

# Critical Release Notice

**Publication number: 297-8021-544**  
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The content of this customer NTP supports the  
SN06 (DMS) software releases.

Bookmarks used in this NTP highlight the changes between the baseline NTP and the current release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the baseline NTP remains unchanged and is valid for the current release.

## Bookmark Color Legend

**Black:** Applies to new or modified content for the NA015 baseline NTP that is valid through the current release.

**Red:** Applies to new or modified content for NA017 that is valid through the current release.

**Blue:** Applies to new or modified content for NA018 (SN05 DMS) that is valid through the current release.

**Green:** Applies to new or modified content for SN06 (DMS) that is valid through the current release.

### *Attention!*

*Adobe® Acrobat® Reader™ 5.0 is required to view bookmarks in color.*

## **Publication History**

### **November 2005**

For the SN06 (DMS) standard release 16.02, the following updates were made:

#### Volume 1

Section “Clearing an SPM UR or a NA link state” added for CR Q01007141.

#### Volume 2

No changes

### **May 2003**

For the SN06 (DMS) release, 16.01, updates were made to Volume 2 according to CR Q00569522. There were no changes to Volume 1.

297-8021-544

DMS-100 Family

## **North American DMS-100**

Trouble Locating and Clearing Procedures

Volume 1 of 2

LET0015 and up Standard 14.02 May 2001

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DMS-100 Family

## **North American DMS-100**

Trouble Locating and Clearing Procedures

Volume 1 of 2

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# About this document

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## How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

## References in this document

The following documents are referred to in this document:

- *Alarm Clearing and Performance Monitoring Procedures*
- *C7TU User Guide*, TAM-1001-015
- *Card Replacement Procedures*
- *CCITT Reference Manual*
- *Customer Data Schema Reference Manual*, 297-8021-351
- *DMS-100 Family Commands Reference Manual*, 297-1001-822
- *Hardware Description Manual Reference Manual*
- *ISDN PRI Maintenance Guide*
- *Log Report Reference Manual*
- *Office Parameters Reference Manual*

- *Operational Measurements Reference Manual*
- *Recovery Procedures*
- *Routine Maintenance Procedures*
- *Subscriber Carrier Module-100 Urban Maintenance Manual*
- *Translations Guide, 297-8021-350*

As of NA0011 (LEC and LET) and EUR010 (EUR) releases, any references to the data schema section of the Translations Guide will be mapped to the Customer Data Schema Reference Manual.

The Advanced Business Services suite does not include an Advanced Maintenance Guide. Consult one or more of the following documents:

- *Bellcore Format Automatic Message Accounting Maintenance Guide, 297-1001-570*
- *Input/Output Devices Maintenance Guide, 297-1001-590*
- *Lines Maintenance Guide, 297-1001-594*
- *Networks Maintenance Guide, 297-1001-591*
- *Peripheral Modules Maintenance Guide, 297-1001-592*
- *Trunks Maintenance Guide, 297-1001-595*

## What precautionary messages mean

The types of precautionary messages used in Nortel Networks documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

**ATTENTION**

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

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DANGER - Possibility of personal injury

**DANGER****Risk of electrocution**

Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING - Possibility of equipment damage

**WARNING****Damage to the backplane connector pins**

Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION - Possibility of service interruption or degradation

**CAUTION****Possible loss of service**

Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

## How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

### Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

>BSY

### **Commands and fixed parameters**

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

```
>BSY CTRL
```

### **Variables**

Variables are shown in lowercase letters:

```
>BSY CTRL ctrl_no
```

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

### **Responses**

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.
```

```
FP 3 Busy CTRL 0: Command passed.
```

---

# 1 Trouble locating and clearing procedures

---

## Introduction

This chapter contains procedures to locate and clear trouble in the DMS-100 switch. The procedures contain the following sections:

- Application
- Definition
- Common procedures
- Action

### Application

This section describes the purpose of the procedure.

### Definition

This section provides context-setting information for trouble locating and clearing procedures. For example, a trouble locating and clearing procedure that has an associated with log report provides a description of the associated log.

### Common procedures

This section lists common procedures to use during the trouble locating and clearing procedure. A common procedure is a series of steps that repeat within maintenance procedures. An example of a common procedure is the procedure for the removal and the replacement of a card. Trouble locating and clearing common procedures reside in a common procedures chapter in this Northern Telecom publication. Do not use common procedures unless the step-action procedure directed you to use common procedures.

### Action

This section contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Activating a loopback on an HLIU

---

### Application

Use this procedure to activate a loopback on an enhanced DS-1 terminator paddle board (NTEX78AA) of a high-speed link unit (HLIU).

### Definition

The following loopback modes are available:

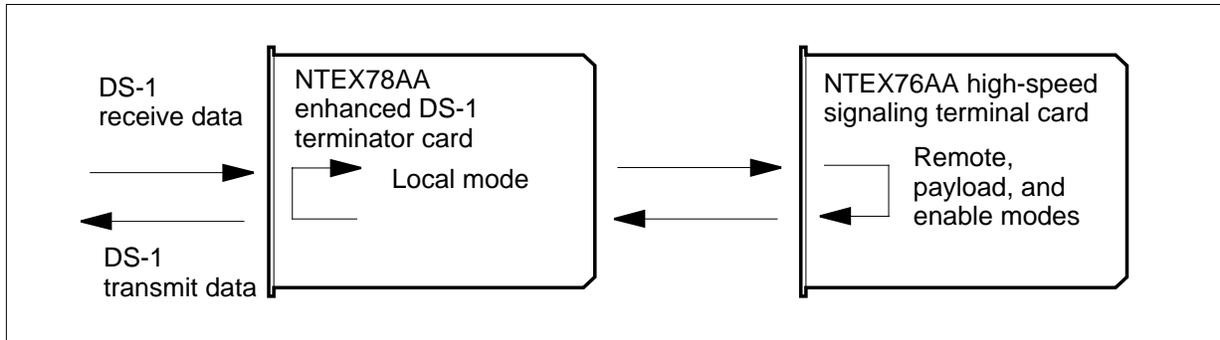
- Remote online mode loops the data received from a DS-1 signaling link through the NTEX78AA card and the NTEX76AA signaling terminal card, and back out through the NTEX78AA card to the DS-1 signaling link. The data is looped back at the input of the NTEX76AA card.
- Local mode loops the data transmitted from the NTEX78AA card output back into the card receive input.
- Enable mode allows the control code scanning mechanism on the card to monitor and respond to a latching loopback control code that is received from a DS-1 signaling link. When enable mode is active and a correct control code sequence is received from a DS-1 signaling link at the signaling terminal card input, a remote loopback loops the test pattern data back out on the DS-1 signaling link output.
- Payload mode loops the data received from the DS-1 signaling link through the NTEX78AA card and the NTEX76AA high-speed signaling terminal (HST). The NTEX76AA HST loops the data back on its input before it is applied to the serial communication controller and transmitted back to the signaling link. This loopback verifies the accuracy of the DS-1 link and the terminating card. The difference between remote online loopback and payload loopback is that there is no framing bit in the payload loopback.

**Note 1:** Only one loopback mode can be active at one time.

**Note 2:** At the MAPCI level of the MAP display, an HLIU that is not in loopback mode displays CLEAR to the right of the HLIU number.

The following figure shows where the three loopback modes occur in an HLIU.

**Activating a loopback on an HLIU (continued)**



**Common procedures**

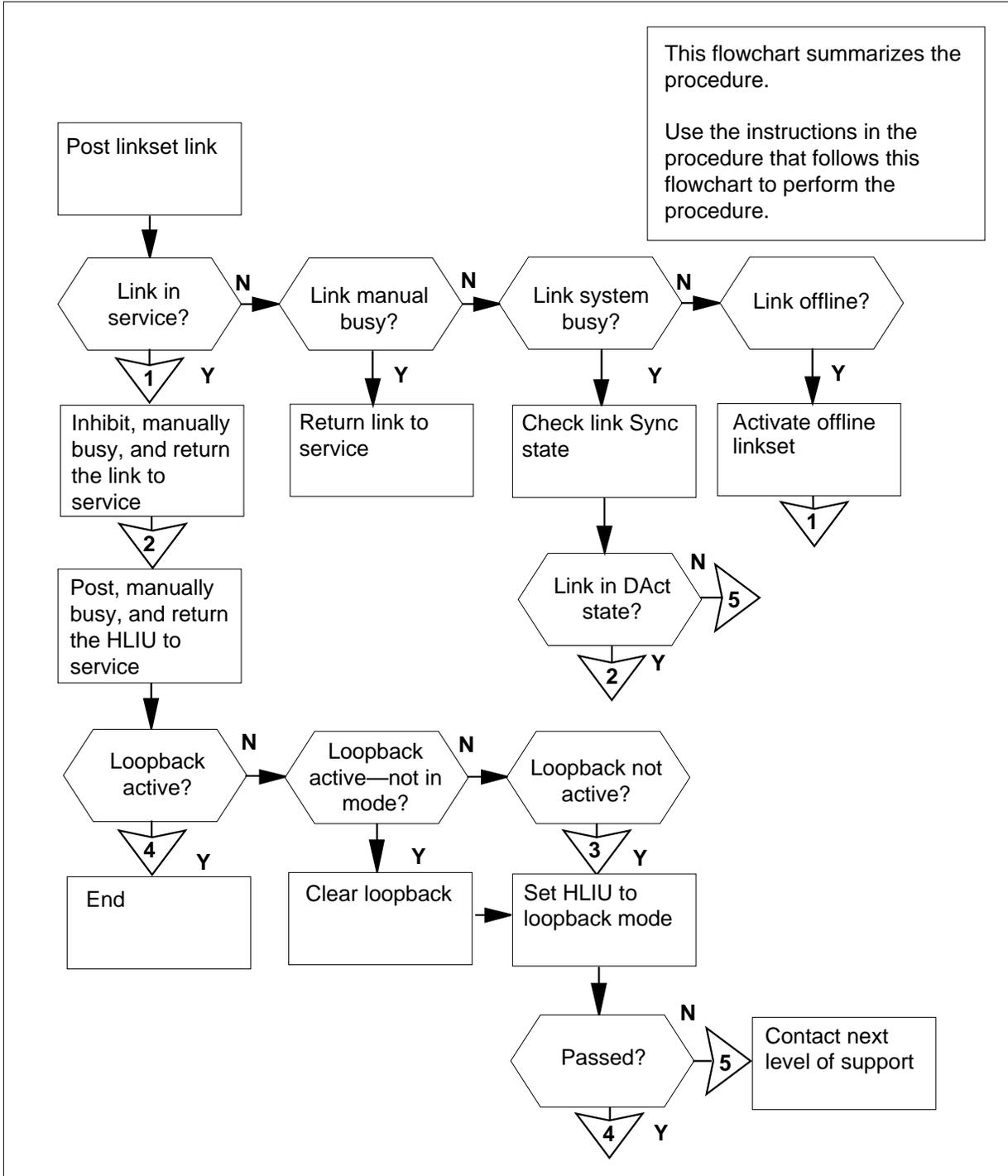
None

**Action**

This procedure contains a summary flowchart and a list of specific steps. Use the flowchart as an overview of the procedure. Follow the specific steps to perform the procedure.

## Activating a loopback on an HLIU (continued)

### Summary of Activating a loopback on an HLIU



## Activating a loopback on an HLIU (continued)

### Activating a loopback on an HLIU

#### At the MAP terminal

- 1 Access the C7LKSET level of the MAP display by typing  
`>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET`  
 and pressing the Enter key.

*Example of a MAP response:*

```

Traf Sync                               Link
LK Stat Stat Resource Stat Physical Access Stat Action

```

- 2 Post the linkset link to which an HLIU is assigned and for which the loopback is to be performed by typing

`>POST C linkset_name`

and pressing the Enter key.

where

**linkset\_name**

is the name of the linkset

*Example of a MAP response:*

```

Linkset LS000100                        InSv
  Traf Sync                               Link
LK Stat Stat Resource Stat Physical Access Stat Action
0 InSv Sync HLIU 100 InSv DS1
1 InSv Sync HLIU 101 InSv DS1

```

Size of Posted Set = 2

If the link traffic state is	Do
InSv	step 5
ManB	step 7
SysB	step 3
Of fl	step 4

- 3 Check the Sync state of the link by referring to the MAP output from step 2.

If the Sync state of the link is	Do
DAct	step 8
anything else	step18

- 4 Activate an offline linkset by performing the procedure in this document. When you have completed this procedure, return to this point.

## Activating a loopback on an HLIU (continued)

---

- 5 Inhibit the linkset link by typing  
**INH link\_no**  
 and pressing the Enter key.  
*where*  
     **link\_no**  
         is the number of the link (0 to 15)

- 6 Manually busy the linkset link by typing  
**>BSY link\_no**  
 and pressing the Enter key.  
*where*  
     **link\_no**  
         is the number of the link (0 to 15)

---

If the BSY command	Do
passed	step 7
failed	step 18

---

- 7 Return the link to service by typing  
**>RTS link\_no**  
 and pressing the Enter key.  
*where*  
     **link\_no**  
         is the number of the link (0 to 15)

---

If the RTS command	Do
passed	step 8
failed	step 18

---

- 8 Access the PM level of the MAP display by typing  
**>MAPCI ;MTC ;PM**  
 and pressing the Enter key.  
*Example of a MAP display:*

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	0	0	0	0	0	37

- 9 Post the HLIU to test the card by typing  
**>POST HLIU hliu\_no**  
 and pressing the Enter key.  
*where*

---

## Activating a loopback on an HLIU (continued)

---

**hliu\_no**  
is the number of the HLIU (0 to 215)

**Note:** The HLIU is assigned to the deactivated link of the deactivated linkset.

*Example of a MAP response:*

```
HLIU 100 InSv Rsvd
POST:
```

- 10** Manually busy the HLIU by typing  
>**BSY**  
and pressing the Enter key.

If the BSY command	Do
passed	step 11
failed	step 18

- 11** Return the HLIU to service by typing  
>**RTS**  
and pressing the Enter key.

If the RTS command	Do
passed	step 12
failed	step 18

- 12** Determine if the loopback mode is active by typing  
>**LOOPBK S**  
and pressing the Enter key.

*Example of a MAP display:*

```
HLIU 100 Clear LOOPBACK active
```

- 13** Determine the required mode.

If the loopback is	Do
ACTIVE, and in the mode you want	step 19
ACTIVE, and not in the mode you want	step 14
NOT ACTIVE	step 15

---

## Activating a loopback on an HLIU (end)

---

**14** Clear the current loopback mode of the posted HLIU by typing  
`>LOOPBK C`  
 and pressing the Enter key.

**15** Set the HLIU to the selected loopback mode by typing  
`>LOOPBK mode`  
 and pressing the Enter key.

*where*

**mode**

is the loopback mode (R, L, P, E, C, or S)

---

If the response is	Do
HLIU liu_no LOOPBK PASSED.	step 19
REQUEST INVALID-HLIU liu_no IS ALLOCATED TO CCS7 TRAFFIC.	step 16
LOOPBACK FAILED-BERT ACTIVE.	step 17
HLIU liu_no: LOOPBACK REJECTED.	step 18
other	step 18

---

**16** The LOOPBACK command does not execute because the HLIU is assigned to linkset management and is running traffic. Wait until the HLIU is available. Go to step 14.

**17** The LOOPBACK command does not execute because the CCS7 bit error rate test (C7BERT) is active on the HLIU. Wait until the C7BERT is finished. Go to step 14.

**18** For further assistance, contact the personnel responsible for the next level of support.

**19** You have completed this procedure.

---

## Activating a loopback on an LIU7

---

### Application

Use this procedure to start a loopback on one of the following:

- an enhanced DS-0A terminator paddle board (NT9X78BA, NT9X78CA, or NT9X78DA) or
- the DMS-100 V.35 interface paddle board (NT9X77AA) of a CCS7 link interface unit (LIU7).

### Definition

The following loopback modes are available:

- Remote mode loops the data received from a DS-0A or V.35 signaling link. The data goes from the link through the NT9X78BA, NT9X78CA, NT9X78DA, or the NT9X77AA card, and the NT9X76AA signaling terminal card. The data goes back through the NT9X78BA, NT9X78CA, NT9X78DA, or the NT9X77AA card. The data proceeds to the DS-0A or V.35 signaling link. The data loops back at the input of the NT9X76AA card.
- Local mode loops the transmitted data from the NT9X77AA, NT9X78BA, NT9X78CA, or NT9X78DA card output back into the card receive input.
- Enable mode allows the control code scanning mechanism on the card to monitor and respond to latching loopback control codes. For the mechanism to monitor and respond, the mechanism must receive these codes from a DS-0A or V.35 signaling link. A response to these signaling links only can occur under the following two conditions. The first condition is that enable mode is active. The second condition is that the signaling terminal card input receives a valid control code sequence. This valid control code sequence must come from a DS-0A or V.35 signaling link output. Under these two conditions, a remote loopback loops the test pattern data back out on the DS-0A or V.35 signaling link output.

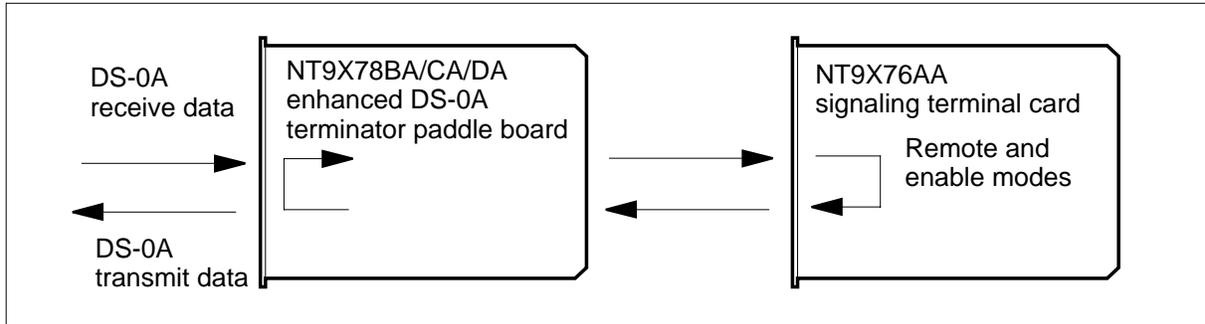
**Note 1:** Only one loopback mode can be active at one time.

**Note 2:** An LIU7 displays a CLEAR mode when the LIU7 is not in loopback mode.

The following figure shows where the loopback modes occur in an LIU7.

## Activating a loopback on an LIU7 (continued)

---



### Common procedures

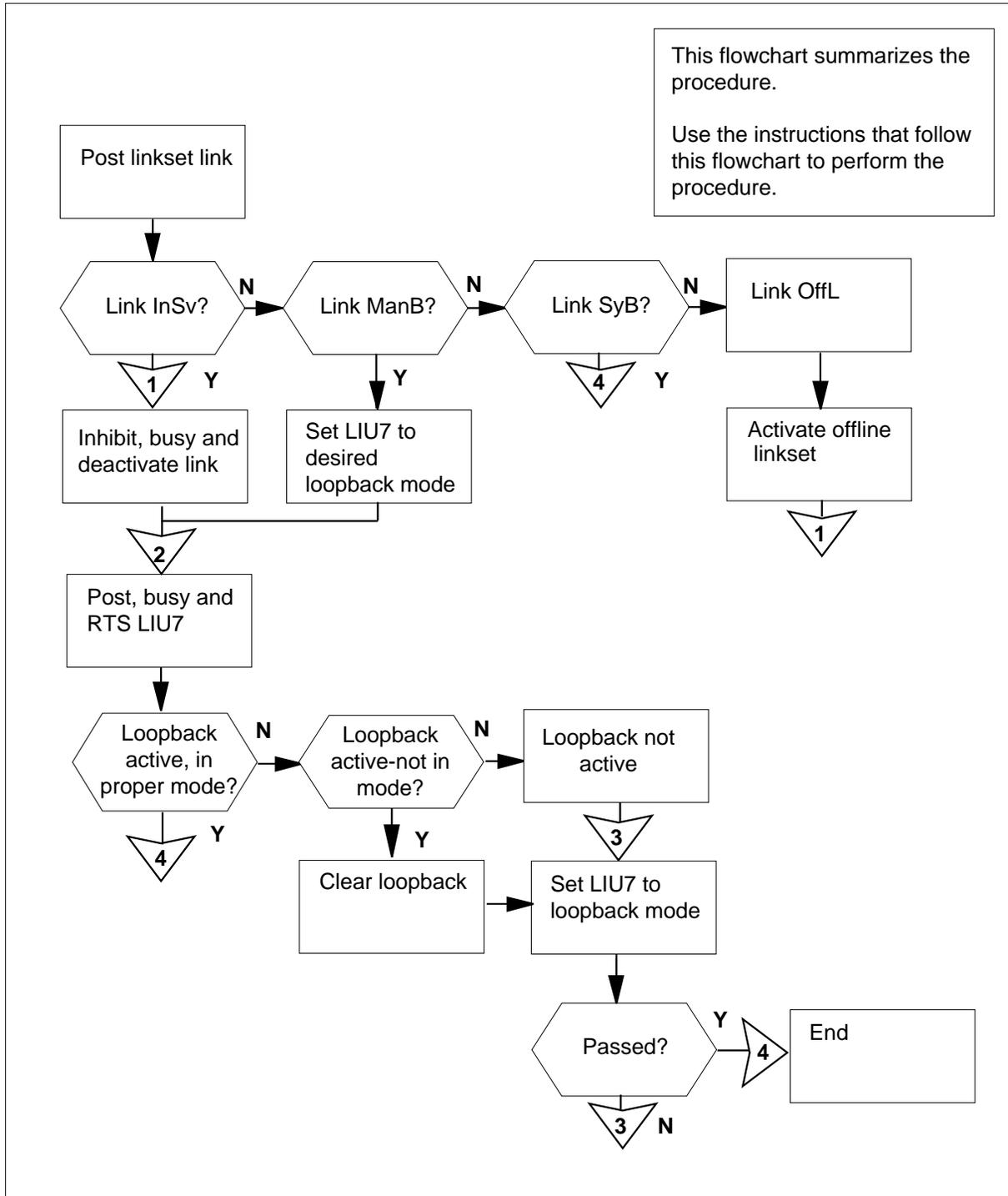
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Activating a loopback on an LIU7 (continued)

### Summary of Activating a loopback on an LIU7



## Activating a loopback on an LIU7 (continued)

---

### Activating a loopback on an LIU7

#### At the MAP terminal

- 1 To access the C7LKSET level of the MAP display, type  
`>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET`  
 and press the Enter key.

*Example of a MAP response:*

```

Traf Sync                               Link
LK Stat Stat Resource Stat Physical Access Stat Action

```

- 2 To post the linkset link that matches an LIU7 and performs the loopback, type  
`>POST C linkset_name`  
 and press the Enter.

*where*

**linkset\_name**  
 is the name of the linkset

*Example of a MAP response:*

```

Linkset LS000100                        InSv
Traf Sync                               Link
LK Stat Stat Resource Stat Physical Access Stat Action
0 InSv Sync LIU7 100 InSv DS0A
1 InSv Sync LIU7 101 InSv DS0A

```

Size of Posted Set = 2

---

If the link traffic state	Do
is InSv	step 3
is ManB	step 5
is SysB	step 16
is OFF1	step 4

---

- 3 To inhibit the link of the linkset, type  
`>INH link_no`  
 and press the Enter key.  
*where*  
**link\_no**  
 is the number of the link (0 to15)
- 4 To manually busy the link of the linkset, type  
`>BSY link_no`

## Activating a loopback on an LIU7 (continued)

and press the Enter key.

where

**link\_no**  
is the number of the link (0 to 15)

If the BSY command	Do
passes	step 5
fails	step 16

**5** To deactivate the link, type

>DEACT link\_no FORCE

and press the Enter key.

where

**link\_no**  
is the number of the link (0 to 15)

**Note:** The termination of the link causes the LIU7 to go system busy for a period of time. Wait for the LIU7 to return to service before you continue the rest of this procedure.

If the DEACT command	Do
passes	step 6
fails	step 16

**6** To access the PM level of the MAP display, type

>MAPCI ;MTC ;PM

and press the Enter key.

*Example of a MAP response:*

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	0	0	0	0	0	37

**7** To post the LIU7 that contains the tested card, type

>POST LIU7 liu7\_no

and press the Enter key.

where

**liu7\_no**  
is the number of the LIU7 (0 to 215)

**Note:** The LIU7 is assigned to the deactivated link of the deactivated linkset.

*Example of a MAP response:*

## Activating a loopback on an LIU7 (continued)

---

LIU7 100 InSv Rsvd  
POST:

- 8** To manually busy the LIU7, type  
>**BSY**  
and press the Enter key.

If the <b>BSY</b> command	Do
passes	step 9
fails	step 16

- 9** To return the LIU7 to service, type  
>**RTS**  
and press the Enter key.

If the <b>RTS</b> command	Do
passes	step 10
fails	step 16

- 10** To determine if the loopback mode is active, type  
>**LOOPBK S**  
and press the Enter key.

*Example of a MAP response:*

LIU7 100 Clear LOOPBACK active

- 11** Determine which mode is necessary.

If the state and mode of the loopback	Do
are ACTIVE, and in the required mode	step 17
are ACTIVE, and not in the required mode	step 12
are NOT ACTIVE	step 13

- 12** To clear the current loopback mode of the posted LIU7, type  
>**LOOPBK C**  
and press the Enter key.

---

## Activating a loopback on an LIU7 (end)

---

- 13** To set the LIU7 to the selected loopback mode, type  
**>LOOPBK mode**  
 and press the Enter key.  
*where*  
     **mode**  
         is the loopback mode (R, L, or E)

If the response	Do
is LIU7 liu_no LOOPBACK PASSED.	step 17
is REQUEST INVALID-LIU7 liu_no IS ALLOCATED TO CCS7 TRAFFIC.	step 14
is LOOPBACK FAILED-BERT ACTIVE.	step 15
is LIU7 liu_no: LOOPBACK REJECTED.	step 16
is other than listed here	step 16

- 14** You cannot execute the LOOPBACK command when the LIU7 is assigned to linkset management and runs traffic. Wait until the LIU7 is available.  
 Go to step 12.
- 15** You cannot execute the LOOPBACK command when the CCS7 bit error rate test (C7BERT) is active on the LIU7. Wait until the C7BERT is complete.  
 Go to step 12.
- 16** For additional help, contact the next level of support.
- 17** The procedure is complete.

---

## Activating a loopback on an NTEX26AA paddle board

---

### Application

Use this procedure to start a loopback on the paddle board (NTEX26AA) for the channel bus interface (CBI) of a CCS7 link interface unit (LIU7).

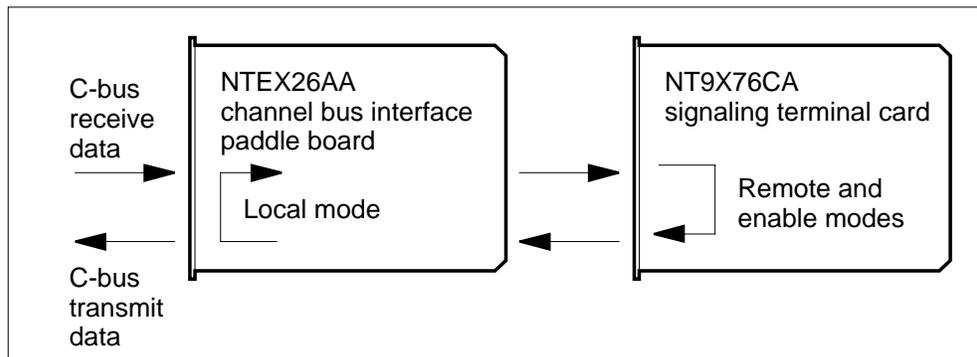
### Definition

The following loopback modes are available:

- Remote mode loops the data received from the channel bus (C-bus) through the NTEX26AA paddle board. The data loops back at the input of the NT9X76CA signaling terminal card.
- Local mode loops the data transmitted from the NTEX26AA paddle board output back into the paddle board receive input.
- Enable mode allows the mechanism for control code scanning on the card to monitor and respond to latching loopback control codes. The codes that latch come from the C-bus. A remote loopback loops the test pattern data back out on the C-bus. The data loops when enable mode is active. A correct control code sequence must go to the input of the signaling terminal card from the C-bus for the data to loop.

*Note:* Only one loopback mode can be active at one time.

The following figure illustrates where the loopback modes occur in an LIU7.



### Common procedures

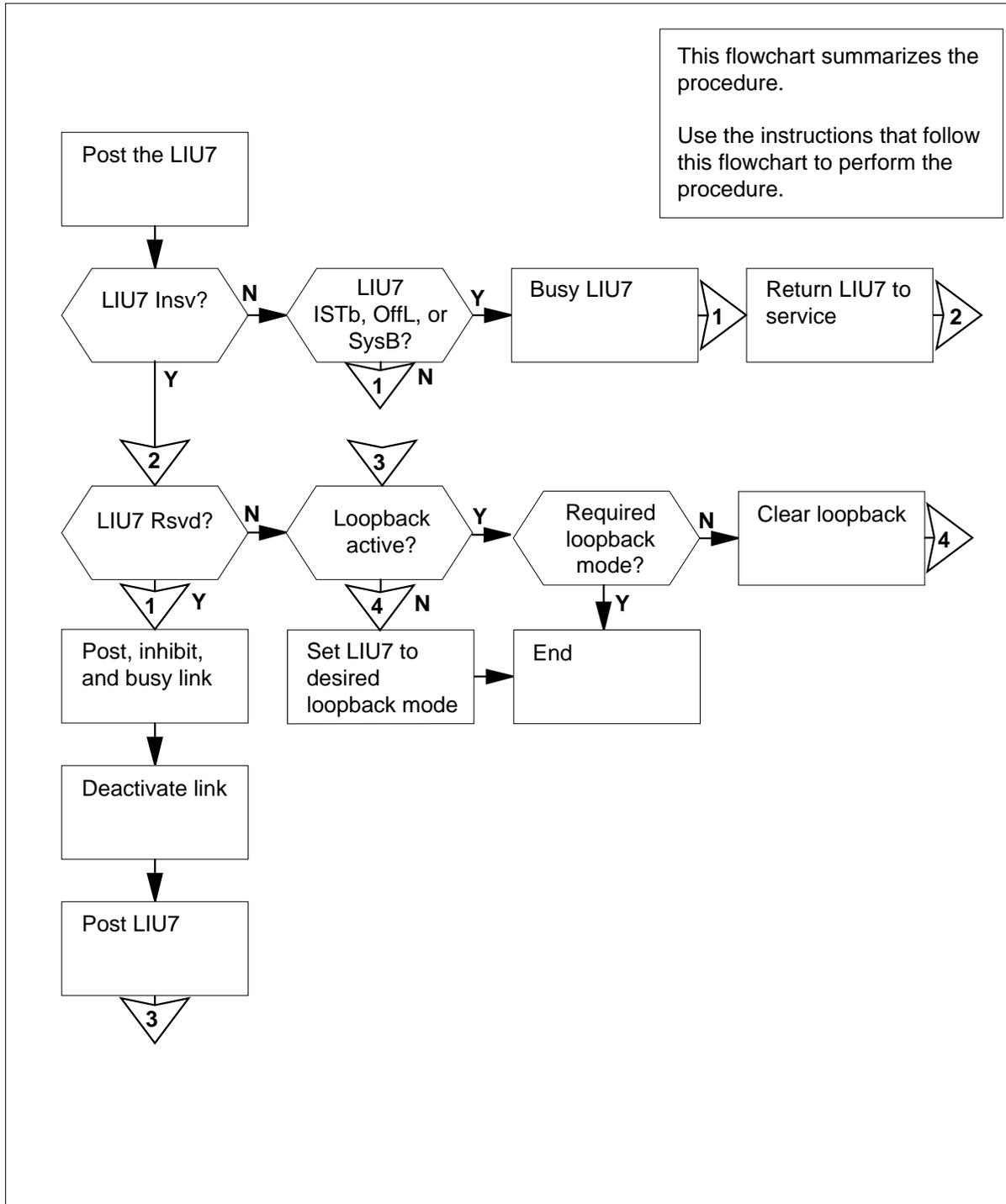
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Activating a loopback on an NTEX26AA paddle board (continued)

### Summary of Activating a loopback on an NTEX26AA paddle board



## Activating a loopback on an NTEX26AA paddle board (continued)

### Activating a loopback on an NTEX26AA paddle board

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type  
**>MAPCI ;MTC ;PM**  
 and press the Enter key.

*Example of a MAP response:*

```

          SysB   ManB   OffL   CBsy   ISTb   InSv
PM          1     3     5     7     6     12
    
```

- 2 To post the LIU7 that contains the card that you want to test, type  
**>POST LIU7 liu\_no**  
 and press the Enter key.

*where*

**liu\_no**  
 is the number of the LIU7 (0 to 255)

*Example of a MAP response:*

```
LIU7 200 InSv Rsvd
```

- 3 Determine if the LIU7 is in service.

If the LIU7	Do
is Insv,	step 6
is OffL, SysB, or ISTb	step 4
is ManB	step 5

- 4 To manually busy the LIU7, type  
**>BSY**  
 and press the Enter key.

If the BSY command	Do
passes	step 5
fails	step 20

- 5 To return the LIU7 to service, type  
**>RTS**

## Activating a loopback on an NTEX26AA paddle board (continued)

and press the Enter key.

If the RTS command	Do
passes	step 6
fails	step 20

- 6 Determine if a loopback mode is active.  
**Note:** In the MAP response example in step 2, the posted LIU7 is reserved and is in service.

If the state of the LIU7	Do
is Lpbk	step 15
is Rsvd	step 7
is other than listed here	step 20

- 7 To determine the linkset that the posted LIU7 is reserved for, type

**>QUERYPM**

and press the Enter key.

*Example of a MAP response:*

```
PM type: LIU7      PM No.: 0      Status: InSv
LIM: 0 Shelf: 1 Slot: 8      LIU FTA: 4242 1000
Default Load: LRS36CJ1
Running Load: LRS36CJ1
LMS States : InSv          InSv
Auditing   : Yes           Yes
Msg Channels: Acc          Acc
TAP 0      : .             .
Reserved LIU7 forms part of CCS7 Linkset: MGTSSSTPLS SLC: 0
LIU is allocated
```

- 8 To access the C7LKSET level of the MAP display, type

**>MAPCI;MTC;CCS;CCS7;C7LKSET**

and press the Enter key.

*Example of a MAP response:*

```
Traf Sync                                     Link
LK Stat Stat Resource Stat Physical Access Stat Action
```

- 9 To post the linkset the LIU7 is reserved for, type

**>POST C linkset\_name**

and press the Enter key.

*where*

## Activating a loopback on an NTEX26AA paddle board (continued)

**linkset\_name**  
is the name of the linkset

*Example of a MAP response:*

```

      Traf Sync                               Link
LK Stat Stat Resource Stat Physical Access Stat Action
0 OffL DAct LIU7 12 OffL DS0A
1 ManB DAct LIU7 13 InSv DS0A
Size of Posted Set = 2
    
```

If the linkset	Do
has more than four entries	step 10
has four or less entries	step 11

- 10** To display the links that remain in the linkset, type

**>NEXT**

and press the Enter key.

- 11** To determine the state of the link of the posted LIU7, the loopback must be on.

If the link state	Do
is InSv, ISTb, SysB, or OffL	step 12
is ManB	step 13

- 12** To inhibit the link, type

**>INH link\_no**

and press the Enter key.

*where*

**link\_no**  
is the number of the link (0 to 15)

If the response	Do
indicates the INH command passes	step 2
indicates the system performed the INH command	step 2
indicates the system cannot inhibit the link. The link is the only available link in the linkset	step 20

**Activating a loopback on an NTEX26AA paddle board** (continued)

	<b>If the response</b>	<b>Do</b>
	is other than listed here	step 20
<b>13</b>	To deactivate the link, type > <b>DEACT link_no FORCE</b> and press the Enter key. <i>where</i> <b>link_no</b> is the number of the link (0 to 15) <b>Note:</b> The termination of the link causes the LIU7 to become temporarily system busy. Wait for the LIU7 to return to service before you continue this procedure.	
	<b>If the DEACT command</b>	<b>Do</b>
	passes	step 14
	fails	step 20
<b>14</b>	To post the LIU7, type > <b>PM;POST LIU7 liu7_no</b> and press the Enter key. <i>where</i> <b>liu7_no</b> is the number of the LIU7 (0 to 255)	
<b>15</b>	To determine if the loopback mode is active, type > <b>LOOPBK Sand press the Enter key.</b>	
	<b>If the state and mode of the loopback</b>	<b>Do</b>
	is ACTIVE, and in the mode you want	step 21
	is ACTIVE, and not in the mode you want	step 16
	is NOT ACTIVE	step 17
<b>16</b>	To clear the current loopback mode of the posted LIU7, type > <b>LOOPBK C</b> and press the Enter key.	
<b>17</b>	To set the LIU7 to the selected loopback mode, type > <b>LOOPBK mode</b>	

---

## Activating a loopback on an NTEX26AA paddle board (end)

---

and press the Enter key.

*where*

**mode**

is the loopback mode (R, L, or E)

- 18** Make sure that the selected loopback mode is active.

---

<b>If the response</b>	<b>Do</b>
is LIU7 liu_no LOOPBK PASSED.,	step 21
is LOOPBK FAILED - BERT ACTIVE.	step 19
is LIU7 liu_no LOOPBK REJECTED.	step 20
is LIU7 liu_no: WARNING. An external V.35 clock must be present for local loopback when V.35 is configured as DTE.	step 20
is other than listed here	step 20

---

- 19** Do not execute the LOOPBK command when the bit error rate test (BERT) is active on the LIU7. Wait until the C7BERT is complete to continue this procedure.

Go to step 17.

- 20** For additional help, contact the next level of support.

- 21** The procedure is complete.

## Activating an offline linkset

---

### Application

Use this procedure to activate an offline linkset for a Common Channel Signaling 7 (CCS7) link interface unit (LIU7), multiple link interface unit (MLIU) or dual-link interface unit (DLIU).

A DLIU is a logical unit that contains

- a high-speed link interface unit (HLIU)
- a high-speed link router (HSLR)

### Definition

A linkset is offline.

### Common procedures

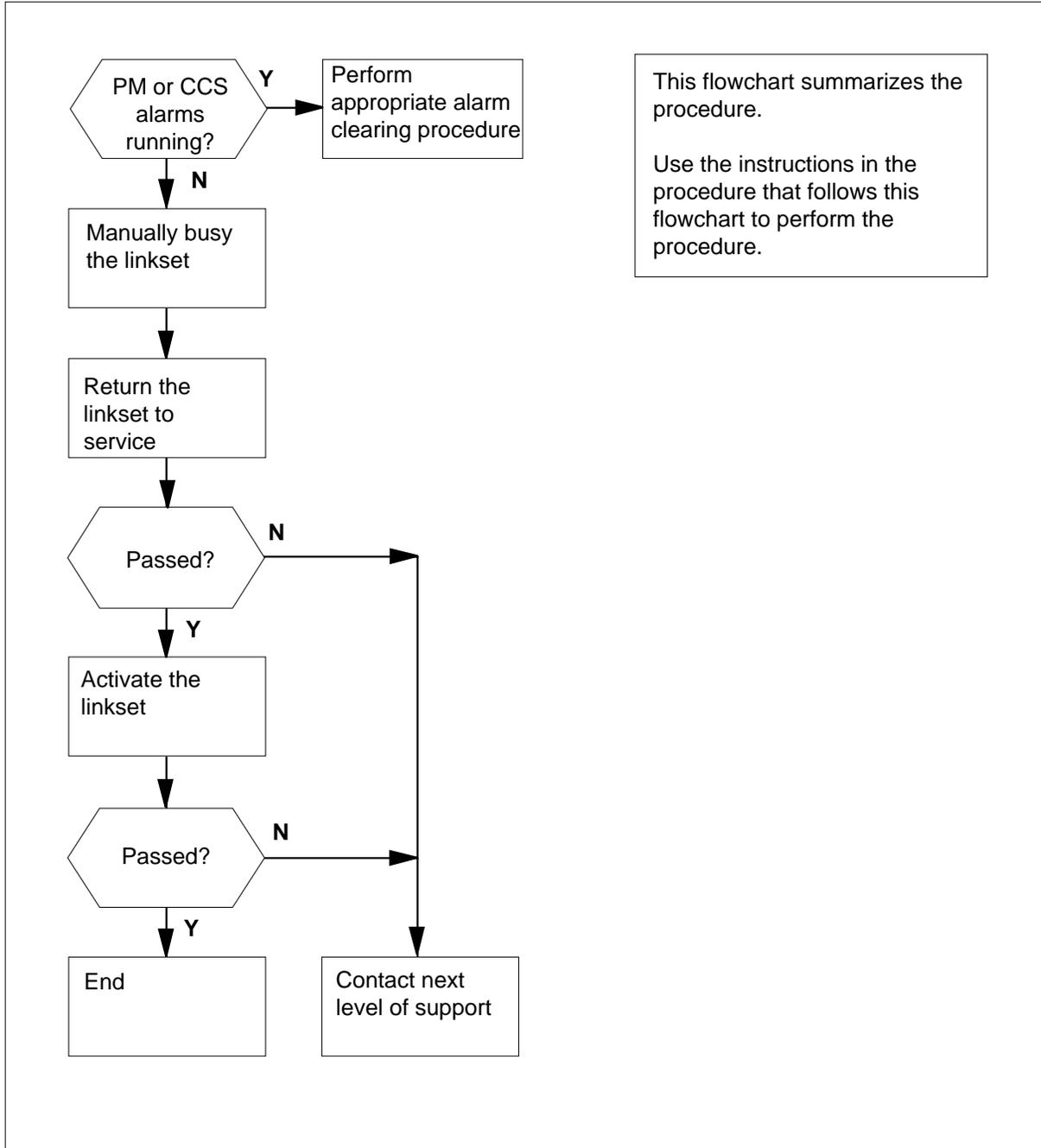
None

### Action

This procedure contains a summary flowchart and a list of specific steps. Use the flowchart as an overview of the procedure. Follow the specific steps to perform the procedure.

## Activating an offline linkset (continued)

### Summary of Activating an offline linkset



## Activating an offline linkset (continued)

### Activating an offline linkset

#### At the MAP terminal

- 1 Access the C7LKSET level of the MAP display by typing  
`>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET`  
 and pressing the Enter key.
- 2 Determine whether PM or CCS alarms appear in the alarm banner.  
*Example of a MAP display:*

```
CM  MS  IOD Net PM  CCS Lns Trks Ext APPL
.  .  .  .  .  .  .  .  .  .  .
```

If	Do
alarms appear under the PM or CCS header of the alarm banner	step 3
no alarms ( . ) appear under either the PM or CCS headers of the alarm banner	step 4

- 3 Clear any PM or CCS alarms before you continue with this procedure. Perform the appropriate alarm clearing procedures in *Alarm and Performance Monitoring Procedures*. When you have completed the procedure, return to this point.
- 4 Post the offline linkset that you want to activate by typing  
`>POST C linkset_name`  
 and pressing the Enter key.

where  
**linkset\_name**  
 is the name of the linkset

*Example of a MAP display for an LIU7:*

**Note:** Where the link interface unit is an MLIU, MLIU is shown in the MAP display in place of LIU7.

```
Linkset LS_TRAFF_1A Offl
  Traf Sync                               Link
LK Stat Stat  Resource Stat Physical Access Stat Action
0 Offl DAct   LIU7 101  InSv   DS0A
1 Offl DAct   LIU7 103  InSv   DS0A
2 Offl DAct   LIU7 105  InSv   DS0A
3 Offl DAct   LIU7 107  InSv   DS0A
Size of Posted Set = 6
```

*Example of a MAP display for a DLIU:*

## Activating an offline linkset (continued)

```

Linkset LS_TRAFF_1A Offl
  Traf Sync
LK Stat Stat      Resource Stat Physical Access Stat Action
0 Offl DAct      DLIU 101  InSv    DS1
1 Offl DAct      DLIU 103  InSv    DS1
2 Offl DAct      DLIU 105  InSv    DS1
3 Offl DAct      DLIU 107  InSv    DS1
Size of Posted Set = 6
    
```

If the associated LIU7, MLIU or DLIU is	Do
---	----

InSv	step 9
anything else	step 5

5 Post the LIU7, MLIU or HLIU that is not in service by typing

```
>PM;POST pm_type liu_no
```

or

```
>PM;POST pm_type mliu_no
```

and pressing the Enter key.

where

**liu\_no or mliu\_no**

is the number of the LIU or MLIU that you want to post (0 to 750)

**pm\_type**

is the type of PM (LIU7, MLIU or HLIU)

Example of a MAP response:

```
LIU7 200 InSv Rsvd
```

6 Determine the state of the LIU7, MLIU, HLIU, or HSLR.

If the state of the LIU7, MLIU, HLIU or HSLR is	Do
---	----

Offl, SysB, or Istb	step 7
ManB	step 8

7 Manually busy the LIU7, MLIU, HLIU, or HSLR by typing

```
>BSY
```

and pressing the Enter key.

If the BSY command	Do
--------------------	----

passed	step 8
--------	--------

**Activating an offline linkset** (continued)

	<b>If the BSY command</b>	<b>Do</b>
	failed	step 21
<b>8</b>	Return the LIU7, MLIU, HLIU, or HSLR to service by typing >RTS and pressing the Enter key.	
	<b>If the RTS command</b>	<b>Do</b>
	passed	step 9
	failed	step 21
<b>9</b>	Manually busy the links in the posted linkset by typing >CCS ;CCS7 ;C7LKSET ;BSY ALL and pressing the Enter key.	
	<b>If the BSY command</b>	<b>Do</b>
	passed for LIU7 or MLIU links	step 11
	passed for DLIU links	step 10
<b>10</b>	Return the links in the posted linkset to service by typing >RTS ALL and pressing the Enter key.	
	<b>If the RTS command</b>	<b>Do</b>
	passed for LIU7 or MLIU links	step 20
	passed for DLIU links	step 12
	failed for LIU7, MLIU or DLIU links	step 21
<b>11</b>	<b>Note:</b> The ACT command initiates automatically when a linkset that contains DLIUs is returned to service. Activate the links in the posted linkset by typing >ACT ALL and pressing the Enter key.	
<b>12</b>	Determine the size of the posted linkset.	
	<b>If the MAP display indicates the size of the posted linkset is</b>	<b>Do</b>
	greater than 4	step 13

## Activating an offline linkset (continued)

	<b>If the MAP display indicates the size of the posted linkset is</b>	<b>Do</b>
	4 or fewer	step 14
<b>13</b>	Display the rest of the links in the linkset by typing >NEXT and pressing the Enter key.	
<b>14</b>	Determine the synchronization states of the links.  <b>Note:</b> The synchronization states are listed under the Sync Stat header of the MAP display.  <i>Example of a MAP display for LIU7:</i>  <b>Note:</b> Where the link interface unit is an MLIU, MLIU is shown in the MAP display in place of LIU7.	
	<pre> Linkset LS_TRAFF_1A Offl   Traf Sync LK Stat Stat      Resource Stat Physical Access Stat Action 0  InSv Sync      LIU7 101  Insv      DS0A 1  InSv Sync      LIU7 103  Insv      DS0A 2  InSv Sync      LIU7 105  Insv      DS0A 3  InSv Sync      LIU7 107  Insv      DS0A Size of Posted Set = 6                     </pre>	
	<p><i>Example of a MAP display for DLIU:</i></p> <pre> Linkset LS_TRAFF_1A Offl   Traf Sync LK Stat Stat      Resource Stat Physical Access Stat Action 0  InSv Sync      DLIU 101  Insv      DS1 1  InSv Sync      DLIU 103  Insv      DS1 2  InSv Sync      DLIU 105  Insv      DS1 3  InSv Sync      DLIU 107  Insv      DS1 Size of Posted Set = 6                     </pre>	
	<b>If all the links that you activated</b>	<b>Do</b>
	have a synchronization state of Sync	step 22
	do not have a synchronization state of Sync	step 15
<b>15</b>	Wait 8 min to see if the links activate. Determine the synchronization states of the links.	
	<b>If the synchronization state of the links is</b>	<b>Do</b>
	Sync or Alnd	step 22

**Activating an offline linkset (end)**

	<b>If the synchronization state of the links is</b>	<b>Do</b>
	anything else, and you have not yet asked the far-end office to activate the link	step 16
	anything else, and you have already asked the far-end office to activate the link	step 21
<b>16</b>	Determine from office records which far-end office is connected to the posted linkset.	
<b>17</b>	Contact the far-end office. Tell personnel at that location that	
	<ul style="list-style-type: none"> <li>• you are going to busy, deactivate, return to service, and activate the link in order to realign it, and that</li> <li>• the link must be activated from both ends once you have busied it, deactivated it, and returned it to service</li> </ul>	
	Coordinate your activities for realigning the link with those of the far-end office.	
<b>18</b>	Manually busy the links that you have been trying to activate by typing >BSY ALL and pressing the Enter key.	
	<b>If the BSY command</b>	<b>Do</b>
	passed	step 19
	failed	step 21
<b>19</b>	Return the links in the posted linkset to service by typing >RTS ALL and pressing the Enter key.	
	<b>If the RTS command</b>	<b>Do</b>
	passed for LIU7 or MLIU links	step 20
	passed for DLIU links	step 22
	failed	step 21
<b>20</b>	Tell personnel at the far-end office to activate the links. Then activate the links from your end by typing >ACT ALL and pressing the Enter key. Go to step 12.	
<b>21</b>	For further assistance, contact the personnel responsible for the next level of support.	
<b>22</b>	You have completed this procedure.	

## Activating the throttling logs mechanism

---

### Application

Use this procedure to reduce the number of logs generated when ISDN user part (ISUP) trunks are out of service.

### Definition

When an ISUP trunk is in a lockout (LO) state because a release complete (RLC) expires, the system generates a log each minute. The log will be either a C7UP100 or a C7UP300 log. This procedure replaces the two logs with one C7UP123 log, which the system generates at the specified interval (ISUP trunk audit interval). The C7UP123 log shows the number and percentage of trunks in a trunk group that an expired RLC timer LO causes.

### Common procedures

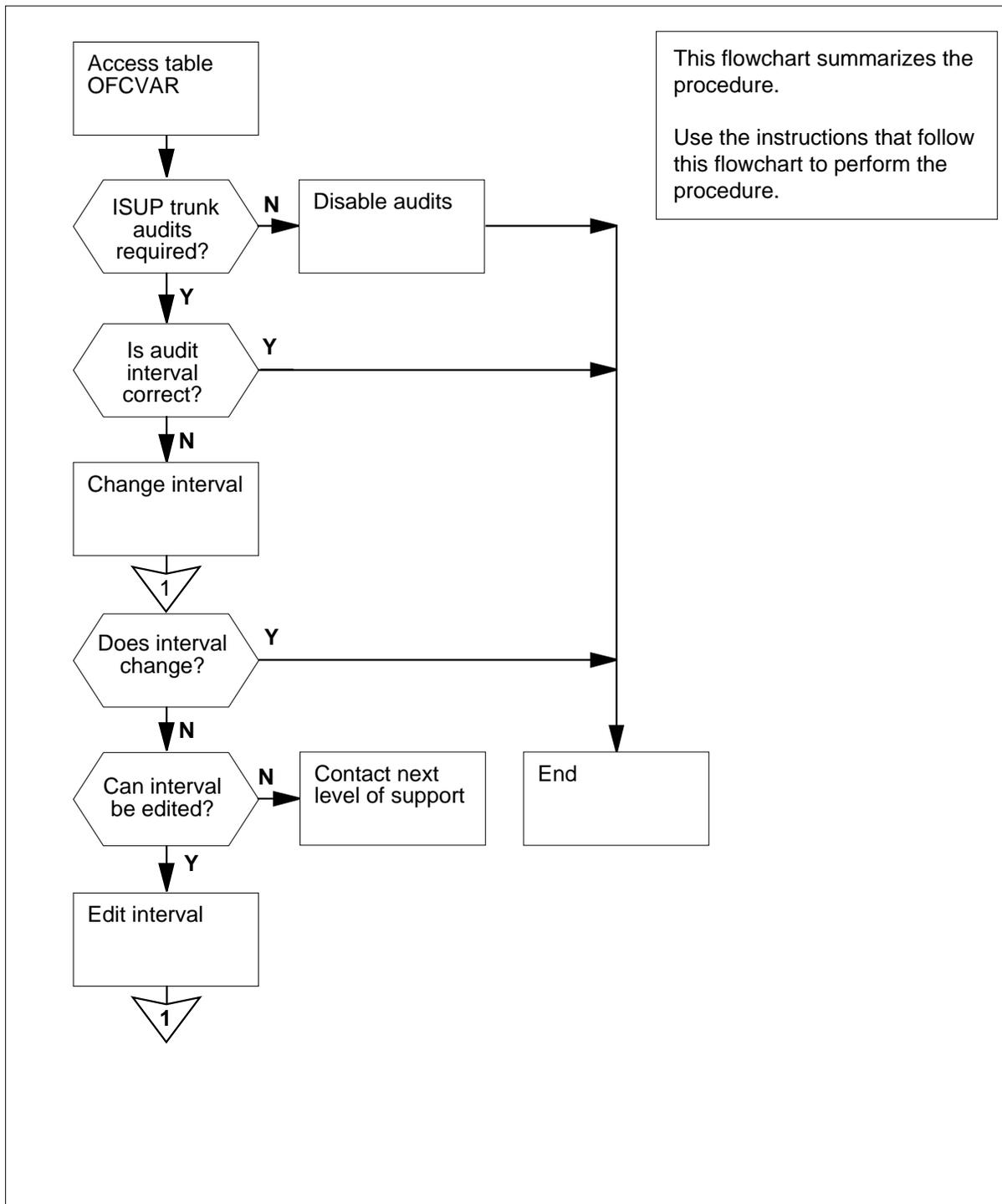
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Activating the throttling logs mechanism (continued)

### Summary of Activating the throttling logs mechanism



## Activating the throttling logs mechanism (continued)

---

### Activating the throttling logs mechanism

#### At the MAP terminal

- 1 To access table OFCVAR, type

```
>TABLE OFCVAR
```

and press the Enter key.

*Example of a MAP display:*

```
TABLE: OFCVAR
```

- 2 To position on office parameter C7UP\_RSC\_LOG\_THRESHOLD, type

```
>POSITION C7UP_RSC_LOG_THRESHOLD
```

and press the Enter key.

*Example of a MAP response:*

```
C7UP_RSC_LOG_THRESHOLD 15
```

- 3 To display the tuple with headers, type

```
>LIST
```

and press the Enter key.

*Example of a MAP response:*

```
PARMNAME          PARMVAL
C7UP_RSC_LOG_THRESHOLD 15
```

**Note:** In the example, the current ISUP trunk audit interval is 15. The interval means the system performs an audit on an ISUP trunk every 15 min. A value of 0 under the PARMVAL header indicates that the throttling logs mechanism did not activate. A value of 10 to 60 indicates that the throttling logs mechanism did activate. To reduce the number of logs generated, increase the audit interval.

---

If you want	Do
to disable the ISUP trunk audit	step 4
to enable the ISUP trunk audit	step 6
to change the ISUP trunk audit interval	step 6
to leave the ISUP trunk audit interval as it is	step 11

---

- 4 To disable the ISUP trunk audit, type

```
>CHANGE 2 0
```

and press the Enter key.

---

## Activating the throttling logs mechanism (continued)

---

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
  C7UP_RSC_LOG_THRESHOLD  0
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 5** To confirm the change, type

>Y

and press the Enter key.

If the response	Do
is ISUP TRUNK AUDIT DISABLED TUPLE CHANGED	step 11
is other than listed here	step 12

- 6** To enter a new ISUP trunk audit interval, type

>CHANGE 2 **new\_value**

and press the Enter key.

*where*

**new\_value**

is the interval at which you want the ISUP trunk audit to occur, in minutes (10 to 60)

**Note:** The value entered must be a whole number.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
  C7UP_RSC_LOG_THRESHOLD  0
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 7** To confirm the change, type

>Y

and press the Enter key.

If the response	Do
is VALUE ACCEPTED TUPLE CHANGED	step 11

---

## Activating the throttling logs mechanism (continued)

---

	<b>If the response</b>	<b>Do</b>
	<pre>is ERROR:  INVALID INTERVAL SPECI- FIED.  value cannot be less than 10. PROCESSING ERROR UNEXPECTED ERROR CONDITION TUPLE TO BE CHANGED: C7UP_RSC_LOG_THRESHOLD  5 ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT</pre>	step 8
	<pre>is ERROR:  INVALID INTERVAL SPECI- FIED.  value cannot be greater than 60. PROCESSING ERROR UNEXPECTED ERROR CONDITION TUPLE      TO      BE      CHANGED: C7UP_RSC_LOG_THRESHOLD  65 ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT</pre>	step 8
	<pre>is PARM VALUE IS WRONG TYPE TYPE IS INT {-32768 TO 32767} PROCESSING ERROR UNEXPECTED ERROR CONDITION TUPLE      TO      BE      CHANGED: C7UP_RSC_LOG_THRESHOLD  5A ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT</pre>	step 8
	is other than listed here	step 12
<b>8</b>	<p>To indicate that you want to change the value entered, type  <b>&gt;E</b>  and press the Enter key.  <i>Example of a MAP response:</i></p> <pre>PARMVAL: 15</pre> <p><b>Note:</b> The parmval can be a value of 0, or a value between 10 and 60.</p>	
<b>9</b>	<p>To enter a correct ISUP trunk audit interval, type  <b>&gt;valid_value</b>  and press the Enter key.  <i>where</i></p>	

---

## Activating the throttling logs mechanism (end)

---

**valid\_value**

is the interval at which you want the ISUP trunk audit to occur, in minutes (10 to 60)

**Note:** The value entered must be a whole number.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
  C7UP_RSC_LOG_THRESHOLD    0
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 10** To confirm the change, type  
>Y  
and press the Enter key.

If the response	Do
is VALUE ACCEPTED TUPLE CHANGED	step 11
is other than listed here	step 12

- 11** To quit from the table, type  
>QUIT  
and press the Enter key.  
Go to step 13.
- 12** For additional help, contact the next level of support.
- 13** The procedure is complete.

## **Adding an LIM to an automatic REx test schedule**

---

### **Application**

Use this procedure to include a link interface module (LIM) in the test schedule for the automatic routine exercise (REx).

### **Definition**

The REx test schedule is for software and hardware REx tests performed at intervals on different nodes.

### **Common procedures**

There are no common procedures.

### **Action**

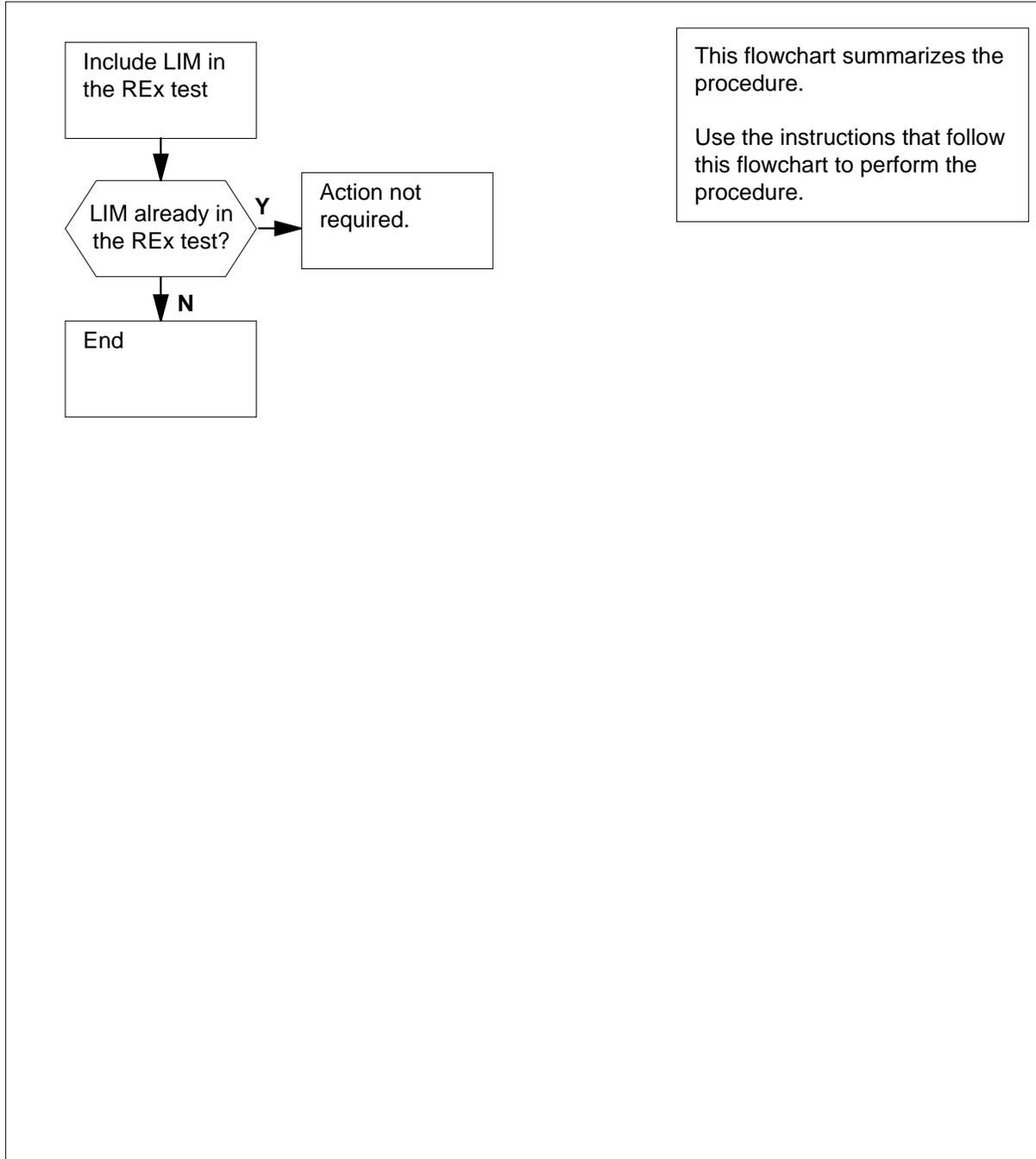
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

---

## Adding an LIM to an automatic REx test schedule (continued)

---

### Summary of Adding an LIM to an automatic REx test schedule



---

## Adding an LIM to an automatic REx test schedule (end)

---

### Adding an LIM to an automatic REx test schedule

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type  
`>MAPCI ;MTC ;PM`  
and press the Enter key.
- 2 To post the link interface module (LIM) that you want to add to the automatic REx test schedule, type  
`>POST LIM lim_no`  
and press the Enter key.  
*where*  
**lim\_no**  
is the number of the LIM (0 to 16)
- 3 To include the posted LIM in the automatic REx test, type  
`>REX ON`  
and press the Enter key.

**Note:** In the following table, the variable x refers to a LIM number of 0 to 16. The variable y refers to a LIM unit number of 0 or 1.

---

<b>If the response</b>	<b>Do</b>
is LIM x UNIT y has been included in the REX schedule.	step 5
is LIM x UNIT y is already included in the REX schedule.	step 4

---

- 4 The REx test schedule already includes the posted LIM. The system did not act.
- 5 The procedure is complete.

## **Adding an NIU to an automatic REx test schedule**

---

### **Application**

Use this procedure to include a network interface unit (NIU) in the automatic routine exercise (REx) test schedule.

### **Definition**

The REx test schedule is a schedule of software and hardware REx tests performed at intervals on different nodes.

### **Common procedures**

There are no common procedures.

### **Action**

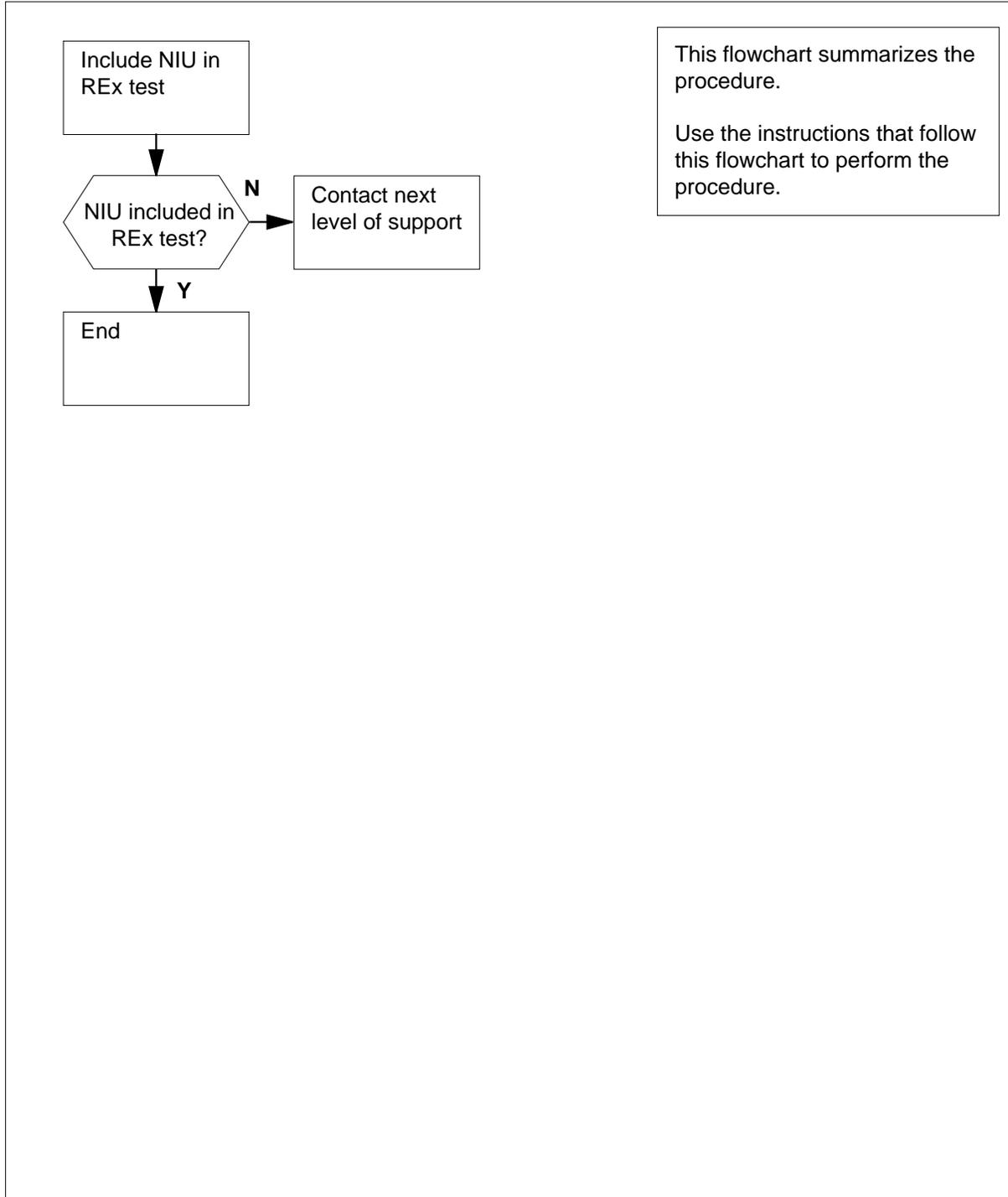
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

---

## Adding an NIU to an automatic REx test schedule (continued)

---

### Summary of Adding an NIU to an automatic REx test schedule



---

## Adding an NIU to an automatic REx test schedule (continued)

---

### Adding an NIU to an automatic REx test schedule

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type

```
>MAPCI ;MTC ;PM
```

and press the Enter key.

*Example of a MAP display:*

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	0	0	0	0	0	39

- 2 To post the NIU that you want to include in the automatic REx test schedule, type

```
>POST NIU niu_no
```

and press the Enter.

*where*

**niu\_no**

is the number of the NIU (0 to 29)

*Example of a MAP display:*

```
NIU 1:  InSv
Unit 0:  Act   InSv
Unit 1:  InAct InSv
```

- 3 To determine if the automatic REx test schedule includes the NIU, type

```
>TST REX QUERY
```

and press the Enter key.

If the response	Do
is The REx schedule includes the NIU n	step 10
is The REx schedule does not include the NIU n	step 4

- 4 To include the posted NIU in the automatic REx test, type

```
>TST REX ON
```

and press the Enter key.

If the response	Do
is The REx schedule includes now includes the NIU.	step 10

---

---

**Adding an NIU to an automatic REx test schedule (end)**

---

	<b>If the response</b>	<b>Do</b>
	is The REx schedule cannot include the NIU n.	step 5
	is Command rejected. The PM is off-line.	step 6
<b>5</b>	Determine if you tried to add the NIU to the REx test schedule for the first or second time.	
	<b>If it</b>	<b>Do</b>
	is the first try	step 4
	is the second or next try	step 9
<b>6</b>	Determine from office records or from operating company personnel why the NIU is offline.	
	<b>If you</b>	<b>Do</b>
	are permitted to return the NIU to service	step 7
	are not permitted to return the NIU to service	step 10
<b>7</b>	To manually busy the posted NIU, type > <b>BSY PM</b> and press the Enter key.	
<b>8</b>	To return the posted NIU to service, type > <b>RTS PM</b> and press the Enter key.	
	<b>If the RTS command</b>	<b>Do</b>
	passes	step 4
	fails	step 9
<b>9</b>	For additional help, contact the next level of support.	
<b>10</b>	The procedure is complete.	

---

## Assembling 2x5 AMP connectors in SuperNode cabling

---

### Application

Use this procedure to assemble 2x5 AMP connectors for inspection or repair.

The following DMS Supernode cables use the 2x5 AMP connectors:

- NTN36BP
- NTN36CB
- NTOX26XG
- NTOX26XH
- NTOX26XJ
- NTOX26ZY
- NTOX26ZZ
- NTOX96AL
- NTOX96AM
- NTOX96AN
- NTOX96BD
- NTOX96DA
- NT9X0171
- NT9X0173

### Definition

The 2x5 AMP connector is disassembled.

### Common procedures

There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart as a summary of the procedure. Follow the steps to perform the procedure.

To make the diagram clear, the wiring is not shown.

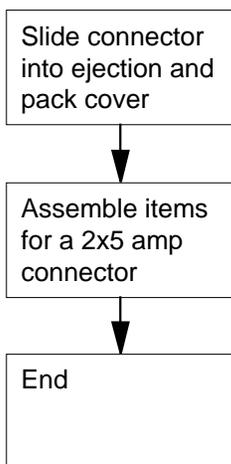
The following figure shows the 2x5 AMP connector parts.

---

## Assembling 2x5 AMP connectors in SuperNode cabling (continued)

---

### Summary of Assembling 2x5 AMP connectors in SuperNode cabling



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

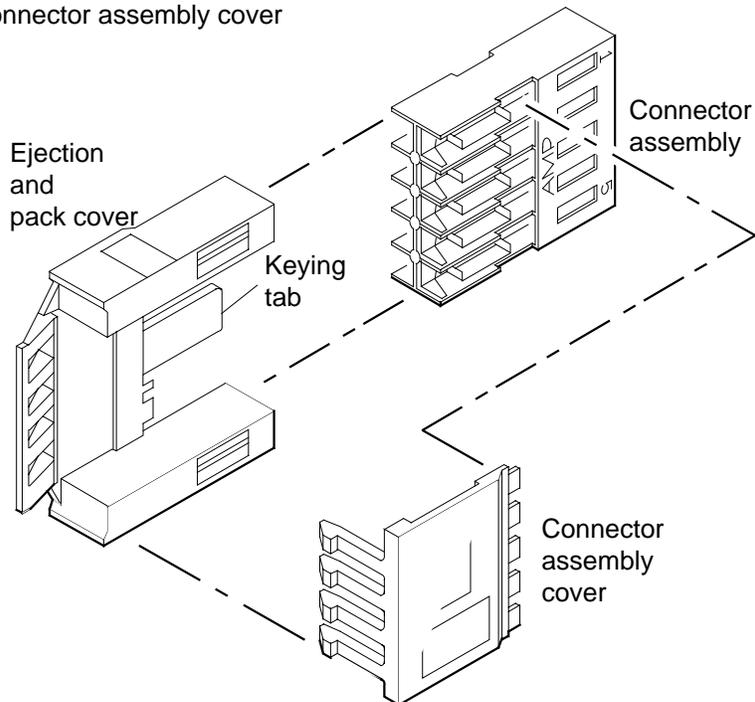
---

## Assembling 2x5 AMP connectors in SuperNode cabling (continued)

---

### Example of Assembling 2x5 AMP connectors

The 2x5 AMP connector consists of the following parts:  
connector assembly  
ejection and pack cover  
connector assembly cover



## Assembling 2x5 AMP connectors in SuperNode cabling (continued)

### How to assemble 2x5 AMP connectors in SuperNode cabling

#### At the piece of equipment

1



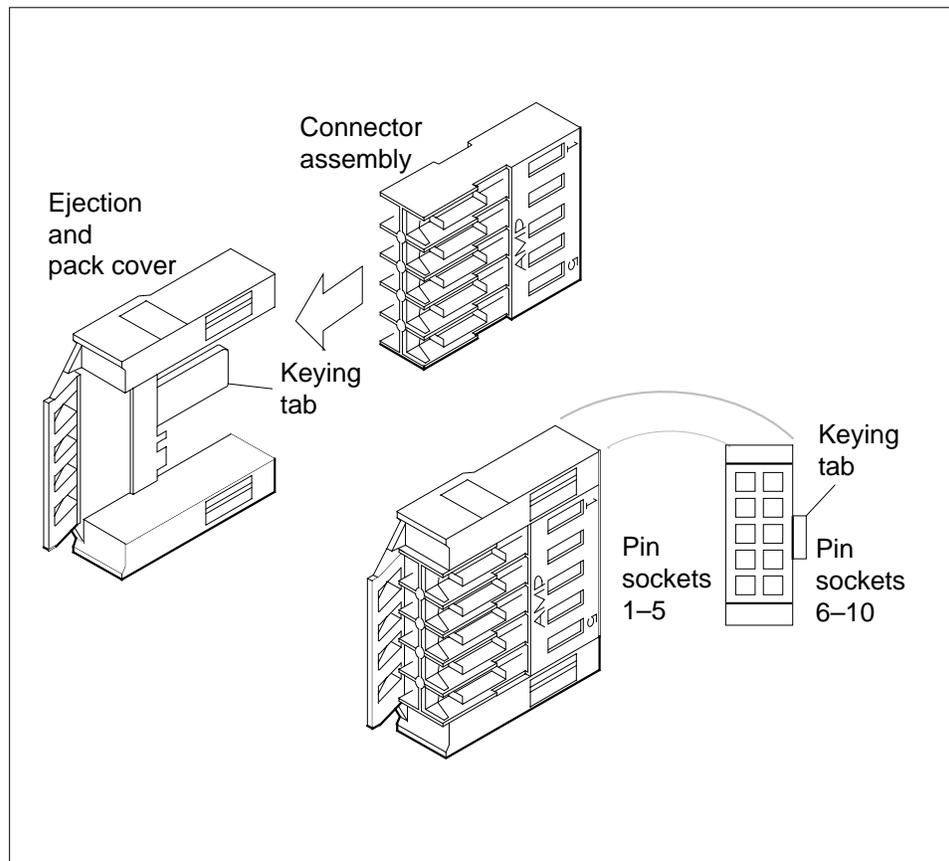
#### WARNING

##### Possible equipment failure

Make sure the keying tab is on connector side 6 to 10. If the keying tab is on connector side 1 to 5, the connections will be reversed.

Slide the connector assembly into the ejection and pack cover.

Make sure the keying tab is on connector side 6 to 10. If the keying tab is on connector side 1 to 5, the connections will be reversed. The following figure indicates the pin-out view of the connector assembly, and the ejection and pack cover.

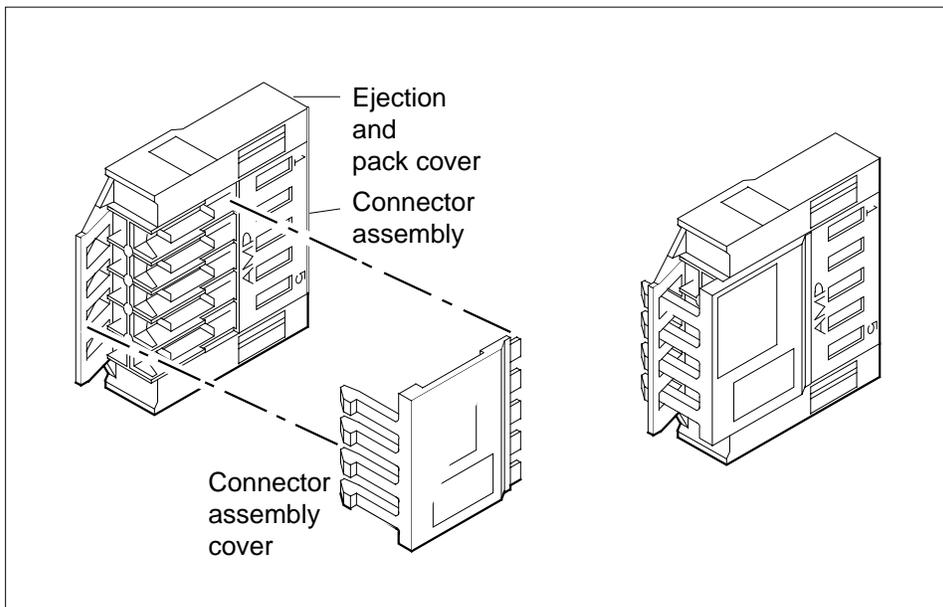


2 Assemble the connector assembly cover, the connector assembly, and the ejection and pack cover.

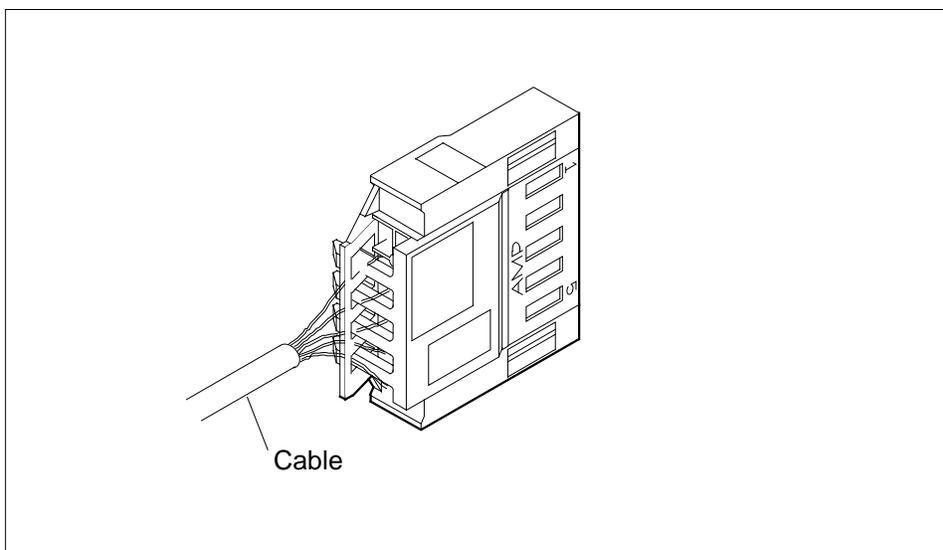
---

## Assembling 2x5 AMP connectors in SuperNode cabling (end)

---



The following figure shows a correctly wired 2x5 AMP connector assembly ready to plug into the switch.



**3** The procedure is complete.

## **BCLID link failure**

---

### **Application**

Use this procedure to determine the cause of a Bulk Calling Line Identification (BCLID) link failure.

### **Definition**

A subscriber complaint indicates that the subscriber site does not receive BCLID messages. The BCLID link transmits calling party information for Subscriber Service lines that belong to BCLID groups.

### **Common procedures**

There are no common procedures.

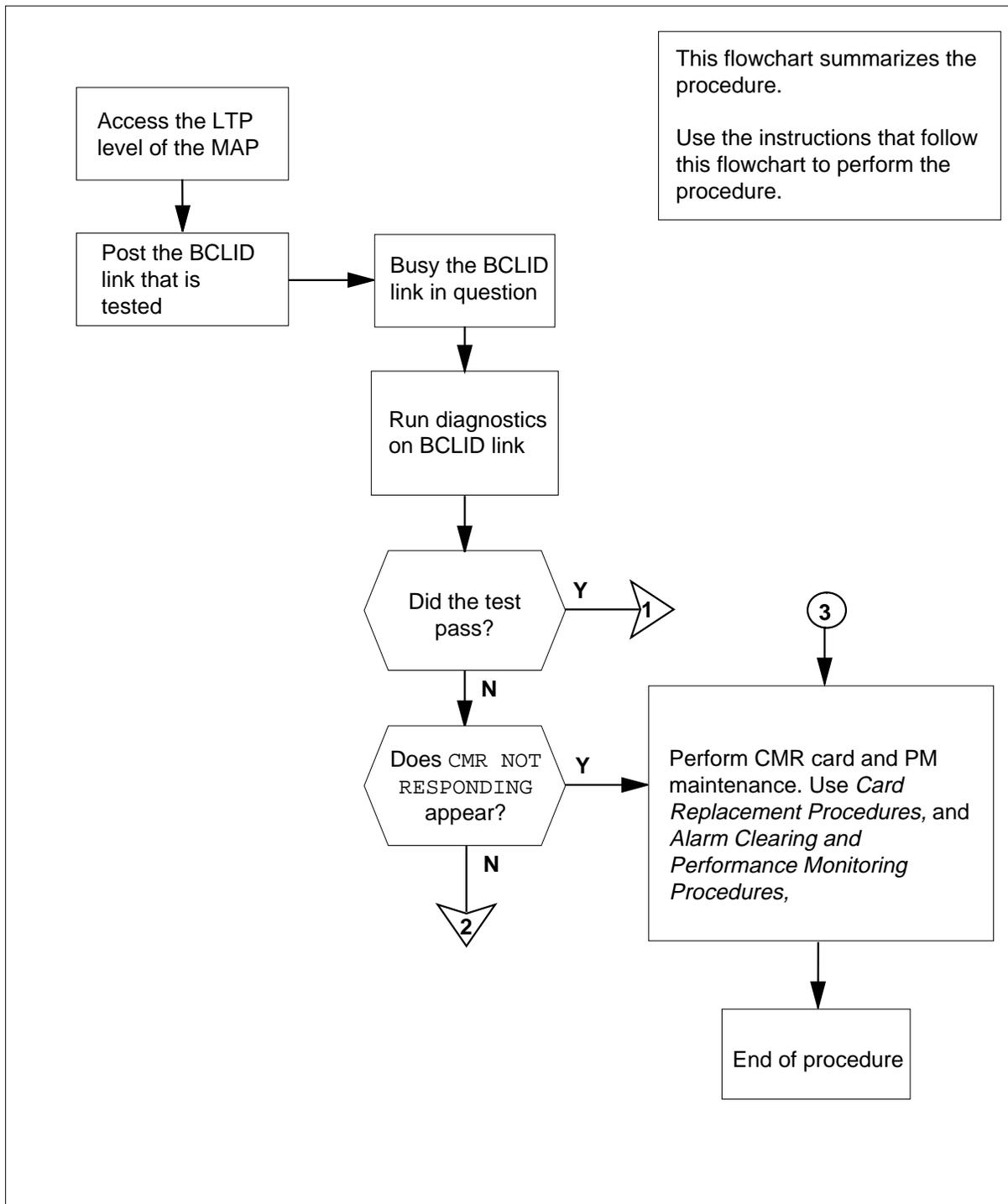
### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

*Note:* The CLASS modem resource (CMR) card NT6X78 can go out of service in the active unit. If the card goes out of service, the operating company personnel can busy, replace, load, and return the card to service. Operating company personnel do not have to execute these operations on the whole unit.

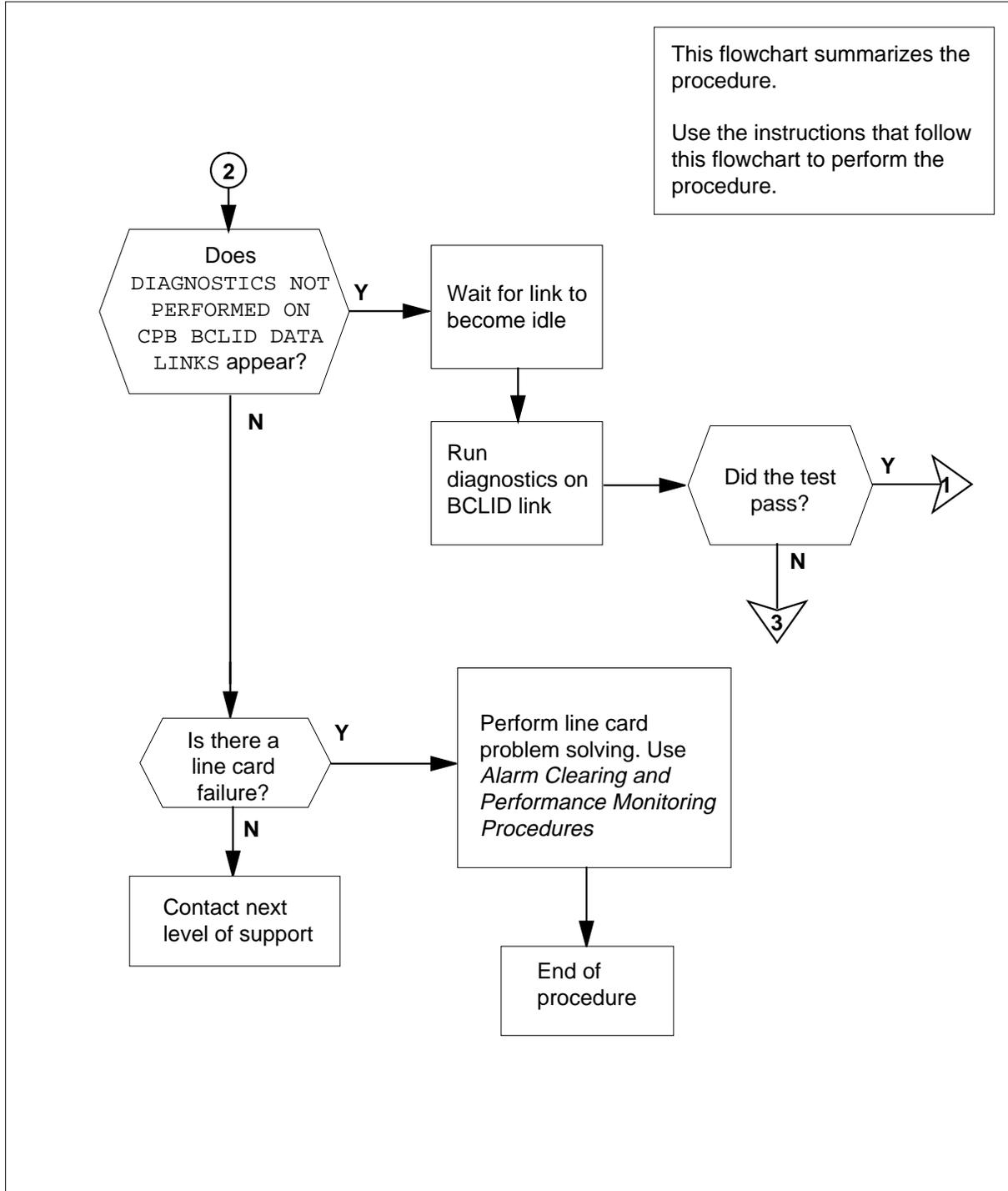
**BCLID link failure** (continued)

**Summary of BCLID link failure**



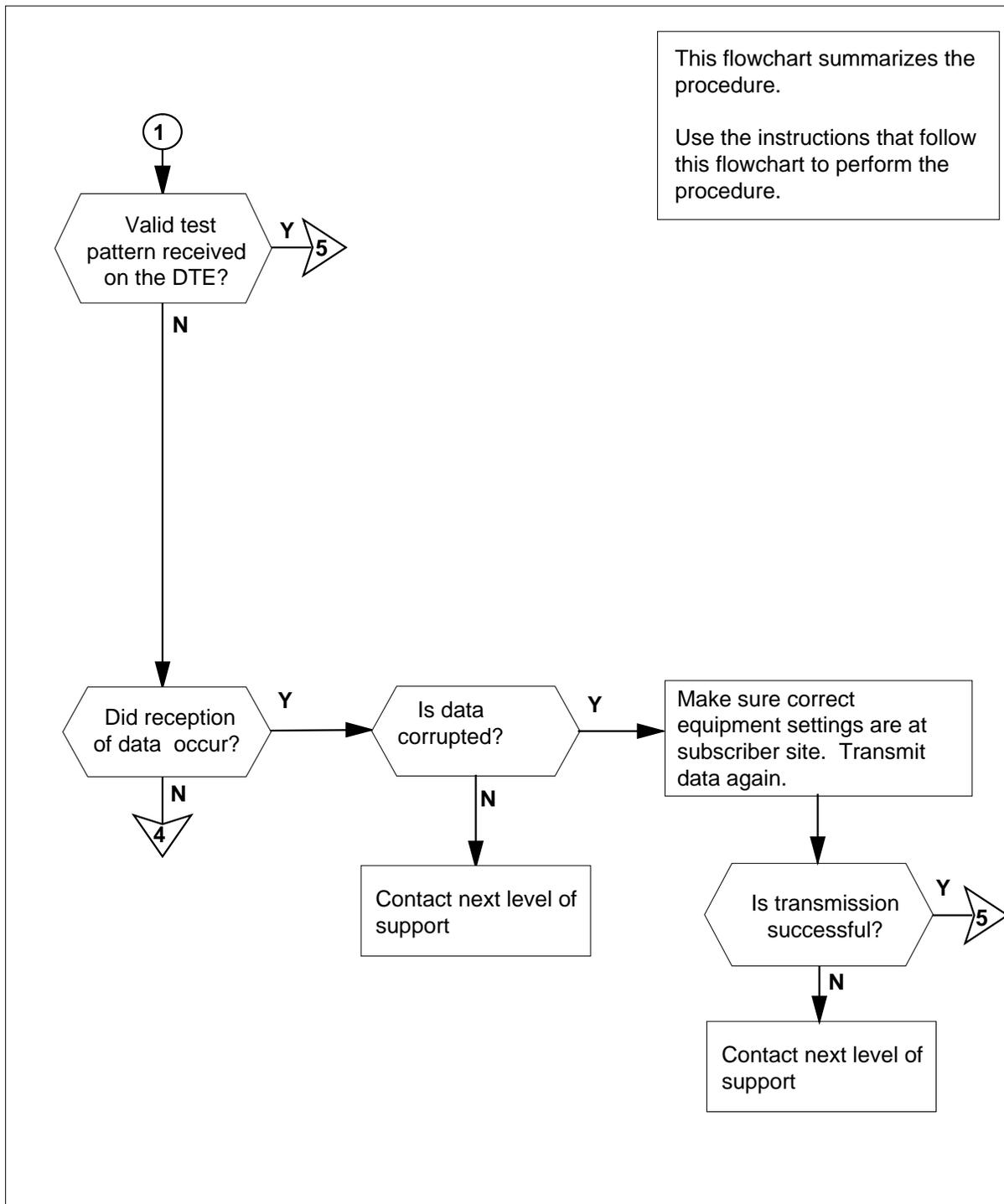
## BCLID link failure (continued)

### Summary of BCLID link failure (continued)



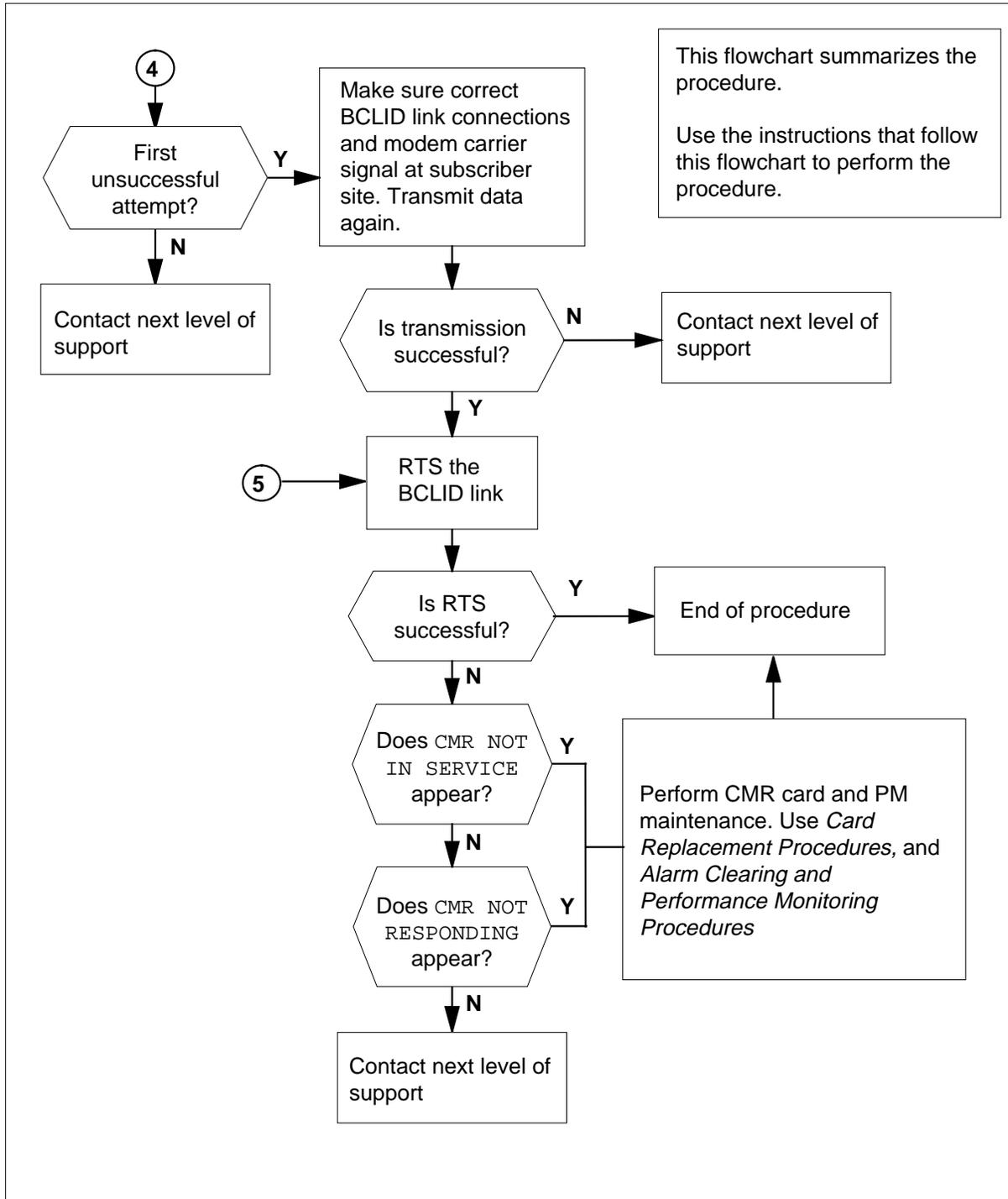
**BCLID link failure** (continued)

**Summary of BCLID link failure (continued)**



**BCLID link failure** (continued)

**Summary of BCLID link failure (continued)**



## BCLID link failure (continued)

### BCLID link failure

#### At the MAP terminal

- 1 To access the line test position (LTP) level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 To post the tested BCLID link, type  
**>POST L len**  
 and press the Enter key.  
*where*  
**len**  
 is the line equipment number of the BCLID link

3



#### CAUTION

##### Loss of service

You cannot transmit BCLID call data while the BCLID link is manual busy (MB). Make sure you schedule tests for BCLID links during low traffic periods.

To busy the tested BCLID link, type

**>BSY**

and press the Enter key.

- 4 To perform standard diagnostic routines and send a test transmission over the data link, type

**>DIAG**

and press the Enter key.

The following message refers to DIAG command operation:

```
BCLID test message sent
RTPH ***+LINE100 FEB15 21:34:47 8800 PASS LN_DIAG
      LEN HOST 00 1 09 21          NO DIRN
      DIAGNOSTIC RESULT      Card Diagnostic OK
      ACTION REQUIRED      None
      CARD TYPE      6X17AA
```

**BCLID link failure** (continued)

Use the following information to determine where to go next in this procedure.

If the	Do
BCLID link passes the tests and the test pattern travels over the BCLID link to the customer premises equipment	step 9
following message appears: CMR NOT RESPONDING	step 5
following message appears: DIAGNOSTICS NOT PERFORMED ON CPB BCLID DATA LINKS	step 6
diagnostics result shows a line card failure	step 8
display is other than listed here	step 25

**At the subscriber site**

- 5 Go to *Card Replacement Procedures* for information on card replacement procedures. Go to *Alarm Clearing and Performance Monitoring Procedures* for information on peripheral module (PM) maintenance procedures. Complete the procedure and return to this point.  
Go to step 26.
- 6 Wait for the link to become idle.
- 7 Perform standard diagnostic routines and send a test transmission over the data link as described in step 4.

If the BCLID link	Do
passes the diagnostics	step 9
does not pass the diagnostics	step 5

- 8 Go to *Alarm Clearing and Performance Monitoring Procedures* to perform fault detection on the line card.
- 9 Make sure that a correct test pattern appears on the subscriber DTE. The system generates a test pattern when the standard diagnostic routines initiated by the DIAG command at the MAP display passes. The test pattern must have one of two formats and must appear exactly as shown below. The first example includes the time and date. The second example shows a third directory number (DN).

**a Example 1**

BC 012345 678901 2345678 9012345678 I T

where

**BC**  
indicates a BCLID message

**BCLID link failure** (continued)

- 012345**  
is the date field
- 678901**  
is the time field
- 2345678**  
is the DN of the called party
- 9012345678**  
is the DN of the calling party
- I**  
is the line status indicator field
- T**  
is the line type indicator field

**b Example 2**

BC 6211000 2345678 9012345678 I T

where

- BC**  
indicates a BCLID message
- 6211000**  
is the first called DN
- 2345678**  
is the DN of the called party
- 9012345678**  
is the DN of the calling party
- I**  
is the line status indicator field
- T**  
is the line type indicator field

Use the following information to determine where to go next in this procedure.

If the	Do
test pattern appears on the DTE as shown at the beginning of this step	step 10
DTE does not appear to receive data	step 11
DTE displays corrupted data that does not adhere to the correct message format shown in this step.	step 17
DTE displays other than listed here	step 25

**10** The BCLID link works correctly. Go to step 20.

**BCLID link failure** (continued)

11 Use the following information to determine where to go next in this procedure.

<b>If this</b>	<b>Do</b>
is the first not successful attempt	step 12
is not the first attempt that fails	step 25

12 Make sure that the following steps occur:

- The Bell 202A modem is in receive mode.
- The two-wire loop to the modem tightly connects to the jack.
- The DB25 cable is in the correct port on the DTE.
- The DB25 cable tightly connects to the modem and the DTE.

13 Connect a set to the BCLID link to listen for a continuous, high-pitched tone. This tone indicates that the 1200-Hz carrier tone transmits.

14 To send the test pattern again, have operating company personnel in the office reenter the DIAG command (step 4).

15 Listen on the set for the test pattern. The test pattern interrupts the 1200-Hz carrier tone quickly and sounds like concentrated noise or static electricity. If you cannot hear the BCLID test pattern, check the BCLID link data entries.

16 Repeat step 9.

17 Make sure that the communications parameters on the DTE are as follows:

- 1200 baud
- eight data bits
- one stop bit
- no parity
- ASCII data code

18 Ask operating company personnel to generate the test pattern again.

19 Repeat step 9.

**At the subscriber site**

20 To return the BCLID link to service, type

**>RTS**

and press the Enter key.

<b>If</b>	<b>Do</b>
the BCLID link returns to service and the status of the link is call processing busy (CPB)	step 26
the following message appears: CMR NOT IN SERVICE	step 21

**BCLID link failure** (end)

	<b>If</b>	<b>Do</b>
	the following message appears: CMR NOT RESPONDING	step 23
	a message other than listed here appears	step 25
<b>21</b>	Go to <i>Card Replacement Procedures</i> for information on card replacement procedures. Go to <i>Alarm Clearing and Performance Monitoring Procedures</i> for information on peripheral module (PM) maintenance procedures. The CMR card is out of service. You cannot return the BCLID link to service. Return to this point.	
<b>22</b>	Go to step 26.	
<b>23</b>	Go to <i>Card Replacement Procedures</i> for information on card replacement procedures. Go to <i>Alarm Clearing and Performance Monitoring Procedures</i> for information on peripheral module (PM) maintenance procedures. The CMR card is in service. The CMR card does not respond to the request to return the BCLID link to service. Return to this point.	
<b>24</b>	Go to step 26.	
<b>25</b>	For additional help, contact the next level of support.	
<b>26</b>	The procedure is complete.	

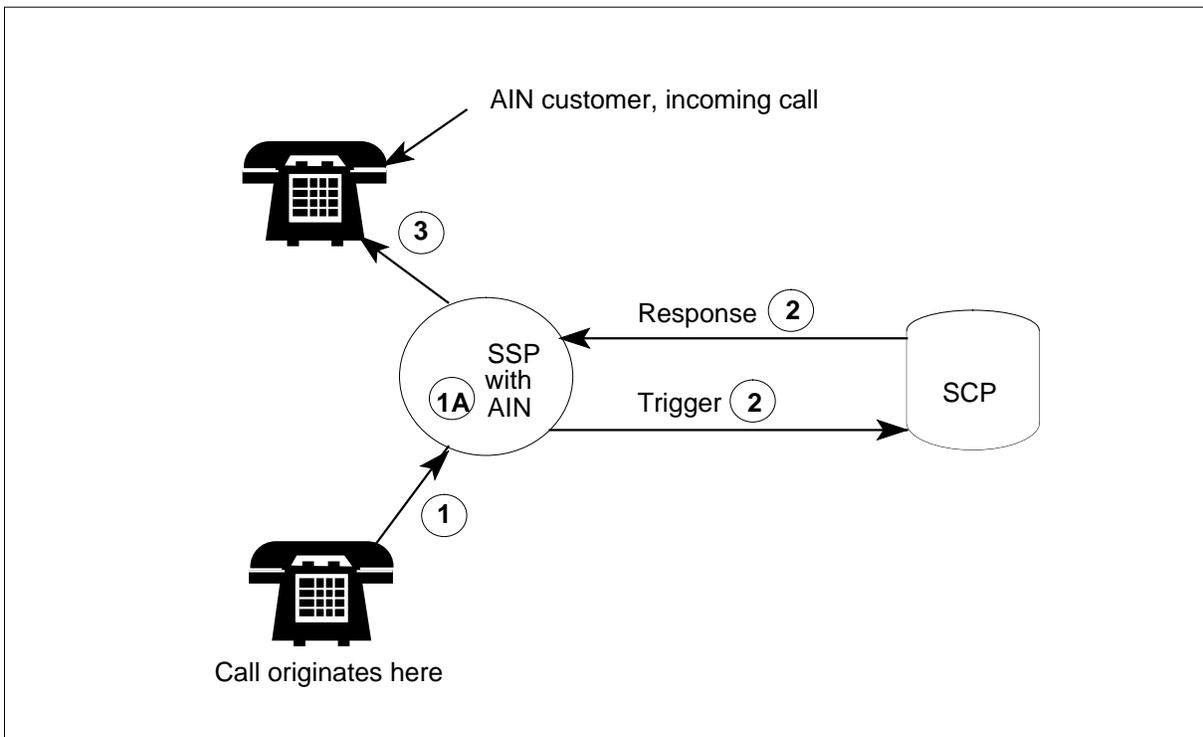
## Cannot be called

### Application

Use this procedure to correct the “Cannots be called” difficulty the AIN customer reports. These incoming call types include the incoming directory number (DN) trigger, the incoming trunk seizure (ITS) trigger, and the shared interoffice trunk (SIT) trigger.

The following figure is an abbreviated call sequence diagram for an incoming AIN call.

#### Basic AIN call sequence, incoming call



Basic problem solving procedures for this type of call include:

- TRAVER from originating number to SSP (step 1 above) or to virtual facility group (VFG) TRAVER SSP (steps 1 and 1A above)
- PVNVER command to launch query to SCP; check response
- TRAVER office route to terminating number (in this case, an AIN customer)

## **Cannot be called** (continued)

---

### **Definition**

This complaint means that the customer cannot receive incoming calls using the features of the advanced intelligent network (AIN) software and the service control point (SCP) database to query for routing and billing information.

Possible causes of this problem are the same as the causes of “cannot call out” problems and can include

- congestion in the service switching point (SSP)
- wrong or incomplete entries (translations)
- customer cannot activate AIN features
- automatic call gapping is activated
- protocol or application errors caused by wrong transaction capabilities application part (TCAP) messages
- SCP entry error

### **Common procedures**

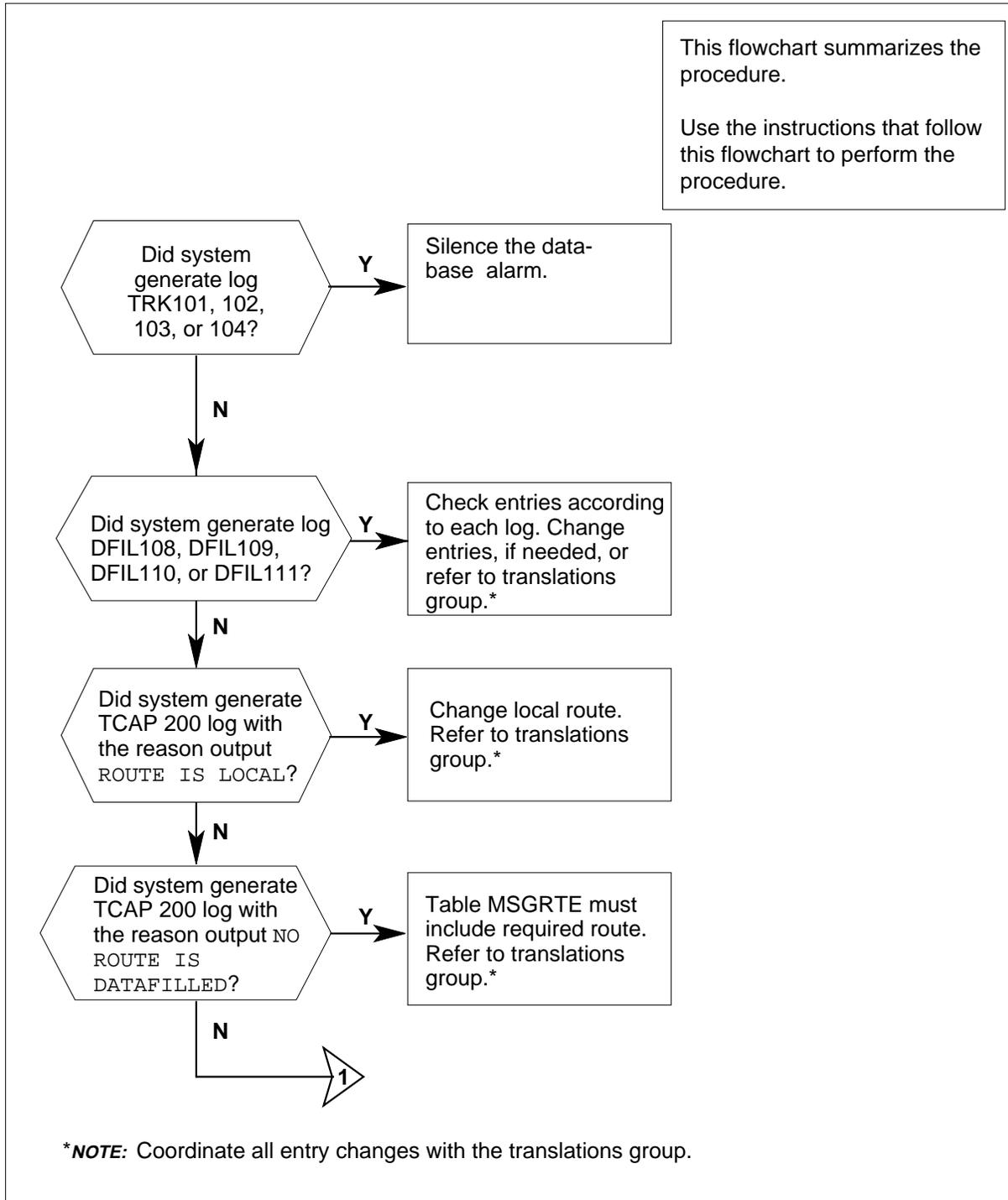
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

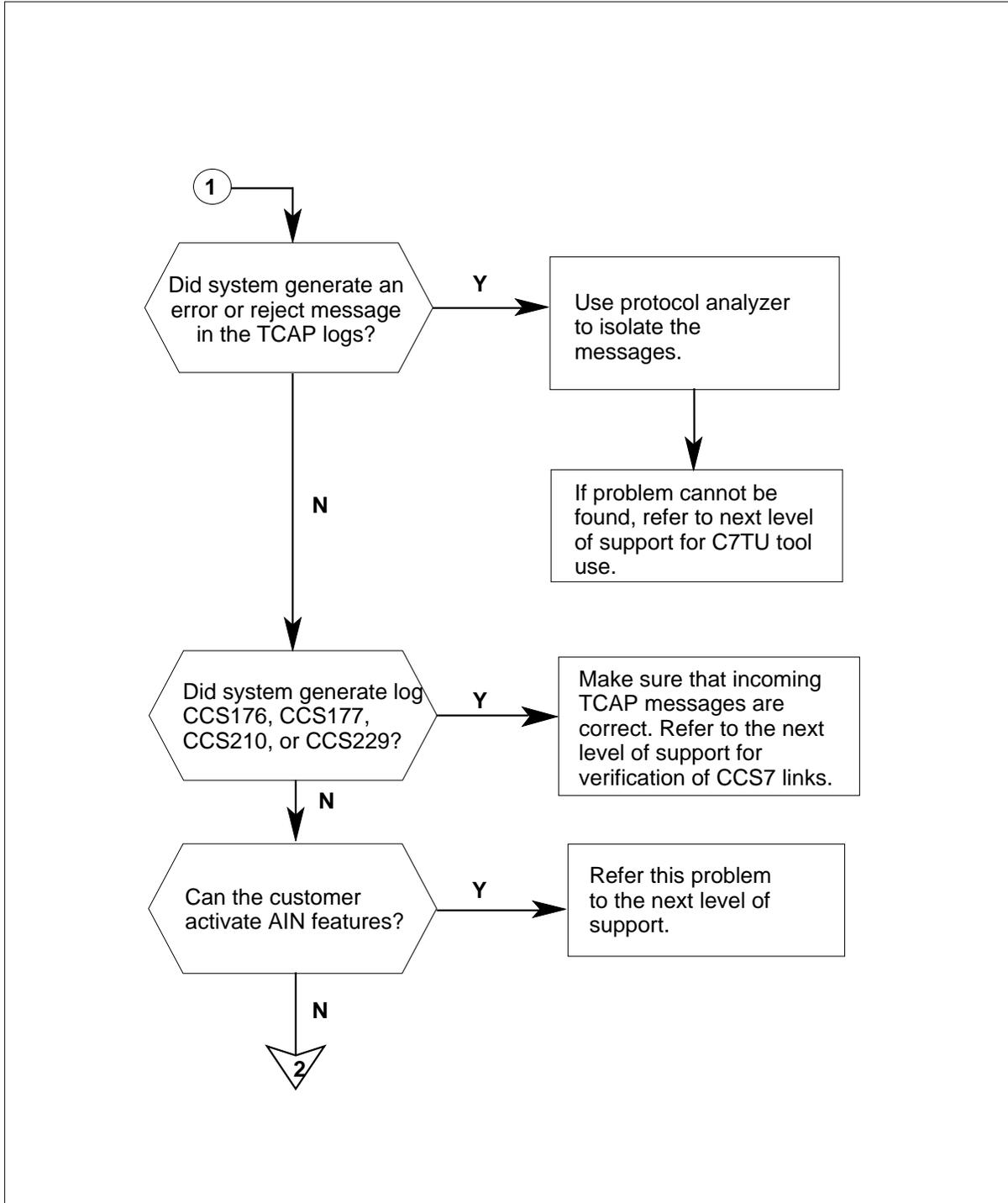
## Cannot be called (continued)

### Summary of Cannot be called



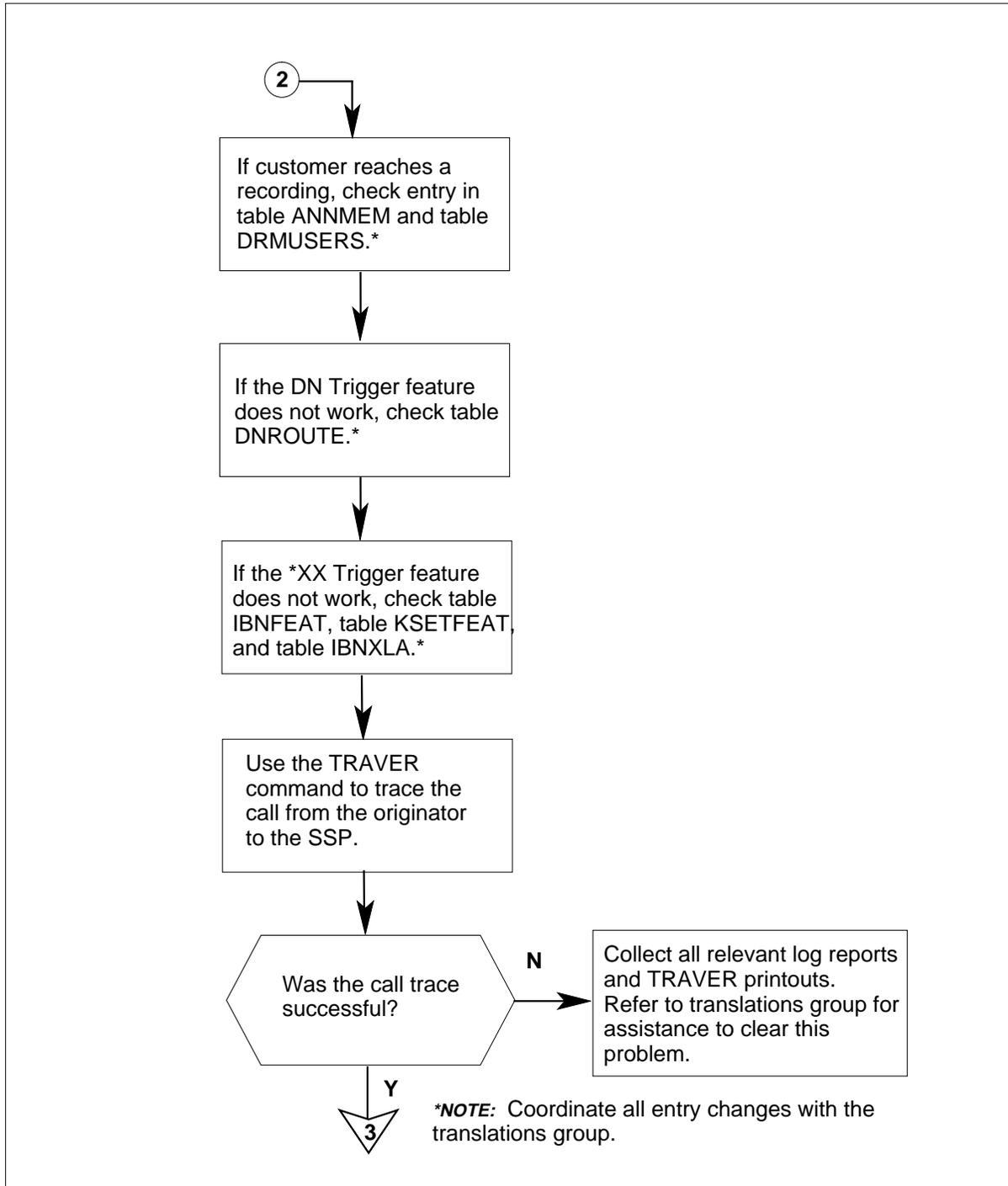
**Cannot be called** (continued)

**Summary of Cannot be called (continued)**



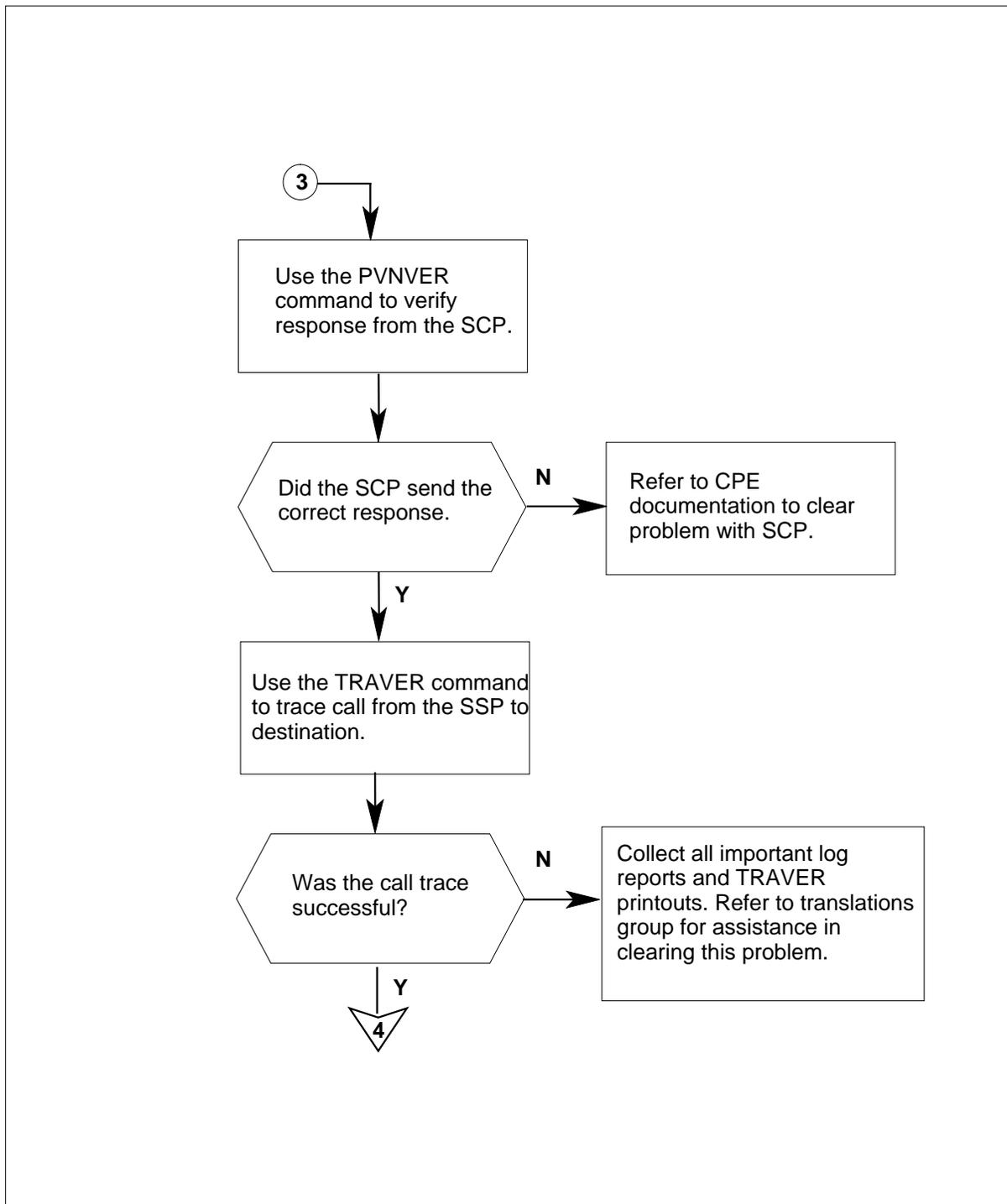
## Cannot be called (continued)

### Summary of Cannot be called (continued)



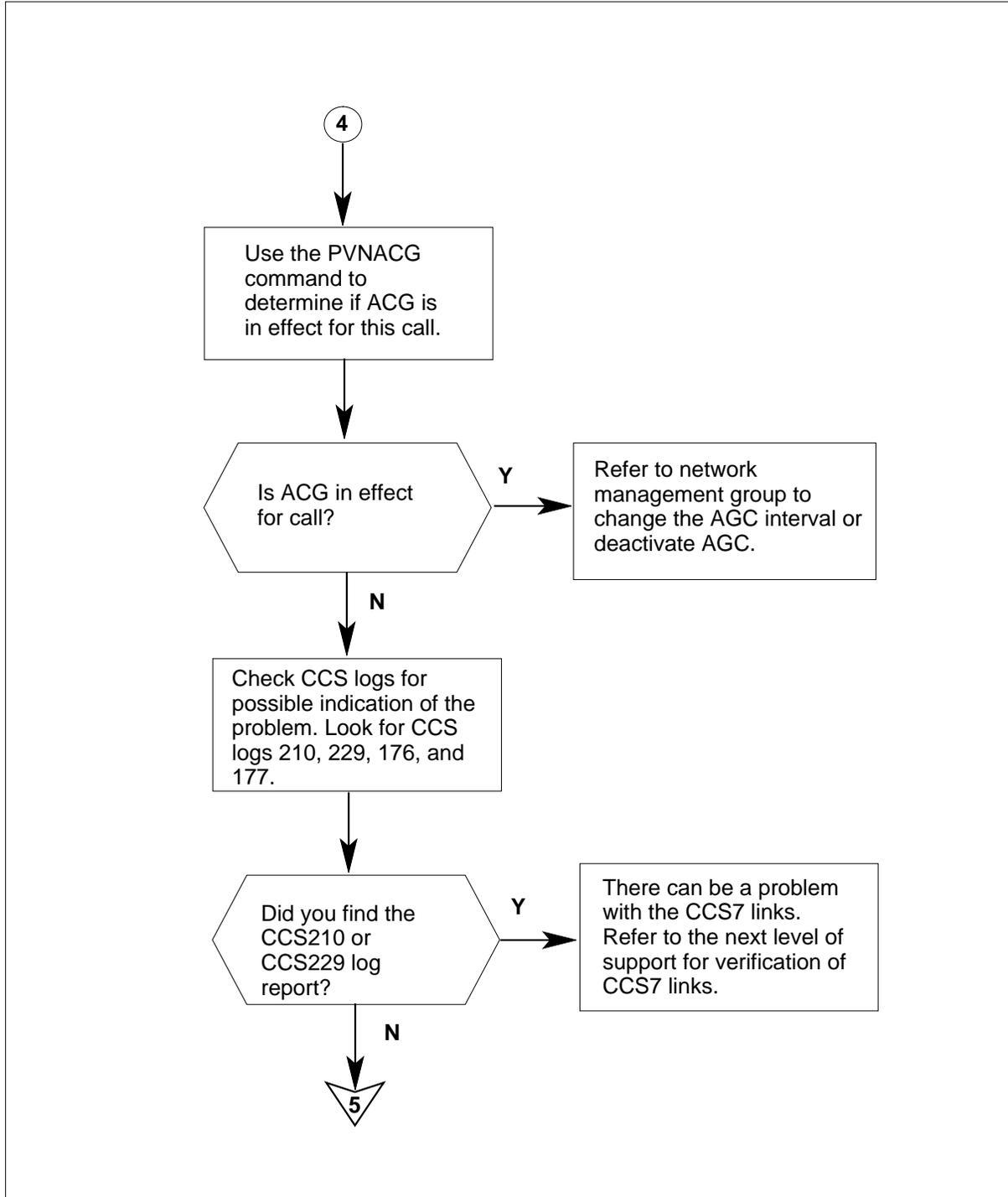
**Cannot be called** (continued)

**Summary of Cannot be called (continued)**



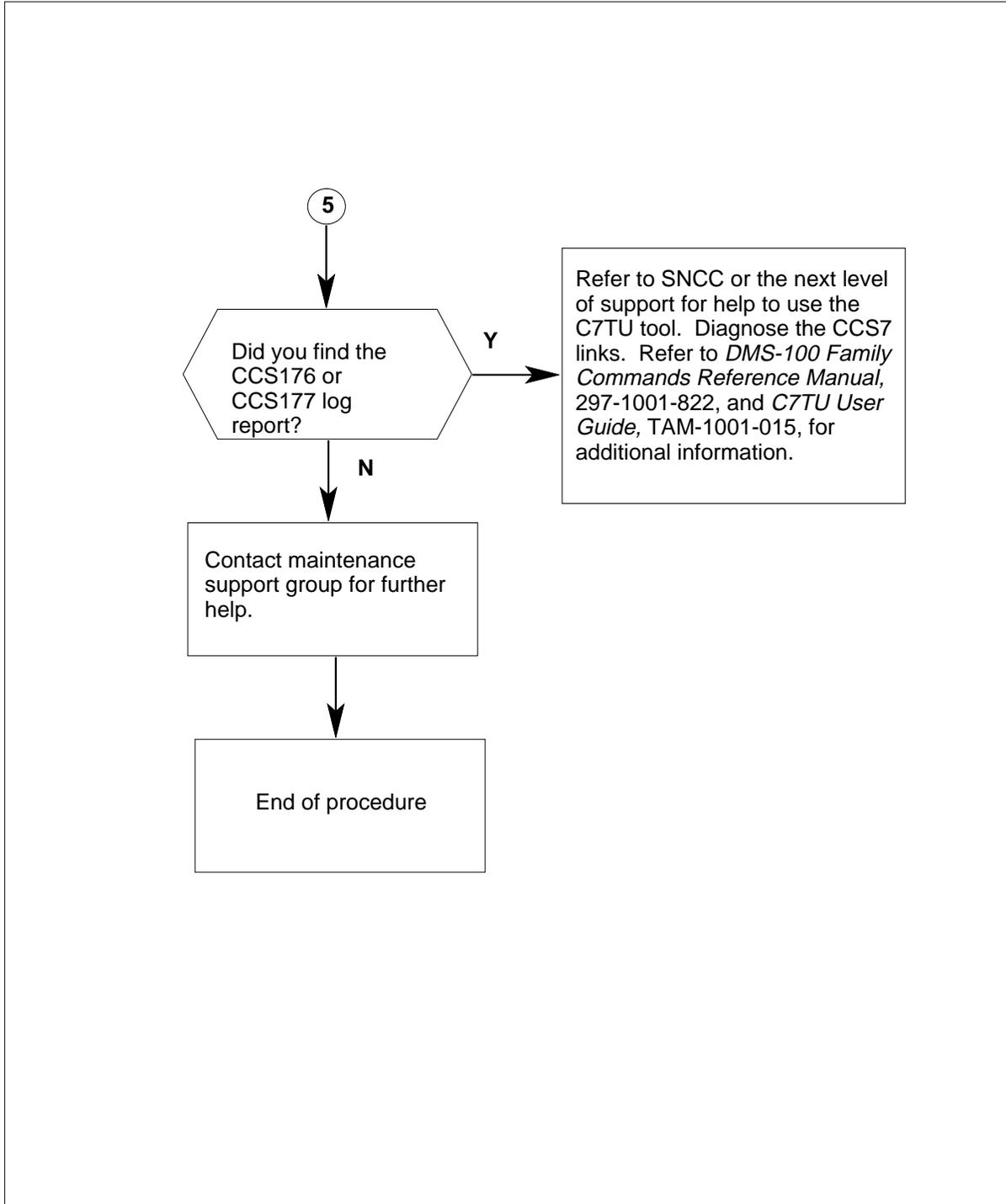
## Cannot be called (continued)

### Summary of Cannot be called (continued)



**Cannot be called** (continued)

**Summary of Cannot be called (continued)**



## Cannot be called (continued)

### Cannot be called

#### At the MAP terminal

- 1 To obtain logs, activate the LOGUTIL log reporting system. Type  
`>LOGUTIL`  
 and press the Enter key.
- 2 To view log reports, type  
`>OPEN log_report_type`  
 and press the Enter key.  
*where*  
     **log\_report\_type**  
         is the log report category to be generated (such as CCS, DFIL, TCAP,  
         or TRKS)
- 3 To display these log reports, type  
`>BACK`  
 and press the Enter key.  
 Enter this command repeatedly until the log reports appear.

**Note:** When you complete the LOGUTIL utility, you must enter the QUIT command. Make sure you enter the QUIT command before you enter another area or begin a new procedure.

If the log report	Do
is TRK101, 102, 103, or 104	step 4
is DFIL108, 109, 110, or 111	step 5
is TCAP 200 and the reason output is ROUTE IS LOCAL	step 10
is TCAP 200 and the reason output is NO ROUTE IS DATAFILLED	step 11
is TCAP log contains an error or reject message	step 12
is CCS176, 177, 210, or 229	step 25
is other than listed here	step 15

- 4 Check the percentage of BUSY information on log TRK101 (minor), TRK 102 (major), TRK 103 (critical), or TRK 104. The information regards trunks that come into the SSP. If you need to silence the alarm, type  
`>MAPCI;MTC;SIL`  
 and press the Enter key.  
 These logs can be referred to network planning personnel or to the next level of support.

**Cannot be called** (continued)

- 5 Check log reports.
- Note 1:** For additional information, refer to *Translations Guide*, and *Log Report Reference Manual*.
- Note 2:** Changes in entries must coordinate with the translations group in your company.

If log	Do
is log DFIL108	step 6
is log DFIL109	step 7
is log DFIL110	step 8
is log DFIL111	step 9

- 6 There can be an error or omission in the entry in table OFRT. Refer to the translations group within your company to verify or correct the entries in table OFRT. For more information, refer to *Log Report Reference Manual* and *Translations Guide*.

- 7 You must add the trunk common language location identifier (CLLI) and the trunk local access and transport (LATA) number to table SSPTKINK. Refer to the translations group in your company to perform this action.

- 8 The carrier digits can be wrong or were not entered for the carrier in tables OCCNAME and OCCINFO. Refer to the translations group in your company to verify or correct the entries in tables OCCNAME and OCCINFO.

- 9 The access field for the carrier in table OCCINFO must change from NONE to a correct access type. Refer to the translations group in your company to perform this action.

- 10 The entries must be correct so that the routing is not local. Refer to the translations group in your company to perform this action.
- Note:** For additional information, refer to *Translations Guide* and *Log Report Reference Manual*.

- 11 To enter the required route in table MSGRTE, refer to the next level of support or to the translations group in your company.
- Note:** For additional information, refer to *Translations Guide* and *Log Report Reference Manual*.

- 12 Check the information generated by the TCAP logs, including error or reject messages.

If	Do
the logs indicate message and re- sponse problems	step 13
cannot find a problem	step 14

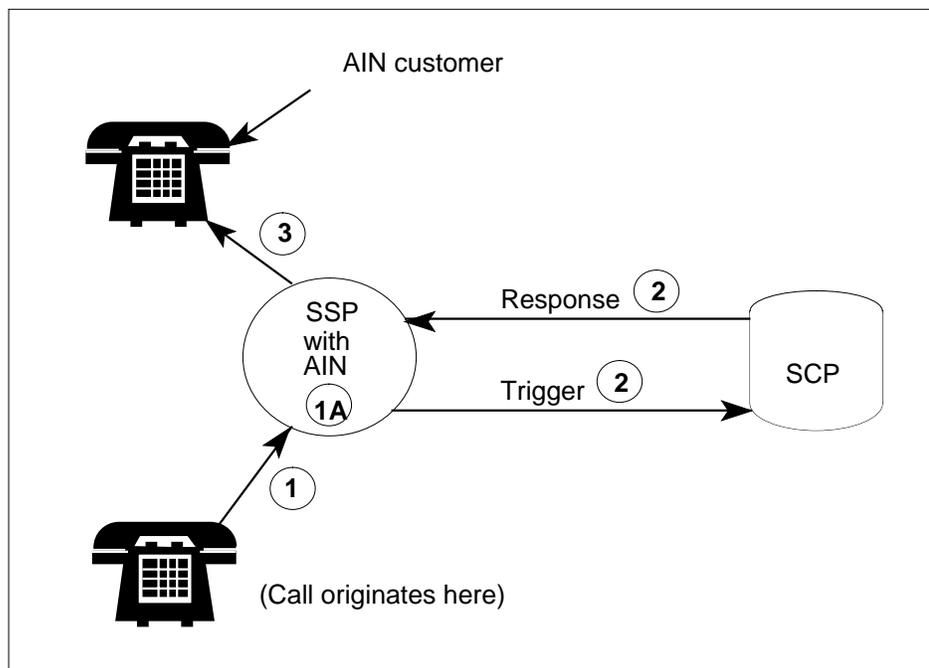
- 13 Use a protocol analyzer to help isolate messages. Refer to the next level of support for instructions.

## Cannot be called (continued)

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- 14** Refer to the next level of support for C7TU tool use. Refer to *DMS-100 Family Commands Reference Manual*, 297-1001-822, and to *C7TU User Guide*, TAM-1001-015 for information on this tool.
- 15** If a customer can activate AIN features, refer this problem to the next level of support.
- If a customer cannot activate AIN features, an entry error can exist that can result in the following conditions. Contact your company translations group if you need help to isolate and clear the fault.
- If the customer reaches a recording, the translations group will check entries in table ANNMEM and table DRMUSERS. The translations group will make sure that the customer can reach the correct recording.
  - If the customer cannot activate the DN Trigger feature, the translations group will check table DNROUTE.
  - If the customer cannot activate the \*XX Trigger feature, the translations group will check table IBNFEAT, table KSETFEAT, and table IBNXLA.
- Use the TRAVER and PVNVER commands to verify the translations data entries. Proceed to step 16 to begin this action.
- Refer to *Translations Guide* for additional information.
- 16** Refer to the following diagram for the steps to trace AIN calls.
- The following examples are standard and variable dial plans. Routing has the following categories:
- public routing-intra-LATA line or trunk calls, carrier = 110, the pseudo carrier for SSP routing
  - public routing-inter-LATA trunk calls, carrier = other than 110, an interexchange carrier (IEC) or international carrier (INC)
  - private routing-private network, trunk or line over an office route, not outward wide area telephone service (OUTWATS)
  - private routing-private network over an office route over OUTWATS. This plan must route through a virtual facility group (VFG).

**Cannot be called** (continued)



- 17 Route this information to a printer before you execute the TRAVER command. Type

```
>RECORD START ONTO PRINTER printer_number
```

and press the Enter key.

where

**printer\_number**

is the number of the printer on which you want the information to print

Example input:

```
>RECORD START ONTO PRINTER 1
```

- 18 STEP 1 (of TRAVER) To generate a TRAVER for an outgoing AIN call, end to end, see diagram in step 16.

- a Execute the TRAVER command by typing

```
>TRAVER L originating_number npa_+_terminating_number
B
```

and pressing the Enter key.

where

**originating\_number**

is the number where the call began or originated

**npa\_+\_terminating\_number**

is the called number, including the numbering plan area (NPA)

Example input:

```
>TRAVER L 2261919 19032231903 B
```

## Cannot be called (continued)

**Note:** This TRAVER example will go to a virtual facility group (VFG) so there will be two TRAVERS, one from the originating number to the VFG and one from the VFG to the SSP.

When the first leg of this TRAVER has been completed, the response at the bottom of the MAP (maintenance and administration position) screen or at the bottom of the printout should give you the VFG and a set of digits. If not, go to step 22.

*Example of a MAP response:*

```
PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)
-----
DIGIT TRANSLATION ROUTES
1 VFG:   NETINV      19032231903          ST
```

- b** To continue tracing this call from the VFG to the SSP, use the information and digits given in the first leg of the TRAVER under DIGIT TRANSLATION ROUTES. Execute the TRAVER command again by typing

```
>TRAVER V vfg terminating_number B
```

and pressing the Enter key.

*where*

**vfg**

is the virtual facility group identification given previously under DIGIT TRANSLATION ROUTES

**terminating\_number**

is the called number, including the numbering plan area (NPA)

```
>TRAVER V NETINV 19032231903 B
```

When this leg of this TRAVER has been completed, the response at the bottom of the MAP screen or at the bottom of the printout should be as follows:

```
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION
INFORMATION
```

**Note:** The table that follows this step-action procedure provides an example of this TRAVER.

If the message	Do
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION appears	step 19
other than listed here appears	step 22

### 19 STEP 2 (of TRAVER)

- a** Query the SCP by typing

```
>PVNVER npa+_originating_number lata_number PVN
npa+_terminating_number
```

**Cannot be called** (continued)

and pressing the Enter key.

*where*

**npa\_+\_originating\_number**  
is the NPA and the calling number

**lata\_number**  
is the local access and transport area number (LATA)

**npa\_+\_terminating\_number**  
is the NPA and the called number

- b** If you do not know your LATA number, you can search for LATANUM in table LATANAME by typing

**>TABLE LATANAME**

and pressing the Enter key.

Then, position on your LATA by typing

**>POS your\_lata**

and pressing the Enter key.

*where*

**your\_lata**  
is the number of your LATA

Note the LATANUM of your LATA. Then, exit table LATANAME by typing

**>QUIT**

and pressing the Enter key.

- c** Query the SCP with the PVNVER command.

*Example input:*

**>PVNVER 9062261919 100 PVN 9032231903**

This command launches a query. When the response is received from the SCP, Parameter 4 will specify the primary office route. Write down the digit(s) in this field. You will need this information for step 21.

**Note:** When using PVNVER for a DN Trigger call, both calling and called numbers are the same.

- 20** You can use either the PVNVER command or the TESTSS PVN command to send a message to the SCP. If the SCP does not respond, refer to customer premises equipment (CPE) documentation for entry checks in the SCP. You also can refer to the next level of support.

- 21** STEP 3 (of TRAVER)

To complete the call that routes from the SSP to the terminating number, type

**>TRAVER R OFRT office\_route\_number**

and press the Enter key.

*where*

**office\_route\_number**  
is that given in Parameter 4 of PVNVER response

## Cannot be called (continued)

---

*Example input:*

>TRAVER R OFRT 938

There will be lists of tables and a message that appear on the bottom of the MAPscreen (or the printed copy).

*Example of a MAP response:*

PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)

-----  
TRAVER: SUCCESSFUL CALL TRACE

- 22** A leg of the call trace procedure does not always provide a response or the responses shown above. When there is no response, collect all log reports, copies of TRAVER and PVNVER. Forward these reports and copies to the next level of support or to the translations group. From the TRAVER and PVNVER, determine if the problem is in your office. Determine if you need arrangements with other departments like SCP, STP, and network management.

- 23** Check if Automatic Call Gapping (ACG) activates when you enter the command

>PVNACG

and press the Enter key.

The response to this command displays all the six digit call numbers that are under SCP overload ACG control. The header indicates the NPA-NXX of the affected AIN calling number, and the gap interval in 10 ms. The header also indicates the control period in seconds and the remaining time on the control in seconds.

PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)

-----  
613621            30000            INFINITE            INFINITE  
613722            0                 128                 75  
-----

TOTAL: 2 ACG CONTROLS.

If there is no active ACG, this message appears:.

**Cannot be called** (continued)

PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)

-----

NO ACG CONTROL IS IN EFFECT.

	<b>If ACG</b>	<b>Do</b>
	is the active calling number of the customer (check the NXX in the response to the PVNACG command)	step 24
	is not active	step 25
<b>24</b>	Refer to network management for possible interval change or termination of ACG.	
<b>25</b>	To obtain logs, activate the LOGUTIL log report system. Type >LOGUTIL and press the Enter key.	
<b>26</b>	To view log reports, type >OPEN log_report_type and press the Enter key. <i>where</i> <b>log_report_type</b> is the alphabetical string that identifies the log report category that will generate	
	<i>Example input:</i> >OPEN CCS	
	<b>Note:</b> When you finish with the LOGUTIL utility, you must enter the QUIT command. Make sure you enter the QUIT command before you enter another area or begin a new procedure.	
	the system generates a CCS210 or CCS229 log, a routeset failure, congestion, or restriction (CCS7 link problems) occurs	step 27
	the system generates a CCS176 or CCS177 log, the link data and route data differences indicate message and response problems	step 28
	other than listed here	step 29
<b>27</b>	Refer to the next level of support to check CCS7 links.	

## Cannot be called (continued)

- 28 Refer to Signaling Network Control Center (SNCC) or the next level of support for C7TU tool use. The next level of support and SNCC can help you capture message information on CCS7 links. Refer to *DMS-100 Family Commands Reference Manual*, 297-1001-822, and to *C7TU User Guide*, TAM-1001-015, for more information on this tool.
- 29 Contact the next level of support.
- 30 The procedure is complete.

### TRAVER Examples

Figure shows the TRAVER and PVNVER call trace procedures for an incoming AIN call. The call is from a RES line to POTS (1+) ten digits that uses the public office dial plan trigger. This call routes through table NCOS.

### TRAVER for incoming AIN call, public office dial plan trigger, from RES line

Line	Output
	<b>(step 1 – The first number to SSP, or to VFG then to SSP)</b>
1	>TRAVER L 2261919 19032231903 B
2	TABLE IBNLINES
3	HOST 01 0 14 13 0 DT STN RES 2261919 531 (CWT) (3WC) (CWI) (CNDBAMA) (COTAMA) (ACBAMA)
4	TABLE LINEATTR
5	531 1FR NONE NT NSCR 254 906 NETI NLCA N RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
6	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
7	TABLE DNATTRS
8	906 226 1919
9	(PUBLIC ( NAME SESAME PHONE 5) \$) \$ \$
10	TABLE DNGRPS
11	TUPLE NOT FOUND
12	TABLE NCOS
13	NETRES 3 0 0 INRES1 ( XLAS PXIN5 NXLA NDGT)\$
14	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
15	NETRES NXLA CXRES FXRES 0 DCRES
16	TABLE DIGCOL
17	DCRES 1 RPT
18	TABLE IBNXLA: XLANAME PXIN5
19	TUPLE NOT FOUND
20	Default from table XLANAME:
21	PXIN5 (NET N N N 0 Y POTS N Y GEN ( LATTR 531) \$)\$ 9
22	TABLE DIGCOL
23	POTS specified: POTS digit collection

**Cannot be called** (continued)

Line	Output
1	TABLE LINEATTR
2	531 1FR NONE NT NSCR 254 906 NETI NLCA RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
3	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
4	TABLE STDPRTCT
5	NETI ( 1) ( 0)
6	. SUBTABLE STDPRT
7	. 19 19 N DD 1 NA
8	. SUBTABLE AMAPRT
9	. KEY NOT FOUND
10	. DEFAULT VALUE IS: NONE OVRNONE N
11	TABLE HNPACONT
12	906 911 19 ( 84) ( 1) ( 0) ( 0)
13	. SUBTABLE HNPACODE
14	. 903 903 FNPA 0
15	TABLE FNPACONT
16	903 872 - ( 3) ( 0) ( 3)
17	. SUBTABLE FNPACODE
18	. 223 223 1 Y
19	. SUBTABLE RTEREF
20	. . 1 N D S6S3ITO 0 N N
21	. EXIT TABLE RTEREF
22	EXIT TABLE FNPACONT
23	TABLE IBNFPEAT
24	HOST 01 0 14 13 0 PIC PIC NETEAP Y
25	OVERLAP CARRIER SELECTION (OCS) APPLIES
26	TABLE LATAAXLA
27	SSPLATA 9 INTER INTER STD
28	TABLE OCCINFO
29	NETEAP 180 EAP Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y N N
30	TABLE EASAC
31	TUPLE NOT FOUND
32	TABLE STDPRTCT
33	NETI ( 1) ( 0)

**Cannot be called** (continued)

Line	Output
1	TABLE STDPRTCT
2	NETI ( 1) ( 0)
3	. SUBTABLE STDPRT
4	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
5	. . TABLE OFRT
6	. . 209 N D S6S1ITOC7 0 N N
7	. . N D S6S1ITO 0 N N
8	. . EXIT TABLE OFRT
9	. TABLE STDPRTCT
10	. EAPI ( 1) ( 0)
11	. . SUBTABLE STDPRT
12	. . 1903 1904 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
13	. . . TABLE IBNRTE
14	. . . 212 VFG N N N NETINV 208
15	. . . . TABLE DIGMAN
16	. . . . 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 210) (NEX 211)
17	. . . . . TABLE DIGMAN
18	. . . . . 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
19	. . . . . EXIT TABLE DIGMAN
20	. . . . . TABLE DIGMAN
21	. . . . . 211 (CL BEG) (REM3) (CL BEG) (INC 1) (CL BEG)
22	. . . . . EXIT TABLE DIGMAN
23	. . . . . EXIT TABLE DIGMAN
24	. . . . . EXIT TABLE IBNRTE
25	+++ TRAVER: SUCCESSFUL CALL TRACE +++
26	DIGIT TRANSLATION ROUTES
27	1 VFG: NETINV 19032231903 ST
28	TREATMENT ROUTES. TREATMENT IS: GNCT 1 T60
29	+++ TRAVER: SUCCESSFUL CALL TRACE +++
30	FF

**Cannot be called** (continued)

Line	Output
	<b>(step 1A – From VFG to SSP)</b>
1	>TRAVER V NETINV 19032231903 B
2	TABLE VIRTGRPS
3	NETINV SIZE 1024 IBN N NETIN 0 0 0 N N N \$
4	TABLE NCOS
5	NETIN 0 0 0 NCIN ( XLAS NXLA NXLA POTS)\$
6	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL\$
7	NETIN NXLA CXIN FXRES 0 DCIN
8	TABLE DIGCOL
9	POTS specified: POTS digit collection
10	NCOS PRELIM XLA name is NIL. Go to next XLA name.
11	CUST PRELIM XLA name is NIL. Go to next XLA name.
12	TABLE IBNXLA: XLANAME CXIN
13	TUPLE NOT FOUND
14	Default from table XLANAME:
15	CXIN (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM) \$)\$ 9
16	TABLE DIGCOL
17	POTS specified: POTS digit collection
18	TABLE LINEATTR
19	501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC NETLATA1 0 NIL NIL 00 N \$
20	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21	+++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
22	+++ TRAVER: SUCCESSFUL CALL TRACE +++
23	PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP
24	+++ TRAVER: CALL TRACE TERMINATED; PROBLEM UNKNOWN +++
25	FF

## Cannot be called (continued)

---

Line	Output
	(step 2 – From SSP , Query sent to SCP and response back to SSP)
1	>PVNVER 9062261919 100 PVN 9032231903
2	The BSDB response
3	0 minutes 0.108 seconds
4	BSDB has sent a response message
5	BSDB has sent routing information
6	Invoke ID: 1. Correlation ID: 0
7	Parameter 1:
8	Primary carrier is: 180
9	Parameter 2:
10	The number is a national routing number
11	Routing number is: 9032231903
12	Parameter 3:
13	Outpulse number is 9032231903
14	Parameter 4:
15	Primary office route is 0000938
16	If unable to route, call will not overflow and not return
17	Call will outpulse the outpulse number
18	Call is a WATS call
19	Parameter 5:
20	Originating station type is a PVN line
21	Parameter 6:
22	Primary billing indicator
23	Call type 166
24	Service feature code 000
25	Parameter 7:
26	Overflow billing indicator
27	Call type 162
28	Service feature code 000
29	FF

**Cannot be called** (continued)

Line	Output
	<b>(step 3 – From SSP, out on office route that the SCP specifies to terminate number - NOTE: THIS EXAMPLE IS FOR PRIVATE ROUTING OVER OUTWATS)</b>
1	>TRAVER R OFRT 938
2	TABLE OFRT
3	938 T IBNRTE 228
4	. TABLE IBNRTE
5	. 228 OW N N N 6 V NETOW 0
6	. EXIT TABLE IBNRTE
7	EXIT TABLE OFRT
8	+++ TRAVER: SUCCESSFUL CALL TRACE +++
9	TRAVER V NETOW 9032231903 B
10	TABLE VIRTGRPS
11	NETOW SIZE 1024 POTS N 501 N ( EA NETEAP Y )\$
12	TABLE LINEATTR
13	501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC NETLATA 0 NIL NIL 00 N \$
14	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
15	TABLE STDPRTCT
16	NETA ( 1 ) ( 0 )
17	. SUBTABLE STDPRT
18	. 903 903 N DD 0 NA
19	. SUBTABLE AMAPRT
20	. KEY NOT FOUND
21	. DEFAULT VALUE IS: NONE OVRNONE N
22	TABLE HNPACONT
23	906 911 10 ( 84 ) ( 1 ) ( 0 ) ( 0 )
24	. SUBTABLE HNPACODE
25	. 903 903 FNPA 0
26	TABLE FNPACONT
27	903 872 - ( 3 ) ( 0 ) ( 3 )
28	. SUBTABLE FNPACODE
29	. 223 223 1 Y
30	. SUBTABLE RTEREF
31	. . 1 N D S6S3ITO 0 N N
32	EXIT TABLE RTEREF
33	EXIT TABLE FNPACONT

**Cannot be called** (continued)

```

Line   Output
1      OVERLAP CARRIER SELECTION (OCS) APPLIES
2      TABLE LATA XLA
3      NETLATA1 903 INTER INTER STD
4      TABLE OCCINFO
5      NETEAP 180 EAP Y Y Y Y N N Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y
          N N
6      TABLE EASAC
7      TUPLE NOT FOUND
181    TABLE STDPRTCT
182    NETA ( 1 ) ( 0 )
183    . SUBTABLE STDPRT
184    . 10180 10180 EA DD 5 P EAPN NETEAP U OFRT 223 6 20 Y
185    . . TABLE OFRT
186    . . 223 N D S6S7EAPC7 0 N N
187    . . N D S6S7EAP 0 N N
188    . . EXIT TABLE OFRT
189    . TABLE STDPRTCT
190    . EAPN ( 1 ) ( 0 )
191    . . SUBTABLE STDPRT
192    . . KEY NOT FOUND
193    . . DEFAULT VALUE IS: N NP 0 NA

194    +++ TRAVER: SUCCESSFUL CALL TRACE +++

195    DIGIT TRANSLATION ROUTES

196    1 S6S7EAPC7          9032231903          ST
197    2 S6S7EAP           9032231903          ST

198    TREATMENT ROUTES. TREATMENT IS: GNCT
199    1 T60

200    +++ TRAVER: SUCCESSFUL CALL TRACE +++

201    FF

```

The second and third figures contain examples of TRAVERs for AIN calls that use incoming triggers. The AIN calls also uses the directory number (DN) trigger, the incoming trunk seizure (ITS) trigger, and the shared interoffice trunk (SIT) trigger.

Figure shows an AIN call that comes in from a T2 trunk. The AIN call uses the DN trigger.



**Cannot be called** (continued)

**TRAVER for incoming AIN call, directory number (DN) trigger; from an IBN trunk**

Line	Output
	<b>&gt;TRAVER TR S3S5IBN2C7 2231722 B</b>
1	TABLE TRKGRP
2	S3S5IBN2C7 IBNT2 0 NPDGP NCRT NETWORK 0 MIDL 0 N ANSDISC 0 N N N N N N Y 0 0 N 0 0 0 0 N N N N N N N N N NATL \$
3	TABLE NCOS
4	NETWORK 0 0 0 NCNET \$
5	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
6	NETWORK NXLA CXNET FXNET 0 DCNET
7	TABLE DIGCOL
8	DCNET 2 RPT
9	NCOS PRELIM XLA name is NIL. Go to next XLA name.
10	CUST PRELIM XLA name is NIL. Go to next XLA name.
11	TABLE IBNXLA: XLANAME CXNET
12	CXNET 223 EXTN Y N N 903 223 7 9 \$
13	TABLE TOFCNAME
14	903 223
15	TABLE DNINV
16	903 223 1722 FEAT DNTRIG IBN 501 NETIN 0 Y
17	TABLE DNATTRS
18	TUPLE NOT FOUND
19	TABLE DNGRPS
20	TUPLE NOT FOUND
21	DIGIT TRANSLATION ROUTES
22	+++ PVN CALL WILL QUERY SCP FOR TRANSLATION INFORMATION
23	1 FEATURE 9032231722 ST
24	TREATMENT ROUTES. TREATMENT IS: GNCT
25	1 T60
26	+++ TRAVER: SUCCESSFUL CALL TRACE +++

The following figure shows the shared interoffice trunk (SIT) trigger. The call starts on LBR2, DN 2251702. These TRAVERs demonstrate the start of the call. The TRAVERs also demonstrate that the call will route with the use of AIN trunks from S5 to S3.

**Cannot be called** (continued)

**TRAVER for incoming AIN call, shared interoffice trunk (SIT) trigger**

Line	Output
	<b>&gt;QDN 2251702</b>
	-----
1	DN: 2251702
2	TYPE: SINGLE PARTY LINE
3	SNPA: 905 SIG: DT LNATTIDX: 508
4	LINE EQUIPMENT NUMBER: HOST 00 0 00 08
5	LINE CLASS CODE: 1FR
6	LINE TREATMENT GROUP: 0
7	CARDCODE: 6X17AA GND: N PADGRP: NPDGP BNV: NL MNO: Y
8	PM NODE NUMBER : 43
9	PM TERMINAL NUMBER : 9
10	OPTIONS:
11	DGT PIC SSP Y
	-----
12	<b>&gt;TRAVER L 2251702 19062261914 B</b>
13	TABLE LINEATTR
14	508 1FR NONE NT NSCR 0 905 NETA NET1 RTE1 0 NIL NILSFC NETLATA2 0 NIL NIL 00 Y NETRES 0 0 \$
15	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
16	TABLE DNATTRS
17	TUPLE NOT FOUND
18	TABLE DNGRPS
19	TUPLE NOT FOUND
20	TABLE STDPRTCT
21	NETA ( 1 ) ( 0 )
22	. SUBTABLE STDPRT
23	. 1906 1906 N DD 1 NA
24	. SUBTABLE AMAPRT
25	. KEY NOT FOUND
26	. DEFAULT VALUE IS: NONE OVRNONE N
27	TABLE HNPACONT
28	905 911 0 ( 7 ) ( 1 ) ( 0 ) ( 0 )
29	. SUBTABLE HNPACODE
30	. 906 906 FNPA 0

**Cannot be called** (continued)

Line	Output
1	TABLE FNPACONT
2	906 256 - ( 2) ( 0) ( 2)
3	. SUBTABLE FNPACODE
4	. 226 226 1 Y
5	. SUBTABLE RTEREF
6	. . 1 N D S5S3ITOC7 0 N N
7	. EXIT TABLE RTEREF
8	EXIT TABLE FNPACONT
9	TABLE LCASCRCN
10	905 NET1 ( 5) MAND N
11	. SUBTABLE LCASCR
12	. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
13	TABLE PFXTREAT
14	MAND DD N DD UNDT
15	TABLE LENFEAT
16	HOST 00 0 00 08 S PIC PIC SSP Y
17	OVERLAP CARRIER SELECTION (OCS) APPLIES
18	TABLE LATAAXLA
19	NETLATA2 906 INTER INTER STD
20	TABLE OCCINFO
21	SSP 0110 EAP N Y Y Y Y Y Y Y Y Y Y LONG 0 FGRPD Y Y Y Y Y N Y N Y N N N
22	TABLE EASAC
23	TUPLE NOT FOUND
24	TABLE STDPRTCT
25	NETA ( 1) ( 0)
26	. SUBTABLE STDPRT
27	. 10110 10110 EA DD 5 P NETI SSP Y OFRT 597 6 20 Y
28	. . TABLE OFRT
29	. . 597 CND EA INTNL SK 3
30	. . N D S5S3IT2C7A 15 D040 N
31	. . N D S5S3IT2A 15 D040 N
32	. . CND ALWAYS SK 2
33	. . N D S5S3IT2C7A 15 D140 N
34	. . N D S5S3IT2A 15 D140 N
35	. . EXIT TABLE OFRT
36	. TABLE STDPRTCT
37	. NETI ( 1) ( 0)
38	. . SUBTABLE STDPRT
39	. . 19 19 EA DD 1 T NA SSP Y OFRT 597 1 1 Y
40	. . . TABLE OFRT
41	. . . 597 CND EA INTNL SK 3
42	. . . N D S5S3IT2C7A 15 D040 N
43	. . . N D S5S3IT2A 15 D040 N
44	. . . CND ALWAYS SK 2

**Cannot be called** (continued)

Line	Output
1	. . . N D S5S3IT2C7A 15 D140 N
2	. . . N D S5S3IT2A 15 D140 N
3	. . . EXIT TABLE OFRT
4	+++ TRAVER: SUCCESSFUL CALL TRACE +++
5	DIGIT TRANSLATION ROUTES
6	1 S5S3IT2C7A D040 ST
7	2 S5S3IT2A D040 ST
8	TREATMENT ROUTES. TREATMENT IS: GNCT
9	1 T120
10	+++ TRAVER: SUCCESSFUL CALL TRACE +++ <b>NOTE:</b> THE CALL WILL QUERY IF OZZ = 040 or 140 and CARRIER ID = 110. THE TRIGGER POINT IS WHEN THE CALL HITS THE NSC SELECTOR.
	<u>CALL #01</u>
	SHARED INTEROFFICE TRUNK TRIGGER: 10 DIGITS ROUTING VIA AN ATC TYPE TRUNK GROUP...
	<b>&gt;TRAVER TR S3S5IT2A '040180' B</b>
11	WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
12	BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
13	DOCUMENTATION.
14	TABLE TRKGRP
15	S3S5IT2A IT 0 NPDGP NCRT 2W NIL MIDL 905 IN01 NSCR 903 000 Y N \$
16	TABLE STDPRTCT

**Cannot be called** (continued)

```

Line   Output
1      IN01 ( 1) ( 0)
2      . SUBTABLE STDPRT
3      . 040180 040180 T NP 6 OFRT 209 6 6 NONE
4      . . TABLE OFRT
5      . . 209 CND EA INTNL ST 210
6      . . . SAME TABLE
7      . . . 210 N D S3S7EAPC7 0 D141 N
8      . . .      N D S3S7EAP 0 D141 N
9      . . . EXIT SAME TABLE
10     . .      N D S3S7EAPC7 0 N N
11     . .      N D S3S7EAP 0 N N
12     . . EXIT TABLE OFRT
13     . SUBTABLE AMAPRT
14     . KEY NOT FOUND
15     . DEFAULT VALUE IS:  NONE OVRNONE  N

16     +++ TRAVER: SUCCESSFUL CALL TRACE +++

17     DIGIT TRANSLATION ROUTES

18     1 S3S7EAPC7                               STP
19     2 S3S7EAP                                 STP

20     TREATMENT ROUTES.  TREATMENT IS: GNCT

21     1 T60

22     +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**NOTE:** The '040' is the OZZ that will travel with the call. The '180' is the carrier in the route response for the AIN call.

The following figure shows TRAVER for an AIN call that uses the incoming trunk seizure trigger where the call starts on LBR2, DN 2251703. The TRAVERS demonstrate that the start of the call will route with the use of AIN trunks from S5 to S3.

**Cannot be called** (continued)

**TRAVER for incoming AIN call, incoming trunk seizure (ITS) trigger**

Line	Output
	<b>&gt;QD N 2251703</b>
1	DN: 2251703
2	TYPE: SINGLE PARTY LINE
3	SNPA: 905 SIG: DT LNATTIDX: N/A
4	LINE EQUIPMENT NUMBER: HOST 00 0 02 08
5	LINE CLASS CODE: IBN
6	IBN TYPE: STATION
7	CUSTGRP: NETWORK SUBGRP: 0 NCOS: 21
8	CARDCODE: 6X17AA GND: N PADGRP: NPDGP BNV: NL MNO: N
9	PM NODE NUMBER : 43
10	PM TERMINAL NUMBER : 73
11	OPTIONS:
12	DGT PIC SSP Y
13	<b>&gt;TRAVER L 2251703 2261914 B</b>
14	TABLE IBNLINES
15	HOST 00 0 02 08 0 DT STN IBN 2251703 NETWORK 0 21 905 \$
16	TABLE DNATTRS
17	TUPLE NOT FOUND
18	TABLE DNGRPS
19	TUPLE NOT FOUND
20	TABLE NCOS
21	NETWORK 21 0 0 AIN (XLAS PX21NET FXNET NDGT) \$
22	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
23	NETWORK NXLA CXNET FXNET 0 DCNET

**Cannot be called** (continued)

```

Line   Output
1      TABLE DIGCOL
2      DCNET 2 RPT
3      TABLE IBNXLA: XLANAME PX21NET
4      PX21NET 226 ROUTE N Y N 0 N 7 7 NDGT Y T IBNRTE 227 9
5      TABLE DIGCOL
6      NDGT specified: digits collected individually
7      TABLE IBNRTE
8          227 N N N N N S5S3IBN2A 0
9          N N N N N S5S3IBN2C7A 0
10     EXIT TABLE IBNRTE
11     +++ TRAVER: SUCCESSFUL CALL TRACE +++

12     DIGIT TRANSLATION ROUTES

13     1 S5S3IBN2A          2261914          ST
14     2 S5S3IBN2C7A      2261914          ST

15     TREATMENT ROUTES.  TREATMENT IS: GNCT
16     1 T120

17     +++ TRAVER: SUCCESSFUL CALL TRACE +++

>TRAVER L 2251703 9062261914 B
18     TABLE IBNLINES
19     HOST 00 0 02 08 0 DT STN IBN 2251703 NETWORK 0 21 905 $
20     TABLE DNATTRS
21     TUPLE NOT FOUND
22     TABLE DNGRPS
23     TUPLE NOT FOUND
24     TABLE NCOS
25     NETWORK 21 0 0 AIN (XLAS PX21NET FXNET NDGT) $
26     TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
27     AND DIGCOL
28     NETWORK NXLA CXNET FXNET 0 DCNET
29     TABLE DIGCOL
30     DCNET 9 RPT

```

**Cannot be called** (continued)

Line	Output
1	TABLE IBNXLA: XLANAME PX21NET
2	PX21NET 906 ROUTE N Y N 0 N 7 10 NDGT Y T IBNRTE 228 9
3	TABLE DIGCOL
4	NDGT specified: digits collected individually
5	TABLE IBNRTE
6	228 N N N N N S5S3IBN2C7A 0
7	N N N N N S5S3IBN2A 0
8	EXIT TABLE IBNRTE
9	+++ TRAVER: SUCCESSFUL CALL TRACE +++
10	DIGIT TRANSLATION ROUTES
11	1 S5S3IBN2C7A 9062261914 ST
12	2 S5S3IBN2A 9062261914 ST
13	TREATMENT ROUTES. TREATMENT IS: GNCT
14	1 T120
15	+++ TRAVER: SUCCESSFUL CALL TRACE +++
	<b>&gt;TRAVER L 2251703 2231903 B</b>
16	TABLE IBNLINES
17	HOST 00 0 02 08 0 DT STN IBN 2251703 NETWORK 0 21 905 \$
18	TABLE DNATTRS
19	TUPLE NOT FOUND
20	TABLE DNGRPS
21	TUPLE NOT FOUND
22	TABLE NCOS
23	NETWORK 21 0 0 AIN (XLAS PX21NET FXNET NDGT) \$
24	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
25	AND DIGCOL
26	NETWORK NXLA CXNET FXNET 0 DCNET
27	TABLE DIGCOL
28	DCNET 2 RPT
29	TABLE IBNXLA: XLANAME PX21NET
30	PX21NET 223 ROUTE N Y N 0 N 7 7 NDGT Y T IBNRTE 227 9

**Cannot be called** (continued)

Line	Output
1	TABLE DIGCOL
2	NDGT specified: digits collected individually
3	TABLE IBNRTE
4	227 N N N N N S5S3IBN2A 0
5	N N N N N S5S3IBN2C7A 0
6	EXIT TABLE IBNRTE
7	+++ TRAVER: SUCCESSFUL CALL TRACE +++
8	DIGIT TRANSLATION ROUTES
9	1 S5S3IBN2A 2231903 ST
10	2 S5S3IBN2C7A 2231903 ST
11	TREATMENT ROUTES. TREATMENT IS: GNCT
12	1 T120
13	+++ TRAVER: SUCCESSFUL CALL TRACE +++
14	THE INCOMING TRUNK TRIGGER CALL TERMINATES FROM THE AIN S3_TO_S5_IBN
15	TRUNKS FROM S5 TO S3.
16	<b>&gt;TRAVER TR S3S5IBN2A 2261914 B</b>
17	TABLE TRKGRP
18	S3S5IBN2A IBNT2 0 NPDGP NCRT NETIN 0 MIDL 7 9032231900 ANSDISC 0 N N N N N N Y 0 0 N 0 0 0 0 N N N N N N N N N NATL \$
19	TABLE NCOS
20	NETIN 7 0 0 INVAR (XLAS PXIN7 NXLA NDGT) (PVN VAR 15) \$
21	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
22	DIGCOL
23	NETIN NXLA CXIN FXRES 0 DCIN
24	TABLE DIGCOL
25	DCIN 2 COL S 3
26	TABLE IBNXLA: XLANAME PXIN7
27	TUPLE NOT FOUND
28	Default from table XLANAME:

**Cannot be called** (continued)

Line	Output
1	PXIN7
2	(NET N N N 0 Y POTS N Y GEN ( LATTR 517) (PVN VAR 15) )\$ F 9
3	TABLE DIGCOL
4	POTS specified: POTS digit collection
5	TABLE LINEATTR
6	517 1FR NONE NT NSCR 253 903 IN07 NLCA NONE 0 NIL NILSFC NETLATA2 0 NIL NIL 00 Y NETRES 0 0 \$
7	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
8	+++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
9	+++ TRAVER: SUCCESSFUL CALL TRACE +++
10	+++ TRAVER: SUCCESSFUL CALL TRACE +++
11	
12	TABLE: NCOS
13	CUSTGRP NCOS NCOSNAME LSC TRAFSNO
14	OPTIONS
15	-----
16	NETIN 4 NCIN 0 0 (XLAS PXIN4 NXLA NDGT)
17	(PVN UNIFORM ) \$
	NETIN 7 INVAR 0 0 (XLAS PXIN7 NXLA NDGT)
	(PVN VAR 15) \$
	<b>NOTE:</b> The NCOS must be changed on the trunk group for the particular PVN dial plan option that will be used. If the PVN UNIFORM option is to be used, NCOS NETIN 4 will be specified in Table TRKGRP for the IBN trunk group. The incoming dialed digits must conform to the UNIFORM dial plan or the call will die. If the PVN VAR option is to be used for the INC TRK trigger, NCOS NETIN 7 will be used and will accept any number of digits from 1 to 15.
18	TABLE: XLANAME
19	DEFAULT
20	MAXDIG
	-----
21	PXIN4
22	(NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) )\$
23	9
24	PXIN4S
25	\$
26	9
27	PXIN4L
28	(NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) )\$
29	9

**Cannot be called** (end)

---

Line	Output
1	TABLE: IBNXLA
2	KEY
3	RESULT
-----	
4	PXIN4 0
5	AMBIG PXIN4S
6	1 PXIN4L
7	PXIN4 911
8	AMBIG SSP911
9	3 PXIN4L
10	PXIN4S 0
11	ATTO
12	NETIN 0 28 N

**Cannot call out**

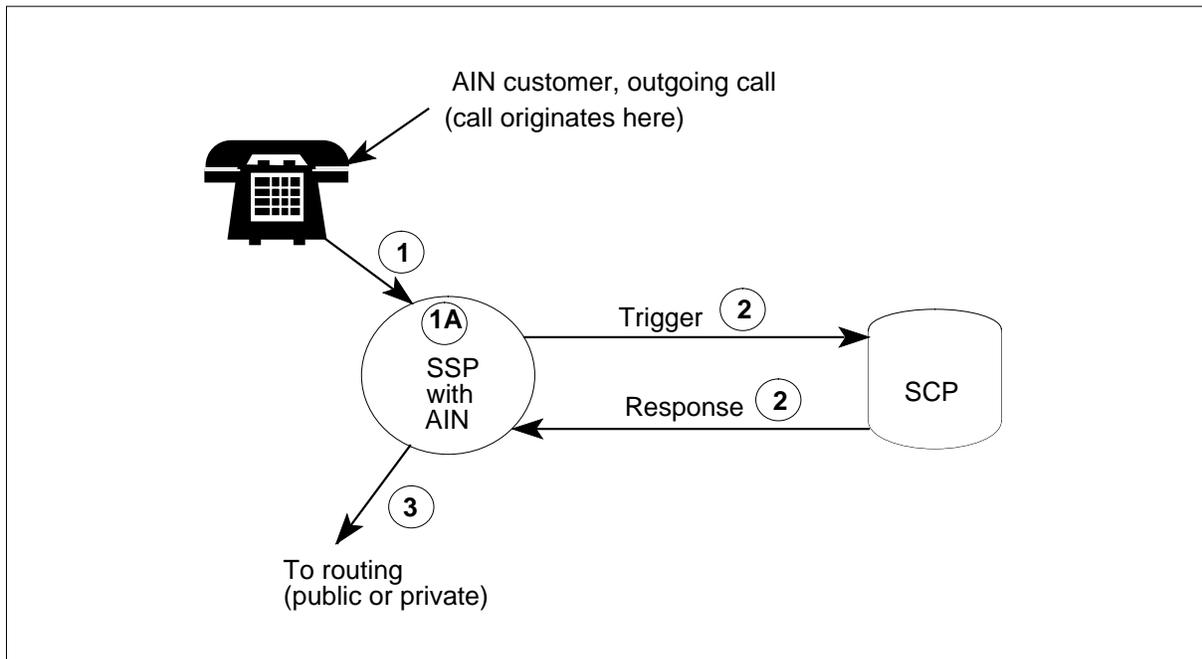
**Application**

Use this procedure to locate and correct customer problems. These problems are not complete outgoing AIN calls. The procedure applies to AIN customers who use originating triggers. These triggers include:

- the automatic flexible reroute (AFR) trigger
- directory number (DN) trigger
- off-hook delay trigger for lines
- off-hook immediate trigger for lines
- private dialing plan trigger
- public office dialing plan trigger
- the \*XX trigger

The following figure is an abbreviated call sequence diagram for an outgoing AIN call.

**Basic AIN call progression, outgoing call**



## **Cannot call out** (continued)

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Basic procedures to detect faults for this type of call include:

- Perform a TRAVER from the originating number to the service switching point SSP (step 1 in Figure 1) or from the originating number to the virtual facility group (VFG). Proceed to the SSP (steps 1 and 1A in Figure 1).
- Enter the PVNVER command to launch a query to the SCP. Check the response.
- TRAVER office route to terminating number

### **Definition**

This complaint means that the customer cannot complete outgoing calls that use the features of AIN software. The customer cannot complete calls that use the service control point (SCP) database to query for routing and billing information.

Possible causes of this problem are

- congestion in the SSP
- wrong or not complete entry (translations)
- the customer cannot activate AIN features
- activation of automatic call gapping
- Wrong transaction capability application part (TCAP) messages that cause protocol or application errors
- SCP entry error

### **Common procedures**

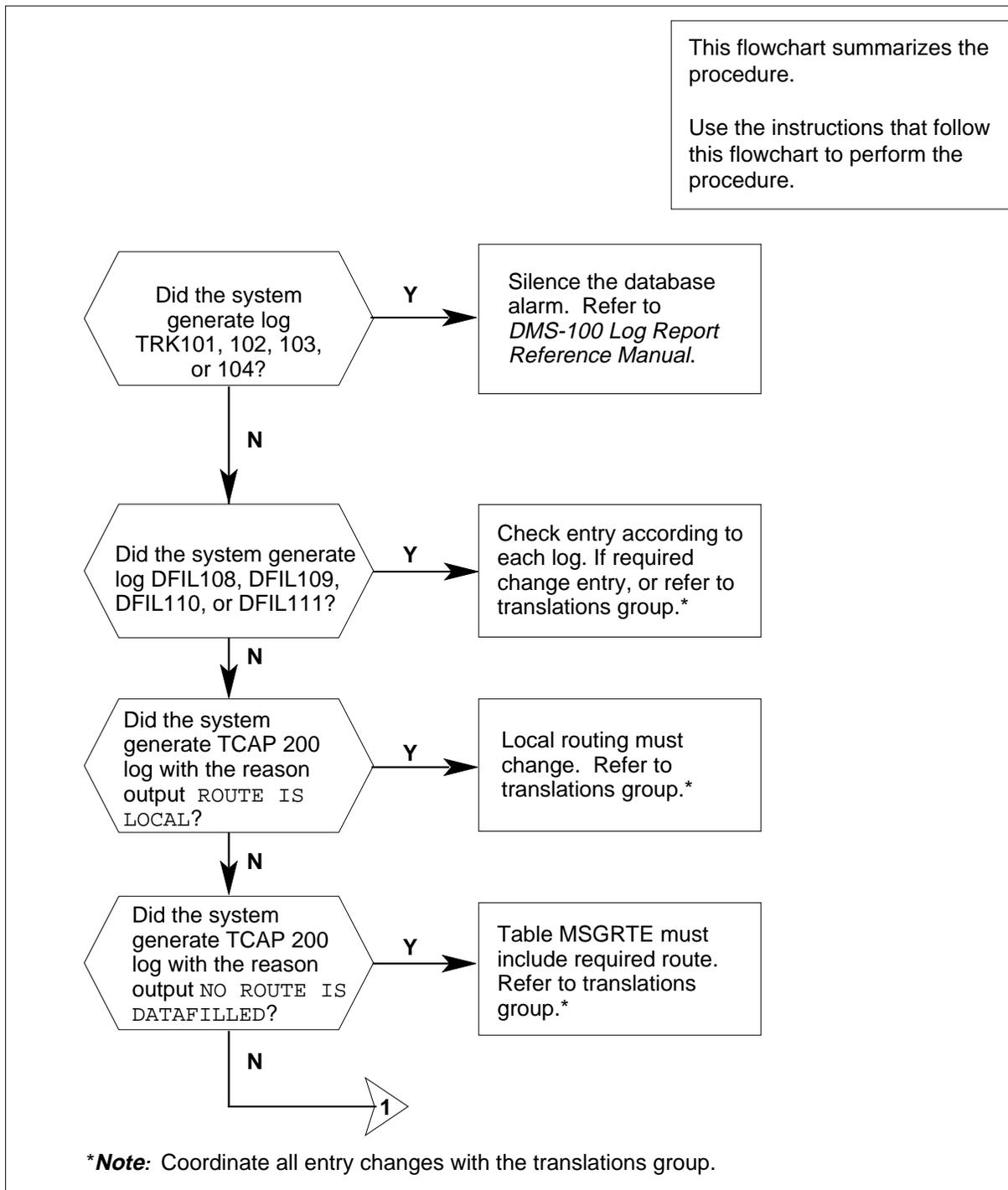
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

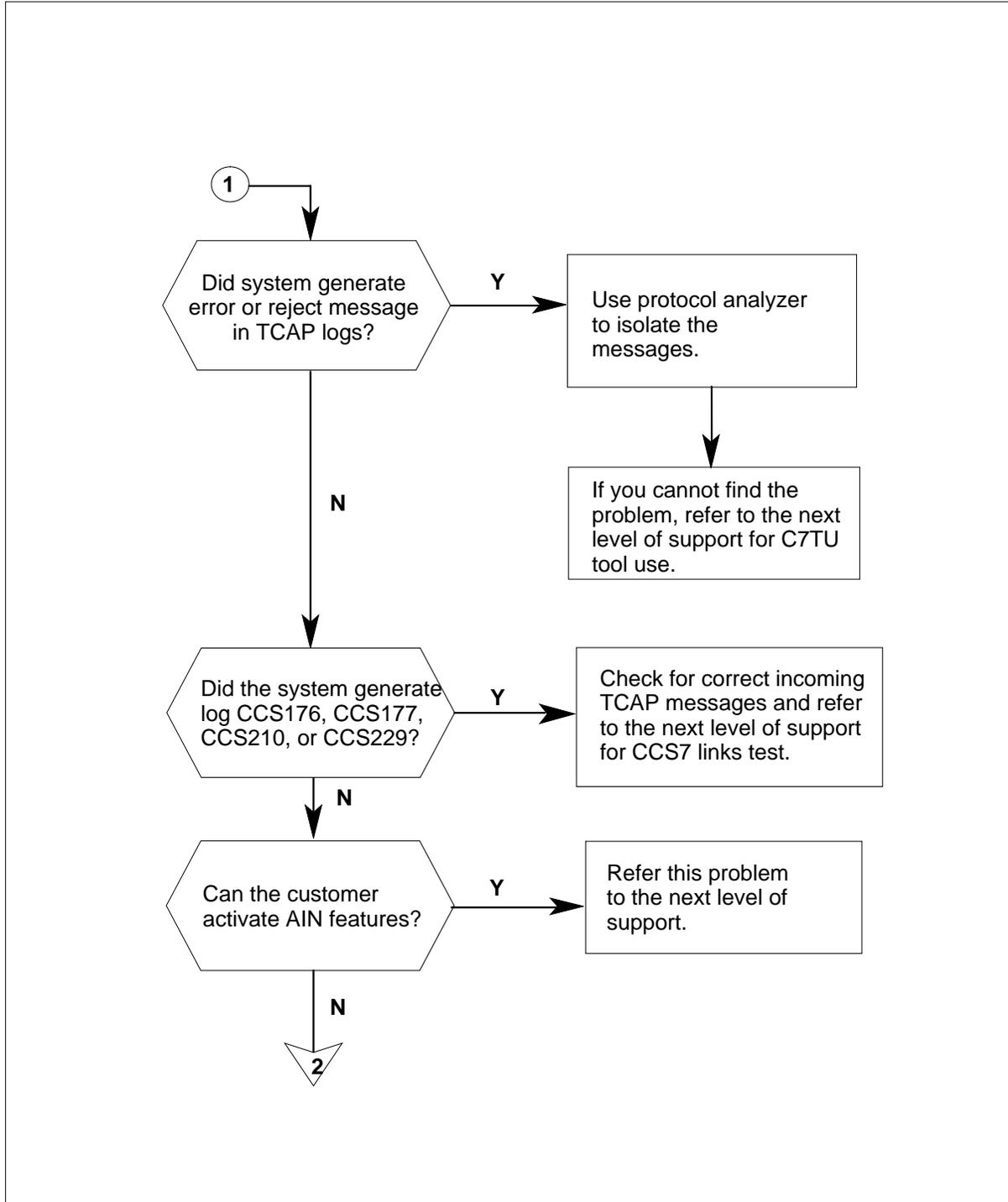
**Cannot call out** (continued)

**Summary of Cannot call out**



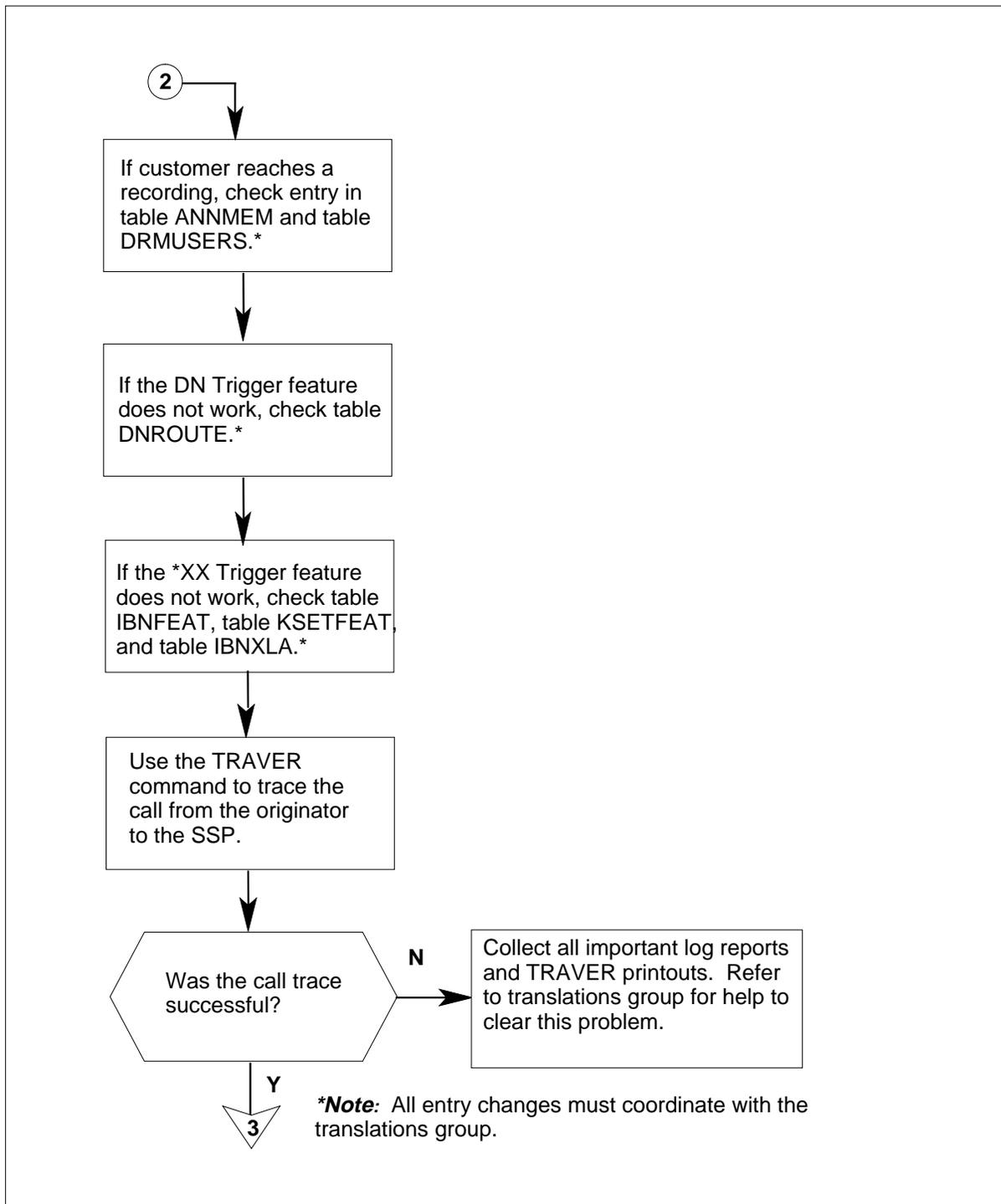
## Cannot call out (continued)

### Summary of Cannot call (continued)



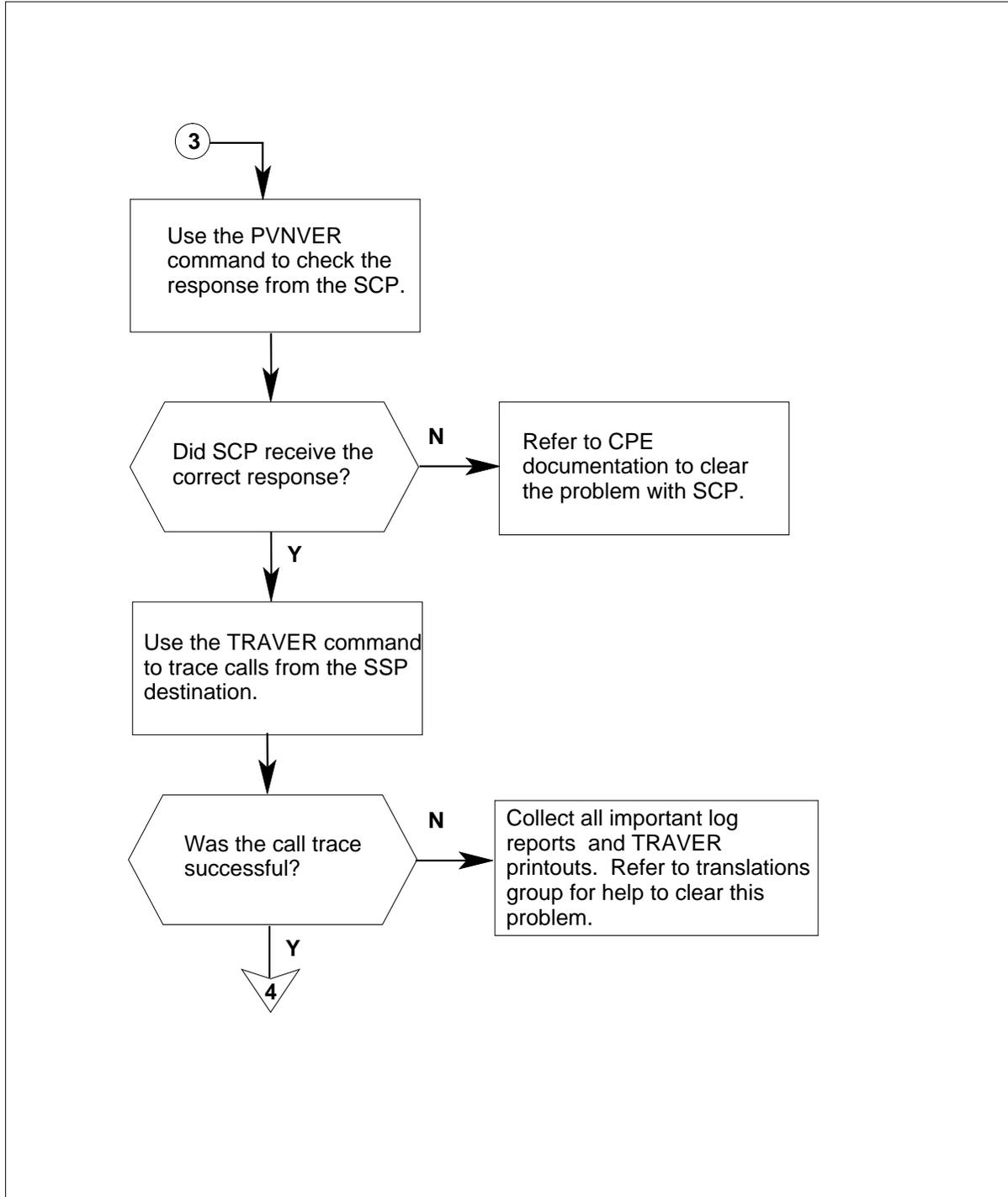
**Cannot call out** (continued)

**Summary of Cannot call out (continued)**



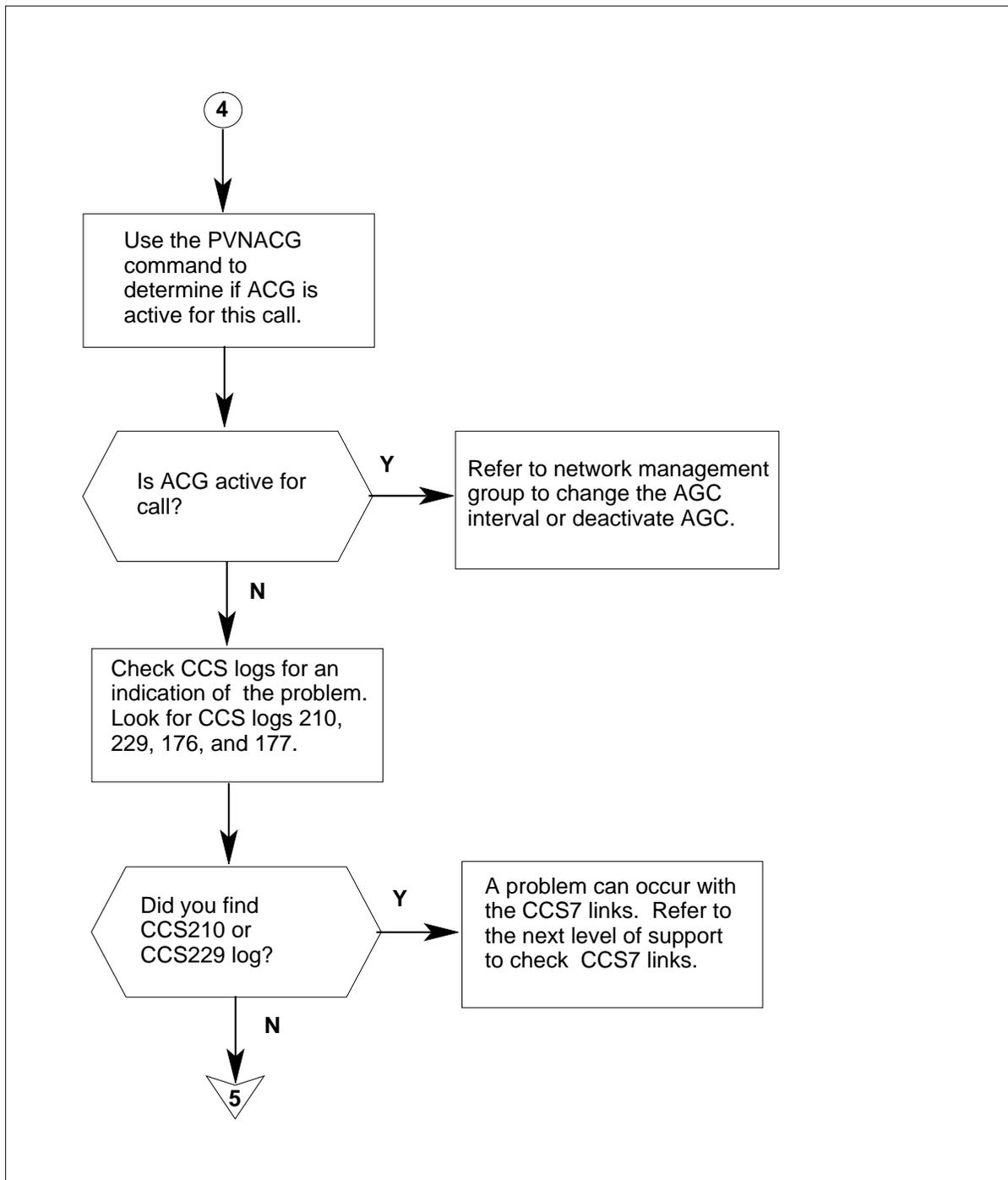
## Cannot call out (continued)

### Summary of Cannot call out (continued)



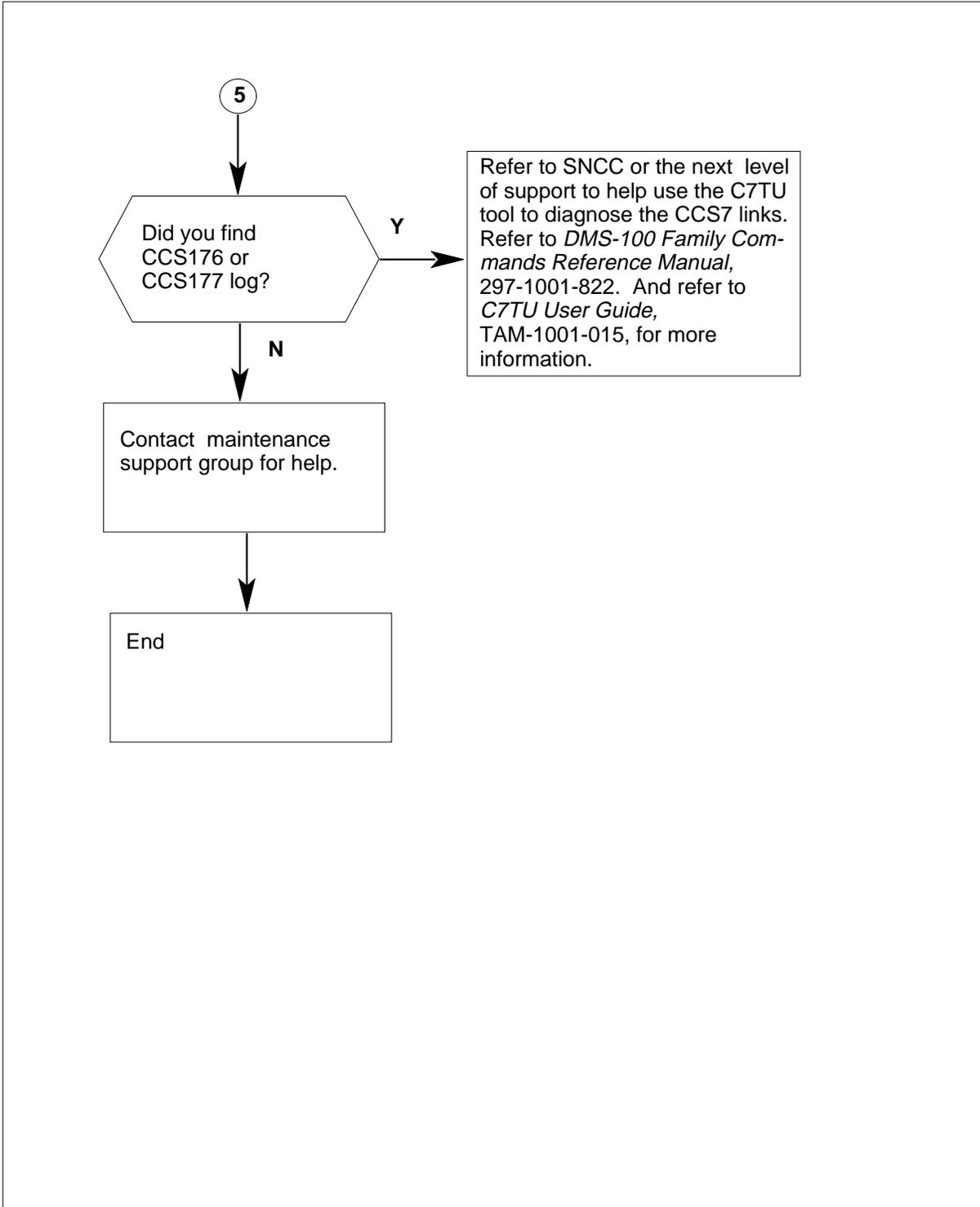
**Cannot call out** (continued)

**Summary of Cannot call out (continued)**



**Cannot call out** (continued)

**Summary of Cannot call out** (continued)



**Cannot call out** (continued)

**Cannot call out**

**At the Map terminal**

- 1 To start the LOGUTIL log reporting system to obtain logs, type  
`>LOGUTIL`  
 and press the Enter key.
- 2 To view log reports, type  
`>OPEN log_report_type`  
 and press the Enter key.  
*where*  
     **log\_report\_type**  
         is the generated log report category (like CCS, DFIL, TCAP, or TRKS)
- 3 To display these log reports, type  
`>BACK`  
 and press the Enter key.  
 Enter this command as many times as needed to make the log reports appear.

**Note:** When you finish with the LOGUTIL utility, you must enter the QUIT command before you enter another area or begin a new procedure.

If log report	Do
is TRK101, 102, 103, or 104	step 4
DFIL108, 109, 110, or 111	step 5
is TCAP 200 and the reason output is ROUTE IS LOCAL	step 10
is TCAP 200 and the reason output is NO ROUTE IS DATAFILLED	step 11
is TCAP log contains an error or reject message	step 12
is CCS176, 177, 210, or 229	step 25
is other than listed here	step 15

- 4 Check the percentage of BUSY information on log TRK101 (minor), TRK 102 (major), TRK 103 (critical), or TRK 104 regarding trunks coming into the SSP. To silence the alarm, type  
`>MAPCI ;MTC ;SIL`  
 and press the Enter key.  
 You often refer these logs to the network planning personnel or to the next level of support.

**Cannot call out** (continued)

- 5 Check log reports.
- Note 1:** For additional information, refer to *Translations Guide* and *Log Report Reference Manual*.
- Note 2:** Coordinate changes in entries with the translations group in your company.

If the log	Do
is DFIL108	step 6
is DFIL109	step 7
is DFIL110	step 8
is DFIL111	step 9

- 6 There can be an error in the entry or missing entries in table OFRT. Refer to the translations group in your company to verify/correct the entry in table OFRT. For more information, refer to *Log Report Reference Manual* and *Translations Guide*.
- 7 You must add the trunk common language location identifier (CLLI) and the trunk local access and transport (LATA) number to table SSPTKINK. Refer to the translations group in your company to perform this action.
- 8 The carrier digits can be wrong or not entered for the carrier in tables OCCNAME and OCCINFO. Refer to the translations group in your company to verify/correct the entry in tables OCCNAME and OCCINFO.
- 9 You must change the access field for the carrier in table OCCINFO from NONE to a correct access type. Refer to the translations group in your company to perform this action.
- 10 The entry must be correct so that the routing is not local. Refer to the translations group in your company to perform this action.
- Note:** For additional information, refer to *Translations Guide* and *Log Report Reference Manual*.
- 11 To include the required route into table MSGRTE, you must enter the correct information. Refer to the next level of support or to the translations group in your company for additional help.
- Note:** For additional information, refer to *Translations Guide* and *Log Report Reference Manual*.
- 12 Check the information output by the TCAP logs for return errors or reject messages.
- | If  | Do      |
|---|---------|
| the logs indicate message and response problems | step 13 |
| you cannot find a problem                       | step 14 |
- 13 Use a protocol analyzer to help isolate messages. Refer to the next level of support for exact instructions.

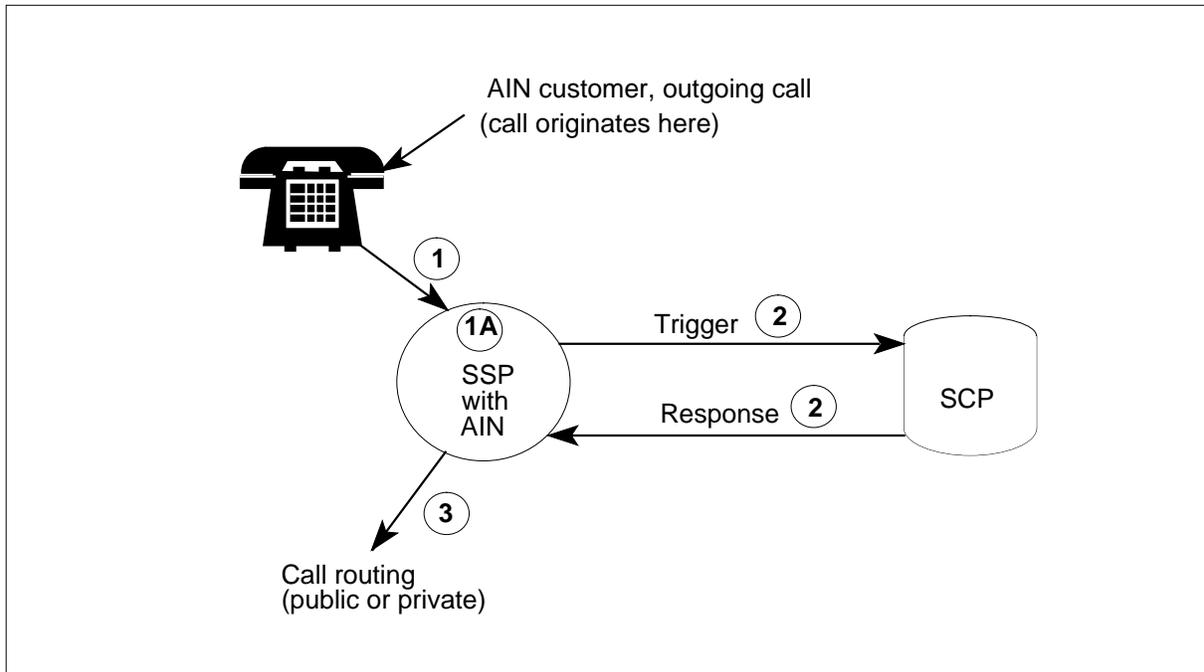
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**Cannot call out** (continued)

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- 14** Refer to the next level of support for C7TU tool use. Refer to *DMS-100 Family Commands Reference Manual*, 297-1001-822. You also can refer to *C7TU User Guide*, TAM-1001-015 for more information on this tool.
- 15** If a customer can activate AIN features, refer this problem to the next level of support.
- If customer(s) cannot activate AIN features, an entry error can exist. The following conditions can be the result. Contact your company translations group to help you isolate and clear the fault.
- If the customer reaches a recording, the translations group will check entries in table ANNMEM and table DRMUSERS. The translations group will make sure that the customer(s) reached the correct recording.
  - If the customer cannot activate the DN Trigger feature, the translations group will check table DNROUTE.
  - If the customer cannot activate the \*XX Trigger feature, the translations group will check table IBNFEAT, table KSETFEAT, and table IBNXLA.
- Use the TRAVER and PVNVER commands to verify the translations entry. Proceed to step 16 to begin this action.
- Refer to *Translations Guide* for additional information.
- 16** Refer to the following diagram for the steps of how to trace AIN calls. Proceed to step 17 to generate the TRAVERS.
- The following examples are variable and uniform dial plans. Routing has the following categories:
- Public routing-intra-LATA line or trunk calls, carrier = 110, the pseudo carrier for SSP routing
  - Public routing-inter-LATA trunk calls, carrier = other than 110, an interexchange carrier (IEC) or international carrier (INC)
  - Private routing-private network, trunk or line over an office route, not outward wide area telephone service (OUTWATS)
  - Private routing-private network over an office route over OUTWATS. This plan must be routed through a virtual facility group (VFG).

## Cannot call out (continued)



- 17 Before you execute the TRAVER command, route this information to a printer.  
Type

```
>RECORD START ONTO PRINTER printer_number
```

and press the Enter key.

where

**printer\_number**

is the number of the printer on which you want the information to print

Example input:

```
>RECORD START ONTO PRINTER 1
```

- 18 STEP 1 (of TRAVER) To generate a TRAVER for an outgoing AIN call, end to end, see diagram in step 16.

- a Execute the TRAVER command by typing

```
>TRAVER L originating_number npa_+_terminating_number  
B
```

and press the Enter key.

where

**originating\_number**

is the number where the call began

**npa\_+\_terminating\_number**

is the called number that includes the numbering plan area (NPA)

Example input:

```
>TRAVER L 2261919 19032231903 B
```

**Cannot call out** (continued)

**Note:** This TRAVER example will go to a virtual facility group (VFG). There will be two TRAVERS, one from the originating number to the VFG and one from the VFG to the SSP.

When the first leg of this TRAVER is complete, the response appears at the bottom of the MAP screen. The response also appears at the bottom of the printout. The response must give you the VFG and a set of digits. If the response does not give you the VFG and set of digits, go to step 22.

*Example of a MAP response:*

```
PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)
-----
DIGIT TRANSLATION ROUTES
1 VFG:      NETINV      19032231903      ST
```

- b** You can continue to trace this call from the VFG to the SSP. Use the information and digits given in the first leg of the TRAVER under DIGIT TRANSLATION ROUTES. To execute the TRAVER command, type

**>TRAVER V vfg terminating\_number B**

and press the Enter key.

*where*

**vfg**  
is the virtual facility group identification already given under DIGIT TRANSLATION ROUTES

**terminating\_number**  
is the DN you dial that includes the NPA

*Example input:*

**>TRAVER V NETINV 19032231903 B**

When you complete this leg of the TRAVER, check for a response. The correct response at the bottom of the MAP screen or at the bottom of the printout must be:

*Example of a MAP response:*

```
PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)
-----
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
```

**Note:** The table that follows this step-action procedure provides an example of this TRAVER.

If the message	Do
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION appears	step 19
did not appear	step 22

## Cannot call out (continued)

---

- 19 STEP 2 (of TRAVER)
- a Query the SCP by typing
- ```
>PVNVER npa+_originating_number lata_number PVN
npa+_terminating_number
```
- and pressing the Enter key.
- where*
- npa+\_originating\_number**  
is the NPA and the calling number
- lata\_number**  
is the local access and transport area number (LATA)
- npa+\_terminating\_number**  
is the NPA and the called number
- b If you do not know your LATA number, you can search for LATANUM in table LATANAME by typing
- ```
>TABLE LATANAME
```
- and pressing the Enter key.
- Then, position on your LATA by typing
- ```
>POS your_lata
```
- and pressing the Enter key.
- where*
- your\_lata**  
is the number of your LATA
- Write down the LATANUM of your LATA. Then, exit table LATANAME by typing
- ```
>QUIT
```
- and pressing the Enter key.
- c Query the SCP with the PVNVER command.
- Example input:*
- ```
>PVNVER 9062261919 100 PVN 9032231903
```
- This command launches a query. When the response is received from the SCP, Parameter 4 will specify the primary office route. Write down the digit(s) in this field. You will need this information for step 21.
- Note:** When using PVNVER for a DN Trigger call, both calling and called numbers are the same.
- 20 You can use either the PVNVER command or the TEST PVN commands to send a message to the SCP. If the SCP does not respond, refer to customer premises equipment (CPE) documentation for entry checks in the SCP. You can also refer to the next level of support.
- 21 STEP 3 (of TRAVER)
- To complete the call routing from the SSP to the terminating number, type
- ```
>TRAVER R OFRT office_route_number
```

**Cannot call out** (continued)

and press the Enter key.

where

**office\_route\_number**  
is in Parameter 4 of PVNVER response

*Example input:*

>TRAVER R OFRT 938

The system generates a list of tables and the following message. The message appears on the bottom of the MAP screen (or the printed copy).

*Example of a MAP response:*

```
PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)
-----
TRAVER: SUCCESSFUL CALL TRACE
```

- 22 A leg of the call trace procedure does not always provide a response or the responses shown above. When a response is not present, collect all log reports, copies of TRAVER and PVNVER. Forward these reports and copies to the next level of support or to the translations group. From the TRAVER and PVNVER, determine if the problem is in your office. Determine if you need arrangements with other departments, like SCP, STP and network management.

- 23 To check if automatic call gapping (ACG) is activated, type

>PVNACG

and press the Enter key.

The response to this command displays all the six-digit calling numbers that are under SCP overload ACG control. The header indicates NPA-NXX of the affected AIN calling number, and the gap interval in 10 ms. The header also indicates the control period in seconds and the remaining time on the control in seconds.

*Example of a MAP response:*

```
PVN 6 DIGIT ACG CODES:

NPA-NXX    GAP(10 SECS)    DURATION(SECS)    TIME REMAINING(SECS)
-----
613621          30000          INFINITE          INFINITE
613722           0             128              75
-----
TOTAL: 2 ACG CONTROLS.
```

If there is no active ACG, this message appears:

*Example of a MAP response:*

**Cannot call out** (continued)

PVN 6 DIGIT ACG CODES:

NPA-NXX GAP(10 SECS) DURATION(SECS) TIME REMAINING(SECS)

-----  
 NO ACG CONTROL IS IN EFFECT.

	<b>If ACG</b>	<b>Do</b>
	is active for a customer with a calling number (check the NXX in the response to the PVNACG command)	step 24
	is not active	step 26
<b>24</b>	Refer to network management for possible interval change or termination of ACG.	
<b>25</b>	To activate the LOGUTIL log reporting system to obtain logs. Type >LOGUTIL and press the Enter key.	
<b>26</b>	To view log reports, type >OPEN log_report_type and press the Enter key. <i>where</i> <b>log_report_type</b> is the alphabetical string that identifies the generated log report category	
	<i>Example input:</i> >OPEN CCS	
	<b>Note:</b> When you finish with the LOGUTIL utility, you must enter the QUIT command. Make sure you enter the QUIT command before you enter another area or begin a new procedure.	
	<b>If</b>	<b>Do</b>
	the system generates a CCS210 or CCS229 log, a routeset failure, congestion, or restriction (CCS7 link problems) occurs	step 27
	the system generates a CCS176 or CCS177 log. The link data and route data difference indicate messaging and response problems	step 28
	output is other than listed here	step 29
<b>27</b>	Refer to the next level of support to check the CCS7 links.	
<b>28</b>	Refer to signaling network control center (SNCC) or the next level of support describes C7TU tool use. The next level of support and SNCC can help you	

**Cannot call out** (continued)

capture message information on CCS7 links. Refer to *DMS-100 Family Commands Reference Manual*, 297-1001-822, *C7TU User Guide*, TAM 1001-015,, for more information on this tool.

- 29 For additional help, contact the next level of support.
- 30 The procedure is complete.

*TRAVER Examples*

Figure shows the TRAVER and PVNVER call trace procedures. These procedures are for outgoing AIN calls from a RES line to POTS (1+) ten digits. These procedures use the dial plan trigger of the public office. In this example, the call routes through table NCOS.

For TRAVER example that ends with an RX selector, refer to figure .

**TRAVER for outgoing AIN call, public office dial plan trigger, from a RES line**

Line	Output
	<b>(step 1 - First number to SSP, or to VFG then to SSP)</b>
1	>TRAVER L 2261919 19032231903 B
2	TABLE IBNLINES
3	OPM0 01 0 14 13 0 DT STN RES 2261919 531 (CWT) (3WC) (CWI) (CNDB) (COTAMA) (ACB) (AR) \$
4	TABLE LINEATTR
5	531 1FR NONE NT NSCR 254 906 NETI NLCA N RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
6	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
7	TABLE DNATTRS
8	906 226 1919
9	(PUBLIC ( NAME SESAME PHONE 5) \$) \$ \$
10	TABLE DNGRPS
11	TUPLE NOT FOUND
12	TABLE NCOS
13	NETRES 3 0 0 INRES1 ( XLAS PXIN5 NXLA NDGT)\$
14	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
15	NETRES NXLA CXRES FXRES 0 DCRES
16	TABLE DIGCOL
17	DCRES 1 RPT
18	TABLE IBNXLA: XLANAME PXIN5
19	TUPLE NOT FOUND
20	Default from table XLANAME:
21	PXIN5 (NET N N N 0 Y POTS N Y GEN ( LATTR 531) \$)\$
22	TABLE DIGCOL
23	POTS specified: POTS digit collection

**Cannot call out** (continued)

Line	Output
1	TABLE LINEATTR
2	531 1FR NONE NT NSCR 254 906 NETI NLCA RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
3	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
4	TABLE STDPRTCT
5	NETI ( 1) ( 0)
6	. SUBTABLE STDPRT
7	WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
8	BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
9	DOCUMENTATION.
10	. 19 19 N DD 1 NA
11	. SUBTABLE AMAPRT
12	. KEY NOT FOUND
13	. DEFAULT VALUE IS: NONE OVRNONE N
14	TABLE HNPACONT
15	906 911 19 ( 84) ( 1) ( 0) ( 0)
16	. SUBTABLE HNPACODE
17	. 903 903 FNPA 0
18	TABLE FNPACONT
19	903 872 - ( 3) ( 0) ( 3)
20	. SUBTABLE FNPACODE
21	. 223 223 1 Y
22	. SUBTABLE RTEREF
23	. . 1 N D S6S3ITO 0 N N
24	. EXIT TABLE RTEREF
25	EXIT TABLE FNPACONT
26	TABLE IBNFEAT
27	OPM0 01 0 14 13 0 PIC PIC NETEAP Y
28	OVERLAP CARRIER SELECTION (OCS) APPLIES
29	TABLE LATAXLA
30	SSPLATA 9 INTER INTER STD
31	TABLE OCCINFO
32	NETEAP 180 EAP Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y N N
33	TABLE EASAC
34	TUPLE NOT FOUND
35	TABLE STDPRTCT
36	NETI ( 1) ( 0)

**Cannot call out** (continued)

Line	Output
1	TABLE STDPRTCT
2	NETI ( 1) ( 0)
3	. SUBTABLE STDPRT
4	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
5	. . TABLE OFRT
6	. . 209 N D S6S1ITOC7 0 N N
7	. . N D S6S1ITO 0 N N
8	. . EXIT TABLE OFRT
9	. TABLE STDPRTCT
10	. EAPI ( 1) ( 0)
11	. . SUBTABLE STDPRT
12	. . 1903 1904 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
13	. . . TABLE IBNRTE
14	. . . 212 VFG N N N NETINV 208
15	. . . . TABLE DIGMAN
16	. . . . 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 210) (NEX 211)
17	. . . . . TABLE DIGMAN
18	. . . . . 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
19	. . . . . EXIT TABLE DIGMAN
20	. . . . . TABLE DIGMAN
21	. . . . . 211 (CL BEG) (REM3) (CL BEG) (INC 1) (CL BEG)
22	. . . . . EXIT TABLE DIGMAN
23	. . . . . EXIT TABLE DIGMAN
24	. . . . . EXIT TABLE IBNRTE
25	+++ TRAVER: SUCCESSFUL CALL TRACE +++
26	DIGIT TRANSLATION ROUTES
27	1 VFG: NETINV 19032231903 ST
28	TREATMENT ROUTES. TREATMENT IS: GNCT 1 T60
29	+++ TRAVER: SUCCESSFUL CALL TRACE +++
30	FF

**Cannot call out** (continued)

**Line Output**

**(step 1A - From VFG to SSP)**

```
1 >TRAVER V NETINV 19032231903 B
2 TABLE VIRTGRPS
3 NETINV SIZE 1024 IBN N NETIN 0 0 0 N N N $
4 TABLE NCOS
5 NETIN 0 0 0 NCIN ( XLAS NXLA NXLA POTS)$
6 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
   DIGCOL$
7 NETIN NXLA CXIN FXRES 0 DCIN
8 TABLE DIGCOL
9 POTS specified: POTS digit collection
10 NCOS PRELIM XLA name is NIL. Go to next XLA name.
11 CUST PRELIM XLA name is NIL. Go to next XLA name.
12 TABLE IBNXLA: XLANAME CXIN
13 TUPLE NOT FOUND
14 Default from table XLANAME:
15 CXIN
   (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM) $)$ 9
16 TABLE DIGCOL
17 POTS specified: POTS digit collection
18 TABLE LINEATTR
19 501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC
   NETLATA1 0 NIL NIL 00 N $
20 LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21 +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION

22 +++ TRAVER: SUCCESSFUL CALL TRACE +++

23 PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP

24 +++ TRAVER: CALL TRACE TERMINATED; PROBLEM UNKNOWN +++

25 FF
```

**Cannot call out** (continued)

Line	Output
	(step 2 - From SSP, query sent to SCP and response back to SSP)
1	>PVNVER 9062261919 100 PVN 9032231903
2	The BSDB response
3	0 minutes 0.108 seconds
4	BSDB has sent a response message
5	BSDB has sent routing information
6	Invoke ID: 1. Correlation ID: 0
7	Parameter 1:
8	Primary carrier is: 180
9	Parameter 2:
10	The number is a national routing number
11	Routing number is: 9032231903
12	Parameter 3:
13	Outpulse number is 2231903
14	Parameter 4:
15	Primary office route is 0000938
16	If unable to route, call will overflow to the next possible route
17	Call will outpulse the routing number
18	Call is a WATS call
19	Parameter 5:
20	Originating station type is a PVN line
21	Parameter 6:
22	Primary billing indicator
23	Call type 166
24	Service feature code 000
25	Parameter 7:
26	Overflow billing indicator
27	Call type 272
28	Service feature code 000
29	FF

**Cannot call out** (continued)

Line	Output
	<b>(step 3 - From SSP, out on office route specified by SCP to terminating number. NOTE: THIS EXAMPLE IS FOR PRIVATE ROUTING OVER OUTWATS.)</b>
141	>TRAVER R OFRT 938
142	TABLE OFRT
143	938 T IBNRTE 228
144	. TABLE IBNRTE
145	. 228 OW N N N 6 V NETOW 0
146	. EXIT TABLE IBNRTE
147	EXIT TABLE OFRT
148	+++ TRAVER: SUCCESSFUL CALL TRACE +++
149	>TRAVER V NETOW 9032231903 B
150	TABLE VIRTGRPS
151	NETOW SIZE 24 POTS N 501 N ( EA NETEAP Y )\$
152	TABLE LINEATTR
153	501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC NETLATA 0 NIL NIL 00 N \$
154	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
155	TABLE STDPRTCT
156	NETA ( 1 ) ( 0 )
157	. SUBTABLE STDPRT
158	. 903 903 N DD 0 NA
159	. SUBTABLE AMAPRT
160	. KEY NOT FOUND
161	. DEFAULT VALUE IS: NONE OVRNONE N
162	TABLE HNPACONT
163	906 911 10 ( 84 ) ( 1 ) ( 0 ) ( 0 )
164	. SUBTABLE HNPACODE
165	. 903 903 FNPA 0
166	TABLE FNPACONT
167	903 872 - ( 3 ) ( 0 ) ( 3 )
168	. SUBTABLE FNPACODE
169	. 223 223 1 Y
170	. SUBTABLE RTEREF
171	. . 1 N D S6S3ITO 0 N N
172	EXIT TABLE RTEREF
173	EXIT TABLE FNPACONT

**Cannot call out** (continued)

Line	Output
174	OVERLAP CARRIER SELECTION (OCS) APPLIES
175	TABLE LATA XLA
176	NETLATA1 903 INTER INTER STD
177	TABLE OCCINFO
178	NETEAP 180 EAP Y Y Y Y N N Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y N N
179	TABLE EASAC
180	TUPLE NOT FOUND
181	TABLE STDPRTCT
182	NETA ( 1 ) ( 0 )
183	. SUBTABLE STDPRT
184	. 10180 10180 EA DD 5 P EAPN NETEAP U OFRT 223 6 20 Y
185	. . TABLE OFRT
186	. . 223 N D S6S7EAPC7 0 N N
187	. . N D S6S7EAP 0 N N
188	. . EXIT TABLE OFRT
189	. TABLE STDPRTCT
190	. EAPN ( 1 ) ( 0 ) 0
191	. . SUBTABLE STDPRT
192	. . 906 906 EA DD 0 T NA NETEAP U OFRT 209 1 1 Y
193	. . . TABLE OFRT . . . 209 CND EA INTNL ST 210
194	. . . . SAME TABLE
195	. . . . 210 N D S3S7EAPC7 0 D141 N
196	. . . . N D S3S7EAP 0 D141 N
197	. . . . EXIT SAME TABLE
198	. . . . N D S3S7EAPC7 0 N N
199	. . . . N D S3S7EAP 0 N N
200	. . . . EXIT TABLE OFRT
201	+++ TRAVER: SUCCESSFUL CALL TRACE +++
202	DIGIT TRANSLATION ROUTES
203	1 S6S7EAPC7 9032231903 ST
204	2 S6S7EAP 9032231903 ST
205	TREATMENT ROUTES. TREATMENT IS: GNCT
206	1 T60
207	+++ TRAVER: SUCCESSFUL CALL TRACE +++
208	FF

The following figure shows a TRAVER for an outgoing AIN call using the public office dial plan trigger for POTS (1+) ten digits. The call originates from a 1FR line, but uses IBN translations for trigger detection.

**Cannot call out** (continued)

**TRAVER for outgoing AIN call, dial plan trigger of public office, from a 1FR line**

Line	Output
	<b>&gt;TRAVER L 2231902 19062261914 B</b>
1	TABLE LINEATTR
2	511 1FR NONE NT NSCR 254 903 NETI NLCA RTE1 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
3	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
4	TABLE DNATTRS
5	TUPLE NOT FOUND
6	TABLE DNGRPS
7	TUPLE NOT FOUND
8	TABLE STDPRTCT
9	NETI ( 1 ) ( 0 )
10	. SUBTABLE STDPRT
11	WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
12	BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
13	DOCUMENTATION.
14	. 19 19 N DD 1 NA
15	. SUBTABLE AMAPRT
16	. KEY NOT FOUND
17	. DEFAULT VALUE IS: NONE OVRNONE N
18	TABLE HNPACONT
19	903 911 0 ( 88 ) ( 1 ) ( 0 ) ( 0 )
20	. SUBTABLE HNPACODE
21	. 906 906 FNPA 0
22	TABLE FNPACONT
23	906 871 - ( 3 ) ( 0 ) ( 3 )
24	. SUBTABLE FNPACODE
25	. 226 226 1 Y
26	. SUBTABLE RTEREF
27	. . 1 N D S3S6ITOC7 0 N N
28	. EXIT TABLE RTEREF
29	EXIT TABLE FNPACONT
30	TABLE LENFEAT
31	HOST 08 1 01 06 S PIC PIC NETEAP Y
32	OVERLAP CARRIER SELECTION (OCS) APPLIES
33	TABLE LATAXLA
34	SSPLATA 9 INTER INTER STD
35	TABLE OCCINFO
36	NETEAP 0180 EAP N Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y N N
37	TABLE EASAC
38	TUPLE NOT FOUND

**Cannot call out** (continued)

Line	Output
1	TABLE STDPRTCT
2	NETI ( 1) ( 0)
3	. SUBTABLE STDPRT
4	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
5	. . TABLE OFRT
6	. . 209 CND EA INTNL ST 210
7	. . . SAME TABLE
8	. . . 210 N D S3S7EAPC7 0 D141 N
9	. . . N D S3S7EAP 0 D141 N
10	. . . EXIT SAME TABLE
11	. . . N D S3S7EAPC7 0 N N
12	. . . N D S3S7EAP 0 N N
13	. . . EXIT TABLE OFRT
14	. TABLE STDPRTCT
15	. EAPI ( 1) ( 0)
16	. . SUBTABLE STDPRT
17	. . 1906 199 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
18	. . . TABLE IBNRTE
19	. . . 212 VFG N N N NETINV 208
20	. . . . TABLE DIGMAN
21	. . . . 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 000
22	. . . . 210) (NEX 21
23	. . . . TABLE DIGMAN
24	. . . . 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
25	. . . . . EXIT TABLE DIGMAN
26	. . . . . TABLE DIGMAN
27	. . . . . 211 (CL BEG) (REM 3) (CL BEG) (INC 1) (CL BEG)
28	. . . . . EXIT TABLE DIGMAN
29	. . . . . EXIT TABLE DIGMAN
30	. . . . . EXIT TABLE IBNRTE
31	+++ TRAVER: SUCCESSFUL CALL TRACE +++
32	DIGIT TRANSLATION ROUTES
33	1 VFG: NETINV 19062261914 ST
34	TREATMENT ROUTES. TREATMENT IS: GNCT
35	1 T120
36	+++ TRAVER: SUCCESSFUL CALL TRACE +++

**Cannot call out** (continued)

Line	Output
1	>TRAVER V NETINV 19062261914 B
2	TABLE VIRTGRPS
3	NETINV SIZE 2047 IBN 9032231000 NETIN 0 0 0 N N N \$
4	TABLE NCOS
5	NETRIN 0 0 0 NCIN ( XLAS NXLA NXLA POTS)\$
6	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
7	NETIN NXLA CXIN FXRES 0 DCIN
8	TABLE DIGCOL
9	POTS specified: POTS digit collection
10	NCOS PRELIM XLA name is NIL. Go to next XLA name.
11	CUST PRELIM XLA name is NIL. Go to next XLA name.
12	TABLE IBNXLA: XLANAME CXIN
13	TUPLE NOT FOUND
14	Default from table XLANAME:
15	CXIN (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) )\$ 9
16	TABLE DIGCOL
17	POTS specified: POTS digit collection
18	TABLE LINEATTR
19	501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0 NIL NIL 00 N \$
20	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21	+++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
22	+++ TRAVER: SUCCESSFUL CALL TRACE +++
23	PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP
	+++ TRAVER: CALL TRACE TERMINATED; PROBLEM UNKNOWN +++

**Cannot call out** (continued)

Line	Output
1	>PVNVER 9032231902 100 PVN 9062261914
2	The BSDB response took
3	0 minutes, 0.102 seconds
4	BSDB has requested the SSP to play an announcement
5	and collect digits
6	Invoke ID: 1, Correlation ID: 0
7	Parameter 1:
8	Announcement type is: Non-terminating
9	Call will be routed to
10	Announcement id: 255
11	Parameter 2:
12	Six digits should be collected
13	Next par is: <AUTHCODE> STRING
14	Enter: <AUTHCODE>
15	>122290
16	The BSDB response took
17	0 minutes, 0.106 seconds
18	BSDB has sent a response message
19	BSDB has sent routing information
20	Invoke ID: 1, Correlation ID: 0
21	Parameter 1:
22	Primary carrier is: 180
23	Parameter 2:
24	The number is a national routing number
25	Routing number is: 9062261914
26	Parameter 3:
27	Originating station type is a PVN line
28	Parameter 4:
29	Authorization code is: 122290
30	Parameter 5:
31	Primary billing indicator
32	Call type 166
33	Service feature code 000
34	BSDB has requested termination information
35	Invoke ID: 2, Correlation ID: 0
	Parameter 1:
	Echo data 01 03 05 09 11 21
	Sent termination information to the BSDB

NOTE: This call will use Public routing from the BSDB.

To properly trace the call as it will route after the business services database (BSDB) response, a line must be assigned to the same line attribute used to route the call. To determine which line attribute is to be used, look at the TRAVER for step 1 (for example, line attribute or LATTR 501). When the NET GEN selectors are used with the PVN option to query an AIN call, the LATTR option must be used to specify which line attribute will be used to route the call when the response is returned from the BSDB.

**Cannot call out** (continued)

Line	Output
1	>QDN 2231923
2	-----
2	DN: 2231923
3	TYPE: SINGLE PARTY LINE
3	SNPA: 903 SIG: DT LNATTIDX: 501
4	LINE EQUIPMENT NUMBER: HOST 16 0 00 02
5	LINE CLASS CODE: 1FR
6	LINE TREATMENT GROUP: 0
7	CARDCODE: 6X17AB GND: N PADGRP: STDLN BNV: NL MNO: N
8	PM NODE NUMBER : 166
9	PM TERMINAL NUMBER : 3
10	OPTIONS:
11	DGT PIC NETEAP Y
12	-----
12	>TRAVER L 2231923 1018019062261914 B
13	TABLE LINEATTR
14	501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
14	NIL NIL 00 N \$
15	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
15	TABLE DNATTRS
16	TUPLE NOT FOUND
17	TABLE DNGRPS
18	TUPLE NOT FOUND
19	TABLE STDPRTCT
20	NETA ( 1 ) ( 0 )
21	. SUBTABLE STDPRT
22	. 10180 10180 EA DD 5 P EAPN NETEAP Y OFRT 215 6 20 Y
23	. . TABLE OFRT
24	. . 215 N D S3S7EAPC7 0 N N
25	. . N D S3S7EAP 0 N N
25	. . EXIT TABLE OFRT
26	. TABLE STDPRTCT
27	. EAPN ( 1 ) ( 0 )
28	. . SUBTABLE STDPRT
29	. . 1906 1906 EA DD 1 T NA NETEAP Y OFRT 209 1 1 Y
30	. . . TABLE OFRT
31	. . . 209 CND EA INTNL ST 210
32	

**Cannot call out** (continued)

Line	Output
1	. . . . SAME TABLE
2	. . . . 210 N D S3S7EAPC7 0 D141 N
3	. . . . N D S3S7EAP 0 D141 N
4	. . . . EXIT SAME TABLE
5	. . . . N D S3S7EAPC7 0 N N
6	. . . . N D S3S7EAP 0 N N
7	. . . . EXIT TABLE OFRT
8	. SUBTABLE AMAPRT
9	. KEY NOT FOUND
9	. DEFAULT VALUE IS: NONE OVRNONE N
10	TABLE HNPACONT
11	903 911 0 ( 88) ( 1) ( 0) ( 0)
12	. SUBTABLE HNPACODE
13	. 906 906 FNPA 0
14	TABLE FNPACONT
15	906 871 - ( 3) ( 0) ( 3)
16	. SUBTABLE FNPACODE
17	. 226 226 1 Y
18	. SUBTABLE RTEREF
19	. . 1 N D S3S6ITOC7 0 N N
20	. EXIT TABLE RTEREF
21	EXIT TABLE FNPACONT
22	OVERLAP CARRIER SELECTION (OCS) APPLIES
23	TABLE LATA2 906 INTER INTER STD
24	TABLE OCCINFO
25	NETEAP 0180 EAP N Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N Y N Y N N N Y Y N N
26	TABLE EASAC
27	TUPLE NOT FOUND
28	Using Equal Access (EA) route OFRT 209 from Pretranslation
29	TABLE OFRT
30	209 CND EA INTNL ST 210
31	. SAME TABLE
32	. 210 N D S3S7EAPC7 0 D141 N
33	. N D S3S7EAP 0 D141 N
34	. EXIT SAME TABLE
35	. N D S3S7EAPC7 0 N N
36	. N D S3S7EAP 0 N N
37	EXIT TABLE OFRT
38	+++ TRAVER: SUCCESSFUL CALL TRACE +++
39	DIGIT TRANSLATION ROUTES
40	1 S3S7EAPC7 9062261914 ST
41	2 S3S7EAP 9062261914 ST
42	TREATMENT ROUTES. TREATMENT IS: GNCT
43	1 T120
44	+++ TRAVER: SUCCESSFUL CALL TRACE +++

**Cannot call out** (continued)

The following figure shows a TRAVER ending with an RX selector, which could be used instead of step 1 in the previous examples.

In the following figure, an IBN line dials a five-digit extension. This call is sent through an RX selector for retranslation to build the directory number (DN) out to a seven-digit DN that can then be sent to the SCP. This process is necessary when using PVN UNIFORM dial plan to access the SCP. The same process is also used to build the number out to a 1+ ten-digit number to be sent to the SCP.

The query will be launched using the PVN variable option.

**TRAVER for outgoing AIN call, private office dial plan trigger that ends with an RX selector**

```

Line   Output

      >TRAVER L 2231725 '61914' B
1      TABLE KSETLINE
2      HOST 16 1 17 27 1 MDN MCA Y Y 2231725 NETIN 0 3 903 (AUTODISP) $
3      TABLE DNATTRS
4      903 223 1903
        (PUBLIC (NONUNIQUE ) $)$ $
5      TABLE DNGRPS
6      TUPLE NOT FOUND
7      TABLE NCOS
8      NETIN 3 0 0 NCIN (XLAS PXIN3 NXLA NDGT)$
9      TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT,
        AND DIGCOL
10     NETIN NXLA CXIN FXRES 0 DCIN
11     TABLE DIGCOL
12     DCIN 6 RPT
13     TABLE IBNXLA: XLANAME PXIN3
14     PXIN3 61 ROUTE N Y N 0 Y 5 5 NDGT N T IBNRTE 237
15     TABLE DIGCOL
16     NDGT specified: digits collected individually
17     TABLE IBNRTE
18     237 RX NETIN 0 6 237 $
19     . TABLE DIGMAN
20     . 237 (CL BEG) (INC 722) (CL BEG)
21     . EXIT TABLE DIGMAN
22     EXIT TABLE IBNRTE

23     +++ TRAVER: SUCCESSFUL CALL TRACE +++

24     TREATMENT ROUTES.   TREATMENT IS:   GNCT
25     1 T120

26     +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Cannot call out** (continued)

Line	Output
	<b>&gt;TRAVER L 2231726 72261914 B</b>
1	TABLE KSETLINE
2	NETIN 1 1 DN Y 2231726 NETIN 0 6 903 (SFC) \$
3	TABLE DNATTRS
4	TUPLE NOT FOUND
5	TABLE DNGRPS
6	TUPLE NOT FOUND
7	TABLE NCOS
8	NETIN 6 0 0 INVAR (XLAS PXIN6 NXLA NDGT)\$
9	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT, AND DIGCOL
10	NETIN NXLA CXIN FXRES 0 DCIN
11	TABLE DIGCOL
12	DCIN 2 COL S 3
13	TABLE IBNXLA: XLANAME PXIN6
14	TUPLE NOT FOUND
15	Default from table XLANAME
16	PXIN6
17	(NET N N N 0 Y POTS N Y GEN ( LATTR 517) (PVN VAR 15) \$) \$F
18	TABLE DIGCOL
19	POTS specified: POTS digit collection
20	TABLE LINEATTR
21	517 1FR NONE NT NSCR 253 903 IN06 NLCA RTE1 0 NIL NILSFC NETLATA2 0 NIL NIL 00 Y NETRES 0 0 \$
22	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
23	+++PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
24	+++ TRAVER: SUCCESSFUL CALL TRACE +++
25	+++ TRAVER: SUCCESSFUL CALL TRACE +++

The example in the following figure contains the automatic flexible reroute (AFR) trigger for retranslation to an alternate route, which could be used for step 1. The other steps of the call trace, steps 2 and 3, including the PVNVER command and tracing the call out of the office to the terminating number on the route specified by the SCP, would be the same as demonstrated in figure .

**Cannot call out** (continued)**TRAVER for outgoing AIN call, automatic flexible reroute (AFR) trigger****Line Output**

In the first TRAVER, an IBN line dials a five-digit extension. This call is first sent to the preferred trunk group and through an RX selector if you need alternate routing. In this event, the DN becomes a seven-digit number before it travels to the SCP.

```

>TRAVER L 2231903 '61914' B
1  TABLE KSETLINE
2  HOST 16 1 17 27 1 MDN MCA Y Y 2231903 NETIN 0 3 903 (AUTODISP) $
3  TABLE DNATTRS
4  903 223 1903
   (PUBLIC (NONUNIQUE ) )$ $
5  TABLE DNGRPS
6  TUPLE NOT FOUND
7  TABLE NCOS
8  NETIN 3 0 0 NCIN (XLAS PXIN3 NXLA NDGT) $
9  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT,
   AND DIGCOL NETIN NXLA CXIN FXRES 0 DCIN
10 TABLE DIGCOL
11 DCIN 6 RPT
12 TABLE IBNXLA: XLANAME PXIN3
13 PXIN3 61 ROUTE N Y N 0 Y 5 5 NDGT N T IBNRTE 237
14 TABLE DIGCOL
15 NGDT specified:digits collected individually
16 TABLE IBNRTE
17 237 N N N N N S3S6IBN2C7 0
18 RX NETIN 0 3 237 $
19 . TABLE DIGMAN
20 . 237 (CL BEG) (INC 722) (CL BEG)
21 . EXIT TABLE DIGMAN
22 EXIT TABLE IBNRTE

23 +++ TRAVER: SUCCESSFUL CALL TRACE +++

24 DIGIT TRANSLATION ROUTES
25 1 S3S6IBN2C7 61914 ST
26 TREATMENT ROUTES. TREATMENT IS: GNCT1
27 T120

28 +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Cannot call out** (continued)

Line	Output
	This TRAVER uses a line assigned to the group. TRAVER also uses NCOS specified with the RX selector to demonstrate how the call will translate.
	<b>&gt;TRAVER L 2231903 72261914 B</b>
1	TABLE KSETLINE
2	HOST 16 1 17 27 1 MDN MCA Y Y 2231903 NETIN 0 3 903 (AUTODISP) \$
3	TABLE DNATTRS
4	903 223 1903
5	(PUBLIC (NONUNIQUE ) \$)\$ \$
6	TABLE DNGRPS
7	TUPLE NOT FOUND
8	TABLE NCOS
9	NETIN 3 0 0 NCIN (XLAS PXIN3 NXLA NDGT) \$
10	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT, AND DIGCOL
11	NETIN NXLA CXIN FXRES 0 DCIN
12	TABLE DIGCOL
13	DCIN 7 COL S 3
14	TABLE IBNXLA: XLANAME PXIN3
15	PXIN3 7 NET N N N 1 Y POTS N Y GEN ( LATTR 512) ( PVN VAR 10)\$
16	TABLE DIGCOL
17	POTS specified: POTS digit collection
18	TABLE LINEATTR
19	512 1FR NONE NT NSCR 255 903 IN01 NLCA RTE1 0 NIL NILSFC NETLATA2 0 NIL NIL 00 \$
20	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21	+++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION+++
22	TRAVER: SUCCESSFUL CALL TRACE ++++++
23	TRAVER: SUCCESSFUL CALL TRACE +++

The following figures display other examples of outgoing triggers.

**Cannot call out** (continued)**TRAVER for outgoing AIN call, directory number (DN) trigger from a line**

Line	Output
	<b>&gt;TRAVER L 2231702 2231910 B</b>
1	TABLE IBNLINES
2	HOST 16 0 01 03 0 DT STN RES 2231702 508 (CWT) (CWI) (CNDBAMA) (COTAMA) (ACBAMA) \$
3	TABLE LINEATTR
4	508 1FR NONE NT NSCR 0 903 NPRT NLCA NONE 0 NIL NILSFC NETLATA2 0 NIL NIL 00 Y NETRES 0 0 \$
5	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
6	TABLE DNATTRS
7	903 223 1702
8	(PUBLIC ( NAME CLASS_FR) (NONUNIQUE ) )\$ \$
9	TABLE DNGRPS
10	TUPLE NOT FOUND
11	TABLE NCOS
12	NETRES 0 0 0 NCRES ( XLAS CXRES NXLA NDGT)\$
13	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
14	NETRES NXLA CXRES FXRES 0 RES
15	TABLE DIGCOL
16	RES specified: RES digit collection
17	TABLE IBNXLA: XLANAME CXRES
18	TUPLE NOT FOUND
19	Default from table XLANAME:
20	CXRES
21	(NET N N N 0 N POTS N Y GEN ( LATTR 500) )\$ 9
22	TABLE DIGCOL
23	POTS specified: POTS digit collection
24	TABLE LINEATTR
25	500 1FR NONE NT NSCR 0 903 NETA NET1 RTE1 10 NIL NILSFC NILLATA 0 NIL NIL 00 N \$
26	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
27	TABLE STDPRTCT
28	NETA ( 1) ( 0)
29	. SUBTABLE STDPRT
30	. KEY NOT FOUND
31	. DEFAULT VALUE IS: N NP 0 NA
32	. SUBTABLE AMAPRT
33	. KEY NOT FOUND
34	. DEFAULT VALUE IS: NONE OVRNONE N
35	TABLE HNPACONT
36	903 911 0 ( 88) ( 1) ( 0) ( 0)



**Cannot call out** (continued)

**TRAVER for outgoing AIN call, off-hook delay trigger, from an IBN PSET (PVN UNIFORM)**

**Line Output**

```
>TRAVER L 2231904 2261914 B
1  TABLE KSETLINE
2  HOST 16 1 17 27 2 MDN MCA Y Y 2231904 NETIN 0 4 903 (AUTODISP) $
3  TABLE DNATTRS
4  903 223 1904
   (PUBLIC (NONUNIQUE ) )$ $
5  TABLE DNGRPS
6  TUPLE NOT FOUND
7  TABLE NCOS
8  NETIN 4 0 0 NCIN ( XLAS PXIN4 NXLA POTS) (PVN UNIFORM) $
9  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
   DIGCOL
10 NETIN NXLA CXIN FXRES 0 DCIN
11 TABLE DIGCOL
12 DCIN 2 COL S 3
13 TABLE IBNXLA: XLANAME PXIN4
14 TUPLE NOT FOUND
15 Default from table XLANAME:
16 PXIN4
17 (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) )$ 9
18 TABLE DIGCOL
19 POTS specified: POTS digit collection
20 TABLE LINEATTR
21 501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0 NIL
22 NIL 00 N $
23 LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
24 +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION

25 +++ TRAVER: SUCCESSFUL CALL TRACE +++

26 +++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Cannot call out** (continued)

**TRAVER for outgoing AIN call, off-hook delay trigger, from an IBN PSET (PVN VAR)**

**Line Output**

```

>TRAVER L 2231904 2261914 B
1  TABLE KSETLINE
2  HOST 16 1 17 27 2 MDN MCA Y Y 2231904 NETIN 0 7 903 (AUTODISP) $
3  TABLE DNATTRS
4  903 223 1904
   (PUBLIC (NONUNIQUE ) )$ $
5  TABLE DNGRPS
6  TUPLE NOT FOUND
7  TABLE NCOS
8  NETIN 7 0 0 INVAR (XLAS PXIN7 NXLA NDGT) (PVN VAR 15) $
9  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
10 DIGCOL
11 NETIN NXLA CXIN FXRES 0 DCIN
12 TABLE DIGCOL
13 DCIN 2 COL S 3
14 TABLE IBNXLA: XLANAME PXIN7
15 TUPLE NOT FOUND
16 Default from table XLANAME:
17 PXIN4
18 (NET N N N 0 Y POTS N Y GEN ( LATTR 517) (PVN VAR 15 ) )$ $ 9
19 TABLE DIGCOL
20 POTS specified: POTS digit collection
21 TABLE LINEATTR
22 517 1FR NONE NT NSCR 0 903 IN07 NLCA RTE1 0 NIL NILSFC NETLATA2 0
23 NIL NIL 00 Y NETRES 0 0 $
24 LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
   +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
25
   +++ TRAVER: SUCCESSFUL CALL TRACE +++

26
   +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Cannot call out** (continued)

**TRAVER for outgoing AIN call, off-hook immediate trigger for lines**

```

Line Output
  >QDN 2231095
-----
  1  DN:      2231905
  2  TYPE: SINGLE PARTY LINE
  3  SNPA: 903  SIG: N/A  LNATTIDX: N/A
  4  LINE EQUIPMENT NUMBER:  HOST 16 1 17 27
  5  LINE CLASS CODE:  PSET (WITH DISPLAY)
  6  KEY: 3
  7  CUSTGRP:          NETIN  SUBGRP: 0  NCOS: 3  RING: Y
  8  CARDCODE: 6X21AB  GND: N  PADGRP: PPHON  BNV: NL MNO: Y
  9  PM NODE NUMBER   : 167
 10  PM TERMINAL NUMBER : 572
 11  OPTIONS:
 12  AUTODISP Y $ AUL 2231912
-----
 13  >QDN 2231912
-----
 14  DN:      2231912
 15  TYPE:          DNTRIG 501 NETIN 0 Y
-----
 16  >TRAVER L 2231905 2231912 B
 17  TABLE KSETLINE
 18  HOST 16 1 17 27 3 DN Y 2231905 NETIN 0 3 903 (AUTODISP) $
 19  TABLE DNATTRS
 20  TUPLE NOT FOUND
 21  TABLE DNGRPS
 22  TUPLE NOT FOUND
 23  TABLE NCOS
 24  NETIN 3 0 0 NCIN (XLAS PXIN3 NXLA NDGT)$
 25  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
 26  DIGCOL
 27  NETIN NXLA CXIN FXRES 0 DCIN
 28  TABLE DIGCOL
 29  DCIN 2 COL S 3
 30  TABLE IBNXLA: XLANAME PXIN3
 31  PXIN3 223 EXTN N N Y 903 223 7 $

```

**Cannot call out** (continued)

Line	Output
1	TABLE TOFCNAME
2	903 223
3	TABLE DNINV
4	903 223 1912 FEAT DNTRIG IBN 501 NETIN 0 Y
5	TABLE DNATTRS
6	TUPLE NOT FOUND
7	TABLE DNGRPS
8	TUPLE NOT FOUND
9	+++ TRAVER: SUCCESSFUL CALL TRACE +++
10	+++DIGIT TRANSLATION ROUTES+++
11	+++ PVN CALL WILL QUERY SCP FOR TRANSLATION INFORMATION
12	1 FEATURE                                    9032231912                                    ST
13	TREATMENT ROUTES.    TREATMENT IS: GNCT
14	1 T120
15	+++ TRAVER: SUCCESSFUL CALL TRACE +++

---

**Cannot call out** (continued)

---

**TRAVER for outgoing AIN call, private office dial plan trigger (PVN VAR)**

**Line Output**

**>TRAVER L 2231903 72261914 B**

```
1  TABLE KSETLINE
2  HOST 16 1 17 27 1 MDN MCA Y Y 2231903 NETIN 0 3 903 (AUTODISP) $
3  TABLE DNATTRS
4  903 223 1903
5  (PUBLIC (NONUNIQUE ) )$ $
6  TABLE DNGRPS
7  TUPLE NOT FOUND
8  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
   DIGCOL
9  TABLE NCOS
10 NETIN 3 0 0 NCIN ( XLAS PXIN3 NXLA NDGT)$
11 NETIN NXLA CXIN FXRES 0 DCIN
12 TABLE DIGCOL
13 DCIN 7 COL S 3
14 TABLE IBNXLA: XLANAME PXIN3
15 PXIN3 7 NET N N N 1 Y POTS N Y GEN ( LATTR 512) ( PVN VAR 10)$
16 TABLE DIGCOL
17 POTS specified: POTS digit collection
18 TABLE LINEATTR
19 512 1FR NONE NT NSCR 255 903 IN01 NLCA RTE1 0 NIL NILSFC NETLATA2
   0 NIL NIL 00 $
20 LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21 +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION

22 +++ TRAVER: SUCCESSFUL CALL TRACE +++

23 +++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Cannot call out** (continued)

**TRAVER for outgoing AIN call, private office dial plan trigger (PVN UNIFORM)**

**Line Output**

```

>TRAVER L 2231903 82261914 B

1  TABLE KSETLINE
2  HOST 16 1 17 27 1 MDN MCA Y Y 2231903 NETIN 0 3 903 (AUTODISP) $
3  TABLE DNATTRS
4  903 223 1903
5  (PUBLIC (NONUNIQUE ) )$ $
6  TABLE DNGRPS
7  TUPLE NOT FOUND
8  TABLE NCOS
9  NETIN 3 0 0 NCIN ( XLAS PXIN3 NXLA NDGT)$
10 TABLE CUSTHEAD: CUSTGRP,PRELIMXLA, CUSTXLA, FEATXLA,
    VACTRMT, AND DIGCOL
11 NETIN NXLA CXIN FXRES 0 DCIN
12 TABLE DIGCOL
13 DCIN 8 RPT
14 TABLE IBNXLA: XLANAME PXIN3
15 PXIN3 8 NET N N N 1 Y NGDT N Y GEN ( LATTR 512) ( PVN UNIFORM)$
16 TABLE DIGCOL
17 NDGT specified: digits collected individually
18 TABLE LINEATTR
19 512 1FR NONE NT NSCR 255 903 IN01 NLCA RTE1 0 NIL NILSFC NETLATA2
    0 NIL NIL 00 $
20 LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
21 +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION

22 +++ TRAVER: SUCCESSFUL CALL TRACE +++

23 +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

*\*XX trigger call*

The TRAVER in figure shows an MDC line that dials an \* feature code of \*77. This call triggers a query to the SCP.

## Cannot call out (continued)

---

### TRAVER for outgoing AIN call that uses the \*XX trigger

**Line Output**

```
>TRAVER L 3621236 'B77' B
1  TABLE IBNLINES
2  HOST 00 1 11 24 0 DT STN IBN 3621236 AINIBN 0 24 919 $
3  TABLE DNATTRS
4  TUPLE NOT FOUND
5  TABLE DNGRPS
6  TUPLE NOT FOUND
7  TABLE NCOS
8  AINIBN 24 0 0 LINE ( XLAS AINIBN3 NXLA NDGT)$
9  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
   DIGCOL
10 AINIBN NXLA AINIBN1 FXAINIBN 1 AINDEMO
11 TABLE DIGCOL
12 AINDEMO STAR COL S 2
13 NCOS FEAT XLA name is nil. Go to next XLA name.
14 TABLE IBNXLA: XLANAME FXAINIBN
15 FXAINIBN 77 FEAT N N N XXTRIG

16 +++ TRAVER: SUCCESSFUL CALL TRACE +++

17 +++ PVN CALL WILL QUERY
   SCP FOR TRANSLATION INFORMATION +++

18 +++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Cannot call out** (continued)

**TRAVER for outgoing AIN call, 3/6/10 digit POTS trigger, for a 3-digit trigger**

**Line Output**

```

>TRAVER L 2231741 '200' B
1  TABLE LINEATTR
2  501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
   NIL NIL 00 N $
3  LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
4  TABLE DNATTRS
5  TUPLE NOT FOUND
6  TABLE DNGRPS
7  TUPLE NOT FOUND
8  TABLE STDPRTCT
9  NETA ( 1 ) ( 0 ) 0
10 . SUBTABLE STDPRT
11 WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
12 BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
13 DOCUMENTATION
14 . KEY NOT FOUND
15 . DEFAULT VALUE IS:   N NP 0 NA
16 . SUBTABLE AMAPRT
17 . KEY NOT FOUND
18 . DEFAULT VALUE IS:   NONE OVRNONE  N
19 TABLE HNPACONT
20 903 912 2 ( 91 ) ( 1 ) ( 0 ) ( 0 ) 0
21 . SUBTABLE HNPACODE
22 . 200 200 NSC AIN 1 18 517 903 223
23 TABLE NSCSCRN
24 AIN TUPLE NOT FOUND
25 +++ AIN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
   TRAVER NOT AVAILABLE

26 +++ TRAVER: SUCCESSFUL CALL TRACE +++

27 +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

---

## Cannot call out (continued)

---

**TRAVER for outgoing AIN call, 3/6/10 digit POTS trigger, for a 6-digit trigger, NPA NXX**

**Line Output**

```
>TRAVER L 2231741 12012343472 B
 1  TABLE LINEATTR
 2  501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
    NIL NIL 00 N $
 3  LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
 4  TABLE DNATTRS
 5  TUPLE NOT FOUND
 6  TABLE DNGRPS
 7  TUPLE NOT FOUND
 8  TABLE STDPRTCT
 9  NETA ( 1) ( 0) 0
10  . SUBTABLE STDPRT
11  WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
12  BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
13  DOCUMENTATION
14  . 1201 1202 N DD 1 NA
15  . SUBTABLE AMAPRT
16  . KEY NOT FOUND
17  . DEFAULT VALUE IS:  NONE OVRNONE  N
18  TABLE HNPACONT
19  903 952 2 ( 94) ( 1) ( 0) ( 0) 0
20  . SUBTABLE HNPACODE
21  . 201234 201234 NSC AIN 6 18 517
22  TABLE NSCSCRN
23  AIN TUPLE NOT FOUND
24  +++ AIN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
25  TRAVER NOT AVAILABLE

26  +++ TRAVER: SUCCESSFUL CALL TRACE +++

27  +++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Cannot call out (end)**

**TRAVER for outgoing AIN call, 3/6/10 digit POTS trigger, for a 10-didit trigger**

```

Line Output
>TRAVER L 2231741 19032231749 B
1 TABLE LINEATTR
2 501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
  NIL NIL 00 N $
3 LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
4 TABLE DNATTRS
5 TUPLE NOT FOUND
6 TABLE DNGRPS
7 TUPLE NOT FOUND
8 TABLE STDPRTCT
9 NETA ( 1) ( 0) 0
10 . SUBTABLE STDPRT
11 WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
12 BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
13 DOCUMENTATION
14 . 1903 1907 N DD 1 NA
15 . SUBTABLE AMAPRT
16 . KEY NOT FOUND
17 . DEFAULT VALUE IS: NONE OVRNONE N
18 TABLE HNPACONT
19 903 912 2 ( 91) ( 1) ( 0) ( 0) 0
20 . SUBTABLE HNPACODE
21 . 903 903 HNPA 0
22 . 2231749 2231749 NSC AIN 1 18 517
23 TABLE NSCSCRN
24 TUPLE NOT FOUND
25 +++ AIN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
  TRAVER NOT AVAILABLE
26
  +++ TRAVER: SUCCESSFUL CALL TRACE +++
27
  +++ TRAVER: SUCCESSFUL CALL TRACE +++

```

For other examples of TRAVER on AIN calls, refer to *Translations Guide*.

## Changing table C7TIMER entries

---

### Application

Use this procedure to change entries in table C7TIMER.

### Definition

Table C7TIMER contains the timers for message transfer part (MTP) levels 2 and 3. The table consists of the following three sets of tuples:

- set Q703
- set Q704
- set Q707

The index in a tuple set accesses each tuple.

Certain links and linksets refer to table CTIMER entries. Make sure that links in table C7LINK and linksets in table C7KSET are offline when you change table C7TIMER entries.

### Common procedures

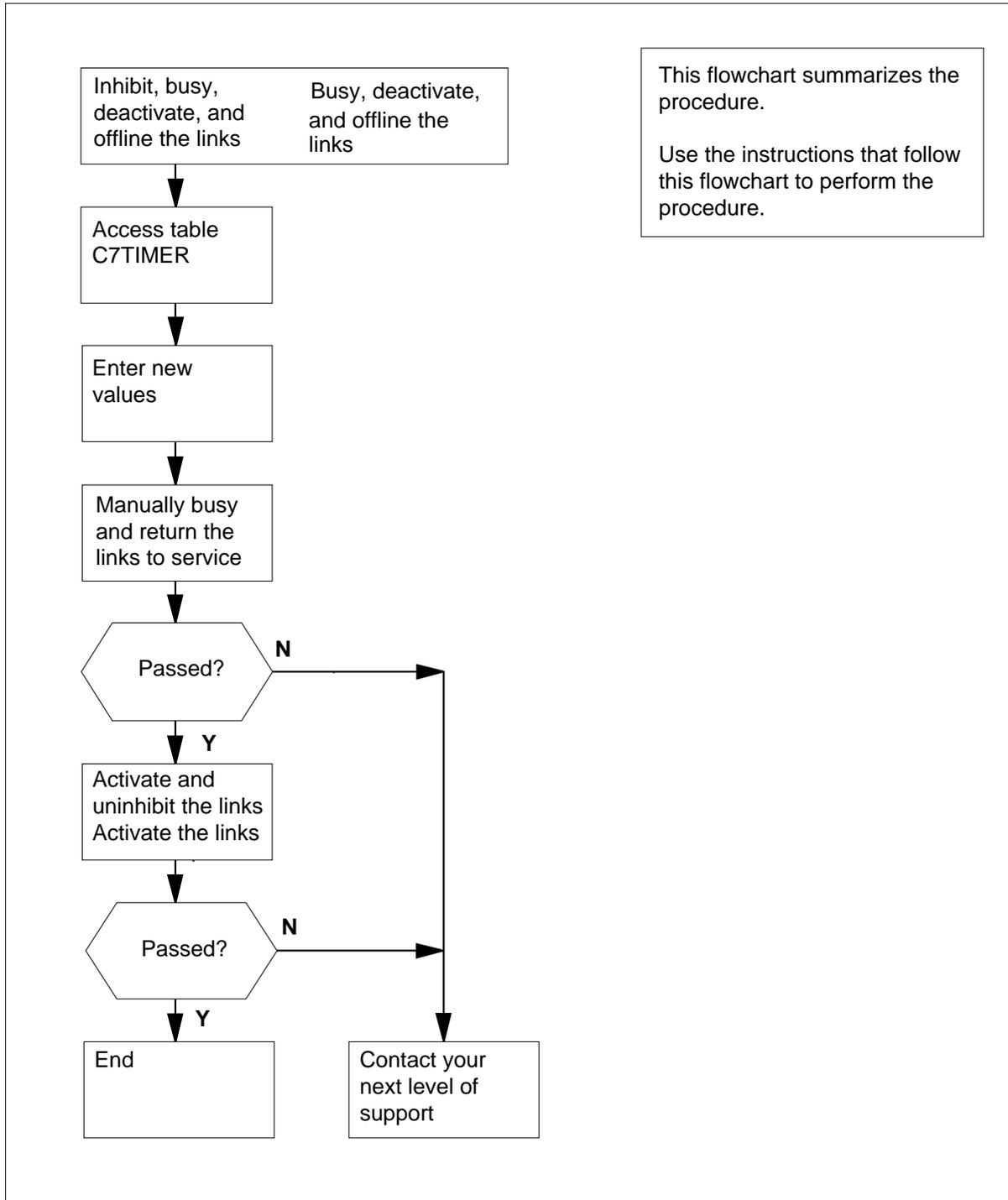
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Changing table C7TIMER entries (continued)

### Summary of Changing table C7TIMER entries



## Changing table C7TIMER entries (continued)

---

### Changing table C7TIMER entries

*At the MAP terminal*

1



**CAUTION**

**Possible loss of service**

A change in the value of the timers in table C7TIMER from the recommended values can cause system disruption and system failure.

To access the C7LKSET level of the MAP display, type

```
>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET
```

and press the Enter key.

2

To post the linkset, type

```
>POST C linkset_name
```

and press the Enter key.

*where*

**linkset\_name**

is the name of the linkset posted

---

<b>If</b>	<b>Do</b>
more than four links to display occur	step 3
all links are not OffL	step 4
all links are not OffL	step 5
all links are OffL	step 9

---

3

To display the next four links in the posted set, type

```
>NEXT
```

and press the Enter key.

Go to step 2.

4

To inhibit the link, type

```
>INH link_no
```

and press the Enter key.

*where*

**Changing table C7TIMER entries** (continued)

**link\_no**  
is the number of the inhibited link (0 to 15)

	<b>If the INH command</b>	<b>Do</b>
	passes	step 5
	fails	step 27
<b>5</b>	To manually busy the links, type > <b>BSY ALL</b> and press the Enter key.	
	<b>If the BSY command</b>	<b>Do</b>
	passes	step 6
	fails	step 27
<b>6</b>	To deactivate the link, type > <b>DEACT ALL</b> and press the Enter key.	
<b>7</b>	To offline the link, type > <b>OFFL ALL</b> and press the Enter key.	
<b>8</b>	Determine if all the links are offline.	
	<b>If all the links</b>	<b>Do</b>
	are Offl	step 9
	are not Offl	step 27
<b>9</b>	To return to the CI level of the MAP display, type > <b>QUIT ALL</b> and press the Enter key.	
<b>10</b>	To access table C7TIMER, type > <b>TABLE C7TIMER</b> and press the Enter key. <i>MAP response:</i>  TABLE: C7TIMER	
<b>11</b>	To change the position of the tuple, type > <b>POSITION key_value</b> and press the Enter key.	

## Changing table C7TIMER entries (continued)

---

where

**key\_value**

is the value of the TIMEKEY field of the tuple to change

**Note:** Field TIMEKEY includes the subfields SPECREF and TMRINDEX.

*Example input:*

```
>POSITION Q703 0
```

**Note:** In the example input, Q703 is SPECREF and 0 is TMRINDEX.

*Example of a MAP response:*

```
Q703 0 ANSI703 130, 118, 118, 6, 23, 12, 30, 100
```

```
Q703 1 JPN703 30, 4800, 4800, 30, 20, 200, 200, 137
```

- 12** To position on the NETSPEC field, type

```
>CHANGE 2
```

and press the Enter key.

*Example of a MAP response:*

```
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED  
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

- 13** To continue processing, type

```
>Y
```

and press the Enter key.

- 14** Press the Enter key until the required field appears in the MAP response. For example, to change the fourth timer field, press the Enter key four times. The fourth timer field has a value of 6 in the MAP response in step 11.

*Example of a MAP response:*

```
T4E=6
```

```
T4E=30
```

- 15** To enter the new value of the field to change, type

```
>new_value
```

and press the Enter key.

where

**new\_value**

is the new value of the field to change

- 16** Continue to press the Enter key until the approval message appears.

*Example of a MAP response:*

---

## Changing table C7TIMER entries (continued)

---

Q703 0 ANSI703 130, 118, 118, 10, 23, 12, 30,100  
 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

Q703 1 JPN703 30, 4800, 4800, 10, 20, 200, 200, 137  
 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

- 17** To confirm the new value, type

>Y

and press the Enter key.

*MAP response:*

TUPLE CHANGED

- 18** To quit from the C7TIMER table, type

>QUIT

and press the Enter key.

- 19** To return to the C7LKSET level of the MAP, type

>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET

and press the Enter key.

- 20** To manually busy the offline links, type

>BSY ALL

and press the Enter key.

If the BSY command	Do
passes	step 21
fails	step 27

- 21** To return the links to service, type

>RTS ALL

and press the Enter key.

If the RTS command	Do
passes	step 22
fails	step 27

- 22** Determine if all the offline links are SysB.

If all the links	Do
are SysB	step 23

**Changing table C7TIMER entries (end)**

	<b>If all the links</b>	<b>Do</b>
	are not SYSB	step 20
<b>23</b>	Tell operating company personnel to activate the link you are working on. At the same time, activate all the links that return to service in step 21. Type >ACT ALL and press the Enter key.	
	<b>If the ACT command</b>	<b>Do</b>
	passes	step 1
	fails	step 27
<b>24</b>	Determine if the links that return to service in step 21 are activated.	
	<b>If all links</b>	<b>Do</b>
	activate	step 25
	do not activate	step 23
<b>25</b>	To uninhibit one of the activated links in step 23, type >UINH link_no and press the Enter key. <i>where</i> <b>link_no</b> is the number of the uninhibited link(0 to 15) <b>Note:</b> To proceed, wait for the link to reach the aligned ready (AlnRdy) state.	
	<b>If the UINH command</b>	<b>Do</b>
	passes	step 26
	fails	step 27
<b>26</b>	Determine if the activated links in step 23 are uninhibited.	
	<b>If all the links are</b>	<b>Do</b>
	are uninhibited	step 2
	are inhibited	step 25
<b>27</b>	For additional help, contact the next level of support.	

---

## Clearing an SPM UR or a NA link state

---

### Clearing an SPM UR or a NA link state

*At the DS512 cable connections*

- 1 Clean the DS512 cables at both ends.
- 2 Verify the DS512 link cables are connected properly. Two ways to do this are:
  - The easiest and most accurate way to check the cables is to physically pull the fiber connection off a port on the CEM, then pull the other end of that fiber at the ENET. Check that the cable is not emitting light. (Do not look directly into the fiber at the light when you have it disconnected. Let the light reflect off the frame.) If you see a light, the other end is not connected according to table MNLINK and is still connected to another port. Pull the fibers until the light goes out, and you know you have both ends of the same cable. Reconnect the ends of the cables back according to table MNLINK.

*Note:* Ensure that the fibers are clean before reconnecting them.

- Another way to tell if cables are on the correct port is to pull a cable from a CEM port or ENET port and verify that the correct port drops sysb. (You may have to TST the port for it to drop.)
- 3 Verify the Nailed Up Connection path.

Three important things to remember about the ENET are:

- Card 8 in each ENET shelf is the interface to the MS shelves.
- Card 9 in each ENET shelf is a cornerstone card. All messaging is buffered through card 9 for odd numbered slots. Card 10 in each ENET shelf is also a cornerstone card. All messaging is buffered through card 10 for even-numbered slots. Inside the ENET there is a NUC. (The NUC is all the way from the CEM to the MS, but it usually gets disconnected up in the ENET.)
- If you suspect the NUC is bad, BSY and RTS the crosspoint card the SPM is tied to. In addition to the crosspoint card and paddleboard the SPM is physically connected to, keep in mind card 9, 10 and card 8 of an ENET shelf as possible source of trouble too. Troubleshoot these cards accordingly. The MS End: Card 8 of each ENET shelf is where the MS's are physically tied to the ENET. After doing a TRNSL on card 8 of ENET shelf, go to the MS level and post the MS chain card indicated. Translate this MS card and see what actual MS port the SPM message channels are tied to. You can then troubleshoot the MS end by TST;BSY;RTS of ports, replacing chain cards, reloading chain cards, and cleaning fibers.

On occasions, you can clear the UR or NA state of the ENET links by 'bouncing' the link at the MAP, by posting the ENET link (mapci;mtc;enet;shelf x;card y), and bsy/rts the link. If that action does not

## **Clearing an SPM UR or a NA link state (end)**

---

clear the UR or NA state of the ENET link, bounce the MS Port at the MAP, by posting the MS link (mapci;mtc;ms;shelf;card x;port y), and bsy/rts the port. For information on which ENET link or MS port is attached to an SPM, see *SPM Fault Management*, NN100075-911.

### **Log history**

#### **Q01007141**

“Clearing an SPM UR or a NA link state” is a new description introduced by CR Q01007141.

## Clearing problems on the SCAI link

---

### Application

Use this procedure to clear switch computer application interface (SCAI) link problems. A subscriber complaint or creation of the SCAI200 log indicates link faults.

Follow the procedure "Determining the location of the problem" first to determine if the problem is present outside the central office (CO).

### Definition

After you isolate the problem to the SCAI link, follow this procedure to clear the link. Indications of link damage are the SCAI200 log and subscriber complaints. Possible causes of these indications might reside in the host computer or the SCAI link.

The problem might continue after you clear the link. The CO maintenance persons informs the correct field service persons that the problem continues to exist with the host equipment.

### Common procedures

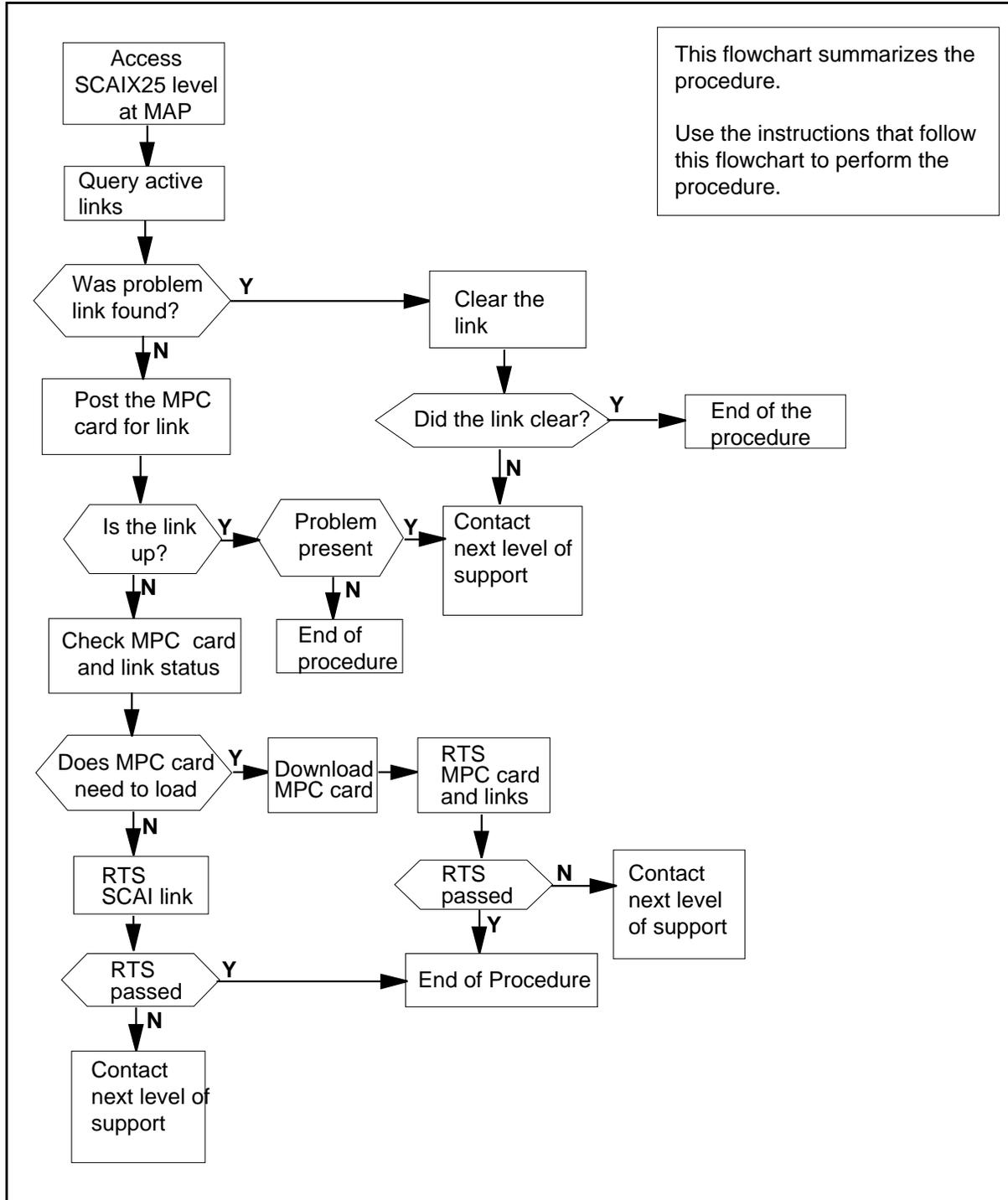
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Clearing problems on the SCAI link (continued)

### Summary of Clearing the problems on the SCAI link



---

## Clearing problems on the SCAI link (continued)

---

### Clearing problems on the SCAI link



**CAUTION**

If you clear a link, you will close communications on the link in use.

Issuing the CLEAR command from the SCAIX25 MAP level brings the session down. The link remains up.

**At the MAP terminal**

- 1 To access the SCAIX25 MAP display level, type  
`>MAPCI ;MTC ;IOD ;SCAIX25`  
 and press the Enter key.
- 2 To post the link reported to have the problem, type  
`>POST mpc# link#`  
 and press the Enter key *where*  
     **mpc#**  
         is the number of the MPC where the link is associated  
     **link#**  
         is the number of the link where the problem is encountered
- 3 Check the MAP display for active links. The letter "L" identifies active links. To query the active links, type  
`>QUERY SESSION session#`  
 and press the Enter key.  
*where*  
     **session#**  
         is the active session number you query (the range is 0 through 59)

If the problem link	Do
is found	step 14
is not found	step 4

- 4 To post the MPC card for that link to make sure that the link is up, type  
`>IOD ;IOC x ;CARD y`  
 and press the Enter key.  
*where*  
     **IOC x**  
         is the input/output controller (IOC) shelf number where the MPC resides

## Clearing problems on the SCAI link (continued)

**CARD y**  
is the number of the MPC card

If the link	Do
is not up	step 5
is up but problem continues	step 16
is up and problem clears	step 17

- 5** Check the status of the MPC and its link.

*Example of a MAP display:*

```
Card 7 Unit 10
      User SYSTEM BOARD LINK0 LINK1 LINK2 LINK3
      Status Ready COMACT UNEQ N/A UNEQ
OFFL
```

If the MAP display of the posted MPC card	Do
resembles the following display	step 6
does not resemble the following display	step 8

- 6** To busy the link, type  
>BSY LINK n  
and press the Enter key.  
*where*

**n**  
is the link number

- 7** To return the busied link to service, type  
>RTS LINK n  
and press the Enter key.  
*where*

**n**  
is the link number

If RTS	Do
passes	step 17
fails	step 16

- 8** Continue to check the status of the MPC and its link.

---

## Clearing problems on the SCAI link (continued)

---

*Example of a MAP display:*

```
Card 7 Unit    10
      User SYSTEM BOARD LINK0 LINK1 LINK2 LINK3
      Status SysB  NOLOAD UNEQ  N/A      UNEQ
OFFL
```

---

<b>If the MAP display of the posted MPC card</b>	<b>Do</b>
--	-----------

---

resembles the following display	step 9
---------------------------------	--------

does not resemble the following display	step 16
---	---------

---

**9** To download the MPC card, type

```
>DOWNLD mpc#
```

and press the Enter key.

*where*

**mpc#**  
is the number of the MPC card

*Example of a MAP:*

```
Card 7 Unit    10
      User SYSTEM BOARD LINK0 LINK1 LINK2 LINK3
      Status SysB  DNLDED UNEQ  N/A      UNEQ  OFFL
```

**10** To busy the MPC card, type

```
>BSY
```

and press the Enter key.

**11** To return the MPC card to service, type

```
>RTS
```

and press the Enter key.

---

<b>If RTS</b>	<b>Do</b>
---------------	-----------

---

passes	step 12
--------	---------

fails	step 16
-------	---------

---

**12** To busy each link associated with the MPC card, type (for each link)

```
>BSY LINK link#
```

and press the Enter key.

*where*

**link#**  
is the number of the link you busy

## Clearing problems on the SCAI link (end)

---

- 13** To return each link to service, type  
>**RTS LINK link#**  
and press the Enter key.  
*where*  
**link#**  
is the number of the link you return to service

---

<b>If RTS</b>	<b>Do</b>
passes	step 17
fails	step 16

---

- 14** To clear the link, type  
>**CLEAR SESSION session#**  
and press the Enter key.  
*where*  
**session#**  
is the session number on the link you clear

- 15** To respond to the prompt, type  
>**YES**  
and press the Enter key.

---

<b>If the link</b>	<b>Do</b>
clears	step 17
did not clear	step 16

---

- 16** For additional help, contact the next level of support.  
**17** The procedure is complete.

## CMR data mismatch with CC

---

### Application

There can be problems with softkeys on an Analog Display Services Interface (ADSI) set. This procedure determines if a CLASS modem resource (CMR) data mismatch with central control (CC) causes the problems.

### Definition

A subscriber complaint indicates that no defined softkeys are present on the ADSI set. A complaint also can indicate that the wrong softkeys were downloaded to the ADSI set.

### Common procedures

There are no common procedures.

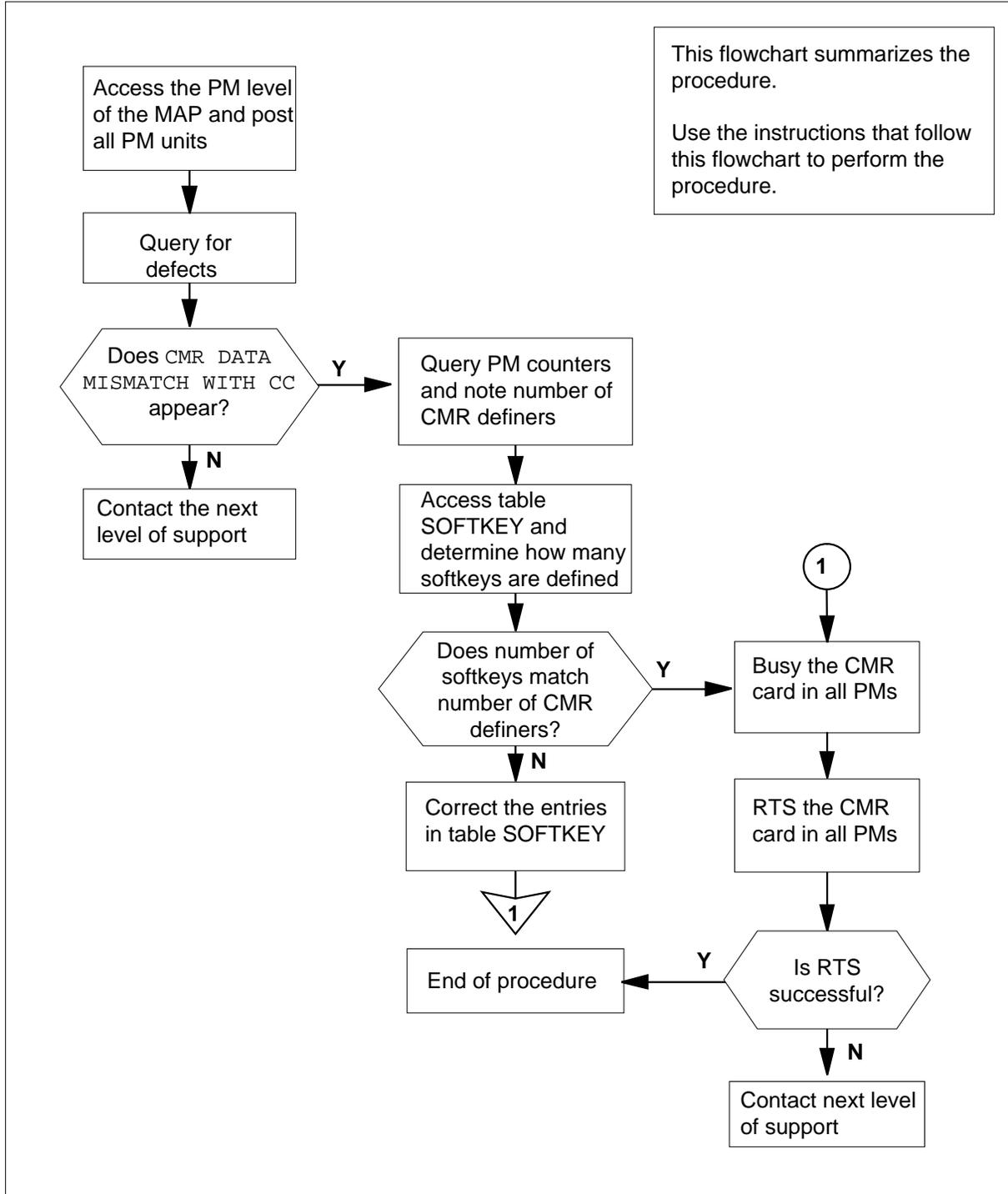
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Note:** The CMR card NT6X78 can go out of service in the active unit. You can busy, replace, load, and return the CMR card to service. You do not have to execute these operations on the whole unit.

**CMR data mismatch with CC** (continued)

**Summary of CMR data mismatch with CC**



---

**CMR data mismatch with CC** (continued)

---

**CMR data mismatch with CC**

***At the MAP terminal***

- 1 To access the PM level of the MAP, type  
`>MAPCI ;MTC ;PM`  
 and press the Enter key.
- 2 To post all peripheral module (PM) units, type  
`>POST pm_type ALL`  
 and press the Enter key.  
*where*  
     **pm\_type**  
     is the PM type (LGC, LTC, RCC, SMS, or SMU)
- 3 To check for fault indicators, type  
`>QUERYPM FLT`  
 and press the Enter key.

---

<b>If the response</b>	<b>Do</b>
is CMR DATA MISMATCH WITH CC	step 4
is a message other than listed here	step 10

- 4 To use the QUERYPM command to determine the number of CMR definers, type  
`>querypm CNTRS`  
 and press the Enter key.  
*Example of a MAP response*

---

## CMR data mismatch with CC (continued)

---

```
Unsolicited MSG limit = 250, Unit 0 = 0, Unit 1 = 0.  
Unit 0:  
RAM Load: NLG32BU  
ROM Load: XPMRKA02  
CMR LOAD: CMR33AI5  
CMR DEFINERS: 12  
MP: 6X45BA/BB  
SP: 6X45BA/BB  
Unit 1:  
RAM Load: NLG32BU  
ROM Load: XPMRKA02  
CMR LOAD: CMR33AI5  
CMR DEFINERS: 12  
MP: 6X45BA/BB  
SP: 6X45BA/BB
```

**Note:** In this example, the number of CMR definers is 12.

- 5 To access table SOFTKEY, type  
*>Table SOFTKEY*  
and press the Enter key.
- 6 To use the COUNT command to display the number of softkeys defined, type  
*>count*  
and press the Enter key.

---

If the number of softkeys	Do
matches number of CMR definers	step 8
does not match number of CMR definers	step 7

---

7



### CAUTION

#### Loss of service

When data in table SOFTKEY is changed, all PMs with CMR cards become in-service trouble (ISTb). CMR cards in the office must be busied and returned to service. The cards update the softkey definer information in the CMR memory.

Correct the entries in table SOFTKEY.

---

**CMR data mismatch with CC (end)**

---

- 8** To busy all CMR cards, type  
*>bsy PM CMR ALL*  
 and press the Enter key.  
*where*  
**CMR**  
 is an optional parameter that means to busy only the card.  
**ALL**  
 is an optional parameter that means to busy all PMs in the office.
- 9** To return all CMR cards to service, type  
*>RTS PM CMR ALL*  
 and press the Enter.  
*where*  
**CMR**  
 is an optional parameter that means to busy only the card.  
**ALL**  
 is an optional parameter that means busy all PMs in the office.

---

<b>If the RTS command</b>	<b>Do</b>
passes	step 11
fails	step 10

---

- 10** For additional help, contact the next level of support.  
**11** The procedure is complete.

## **Confirming a missing telephone**

---

### **Application**

Use this procedure to confirm a missing telephone.

### **Definition**

The next level of support identifies a missing telephone. The next level of support can request that you perform this procedure to confirm the missing telephone or provide additional information.

### **Common procedures**

There are no common procedures.

### **Action**

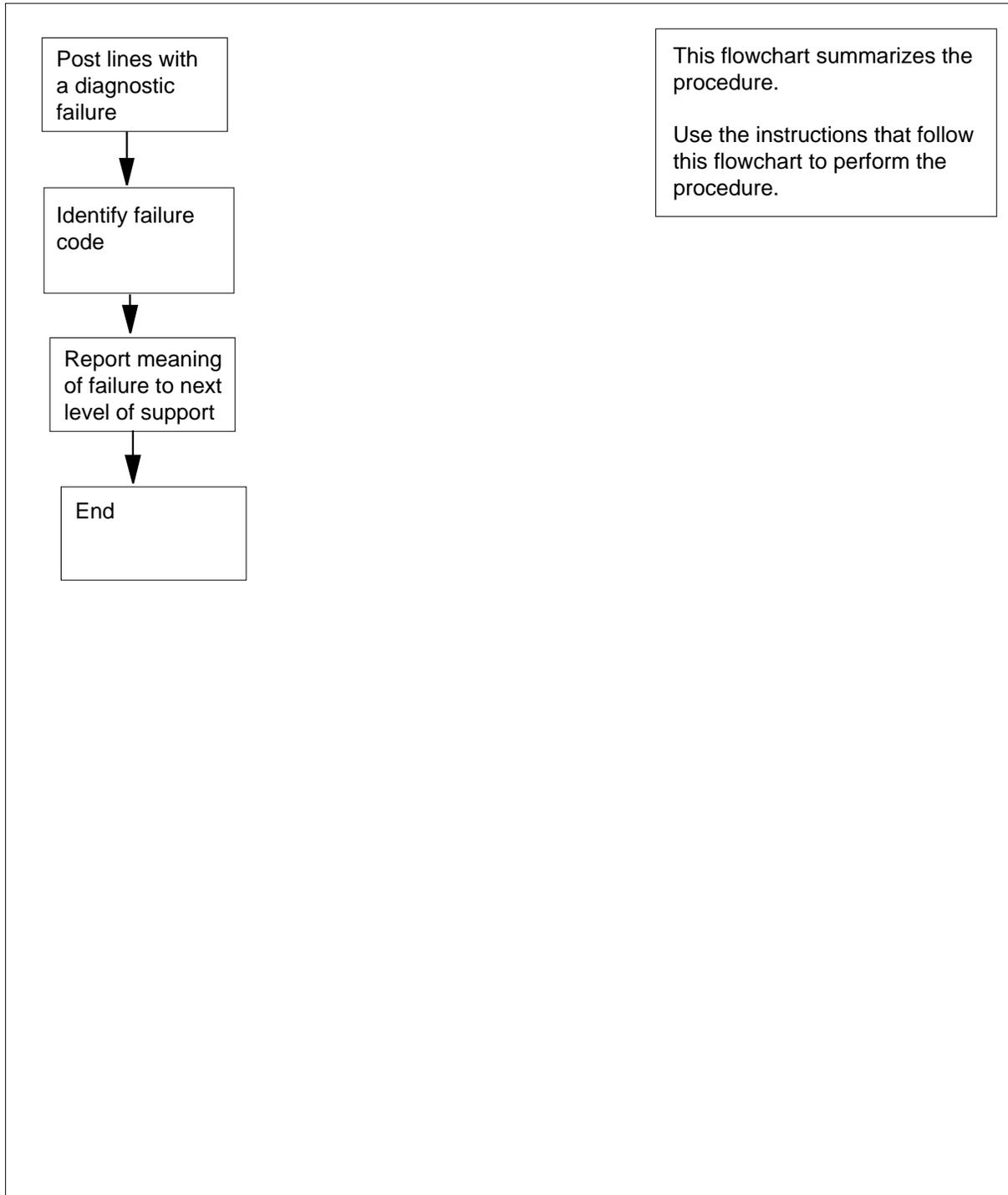
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

---

## Confirming a missing telephone (continued)

---

### Summary of Confirming a missing telephone



## Confirming a missing telephone (continued)

### Confirming a missing telephone

#### At the MAP terminal

1 To access the LTP level of the MAP display, type  
**>MAPCI;MTC;LNS;LTP** and press the Enter key.

2 To post the lines that have a diagnostic failure, type  
**>POST DF MSET**  
 and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          PREFIX
LEN REM1 00 0 00 06
LCC PTY RNG.....          STA F S LTA TE RESULT
IBN          DN 613 722 4345 IDL m
    
```

3 Note the failure code that appears under the F header. Check the following information for the meaning of that failure code.

IfFailure Code	DoMeaning
D	the DIAG test failed
F	the DIAG test failed
S (N/A for ISDN)	the SDIAG test failed
N	the SDIAG test passed on the previously faulty line
m	the DIAG test detected a missing keyset or network termination 1 (NT1)
M	the DIAG test detected a missing line card
Q	there is a call-processing error
I	there is a major incoming message overload (ICMO)
i	there is a minor incoming message overload (ICMO)
l	the keyset line failed the loop-back test at the terminal

**Confirming a missing telephone** (end)

---

- 4 Contact the next level of support and report the failure code and its meaning.
- 5 The procedure is complete.

## **Correcting an attendant console problem**

---

### **Application**

Use this procedure to diagnose and correct an attendant console problem.

### **Definition**

The next level of support identifies an attendant console problem. The next level can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

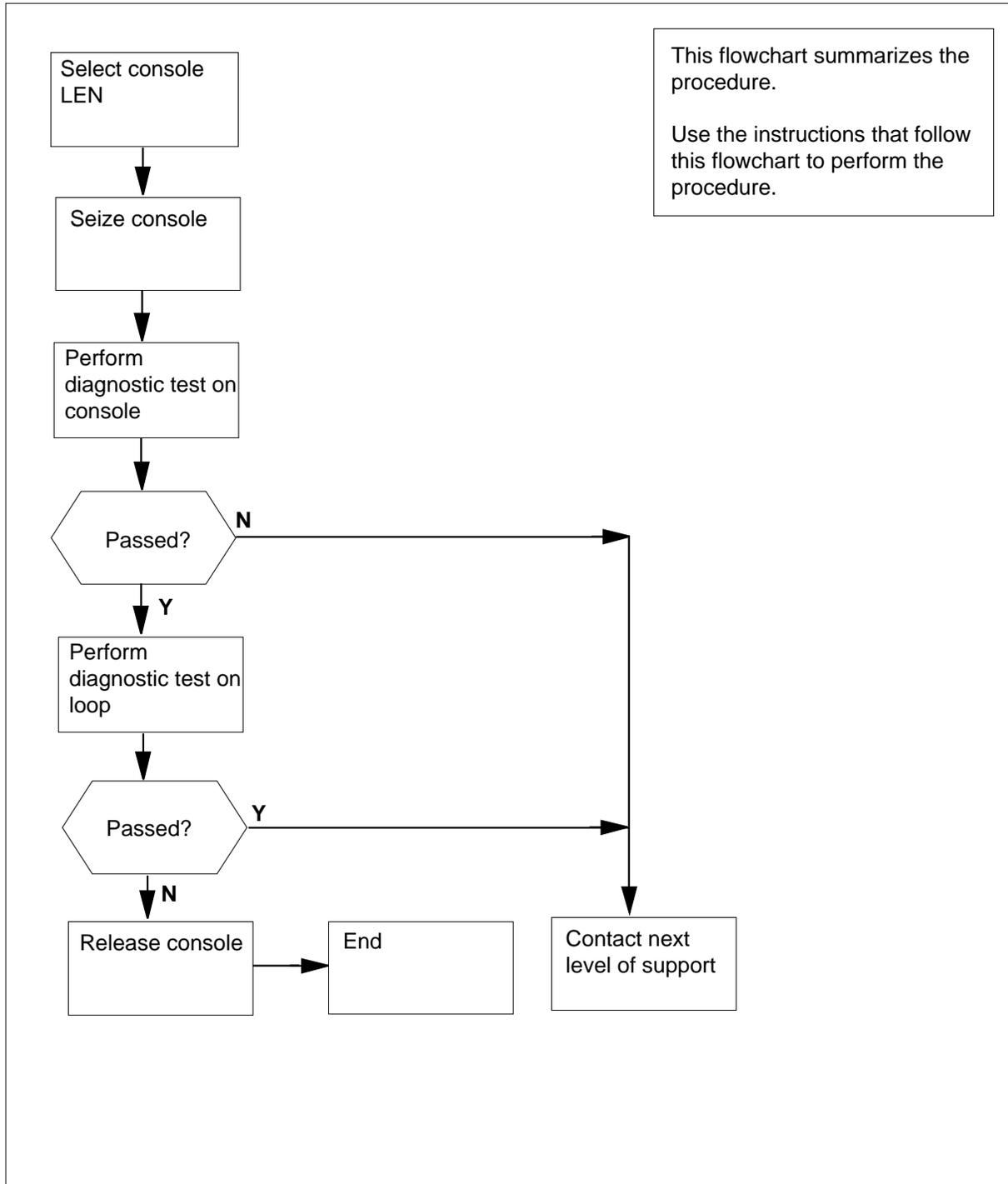
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting an attendant console problem (continued)

### Summary of Correcting an attendant console problem



## Correcting an attendant console problem (continued)

### Correcting an attendant console problem

#### At the MAP terminal

- 1 To access the IBNCON level of the MAP display, type  

```
>MAPCI ;MTC ;LNS ;LTP ;IBNCON
```

 and press the Enter key.
- 2 To select the line equipment number (LEN) of the attendant console indicated in the log report, type  

```
>SELECT L len
```

 and press the Enter key.  
 where  
     **len**  
       is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

**Note:** Do not select the attendant console if it is in use.

*Example input:*

```
>SELECT L 00 1 00 01
```

*Example of a MAP response:*

```
LCC PTY  RNG  LEN                      STA F S LTA TE RESULT
1FR                      DN 621 4777 IDL
```

- 3 To change the status of the console from unjacked (UNJK) to manual busy (MB), type  

```
>BUSY
```

 and press the Enter key.
- 4 To change the status of the console from MB to seized (SZD), type  

```
>SEIZE
```

 and press the Enter key.
- 5 To perform an IBNCON-level diagnostic test on the console, type  

```
>DIAGNOSE  CONS
```

 and press the Enter key.

If the MAP response	Do
is CONSOLE FAILURE: RE-PLACE	step 6
is CONSOLE LOOP AROUND TEST FAIL	step 9

- 6 To perform an IBNCON-level diagnostic test on the loop, type  

```
>DIAGNOSE LOOP
```

---

## Correcting an attendant console problem (end)

---

and press the Enter key.

<b>If the MAP response</b>	<b>Do</b>
is CONSOLE LOOP AROUND TEST OK	step 7
is CONSOLE LOOP AROUND TEST FAIL	step 9

**7** To change the status of the console from SZD to MB, type

**>RELEASE**

and press the Enter key.

**8** To return the console to service, type

**>RTS**

and press the Enter key.

<b>If the RTS command</b>	<b>Do</b>
passes	step 10
fails	step 9

**9** For additional help, contact the next level of support.

**10** The procedure is complete.

## **Correcting an automatic line test failure**

---

### **Application**

Use this procedure to diagnose and correct the failure of the automatic line test. The performance of the automatic line test is on groups of line circuits and on subscriber loops. The schedule for automatic line tests are at times during low traffic periods.

### **Definition**

The next level of support identifies an automatic line test. The next level of support will request the performance of this procedure to correct problems or provide information.

### **Common procedures**

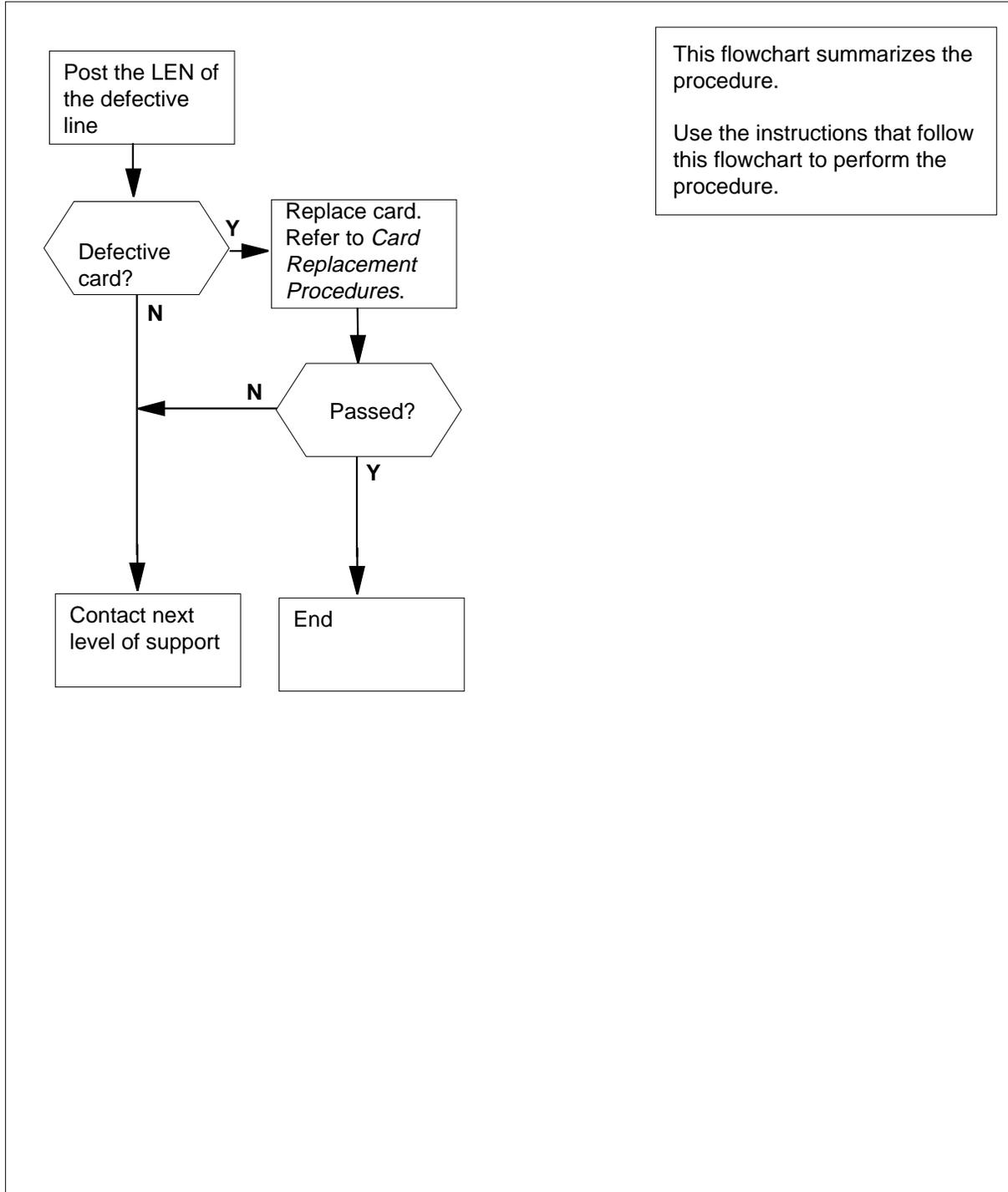
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting an automatic line test failure (continued)

### Summary of Correcting an automatic line test failure



## Correcting an automatic line test failure (continued)

### Correcting an automatic line test failure

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

where

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

Example input:

```
>POST L 00 1 00 01
```

Example of a MAP response:

```
LEN HOST 00 1 00 01
LCC PTY RNG..... STA F S LTA TE RESULT
IFR DN 613 621 4777 IDL
```

- 3 To locate the defective line card, type

```
>CKTLOC
```

and press the Enter key.

Example of a MAP response:

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description and Slot headers.

- 5 Perform the procedure in *Card Replacement Procedures* to replace the defective line card recorded in step 4. Complete the procedure and return to this point.

- 6 Perform a diagnostic test on the replaced line card in step 5, type

```
>DIAG
```

and press the Enter key.

Example of a MAP response:

---

## Correcting an automatic line test failure (end)

---

```

+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
    
```

---

If the MAP response	Do
is +LINE100, and other information	step 8
is +LINE101, and other information	step 7
is COULD NOT SEIZE LINE	step 7

- 7** For additional help, contact the next level of support.
- 8** The procedure is complete.

## **Correcting a call cut-off problem**

---

### **Application**

Use this procedure to diagnose and correct a condition that cuts off a subscriber call.

### **Definition**

The next level of support identifies a call cut-off problem. The next level of support can request a performance of this procedure to correct problems or provide additional information.

### **Common procedures**

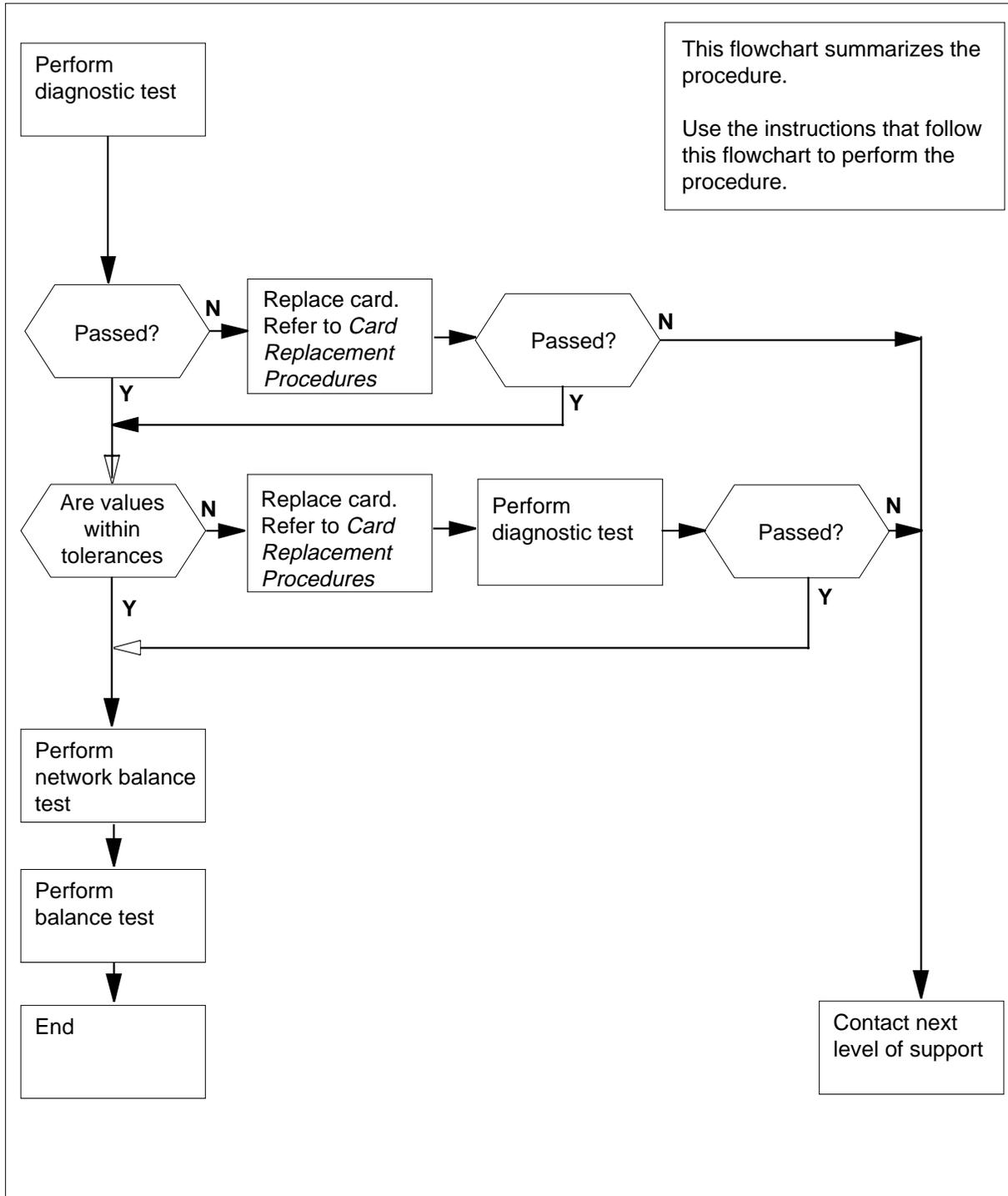
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a call cut-off problem (continued)

### Summary of Correcting a call cut-off problem



## Correcting a call cut-off problem (continued)

---

### Correcting a call cut-off problem

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
and press the Enter key.
- 2 To post the directory number (DN) of the line where a subscriber call is cut off, type  
**>POST D dn**  
and press the Enter key.

where

**dn**

is the 10- or 11-digit DN of the subscriber line, without spaces

*Example input:*

**>POST D 6136211076**

*Example of a MAP response:*

```
LEN HOST 00 0 12 19
LCC PTY RNG          STA F S LTA TE RESULT
8FR T4      DN 613 621 1076 IDL
```

- 3 To perform a diagnostic test on a subscriber line, type  
**>DIAG**  
and press the Enter key.

*Example of a MAP response:*

```
+LINE100 SEP30 10:28:21 5900 PASS LN_DIAG
LEN HOST 00 0 12 19 DN 6136211076
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X18AA
```

---

If the MAP response	Do
---------------------	----

---

is +LINE100, and other information	step 8
------------------------------------	--------

is +LINE101, and other information	step 4
------------------------------------	--------

is COULD NOT SEIZE LINE	step 19
-------------------------	---------

---

- 4 To locate the defective line card, type  
**>CKTLOC**

## Correcting a call cut-off problem (continued)

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 5 Record the product engineering code (PEC), PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6 Perform the correct procedure in *Card Replacement Procedures* to replace the defective line card recorded in step 5. Complete the procedure and return to this point.

- 7 To perform a diagnostic test on the line card replaced in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 8
is +LINE101, and other information	step 19
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 19

- 8 To perform a line test on the loop, type

**>LTPLTA;LNTST**

and press the Enter key.

*Example of a MAP response:*

**Correcting a call cut-off problem** (continued)

```

Test OK
          RES      CAP      VAC  VDC
TIP      999.OK   0.000UF  0    0
RNG      999.OK   0.000UF  0    0
TIP TO  RNG  999.OK   1.200UF
    
```

If the test	Do
passes	step 9
fails	step 19

**9** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.

**10** Determine if the values recorded in step 9 are within the tolerances listed in the *Maintenance Guide*.

If the RES, CAP, VAC, and VDC values	Do
are within the tolerances	step 15
are outside the tolerances	step 11

**11** To locate the defective line card, type

>LTP ;CKTLOC

and press the Enter key.

*Example of a MAP response:*

```

CktLoc
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18AA
    
```

```

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

**12** Record the PEC, the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 11, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

**13** Perform the correct procedure in *Card Replacement Procedures* to replace the defective line card recorded in step12. Complete the procedure and return to this point.

**14** To perform a diagnostic test on the line card replaced in step 13, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

---

## Correcting a call cut-off problem (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 15
is +LINE101, and other information	step 19
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 19

**15** To perform a network balance test, type

**>LTPLTA;BALNET**

and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS    Non loaded  No
      RESULT      Non loaded  No
```

**16** Record the test results for the next level of support.

**17** To perform a balance test to check for possible faults in the outside plant, type

**>LTPMAN;BAL**

and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS    Non loaded  No
      RESULT      Non loaded  No
```

**18** Record the test results for the next level of support.

Go to step 20.

**19** For additional help, contact the next level of support.

**20** The procedure is complete.

## **Correcting a data error problem**

---

### **Application**

Use this procedure to determine why data errors occur on a line.

### **Definition**

The next level of support identifies a data error problem. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

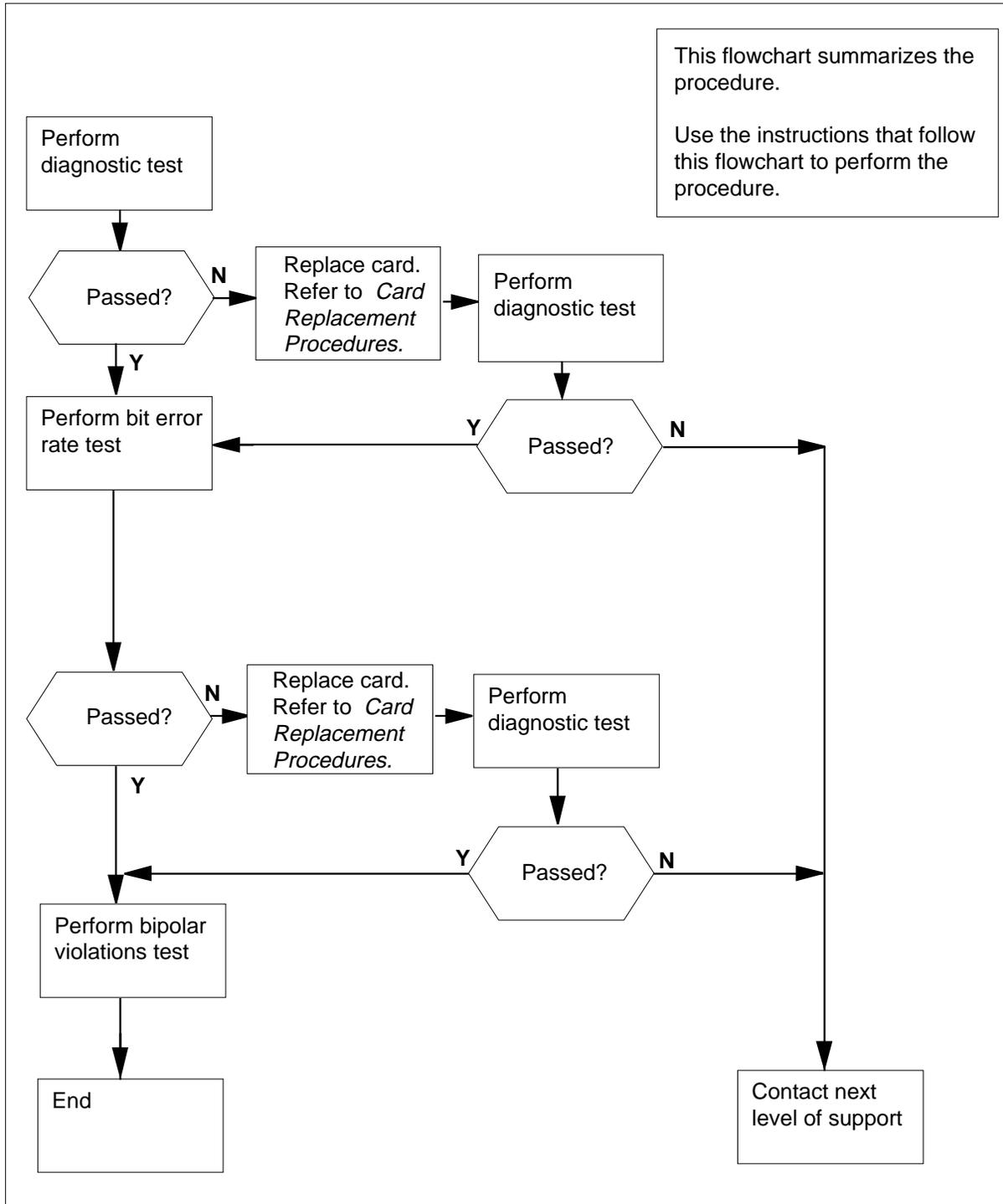
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Correcting a data error problem** (continued)

**Summary of Correcting a data error problem**



## Correcting a data error problem (continued)

### Correcting a data error problem

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 To post the directory number (DN) of the line where the subscriber call is cut off, type  
**>POST D dn**  
 and press the Enter key.

where

**dn**

is the 10- or 11-digit DN of the subscriber line, without spaces

*Example input:*

**>POST D 6136211076**

*Example of a MAP response:*

```
LEN HOST 00 0 12 19
LCC PTY RNG          STA F S LTA TE RESULT
8FR T4      DN 613 621 1076 IDL
```

- 3 To perform a diagnostic test on the subscriber line, type  
**>DIAG**  
 and press the Enter key.

*Example of a MAP response:*

```
+LINE100 SEP30 10:28:21 5900 PASS LN_DIAG
LEN HOST 00 0 12 19 DN 6136211076
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X18AA
```

---

#### If the MAP response

#### Do

- |                                    |         |
|------------------------------------|---------|
| is +LINE100, and other information | step 8  |
| is +LINE101, and other information | step 4  |
| is COULD NOT SEIZE LINE            | step 30 |
- 

- 4 To locate the defective line card, type  
**>CKTLOC**

---

## Correcting a data error problem (continued)

---

and press the Enter key.

*Example of a MAP response:*

```

Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

- 5** Record the product engineering code (PEC), PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6** Perform the correct procedure in *Card Replacement Procedures* to replace the defective line card recorded in step 5. Complete the procedure and return to this point.

- 7** To perform a diagnostic test on the line card replaced in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```

+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
    
```

If the MAP response	Do
is +LINE100, and other information	step 8
is +LINE101, and other information	step 30
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 30

- 8** To perform a line test on the loop, type

**>LTPLTA;LNTST**

and press the Enter key.

*Example of a MAP response:*

**Correcting a data error problem** (continued)

```

Test OK
          RES      CAP      VAC      VDC
TIP      999.OK   0.000UF  0      0
RNG      999.OK   0.000UF  0      0
TIP TO  RNG  999.OK   1.200UF
    
```

If the test	Do
passes	step 9
fails	step 30

**9** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC), and direct current voltage (VDC) values from the MAP response.

**10** Determine if the record of values in step 9 are within the tolerances listed in the *Maintenance Guide*.

If the RES, CAP, VAC, and VDC values	Do
are within the tolerances	step 15
are outside the tolerances	step 11

**11** To locate the defective line card, type

>LTP ;CKTLOC

and press the Enter key.

*Example of a MAP response:*

```

CktLoc
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18AA

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

**12** Record the PEC, PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 11, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

**13** Perform the correct procedure in *Card Replacement Procedures* to replace the defective line card recorded in step 12. Complete the procedure and return to this point.

**14** To perform a diagnostic test on the line card replaced in step 13, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

**Correcting a data error problem** (continued)

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 15
is +LINE101, and other information	step 30
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 30

- 15** To perform a bit error rate test, type  
**>LTPDATA;BERT START**  
 and press the Enter key.

*Example of a MAP response:*

```
LEN HOST 02 0 00 04
LCC PTY RNG          STA F S LTA TE RESULT
IBN DATA      DN 613 722 3117 MB
Number of blocks received      : 159672
Number of errors                : 0
Number of sync slips           : 0
Bit Error Ratio is             : 0
```

**Note:** The status of the line changes to manual busy (MB).

If the MAP response	Do
indicates a data problem	step 22
indicates a line card failure	step 16
indicates no errors	step 26
indicates the bit error rate test did not run	step 22

- 16** To terminate the bit error rate test, type  
**>BERT STOP**  
 and press the Enter key.

## Correcting a data error problem (continued)

- 17 To locate the defective line card, type

>LTP;CKTLOC

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 18 Record the PEC, PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 17, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 19 Perform the correct procedure in *Card Replacement Procedures* to replace the defective line card recorded in step 18. Complete the procedure and return to this point.

- 20 To perform a diagnostic test on the line card replaced in step 19, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

---

**If the MAP response**

**Do**

is +LINE100, and other information step 21

is +LINE101, and other information step 30

is COULD NOT RUN LINE\_CARD\_DIAGNOSTIC step 30

---

- 21 To perform a bit error rate test, type

>LTPDATA;BERT START

and press the Enter key.

*Example of a MAP response:*

---

## Correcting a data error problem (continued)

---

```

LEN HOST 02 0 00 04
LCC PTY RNG          STA F S LTA TE RESULT
IBN DATA   DN 613 722 3117 MB
Number of blocks received : 159672
Number of errors          : 0
Number of sync slips     : 0
Bit Error Ratio is       : 0
    
```

**Note:** The status of line changes to manual busy (MB).

---

If the MAP response	Do
indicates a data problem	step 22
indicates a line card failure	step 30
indicates no errors	step 26
indicates the bit error rate test did not run	step 30

---

**22** To set the loopback, type

>LOOPBK **location**

and press the Enter key.

*where*

**location**

is an exact location on a data line, which depends on the type of interface. Refer to the LOOPBK command and responses in the *Maintenance Guide*.

*Example of a MAP response:*

```

LOOP BACK AT DU ACTIVATED
    
```

---

If the loopback	Do
activates	step 23
did not activate	step 30

---

**23** To perform a test for possible faults in the outside plant, type

>LTPLTA;LNTST

and press the Enter key.

*Example of a MAP response:*

---

## Correcting a data error problem (end)

---

Test OK				
	RES	CAP	VAC	VDC
TIP	999.0K	0.000UF	0	0
RNG	999.0K	0.000UF	0	0
TIP TO RNG	999.0K	1.200UF		

---

<b>If the test</b>	<b>Do</b>
passes	step 24
fails	step 30

---

**24** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.

**25** Determine if the recorded values in step 24 are within the tolerances listed in the *Maintenance Guide*.

---

<b>If the RES, CAP, VAC, and VDC values</b>	<b>Do</b>
are within the tolerances	step 26
are outside the tolerances	step 30

---

**26** To terminate the bit error rate test, type

**>LTPDATA;BERT STOP**

and press the Enter key.

**27** To perform a bipolar violation test for the next level of support, type

**>BPVO START**

and press the Enter key.

**28** Record the results of the test for the next level of support.

**29** To stop the bipolar violations test, type

**>BPVO STOP**

and press the Enter key.

Go to step 31.

**30** For additional help, contact the next level of support.

**31** The procedure is complete.

## Correcting digital test unit problems

---

### Application

Use this procedure to correct digital test unit (DTU) problems.

### Definition

Use the DTU to perform bit error rate tests (BERT) on trunk circuits. The DTU has a NT4X23 card and a double trunk appearance. The NT4X23 card is in a maintenance trunk module (MTM).

TRK106 logs can indicate DTU problems. A defective NT4X23 card or a defective DTU firmware load can cause DTU problems.

*Note:* Do not confuse bit error rate trunk and line test utilities. The DTU performs bit error rate tests for trunks. The ISDN BERT (IBERT) line card (ILC), an NT6X99 card, performs bit error rate tests for lines.

### Common procedures

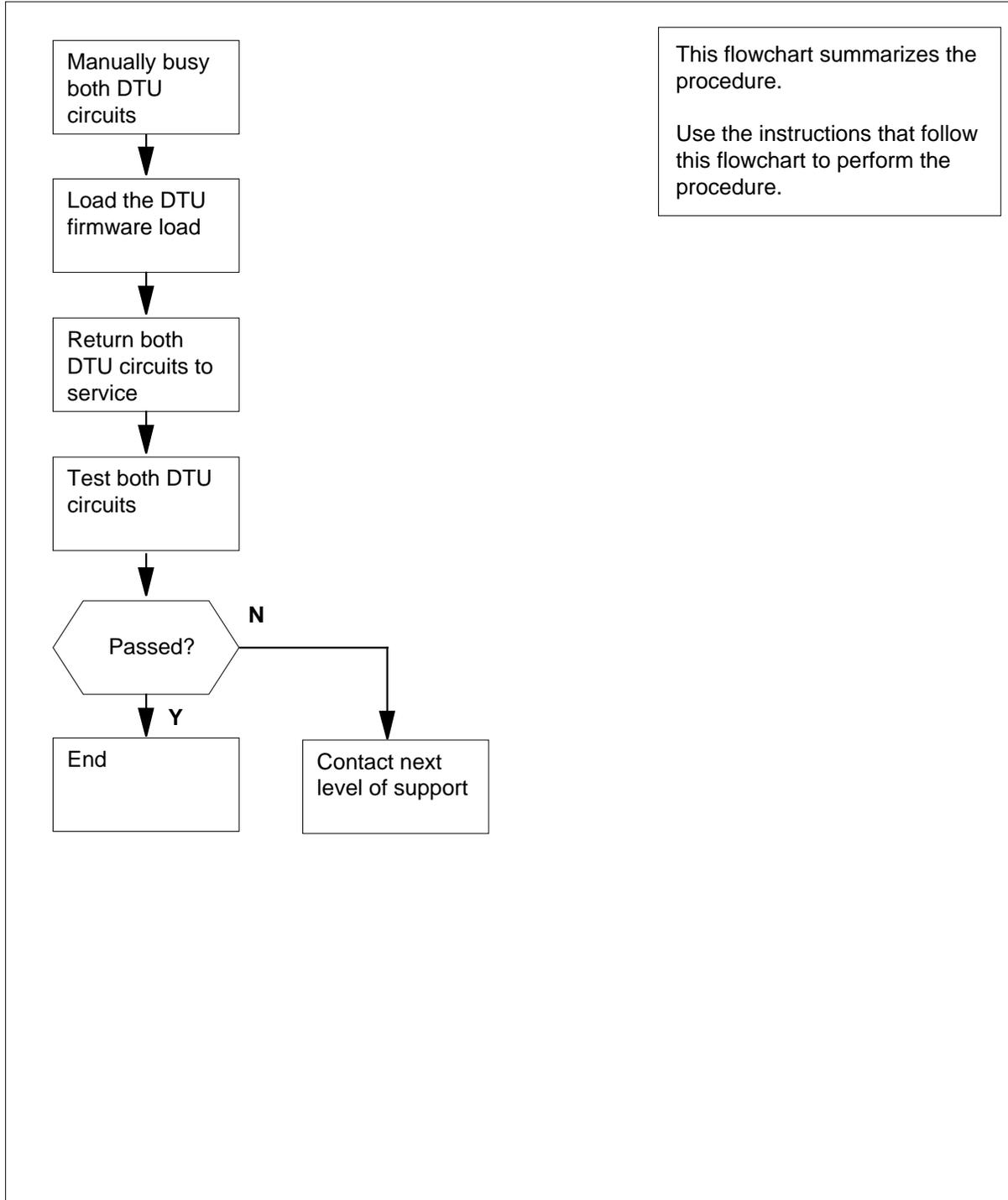
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting digital test unit problems (continued)

### Summary of Correcting digital test unit problems



## Correcting digital test unit problems (continued)

### Correcting digital test unit problems

#### ATTENTION

Circuits that you set to SEIZE and BUSY must be on the same card for this procedure to work.

#### At the MAP terminal

1



#### DANGER

Degradation of digital trunk bit error rate testing

This procedure removes the DTU from service. Perform this procedure during periods of low traffic.

To access the TTP level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP
```

and press the Enter key.

2

To post one of the defective DTU circuits, type

```
>POST G clli dtu_no
```

and press the Enter key.

where

#### CLLI

is the common language location identifier (CLLI) of the MTA (table CLLI)

#### dtu\_no

is the number of the DTU

Example input:

```
>POST G DTU 0
```

Example of a MAP response:

```
POST      1  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE  PM NO.      COM LANG  STA S R  DOT TE  RESULT
O  MTM   6   2 DTU          0  IDL
```

3

To manually busy the DTU circuit, type

```
>BSY
```

and press the Enter key.

Example of a MAP response:

---

## Correcting digital test unit problems (continued)

---

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG      MTM  6  2  DTU          0  MB
    
```

- 4** To hold the DTU circuit, type

**>SEIZE**

and press the Enter key.

*Example of a MAP response:*

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG      MTM  6  2  DTU          0  SZD . .
                                P_MB
    
```

- 5** To hold the DTU circuit, type

**>HOLD**

and press the Enter key.

*Example of a MAP response:*

```

POST      DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG      MTM  6  3  DTU          1  IDL
                                HOLD1  DTU          0  SZD . .
    
```

- 6** To manually busy the second circuit of the defective DTU, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

```

POST      DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG      MTM  6  3  DTU          1  MB
                                HOLD1  DTU          0  SZD . .
    
```

- 7** To seize the DTU circuit, type

**>SEIZE**

and press the Enter key.

*Example of a MAP response:*

**Correcting digital test unit problems** (continued)

```

POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE     PM NO.      COM LANG     STA S R     DOT TE     RESULT
OG   MTM      6 3  DTU          1  SZD . .
                                     P_MB

                                HOLD1  DTU          0  SZD . .
    
```

- 8** To hold the DTU circuit, type  
**>HOLD**  
 and press the Enter key.  
*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE     PM NO.      COM LANG     STA S R     DOT TE     RESULT
OG   RMM      2 2  DTU          2  IDL
                                HOLD1  DTU          0  SZD . .
                                HOLD2  DTU          1  SZD . .
    
```

- 9** Determine the load file name of the DTU.

If you	Do
know the load file name of the DTU	step 15
do not know the load file name of the DTU	step 10

- 10** From office records, note the system load module (SLM) disk and volume that contains the DTU load file.

- 11** To access the disk utility, type  
**>DISKUT**  
 and press the Enter key.  
*Example of a MAP response:*

```

Disk utility is now active.
DISKUT:
    
```

- 12** To list all the files on the volume that contains the DTU load, type  
**>LISTFL disk\_volume\_name**  
 and press the Enter key.  
*where*

## Correcting digital test unit problems (continued)

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the volume on the disk that contains the DTU

Example input:

>LISTFL S00DIMAGE1

Example of a MAP response:

File information for volume S00DIMAGE1:

{NOTE: 1 BLOCK = 512 BYTES }

LAST FILE MODIFY CODE	O R I O R E T P	FILE SIZE	NUM OF RECORDS	MAX REC	FILE NAME
DATE	G C O E C N	IN BLOCKS	IN FILE	LEN	
930215	0 I F	12744	6372	1020	930215_CM
930215	0 I F	188180	94090	1020	930215_MS
930212	0 O F	13460	6730	1020	APX35CG
930212	0 O F	7154	3577	1020	ERS35CG
930216	0 O F	33936	16968	1020	FPX35CG
930216	0 O F	5334	2667	1020	LRC35CG
930215	0 O F	5334	2667	1020	LCC35CG
930129	0 O F	12	24	256	ASN1UI\$LD
920109	0 I F	5464	2732	1020	LRS35CD
930212	0 I F	9104	4552	1020	LPX35CG
930212	0 I F	13432	7160	1024	930212_CM
930212	0 I F	189272	93136	1024	930212_MS

**Note:** The example above does not show the FILE ORG, FILE CODE, REC TYPE, and FILE STATUS columns of the MAP display.

- 13 Record the name of the DTU load.

**Note:** In the MAP example in step 12, the DTU load is DTULD04.

- 14 To quit the disk utility, type

>QUIT

and press the Enter key.

- 15



**DANGER**

**Loss of recording device service**

A download of the DTU file from a SLM to the DTU takes 15 minutes. Before loading the DTU, make sure that the recording device is not required for other important services.

---

## Correcting digital test unit problems (continued)

---

To load the DTU, type  
**>LOADFW CC dtu\_load**  
 and press the Enter key.  
*where*

**dtu\_load**  
 is the name of the DTU load

*Example input:*

**>LOADFW CC DTULD04**

*Example of a MAP response:*

```
Loadfile found : START LOADING...
Load Completed
```

**16** To post one of the defective DTU circuits, type

**>POST G DTU dtu\_no**

and press the Enter key.

*where*

**dtu\_no**  
 is the number of a defective DTU circuit

*Example of a MAP response:*

```
POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE    PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG   MTM     6  2  DTU          0  SZD .
                                P_MB
                                HOLD1 DTU          0  SZD . .
                                HOLD2 DTU          1  SZD . .
```

**17** To force the release of the circuit in the control position, type

**>FRLS**

and press the Enter key.

*Example input:*

```
POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE    PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG   MTM     6  2  DTU          0  MB
                                HOLD1 DTU          0  SZD . .
                                HOLD2 DTU          1  SZD . .
```

---

If the state of the circuit	Do
is MB	step 24

## Correcting digital test unit problems (continued)

	<b>If the state of the circuit</b>	<b>Do</b>
	is other than listed here	step 18
<b>18</b>	To access the PM level of the MAP display, type <b>&gt;PM</b> and press the Enter key.	
<b>19</b>	To post the MTM, type <b>&gt;POST MTM mtm_no</b> and press the Enter key. <i>where</i> <b>mtm_no</b> is the number of the MTM that contains the DTU	
<b>20</b>	To manually busy the MTM, type <b>&gt;BSY</b> and press the Enter key.	
<b>21</b>	To return the MTM to service, type <b>&gt;RTS</b> and press the Enter key.	
<b>22</b>	To access the TTP level of the MAP display, type <b>&gt;TRKS ;TTP</b> and press the Enter key.	
<b>23</b>	To force the release of the circuit in the control position, type <b>&gt;FRLS</b> and press the Enter key.	

*Example input:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT  TYPE    PM NO.      COM LANG   STA S R  DOT TE  RESULT
OG   MTM     6  2  DTU    0  MB
                                HOLD1  DTU    0  MB
                                HOLD2  DTU    1  SZD . .
    
```

	<b>If the state of the circuit</b>	<b>Do</b>
	is MB	step 24
	is other than MB	step 37

**Correcting digital test unit problems** (continued)

**24** To return the circuit to service, type

**>RTS**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE     PM NO.      COM LANG    STA S R  DOT TE  RESULT
OG   MTM     6  2  DTU          0  IDL
                                     HOLD1  DTU      0  IDL
                                     HOLD2  DTU      1  SZD  .  .
    
```

If the RTS command	Do
passes	step 25
fails	step 18

**25** To test the DTU circuit, type

**>TST**

and press the Enter key.

*Example of a MAP response:*

```

TEST OK
COMB_CO ****+ TRK107 MAY09 19:20:27 6400 PASS CKT DTU 0
    
```

If the TST command	Do
passes	step 26
fails	step 37

**26** To post the second DTU circuit, type

**>POST G DTU dtu\_no**

and press the Enter key.

*where*

**dtu\_no**

is the number of the second DTU circuit

*Example of a MAP response:*

## Correcting digital test unit problems (continued)

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.    COM LANG  STA S R  DOT TE  RESULT
OG   MTM   6  3  DTU          1  SZD . .
                                P_MB

                                HOLD1 DTU          0  IDL
                                HOLD2 DTU          1  SZD . .
    
```

- 27** To force the release of the circuit, type

**>FRLS**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.    COM LANG  STA S R  DOT TE  RESULT
OG   MTM   6  3  DTU          1  MB

                                HOLD1 DTU          0  IDL
                                HOLD2 DTU          1  MB
    
```

---

**If the state of the circuit**

**Do**

is MB

step 35

is other than listed here

step 28

---

- 28** To access the PM level of the MAP display, type

**>PM**

and press the Enter key.

- 29** To post the MTM, type

**>POST MTM mtm\_no**

and press the Enter key.

*where*

**mtm\_no**

is the number of the MTM that contains the DTU

- 30** To manually busy the MTM, type

**>BSY**

and press the Enter key.

- 31** To return the MTM to service, type

**>RTS**

and press the Enter key.

**Correcting digital test unit problems** (continued)

**32** To access the TTP level of the MAP display, type

**>TRKS ;TTP**

and press the Enter key.

**33** To post the second defective DTU circuit, type

**>POST G DTU dtu\_no**

and press the Enter key.

where

**dtu\_no**

is the number of the second defective DTU circuit

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG   STA S R  DOT TE  RESULT
OG   MTM   6   3   DTU          1  SZD  .  .
                                     P_MB
                                     HOLD1  DTU          0  SZD  .  .
                                     HOLD2  DTU          1  SZD  .  .
    
```

**34** To force the release of the circuit, type

**>FRLS**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG   STA S R  DOT TE  RESULT
OG   MTM   6   3   DTU          1  MB
                                     HOLD1  DTU          0  IDL
                                     HOLD2  DTU          1  MB
    
```

**35** To return the second DTU circuit to service, type

**>RTS**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.      COM LANG   STA S R  DOT TE  RESULT
OG   MTM   6   3   DTU          1  IDL
                                     HOLD1  DTU          0  IDL
                                     HOLD2  DTU          1  IDL
    
```

## Correcting digital test unit problems (end)

---

- 36** To test the second DTU circuit, type  
>**TST**  
and press the Enter key.

*Example of a MAP response:*

```
TEST OK  
+ TRK107 MAY09 19:20:27 6400 PASS CKT DTU 0
```

---

<b>If the TST command</b>	<b>Do</b>
passes	step 38
fails	step 37

---

- 37** For additional help, contact the next level of support.  
**38** The procedure is complete.

## Correcting DRAM announcement trouble

---

### Application

Use this procedure to correct digital recorded announcement machine (DRAM) announcement problems.

### Definition

NT1X76, NT1X77, or NT1X79 cards store DRAM phrases digitally. Each card has a single trunk appearance. The DRAM controller is an NT1X75 card and has a single trunk appearance.

The NT1X76 card stores phrases in programmable read-only memory (PROM). You cannot record announcements again manually to correct announcement problems associated with this card. You must replace the card.

The NT1X77 card stores phrases in random-access memory (RAM). The NT1X79 card stores phrases in electrically erasable programmable read-only memory (EEPROM). Record announcements again manually to correct announcement problems associated with these cards.

### Common procedures

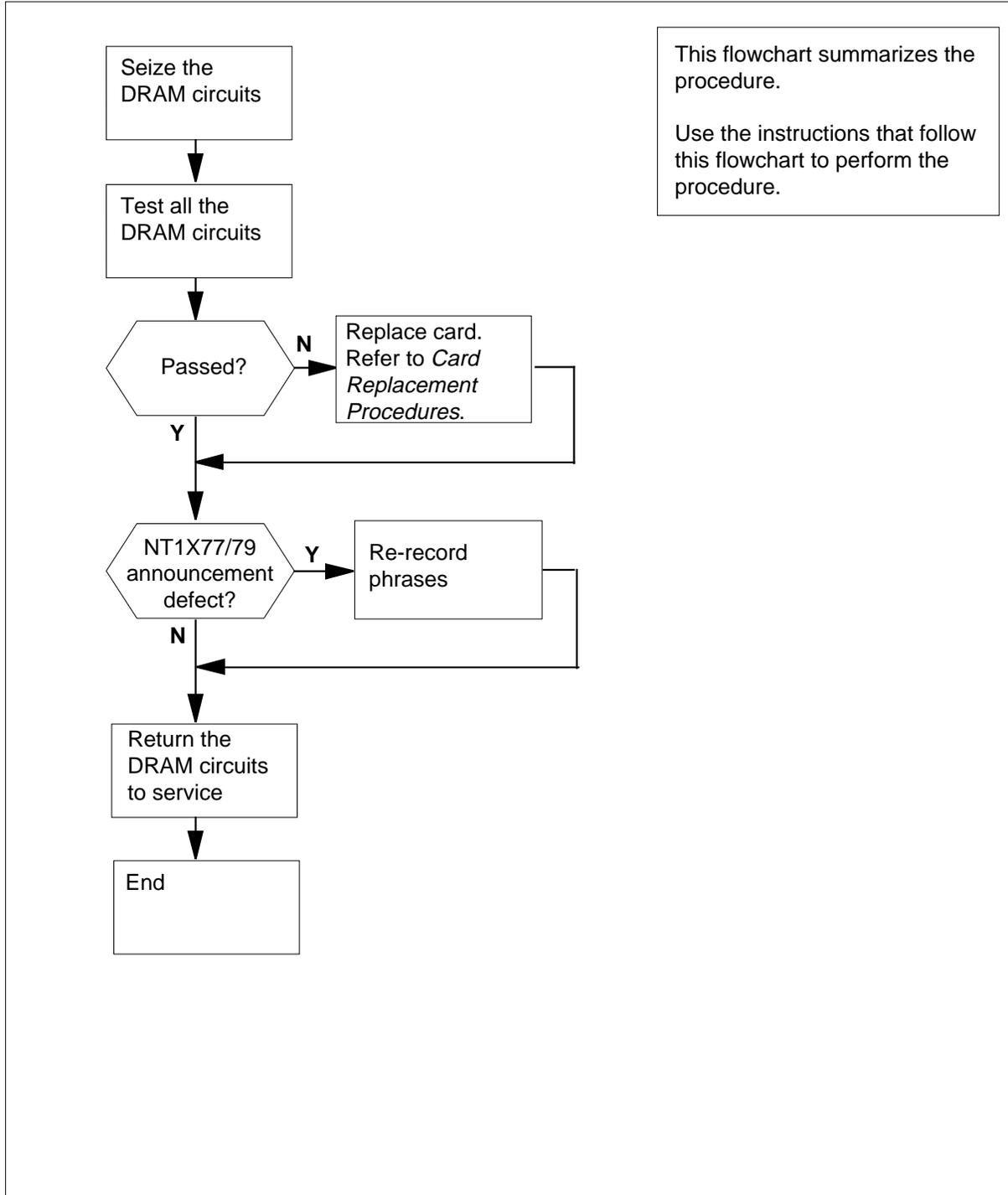
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting DRAM announcement trouble (continued)

### Summary of Correcting DRAM announcement trouble



## Correcting DRAM announcement trouble (continued)

### Correcting DRAM announcement trouble



#### **DANGER**

#### **Loss of announcement services**

This procedure removes the DRAM from service. Perform this procedure during periods of low traffic.

#### **At the MAP terminal**

- 1 To access the TTP level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP
```

and press the Enter key.

- 2 To post the DRAM circuits, type

```
>POST G DRAMdram_clli
```

and press the Enter key.

*where*

#### **dram\_clli**

is the common language location identifier (CLLI) of the DRAM controller (table DRAMS or table CLLI)

*Example input:*

```
>POST G DRAM0
```

*Example of a MAP response:*

```
LAST CKTN = 4
POSTED CKT IDLED
SHORT CLLI IS: DRAM0
OK,CKT POSTED
```

- 3 To seize the circuit, type

```
>SEIZE
```

and press the Enter.

*Example of a MAP response:*

```
POST      4  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.    COM LANG  STA S R  DOT TE RESULT
ANN  STM    0  0  DRAM0      0  SZD . .
                                     P_IDL
```

**Note:** The first circuit in the posted set is always the controller card (NT1X75) trunk.

- 4 To move the next DRAM circuit into the control position, type

```
>NEXT
```

## Correcting DRAM announcement trouble (continued)

and press the Enter key.

- 5 Repeat steps 3 and 4 until you hold all the circuits in the posted set.

- 6 To post the DRAM circuits again, type

```
>POST G DRAMdram_clli
```

and press the Enter key.

where

**dram\_clli**

is the CLLI of the DRAM controller (table DRAMS or table CLLI)

*Example input:*

```
>POST G DRAM0
```

*Example of a MAP response:*

```
LAST CKTN = 4
POSTED CKT IDLED
SHORT CLLI IS: DRAM0
OK,CKT POSTED
```

- 7 To test the circuit in the control position, type

```
>TST
```

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
***+ TRK107 JAN19 13:12:16 2200 PASS DRAM0 0
```

If the TST command	Do
passes	step 10
fails	step 8

- 8 To replace the card that corresponds to the circuit you tested, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 9 To test the circuit, type

```
>TST
```

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
***+ TRK107 JAN19 13:12:16 2200 PASS DRAM0 0
```

If the TST command	Do
passes	step 10

**Correcting DRAM announcement trouble** (continued)

	<b>If the TST command</b>	<b>Do</b>
	fails	step 31
<b>10</b>	To move the next circuit into the control position, type >NEXT and press the Enter key.	
<b>11</b>	Repeat steps 7 through 10 for all the DRAM circuits in the posted set.	
	<b>If</b>	<b>Do</b>
	one or more DRAM circuits failed a test	step 12
	DRAM circuits did not fail a test	step 32
<b>12</b>	Determine if the announcement problem relates to NT1X77 or NT1X79 cards.	
	<b>If the problem</b>	<b>Do</b>
	is associated with an NT1X77 or NT1X79 card	step 13
	is not associated with an NT1X77 or NT1X79 card	step 31
<b>13</b>	To access the DRAM recording utility, type >DRAMREC and press the Enter key.	
<b>14</b>	To connect an idled (IDL) headset trunk to the DRAM controller circuit, type >CONNECT dram_no hset_clli member_no and press the Enter key. <i>where</i> <b>dram_no</b> is the number of the DRAM controller <b>hset_clli</b> is the CLLI of the headset trunk (table CLLI) <b>member_no</b> is the member number assigned to the headset trunk (table TRKMEM)	
	<i>Example input:</i> >CONNECT 0 HSET 0	
<b>15</b>	To display the DRAM phrases on the defective card, type >DISPLAY dram_no card_no	

## Correcting DRAM announcement trouble (continued)

and press the Enter key.

where

**dram\_no**

is the member number of the DRAM controller

**card\_no**

is the number of the defective DRAM card (table DRAMS)

Example input:

>DISPLAY 0 1

Example or a MAP response:

CARD 1 PROM SPACE: MAX CONTIG 0 TOTAL 0

PHRASE_EXT	PHRASE_INT	LENGTH
-----	-----	-----
ENG1	48	1
ENG2	49	1
ENG3	50	1
ENG4	51	1
ENG5	52	1
ENG6	53	1
ENG7	54	1
ENG8	55	1
ENG9	56	1
ENG0	47	1
NCAENG	40	10
PSPDENG	41	9
VCAENG	42	13
EA3ENG	43	10
BLKDNENG	44	7
NOD1ENG	45	11

**Note:** Refer to the *Hardware Description Manual Reference Manual* to understand the DRAM phrases listed above.

If the system	Do
does not list phrases	step 16
lists some phrases	step 22

**16** Obtain a list of phrases on the NT1X77 or NT1X79 card from your office records.

**17** To record the phrase, type  
>RECORD phrase\_ext length

and press the Enter key.

where

---

## Correcting DRAM announcement trouble (continued)

---

**phrase\_ext**  
is the name of the phrase

**length**  
is the length of the phrase in seconds

*Example input:*

>RECORD VCAENG 10

**18** Make the announcement after three prompt tones. Speak into the receiver.

**19** To play back the phrase, type

>PLAYBACK dram\_no phrase\_ext

and press the Enter key.

*where*

**dram\_no**  
is the member number of the DRAM controller

**phrase\_ext**  
is the name of the phrase you want to play back

*Example input:*

>PLAYBACK 0 VCAENG

---

If the phrase recorded	Do
is correct	step 20
is not correct	step 31

---

**20** Repeat steps 17 through 19 to record the phrases on the NT1X77 or NT1X79 card.

When these steps are complete, go to step 21.

**21** To quit DRAMREC, type

>QUIT

and press the Enter key.

Go to step 26.

**22** To play back one of the defective phrases, type

>PLAYBACK dram\_no phrase\_ext

and press the Enter key.

*where*

**dram\_no**  
is the member number of the DRAM controller

**phrase\_ext**  
is the name of the phrase you want to play back

*Example input:*

>PLAYBACK 0 VCAENG

**23** Listen to the phrase on the headset.

## Correcting DRAM announcement trouble (continued)

---

- 24 Repeat steps 22 and 23 for all the phrases.  
When you complete these steps, go to step 25.
- 25 Determine if an announcement problem exists.

---

If announcement trouble	Do
is present	step 16
is not present	step 26

---

- 26 To disconnect the headset trunk to the DRAM controller circuit, type  
>DISCONNECT dram\_no hset\_clli member\_no  
and press the Enter key.

*where*

**dram\_no**

is the number of the DRAM controller

**hset\_clli**

is the CLLI of the headset trunk (table CLLI)

**member\_no**

is the member number assigned to the headset trunk (table

TRKMEM)

*Example input:*

```
>DISCONNECT 0 HSET 0
```

- 27 To post the DRAM circuits again, type

```
>POST G dram_clli
```

and press the Enter key.

*where*

**dram\_clli**

is the CLLI of the DRAM controller (table DRAMS or tableCLLI)

*Example input:*

```
>POST G DRAM0
```

*Example of a MAP response:*

```
LAST CKTN = 4  
POSTED CKT IDLED  
SHORT CLLI IS: DRAM0  
OK,CKT POSTED
```

- 28 To return the circuit in the control position to service, type

```
>RTS
```

and press the Enter key.

---

## Correcting DRAM announcement trouble (end)

---

- 29 To move the next circuit into the control position, type  
>NEXT  
and press the Enter key.
- 30 Repeat steps 28 and 29 for all the posted DRAM circuits.  
When the steps are complete, go to step 32.
- 31 For additional help, contact the next level of support.
- 32 The procedure is complete.

## Correcting DRAM sit tone trouble

---

### Application

Use this procedure to test the output decibel levels for the sit tones of a digital recorded announcement machine (DRAM). This procedure also corrects tones that are out of specification. The output decibel levels for sit tones are -13 dB(+/- 1.5 dB).

*Note:* The decibel levels do not always show a continuous value because three different tones comprise sit tones.

### Definition

NT1X76, NT1X77, or NT1X79 cards store DRAM sit tones digitally. Each card has a single trunk appearance.

The NT1X76 card stores sit tones in programmable read-only memory (PROM). You cannot correct announcement problems related to this card. You must replace the card.

The NT1X77 card stores sit tones in random-access memory (RAM). The NT1X79 stores tones in electrically erasable programmable read-only memory (EEPROM). To correct problems with the output level of these cards, load the sit tones again.

### Common procedures

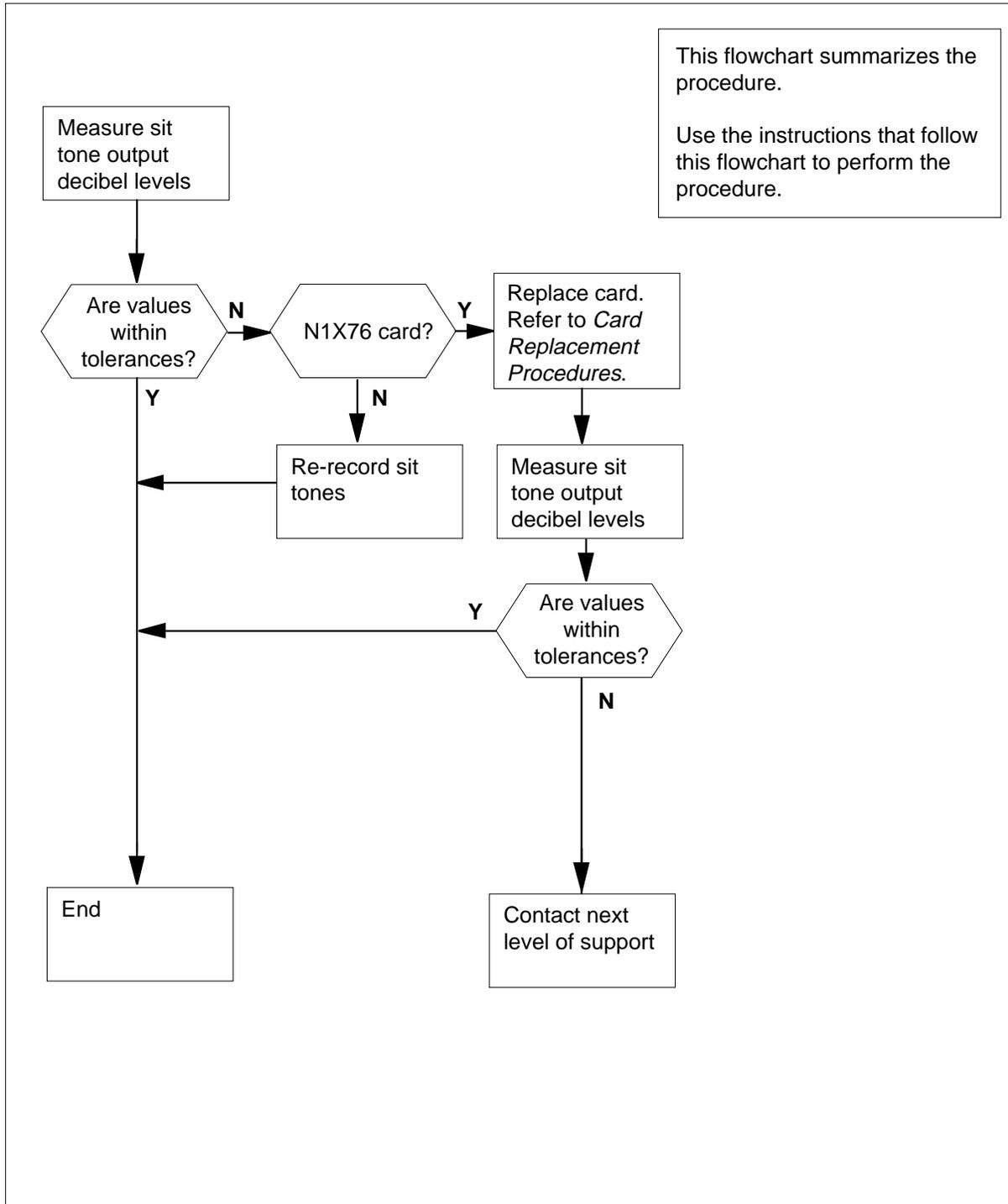
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting DRAM sit tone trouble (continued)

### Summary of Correcting DRAM sit tone trouble



## Correcting DRAM sit tone trouble (continued)

---

### Correcting DRAM sit tone trouble



#### **DANGER**

##### **Loss of announcement services**

This procedure removes the DRAM from service.  
Perform this procedure during periods of low traffic.

#### **At the MAP terminal**

- 1 To access the Manual level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;MANUAL**  
and press the Enter key.

- 2 To post the DRAM circuits, type  
**>POST G DRAMdram \_clli**  
and press the Enter key.

*where*

##### **dram\_clli**

is the common language location identifier (CLLI) of the DRAM controller (table DRAMS or table CLLI)

*Example input:*

```
>POST G DRAM0
```

*Example of MAP response:*

```
LAST CKTN = 4  
POSTED CKT IDLED  
SHORT CLLI IS: DRAM0  
OK,CKT POSTED
```

- 3 To access the DRAM recording function, type  
**>DRAMREC**  
and press the Enter key.
- 4 To display the DRAM phrases on the defective card, type  
**>DISPLAY dram\_no card\_no**  
and press the Enter key.

*where*

##### **dram\_no**

is the member number of the DRAM controller

##### **card\_no**

is the number of the defective DRAM card (table DRAMS)

*Example input:*

```
>DISPLAY 0 1
```

## Correcting DRAM sit tone trouble (continued)

*Example of MAP response:*

```

CARD 1   PROM      SPACE: MAX CONTIG  0  TOTAL  0

PHRASE_EXT      PHRASE_INT      LENGTH
-----
SIT1             8                2
SIT2             9                2
SIT3            10                2
SIT4            11                2
SIT5            12                2
SIT6            13                2
SIT7            14                2
SIT8            15                2
SIT9            16                2
SIT10           17                2
SIT11           18                2
SIT12           19                2
SIT13           20                2
SIT14           21                2
SIT15           22                2
SIT16           23                2
SIT17           24                2
SIT18           25                2
SIT19           26                2
SIT20           27                2
    
```

**Note:** Refer to *Hardware Description Manual Reference Manual* to understand the preceding list of DRAM phrases.

- 5 Record defective sit tones.
- 6 To connect an idled (IDL) headset trunk to the DRAM controller circuit, type  
**>CONNECT dram\_no hset\_clli member\_no**  
 and press the Enter key.

*where*

**dram\_no**

is the number of the DRAM controller

**hset\_clli**

is the CLLI of the headset trunk (table CLLI)

**member\_no**

is the assigned member number of the headset trunk (table

TRKMEM)

*Example input:*

```
>CONNECT 0 HSET 0
```

- 7 To play back the phrase, type

```
>PLAYBACK dram_no phrase_ext
```

## Correcting DRAM sit tone trouble (continued)

and press the Enter key.

where

**dram\_no**

is the member number of the DRAM controller

**phrase\_ext**

is the name of the sit tone you want to test

*Example input:*

```
>PLAYBACK 0 SIT1
```

- 8** To disconnect the headset trunk to the DRAM controller circuit, type

```
>DISCONNECT dram_no hset_clli member_no
```

and press the Enter key.

where

**dram\_no**

is the number of the DRAM controller

**hset\_clli**

is the CLLI of the headset trunk (table CLLI)

**member\_no**

is the assigned member number of the headset trunk (table

TRKMEM)

*Example input:*

```
>DISCONNECT 0 HSET 0
```

- 9** To measure the loss to show the output decibel level, type

```
>LOSS
```

and press the Enter key.

*Example of a MAP response:*

```
POST      5  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE  PM NO.   COM LANG   STA S R  DOT TE  RESULT
ANN  MTM   4  0    DRAM0     0  SZD . .    LVM -13.8
                    TTT      0  P_IDL R
```

**Note:** The output decibel level of the sit tone is under the RESULT column of the MAP response.

- 10** Note the sit tone output decibel level.

- 11** To release DRAM from test connection, type

```
>RLS
```

and press the Enter key.

*Example of a MAP response:*

**Correcting DRAM sit tone trouble** (continued)

```

POST      5  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
ANN  MTM    4  0     DRAM0       0  IDL . .
    
```

- 12 Repeat steps 6 to 11 as needed. Return to this point.
- 13 Determine if the sit tones have an output decibel level of -13 dB (+/- 1.5 dB).

If each sit tone	Do
has an output decibel level of -13 dB	step 22
do not have an output decibel level of -13 dB	step 14

- 14 Determine which type of card the system uses.

If the card used	Do
is an NT1X76 card	step 15
is an NT1X77 or NT1X79 card	step 19

- 15 To replace the NT1X76 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 16 To test the circuit in the control position, type

>TST

and press the Enter key.

*Example of a MAP response:*

```

TEST OK
****+ TRK107 JAN19 13:12:16 2200 PASS DRAM0 0
    
```

If the TST command	Do
passes	step 17
fails	step 24

- 17 Repeat steps 6 to 11. Return to this point.

- 18 Determine if each sit tone has an output decibel level of -13 dB (+/- 1.5 dB).

If each sit tone	Do
has an output decibel level of -13 dB	step 22

---

## Correcting DRAM sit tone trouble (end)

---

	<b>If each sit tone</b>	<b>Do</b>
	do not have an output decibel level of -13 dB	step 24
<b>19</b>	To load the sit tones on the DRAM, type >SITLOAD dram_no and press the Enter key. where <b>dram_no</b> is the member number of the DRAM controller MAP response:	
	SITDATA HAS BEEN SUCCESSFULLY LOADED	
<b>20</b>	Repeat steps 6 through 12 to test all the sit tones. Return to this point.	
<b>21</b>	Determine if each sit tone has an output decibel level of -13 dB (+/- 1.5 dB).	
	<b>If each sit tone</b>	<b>Do</b>
	has an output decibel level of -13dB	step 22
	does not have an output decibel level of -13 dB	step 24
<b>22</b>	To quit DRAMREC, type >QUIT and press the Enter key.	
<b>23</b>	To return the circuit in the control position to service, type >RTS and press the Enter key. When the circuits return to service, go to step 25.	
<b>24</b>	For additional help, contact the next level of support.	
<b>25</b>	The procedure is complete.	

## **Correcting EDRAM voice file problems**

---

### **Application**

Use this procedure to correct voice file problems for an enhanced digitally recorded announcement machine (EDRAM).

### **Definition**

A lack of announcements or corrupt announcements characterize EDRAM problems.

### **Common procedures**

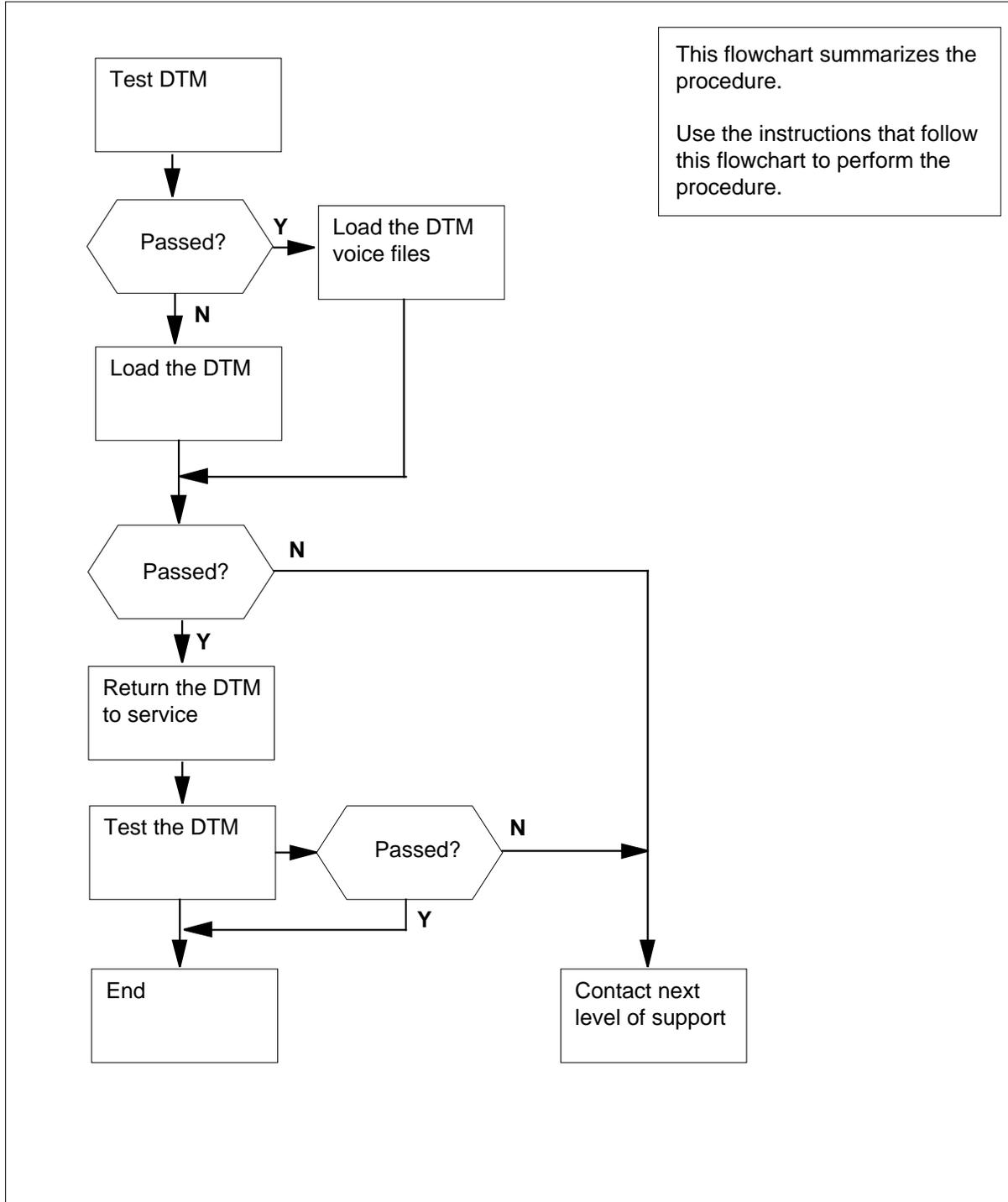
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting EDRAM voice file problems (continued)

### Summary of Correcting EDRAM voice file problems



## Correcting EDRAM voice file problems (continued)

### Correcting EDRAM voice file problems

#### At the MAP terminal

1



#### **DANGER**

##### **Loss of announcement services**

This procedure removes the EDRAM from service. Perform this procedure during periods of low traffic.

To access the PM level of the MAP display, type

```
>MAPCI ;MTC ;PM
```

and press the Enter key.

2

To post the digital trunk module (DTM), type

```
>POST DTM dtm_no
```

and press the Enter key.

where

**dtm\_no**

is the number of the DTM

*Example of a MAP response:*

```
DTM      4      InSv
```

3

To manually busy the DTM, type

```
>BSY
```

and press the Enter key.

4

To test the DTM, type

```
>TST
```

and press the Enter key.

If the TST command	Do
passes	step 5
fails	step 17

5

To access the TTP level of the MAP display, type

```
>TRKS ;TTP
```

and press the Enter key.

6

To create a posted set of DTM circuits, type

```
>POST TM DTM dtm_no
```

## Correcting EDRAM voice file problems (continued)

---

and press the Enter key.

where

**dtm\_no**

is the number of affected DTM normally indicated by a log or an alarm

*Example of a MAP response:*

```
POST      7  DELQ          BUSYQ          DIG
TTP 6-004
CKT TYPE  PM NO.    COM LANG    STA S R  DOT TE  RESULT
ANN DTM    4  2      MCA          2  IDL
```

- 7** To manually busy the DTM circuit in the control position, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

```
POST      7  DELQ          BUSYQ          DIG TTP 6-004
CKT TYPE  PM NO.    COM LANG    STA S R  DOT TE  RESULT
ANN DTM    4  2      MCA          2  MB
```

- 8** To post the next DTM circuit, type

**>NEXT**

and press the Enter key.

- 9** Repeat steps 7 and 8 until all the posted DTM circuits are busied.

- 10** To access table EDRAMINV, type

**>TABLE EDRAMINV**

and press the Enter key.

*Example of a MAP response:*

```
TABLE: EDRAMINV
```

- 11** To list all the DTMs, type

**>LIST ALL**

and press the Enter key.

*Example of a MAP response:*

**Correcting EDRAM voice file problems** (continued)

TOP		EDRAMNM	TUPINFO
DTM	1 0	CTRL	MTM 4 10
DTM	1 1		ANN ECLS20AP
DTM	1 3		ANN ECLS20AQ
DTM	1 5		ANN ECLS20AR
DTM	1 7		ANN ECLS20AS
DTM	2 0	CTRL	MTM 4 12
DTM	2 1		ANN ECLS20AT
DTM	2 3		ANN ECLS20AU
DTM	2 5		ANN ECLS20AV
DTM	2 7		ANN ECLS20AW
DTM	3 0	CTRL	MTM 4 14
DTM	3 1		ANN ECLS10AJ
DTM	3 3		ANN ECLS10AK
DTM	3 5		ANN ECFRA0AM
DTM	4 0	CTRL	MTM 0 14
DTM	4 1		ANN ESTD0AA
DTM	5 0	CTRL	MTM 1 14

BOTTOM

**12** Record the DTM that contains the defective announcements (ANN).

**13** To leave table EDRAMINV, type

**>LEAVE**

and press the Enter key.

**14** To access the PM level of the MAP display, type

**>PM**

and press the Enter key.

**15** To post the affected DTM, type

**>POST DTM dtm\_no**

and press the Enter key.

where

**dtm\_no**

is the number of the affected DTM

*Example of a MAP response:*

DTM 4 InSv

**16** To load the DTM, type

**>LOADPM ANN**

and press the Enter key.

**Note:** The LOADPM ANN command downloads the EDRAM voice files.

## Correcting EDRAM voice file problems (continued)

*Example of a MAP response:*

DTM 4 LoadPM Passed

If the LOADPM command	Do
passes	step 29
fails	step 36

- 17** To access the TTP level of the MAP display, type

**>TRKS ;TTP**

and press the Enter key.

- 18** To create a posted set of the DTM circuits, type

**>POST TM DTM dtm\_no**

and press the Enter key.

*where*

**dtm\_no**

is the number of the affected DTM indicated by a log or analarm

*Example of a MAP response:*

```

POST      7  DELQ          BUSYQ          DIG
TTP 6-004
CKT TYPE  PM NO.      COM LANG      STA S R  DOT TE  RESULT
ANN DTM   4  2      MCA          2  IDL
    
```

- 19** To manually busy the DTM circuit in the control position, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

```

POST      7  DELQ          BUSYQ          DIG
TTP 6-004
CKT TYPE  PM NO.      COM LANG      STA S R  DOT TE  RESULT
ANN DTM   4  2      MCA          2  MB
    
```

- 20** To post the next DTM circuit, type

**>NEXT**

and press the Enter key.

- 21** Repeat steps 19 and 20 until all the posted DTM circuits are busied.

- 22** To access table EDRAMINV, type

**>TABLE EDRAMINV**

and press the Enter key.

*Example of a MAP response:*

---

## Correcting EDRAM voice file problems (continued)

---

TABLE: EDRAMINV

- 23** To list all the DTMs, type

**>LIST ALL**

and press the Enter key.

*Example of a MAP response:*

```

TOP
      EDRAMNM                      TUPINFO
-----
DTM  1 0 CTRL                      MTM    4 10
DTM  1 1                          ANN ECLS20AP
DTM  1 3                          ANN ECLS20AQ
DTM  1 5                          ANN ECLS20AR
DTM  1 7                          ANN ECLS20AS
DTM  2 0 CTRL                      MTM    4 12
DTM  2 1                          ANN ECLS20AT
DTM  2 3                          ANN ECLS20AU
DTM  2 5                          ANN ECLS20AV
DTM  2 7                          ANN ECLS20AW
DTM  3 0 CTRL                      MTM    4 14
DTM  3 1                          ANN ECLS10AJ
DTM  3 3                          ANN ECLS10AK
DTM  3 5                          ANN ECFRA0AM
DTM  4 0 CTRL                      MTM    0 14
DTM  4 1                          ANN ESTD0AA
DTM  5 0 CTRL                      MTM    1 14
    
```

BOTTOM

- 24** Record the maintenance trunk module (MTM) that contains the defective DTM.

**Note:** The defective DTM (DTM 4) is in MTM 0 in the example used in this procedure.

- 25** To leave table EDRAMINV, type

**>LEAVE**

and press the Enter key.

**At the MAP terminal**

- 26** To access the PM level of the MAP, type

**>PM**

and press the Enter key.

- 27** To post the affected DTM, type

**>POST DTM dtm\_no**

and press the Enter key.

---

## Correcting EDRAM voice file problems (continued)

---

where

**dtm\_no**

is the number of the affected DTM

*Example of a MAP response:*

```
DTM      4      InSv
```

28



### CAUTION

#### Loss of recording device service

EDRAM files require 15 minutes to load from tape or disk. Before you use the LOADPM command, make sure the recording devices are not required for higher priority tasks.

To load the DTM, type

**>LOADPM**

and press the Enter key.

**Note:** The LOADPM command downloads the EDRAM application firmware and the voice files.

*Example of a MAP response:*

```
DTM 4 LoadPM Passed
```

If the LOADPM command	Do
passes	step 29
fails	step 36

29 To return the DTM to service, type

**>RTS**

and press the Enter key.

*Example of a MAP response:*

```
DTM 4 Rts Passed  
OK.
```

30 To test the DTM, type

**>TST**

and press the Enter key.

If the TST command	Do
passes	step 31

## Correcting EDRAM voice file problems (end)

- |           | If the TST command   | Do      |
|-----------|--|---------|
|           | fails  | step 36 |
| <b>31</b> | To access the TTP level of the MAP, type<br><b>&gt;MAPCI;MTC;TRKS;TTP</b><br>and press the Enter key.  |         |
| <b>32</b> | To post a DTM circuit, type<br><b>&gt;POST TM DTM dtm_no</b><br>and press the Enter key.<br><i>where</i><br><b>dtm_no</b><br>is the number of the affected DTM normally indicated by a log or an alarm |         |
|           | <i>Example of a MAP response:</i>  |         |
|           | <pre> POST      7  DELQ          BUSYQ          DIG TTP  6-004 CKT TYPE  PM NO.      COM LANG      STA S R  DOT TE  RESULT ANN DTM    4  2      MCA          2  MB           </pre>                    |         |
| <b>33</b> | To return the posted DTM circuit to service, type<br><b>&gt;RTS</b><br>and press the Enter key.<br><i>Example of a MAP response:</i>   |         |
|           | <pre> POST      7  DELQ          BUSYQ          DIG TTP  6-004 CKT TYPE  PM NO.      COM LANG      STA S R  DOT TE  RESULT ANN DTM    4  2      MCA          2  IDL           </pre>                   |         |
| <b>34</b> | To post the next DTM circuit, type<br><b>&gt;NEXT</b><br>and press the Enter key.  |         |
| <b>35</b> | Repeat steps 33 and 34 until all the DTM circuits return to service.<br>When all circuits return to service, go to step 37.  |         |
| <b>36</b> | For additional help, contact the next level of support.  |         |
| <b>37</b> | The procedure is complete.   |         |

## **Correcting enhanced network load entries**

---

### **Application**

Use this procedure to verify and correct the entries for enhanced network (ENET) automatic system recovery.

### **Definition**

ENET entries can become corrupt after a system failure. This procedure corrects the automatic system recovery of the ENET data entries.

### **Common procedures**

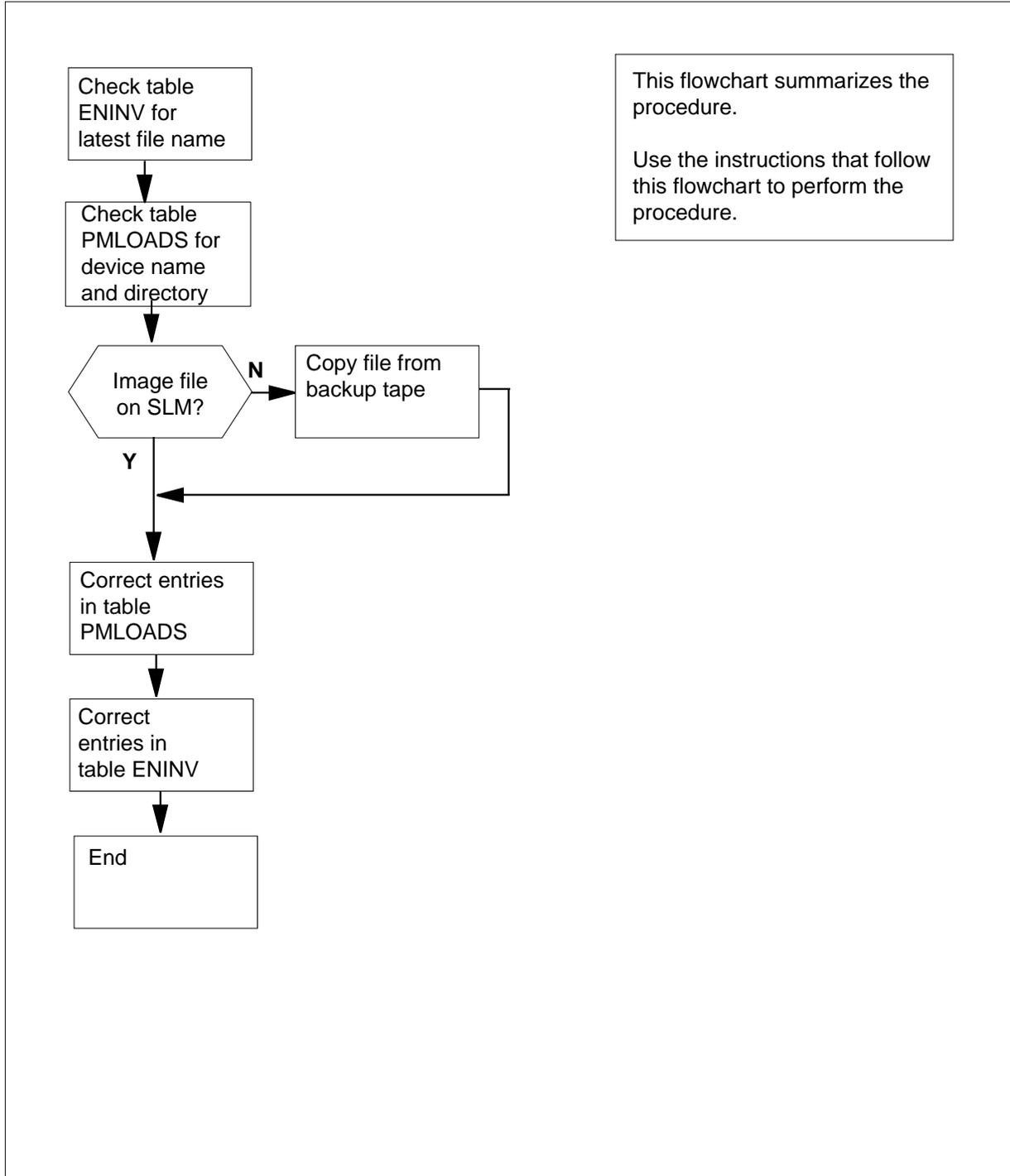
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting enhanced network load entries (continued)

### Summary of Correcting enhanced network load entries



## Correcting enhanced network load entries (continued)

### Correcting enhanced network load entries

#### At the MAP terminal

- 1 To access the NET level of the MAP display, type  
`>MAPCI ;MTC ;NET`  
 and press the Enter key.
- 2 To access table ENINV, type  
`>TABLE ENINV`  
 and press the Enter key.
- 3 To display all the tuples in table ENINV, type  
`>LIST ALL`  
 and press the Enter key.

*Example of a MAP response:*

```
FRPOS0  SHELF0  LOAD0  MSCARD1  FLOOR1  ROW1  FRPOS1  SHELF1  LOAD1
-----
      5      39  ENC34BB  8          0      A      5      13  ENC34BB
```

**Note:** Every equipped ENET shelf has a corresponding tuple.

- 4 Record the file names that appear under the LOAD0 and LOAD1 headers for each tuple.

**Note:** In the example in step 3, ENC34BB is the latest image file.

- 5 To exit table ENINV, type  
`>QUIT`  
 and press the Enter key.
- 6 To access table PMLOADS, type  
`>TABLE PMLOADS`  
 and press the Enter key.
- 7 To find the latest image file, type  
`>POSITION file_name`  
 and press the Enter key.

where

**file\_name**

is the name of the latest image file recorded in step 4

*Example of a MAP response:*

```
ENC34BB          S01DISLOADS
```

If the latest image file	Do
is present	step 9

---

## Correcting enhanced network load entries (continued)

---

	<b>If the latest image file</b>	<b>Do</b>
	is not present	step 8
<b>8</b>	To find other file names in table ENINV, type >POSITION <b>file_name</b> and press the Enter key. <i>where</i> <b>file_name</b> is another image file name	
<b>9</b>	Record the device and volume names associated with the image file.	
<b>10</b>	To exit table PMLOADS, type >QUIT and press the Enter key.	
<b>11</b>	To access the disk utility level, type >DISKUT and press the Enter key.	
<b>12</b>	To list the volumes on the device specified in table PMLOADS, type >LISTVOL <b>slm_numberD</b> and press the Enter key. <i>where</i> <b>slm_number</b> is 00 or 01	
<b>13</b>	Record the name of the volume present in table PMLOADS.	
<b>14</b>	To list the files on the volume, type >LISTFL <b>disk_volume_name</b> and press the Enter key. <i>where</i> <b>disk_volume_name</b> is the name of the SLM disk (S00D or S01D) and the name of the volume that contains the image file  <i>Example input:</i> >LISTFL S00DIMAGE1  <i>Example of a MAP response:</i>	

## Correcting enhanced network load entries (continued)

File information for volume S00DIMAGE1:  
 {NOTE: 1 BLOCK = 512 BYTES }

LAST MODIFY DATE	FILE CODE G C O E R E T P C N	O R I O	FILE SIZE IN BLOCKS	NUM OF RECORDS IN FILE	MAX REC LEN	FILE NAME
930215	0 I F		12744	6372	1020	930215_CM
930215	0 I F		188180	94090	1020	930215_MS
930212	0 O F		13460	6730	1020	APX35CG
930212	0 O F		7154	3577	1020	ERS35CG
930216	0 O F		33936	16968	1020	FPX35CG
930216	0 O F		5334	2667	1020	LRC35CG
930215	0 O F		5334	2667	1020	LCC35CG
930129	0 O F		12	24	256	ASN1UI\$LD
920109	0 I F		5464	2732	1020	LRS35CD
930212	0 I F		9104	4552	1020	LPX35CG
930212	0 I F		13432	7160	1024	930212_CM
930212	0 I F		189272	93136	1024	930212_MS

**Note:** In the example above, the FILE ORG, FILE CODE, REC TYPE, and FILE STATUS columns of the MAP display do not appear.

- 15 Record the latest ENET image file name.
- 16 Locate the latest ENET image file. Use the information from the system load module (SLM) and tables ENINV and PMLOADS.

If the latest image file	Do
is present on the SLM	step 29
is present in tables ENINV or PMLOADS	step 17

- 17 Obtain the latest backup tape that contains an ENET image.

**At the SLM**

- 18 Insert the backup tape in the correct SLM tape drive unit.

**At the MAP terminal**

- 19 To mount the tape, type  
 >IT **device\_name**  
 and press the Enter key.  
*where*  
**device\_name**  
 is S00T if you are working on SLM 0, or S01T if you are working on SLM 1.
- 20 To list the files on the backup tape, type  
 >LISTFL **device\_name**

---

## Correcting enhanced network load entries (continued)

---

and press the Enter key.

*where*

**device\_name**

is S00T or S01T, as entered in step 19.

**21** Record the name of the latest ENET image file.

**22**



**CAUTION**

**Risk of service degradation**

A date stamp on a file name prevents the download of patches to the system. If the image file name has a date stamp, remove the date stamp, when you copy the image file name from tape to disk.

To copy the file from the tape to the disk, type

**>RESTORE FILE disk\_volume\_name**

and press the Enter key.

*where*

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the name of the Volume that contains the image file.

**23** List the files to confirm that the ENET image file is on the volume. Type,

**>LISTFL disk\_volume\_name**

and press the Enter key.

*where*

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the name of the volume that contains the image file

**24** To eject the tape, type

**>EJECTTAPE**

and press the Enter key.

**At the SLM**

**25** Remove and store the tape from the SLM.

**At the MAP terminal**

**26** Find an expired image file on the SLM disk.

---

<b>If an out-of-date image file</b>	<b>Do</b>
is present	step 27

---

**Correcting enhanced network load entries** (continued)

	<b>If an out-of-date image file</b>	<b>Do</b>
	is not present	step 29
<b>27</b>	To list the files on the volume to identify the software for the system, type > <b>LISTFL disk_volume_name</b> and press the Enter key. <i>where</i> <b>disk_volume_name</b> is the name of the SLM disk (S00D or S01D) and the name of the volume that contains the image file	
<b>28</b>	To delete the expired file, type > <b>DELETEFL old_file_name</b> and press the Enter key. <i>where</i> <b>old_file_name</b> is the old image file name	
<b>29</b>	To exit the disk utility level, type > <b>QUIT</b> and press the Enter key.	
<b>30</b>	Determine if the differences between the table information and the file and volume of the SLM disk cause errors.	
	<b>If the errors</b>	<b>Do</b>
	are in table PMLOADS only	step 31
	are in table PMLOADS and table ENINV	step 31
	are in table ENINV only	step 45
<b>31</b>	To access table PMLOADS, type > <b>TABLE PMLOADS</b> and press the Enter key. <i>MAP response:</i>  TABLE: PMLOADS	
<b>32</b>	Determine the nature of the error.	
	<b>If the error</b>	<b>Do</b>
	is a device name or volume name only that are not correct	step 33

---

## Correcting enhanced network load entries (continued)

---

	<b>If the error</b>	<b>Do</b>
	is an image file name only that is not correct	step 36
	is an image file name, device name, and volume name that are not correct	step 39
<b>33</b>	To access the tuple that has the wrong device name or volume name, type <b>&gt;POSITION file_name</b> and press the Enter key. <i>where</i> <b>file_name</b> is the latest ENET image file name from step 15	
<b>34</b>	To change the wrong device name or volume name to the correct name, type <b>&gt;CHANGE DEV sdisk_volume_name</b> and press the Enter key. <i>where</i> <b>disk_volume_name</b> is the name of the SLM disk (S00D or S01D) and the name of the volume that contains the image file  <i>Example of a MAP response:</i>	
	<pre>TUPLE TO BE CHANGED: ENC34BB      S01DISLOADS ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT</pre>	
<b>35</b>	To confirm the command, type <b>&gt;Y</b> and press the Enter key. <i>MAP response:</i>	
	<pre>TUPLE CHANGED  Go to step 43.</pre>	
<b>36</b>	To access the tuple that has the wrong image file name, type <b>&gt;POSITION invalid_file_name</b> and press the Enter key. <i>where</i> <b>invalid_file_name</b> is the wrong ENET image file name.	

## Correcting enhanced network load entries (continued)

---

- 37** To change the image file name, type  
>**CHANGE LOADNAME file\_name**  
and press the Enter key.  
*where*  
**file\_name**  
is the latest ENET image file name

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
EN34BB      S01DISLOADS
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
```

- 38** To confirm the command, type  
>**Y**  
and press the Enter key.  
*MAP response:*

```
TUPLE CHANGED
```

Go to step 43.

- 39** To add the latest image file name to the table, type  
>**ADD new\_file\_name sdisk\_volume\_name**  
and press the Enter key.  
*where*  
**new\_file\_name**  
is the latest image file name  
**disk\_volume\_name**  
is the name of the SLM disk (S00D or S01D) and the name of the volume that contains the image file

- 40** To search for any expired image file names, type  
>**POSITION old\_file\_name disk\_volume\_name**  
and press the Enter key.  
*where*  
**disk\_volume\_name**  
is the name of the SLM disk (S00D or S01D) and the name of the volume containing the image file  
**old\_file\_name**  
is the name of the out-of-date file

*Example of a MAP response:*

```
ENC34BB      S01DISLOADS
```

- 41** To delete the expired file, type  
>**DELETE**

---

## Correcting enhanced network load entries (continued)

---

and press the Enter key.

*Example of a MAP response:*

```
TUPLE TO BE DELETED:
ENC34BB      S01DISLOADS
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
```

- 42** To confirm the command, type

**>Y**

and press the Enter key.

*MAP response:*

```
TUPLE DELETED
```

- 43** To exit table PMLOADS, type

**>QUIT**

and press the Enter key.

- 44** Determine if errors are present in table ENINV as noted in step 30.

<b>If errors</b>	<b>Do</b>
are present in table ENINV	step 45
are not present in table ENINV	step 50

- 45** To access table ENINV, type

**>TABLE ENINV**

and press the Enter key.

- 46** To access the tuple with a load file name that is not correct, type

**>POSITION tuple\_number**

and press the Enter key.

*where*

**tuple\_number**

specifies the tuple number, starting at 1

- 47** To change the load file name, type

**>CHANGE LOAD plane\_number new\_file\_name**

and press the Enter key.

*where*

**plane\_number**

is the correct enhanced network plane number (0 or 1)

**new\_file\_name**

is the correct load file name

## Correcting enhanced network load entries (end)

---

- 48** Determine if more tuples require change.
- | <b>If more tuples</b> | <b>Do</b> |
|-----------------------|-----------|
| are present           | step 46   |
| are not present       | step 49   |
- 49** To exit table ENINV, type  
>**QUIT**  
and press the Enter key.
- 50** The procedure is complete.

## **Correcting a line flux cancellation error**

---

### **Application**

Use this procedure to correct an error in line flux cancellations.

### **Definition**

The next level of support identifies errors in a line flux cancellation. The next level of support can request the performance of this procedure to correct a problem or to provide additional information.

### **Common procedures**

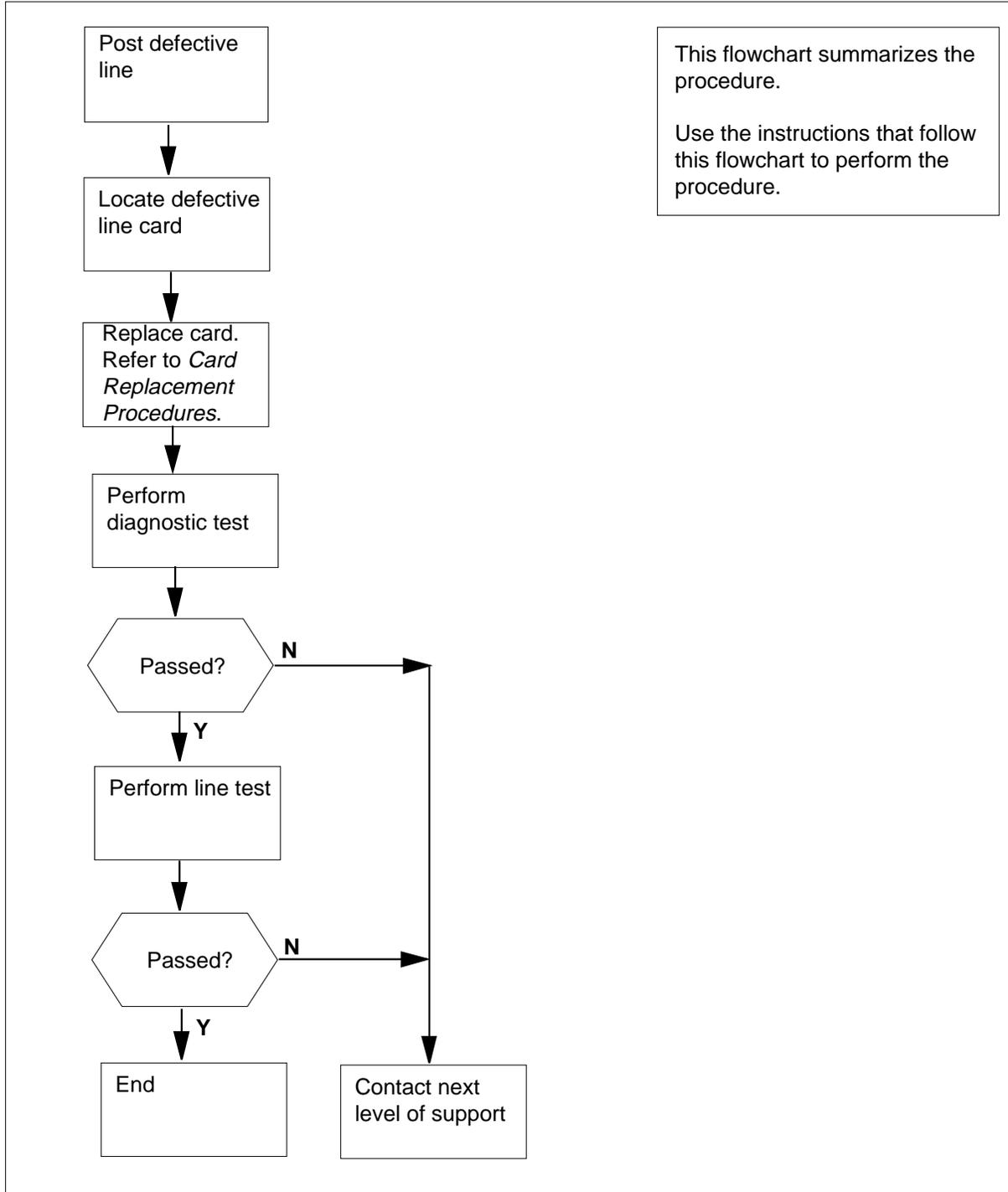
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line flux cancellation error (continued)

### Summary of Correcting a line flux cancellation error



---

## Correcting a line flux cancellation error (continued)

---

### Correcting a line flux cancellation error

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

*where*

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit numbers.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG          STA F S LTA TE RESULT
1FR          DN 613 621 4777  IDL
```

- 3 To locate the defective line card, type

```
>CKTLOC
```

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos  Bay_id  Sh  Description Slot  EqPEC
HOST  00 B00   LCE 00  38  LCM 00 1   00:01 6X17AC

GRD START  2DB LOSS  BAL NETWORK  MAN  OVR  SET
      NO      NO      NON LOADED      NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5 To perform a diagnostic test on the defective line card, type

```
>DIAG
```

and press the Enter key.

*Example of a MAP response:*

## Correcting a line flux cancellation error (continued)

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 8
is +LINE101, and other information	step 6
is COULD NOT SEIZE LINE	step 12

**6** To replace the defective line card recorded in step 4, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**7** To perform a diagnostic test on the replaced line card in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

*Example of a MAP response:*

```
+LINE101 NOV04 18:34:21 0700 FAIL LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic FAIL
ACTION REQUIRED      Replace card
CARD TYPE      6X17AC
```

*Example of a MAP response:*

```
COULD NOT RUN LINE_CARD_DIAGNOSTIC
```

If the MAP response	Do
is +LINE100, and other information	step 8

**Correcting a line flux cancellation error** (continued)

	<b>If the MAP response</b>	<b>Do</b>
	is +LINE101, and other information	step 12
	is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 12
<b>8</b>	To perform a test for possible faults in the outside plant, type >LTPLTA;LNTST and press the Enter key. <i>Example of a MAP response:</i>	
	<pre> Test OK  RES          CAP          VAC          VDC TIP          999.0K        0.000UF      0           0 RNG          999.0K        0.000UF      0           0 TIP TO RNG   999.0K        1.200UF           </pre>	
	<b>If the test</b>	<b>Do</b>
	passes	step 9
	fails	step 12
<b>9</b>	Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.	
<b>10</b>	Determine if the values recorded in step 9 are within the tolerances listed in the <i>Maintenance Guide</i> .	
	<b>If the RES, CAP, VAC, and VDC values</b>	<b>Do</b>
	are within the tolerances	step 11
	are outside the tolerances	step 12
<b>11</b>	To perform a test of the DIGITONE pad or DIGITONE dial of the posted station, type >DGTTST and press the Enter key. <i>Example of a MAP response:</i>	
	TEST PASSED, DIGITS RECEIVED: 7	
	<b>If the test</b>	<b>Do</b>
	passes	step 13

**Correcting a line flux cancellation error (end)**

---

	<b>If the test</b>	<b>Do</b>
	fails	step 12
<b>12</b>	For additional help, contact the next level of support.	
<b>13</b>	The procedure is complete.	

## Correcting a line loop detect error

---

### Application

Use this procedure to diagnose and correct a line loop detect error.

### Definition

The next level of support identifies a line loop detect error. The next level of support can request a performance of this procedure to correct problems or to provide additional information.

### Common procedures

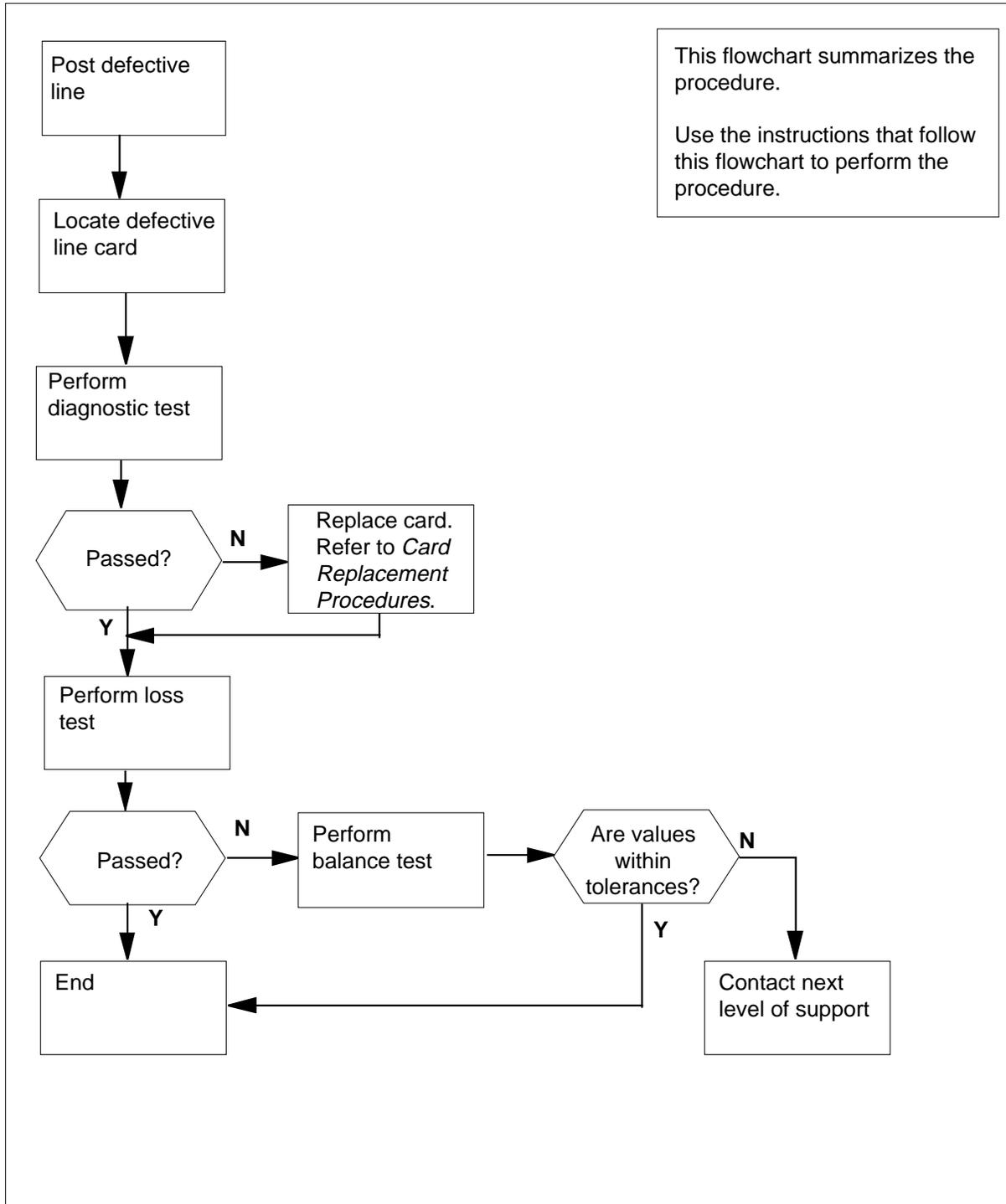
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line loop detect error (continued)

### Summary of Correcting a line loop detect error



---

## Correcting a line loop detect error (continued)

---

### Correcting a line loop detect error

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

*where*

#### **LEN**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3 To locate the defective line card, type

```
>CKTLOC
```

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5 To perform a diagnostic test on the defective line card, type

```
>DIAG
```

and press the Enter key.

*Example of a MAP response:*

## Correcting a line loop detect error (continued)

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 8
is +LINE101, and other information	step 6
is COULD NOT SEIZE LINE	step 15

**6** To replace the defective line card recorded in step 4, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**7** To perform a diagnostic test on the replaced line card in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

If the MAP response	Do
is +LINE100, and other information	step 16
is +LINE101, and other information	step 8
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 15

**8** To perform a loss test to check for possible faults in the outside plant, type

**>LTPMAN;LOSS**

and press the Enter key.

**Correcting a line loop detect error** (continued)

```

LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 MB                2
    
```

If the test	Do
passes	step 9
fails	step 15

- 9** Determine if the number indicated in the RESULT field of the MAP response meets company specifications. Determine if the number meets the indicated values in the *Maintenance Guide*.

If the number in the RESULT field	Do
meets specifications and values	step 10
does not meet specifications and values	step 15

- 10** To perform a balance test to check for possible faults in the outside plant, type **>LTPMAN;BAL** and press the Enter key.  
*Example of a MAP response:*

```

LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL            TTU
Test: Onhook    Balnet    2DB Pad
      PREVIOUS Non loaded    No
      RESULT   Non loaded    No
    
```

- 11** Record the test results for the next level of support.
- 12** To perform a test for damage in the outside plant, type **>LNTST** and press the Enter key.  
*Example of a MAP response:*

---

**Correcting a line loop detect error (end)**

---

Test OK				
	RES	CAP	VAC	VDC
TIP	999.0K	0.000UF	0	0
RNG	999.0K	0.000UF	0	0
TIP TO RNG	999.0K	1.200UF		

---

<b>If the test</b>	<b>Do</b>
passes	step 13
fails	step 15

---

**13** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.

**14** Determine if the values recorded in step 13 are within the tolerances listed in the *Maintenance Guide*.

---

<b>If the RES, CAP, VAC, and VDC values</b>	<b>Do</b>
are within the tolerances	step 16
are outside the tolerances	step 15

---

**15** For additional help, contact the next level of support.

**16** The procedure is complete.

## **Correcting a line loopback problem**

---

### **Application**

Use this procedure to diagnose and correct a line loopback problem.

### **Definition**

The next level of support identifies a line loopback problem. The next level of support can request the performance of this procedure to correct the problem or provide additional information.

### **Common procedures**

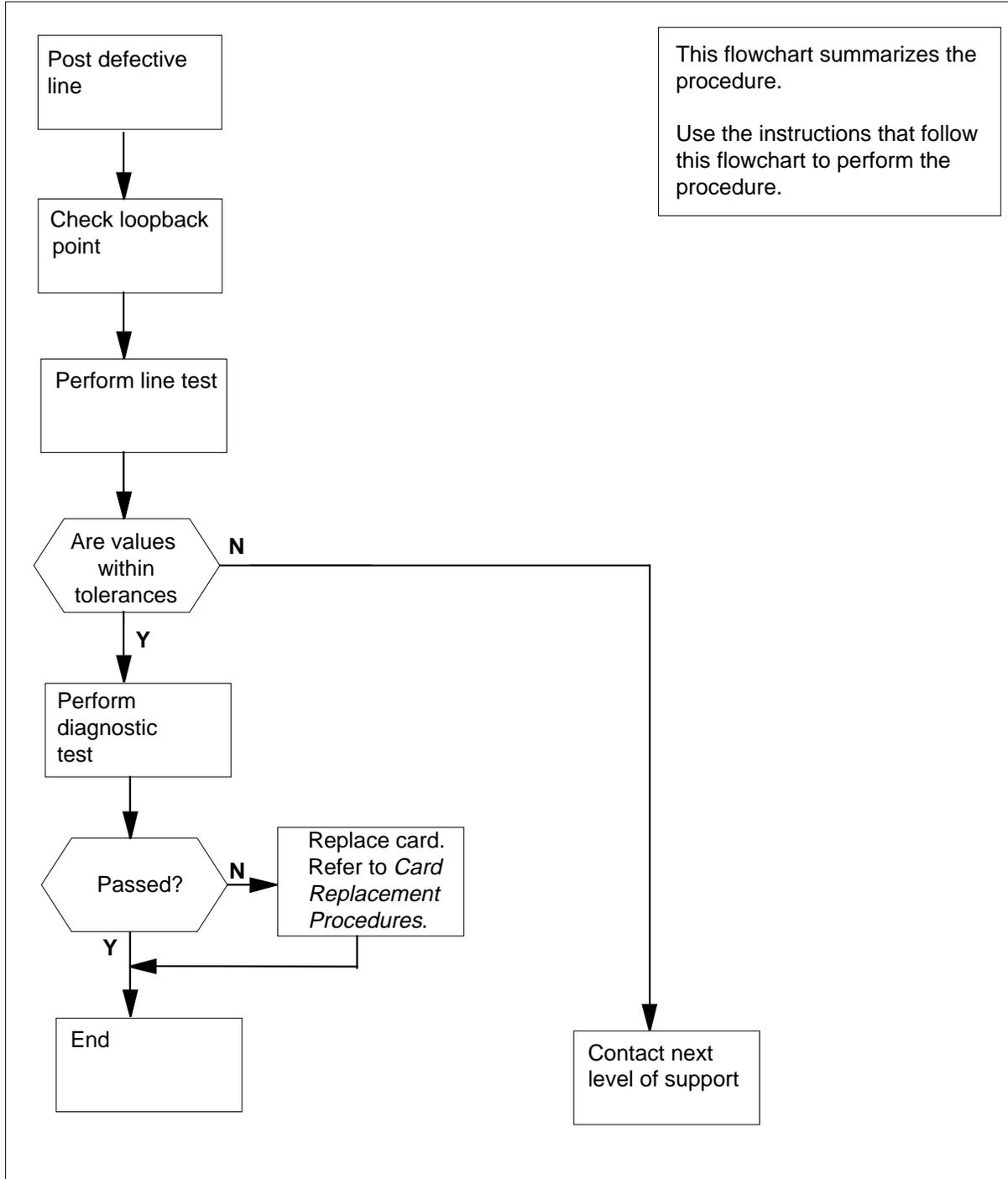
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line loopback problem (continued)

### Summary of Correcting a line loopback problem



---

## Correcting a line loopback problem (continued)

---

### Correcting a line loopback problem

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 To post the line equipment number (LEN) of the defective line, type  
**>POST L len**  
 and press the Enter key.  
*where*  
**len**  
 is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3 To check the loopback point and the status of the subscriber equipment, type  
**>LTPDATA ;SUSTATE**  
 and press the Enter key.

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG          STA F S LTA TE RESULT
1FR                DN 613 621 4777 IDL
```

```
SUSTATE
Line Card Status
TCM SYNC SYNCREP BPVO BPVREP TA CO PROFILE FIRMWARE
.          .          -          -          -          -          1.1
Subscriber Unit Status
                                NEAR                                FAR
BAUD   LOOP RI CTS RTS DTR PROFILE FIRMWARE RTS DTR
19200 S none -   -   .   .   .   .   .   1.1   -   -
```

- 4 Use the *Maintenance Guide* to determine if the loopback point is correctly set under the LOOP field.

---

If the loopback point	Do
is correctly set	step 6

---

**Correcting a line loopback problem** (continued)

	<b>If the loopback point</b>	<b>Do</b>																				
	is not correctly set	step 5																				
<b>5</b>	To set the correct loopback, type <b>&gt;LOOPBK location</b> and press the Enter key. <i>where</i> <b>location</b> is the location specified on a data line. The location specified depends on the the type of interface. Refer to the LOOPBK command and responses in the <i>Maintenance Guide</i> . <i>Example of a MAP response:</i>  LOOPBACK AT DU ACTIVATED																					
	<b>If the loopback</b>	<b>Do</b>																				
	activates	step 6																				
	did not activate	step 14																				
<b>6</b>	To perform a line test for possible damage in the outside plant, type <b>&gt;LTPLTA ;LNTST</b> and press the Enter key. <i>Example of a MAP response:</i>  Test OK <table border="1" style="margin-left: 40px;"> <thead> <tr> <th></th> <th>RES</th> <th>CAP</th> <th>VAC</th> <th>VDC</th> </tr> </thead> <tbody> <tr> <td>TIP</td> <td>999.0K</td> <td>0.000UF</td> <td>0</td> <td>0</td> </tr> <tr> <td>RNG</td> <td>999.0K</td> <td>0.000UF</td> <td>0</td> <td>0</td> </tr> <tr> <td>TIP TO RNG</td> <td>999.0K</td> <td>1.200UF</td> <td></td> <td></td> </tr> </tbody> </table>			RES	CAP	VAC	VDC	TIP	999.0K	0.000UF	0	0	RNG	999.0K	0.000UF	0	0	TIP TO RNG	999.0K	1.200UF		
	RES	CAP	VAC	VDC																		
TIP	999.0K	0.000UF	0	0																		
RNG	999.0K	0.000UF	0	0																		
TIP TO RNG	999.0K	1.200UF																				
	<b>If the test</b>	<b>Do</b>																				
	passes	step 7																				
	fails	step 14																				
<b>7</b>	Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.																					
<b>8</b>	Determine if the recorded values in step 7 are within the tolerances listed in the <i>Maintenance Guide</i> .																					
	<b>If the RES, CAP, VAC, and VDC values</b>	<b>Do</b>																				
	are within the tolerances	step 9																				

## Correcting a line loopback problem (continued)

	<b>If the RES, CAP, VAC, and VDC values</b>	<b>Do</b>
	are outside the tolerances	step 14
<b>9</b>	<p>To perform a diagnostic test, type  <b>&gt;LTP ;DIAG</b>                      and press the Enter key.  <i>Example of a MAP response:</i></p> <pre style="margin-left: 20px;">+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG LEN HOST 00 1 00 01      DN 6136214777 DIAGNOSTIC RESULT   Card Diagnostic OK ACTION REQUIRED      None CARD TYPE           6X17AC</pre>	
	<b>If the MAP response</b>	<b>Do</b>
	is +LINE100, and other information	step 15
	is +LINE101, and other information	step 10
	is COULD NOT SEIZE LINE	step 14
<b>10</b>	<p>To locate the defective line card, type  <b>&gt;CKTLOC</b>                      and press the Enter key.  <i>Example of a MAP response:</i></p> <pre style="margin-left: 20px;">Site Flr RPos  Bay_id  Sh  Description  Slot  EqPEC HOST  00 B00   LCE 00  38   LCM 00 1    00:01 6X17AC  GRD START  2DB LOSS  BAL NETWORK  MAN  OVR  SET       NO      NO      NON LOADED      NO</pre>	
<b>11</b>	Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.	
<b>12</b>	Replace the defective line card recorded in step 11 to replace the card. Perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point.	
<b>13</b>	<p>To perform a diagnostic test on the line card, type  <b>&gt;DIAG</b>                      and press the Enter key.  <i>Example of a MAP response:</i></p>	

## Correcting a line loopback problem (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

<b>If the MAP response</b>	<b>Do</b>
is +LINE100, and other information	step 15
is +LINE101, and other information	step 14
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 14

---

- 14** For additional help, contact the next level of support.
- 15** The procedure is complete.

## **Correcting a line noise problem**

---

### **Application**

Use this procedure to diagnose and correct a line noise problem.

### **Definition**

The next level of support identifies a line noise problem. The next level of support can request the performance of this procedure to correct a problem or to provide additional information.

### **Common procedures**

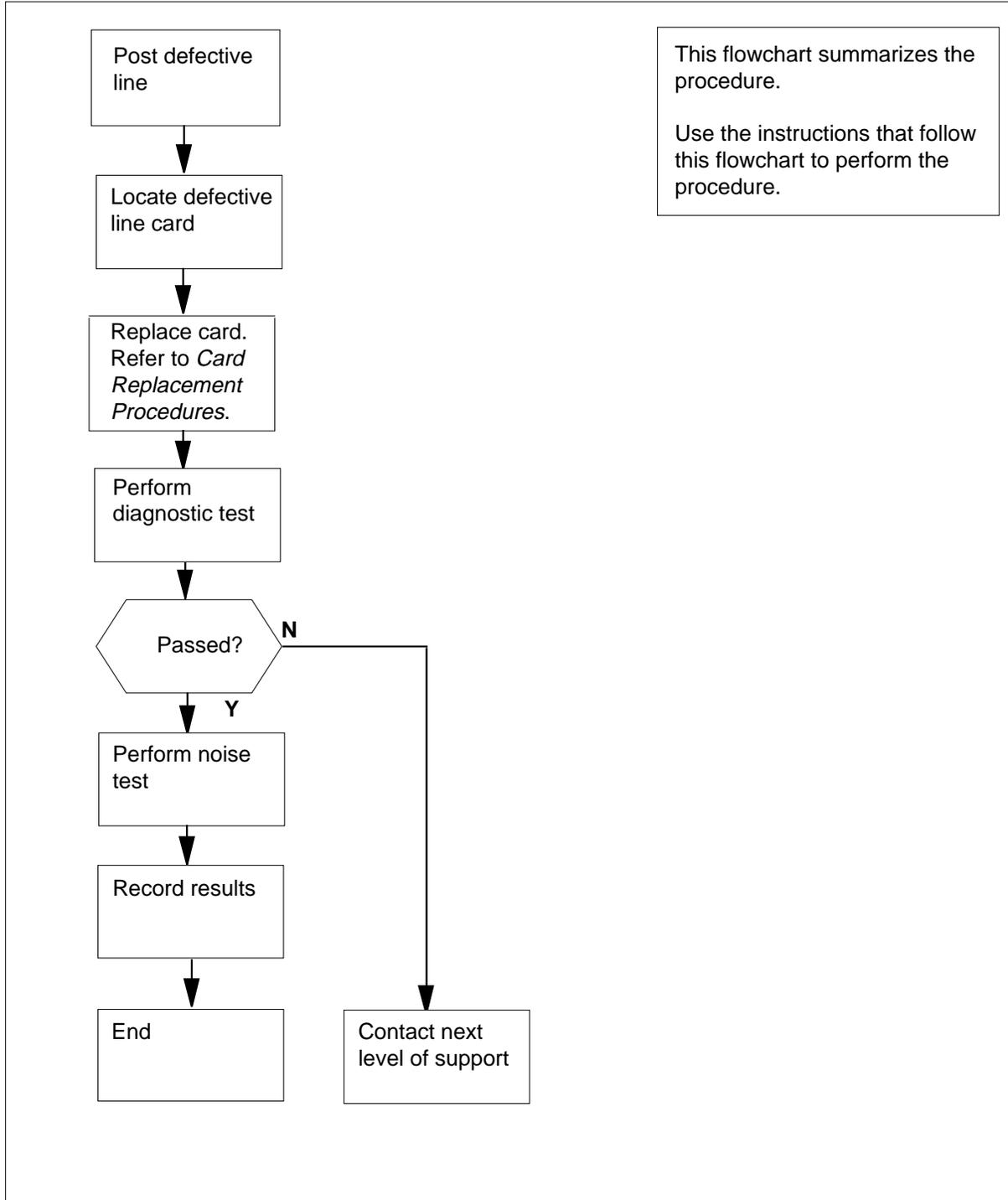
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line noise problem (continued)

### Summary of Correcting a line noise problem



---

## Correcting a line noise problem (continued)

---

### Correcting a line noise problem

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

*where*

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG..... STA F S LTA TE RESULT
IFR DN 613 621 4777 IDL
```

- 3 To locate the defective line card, type

```
>CKTLOC
```

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5 To replace the recorded defective line card in step 4, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 6 To perform a diagnostic test on the replaced line card in step 5, type

```
>DIAG
```

and press the Enter key.

*Example of a MAP display:*

---

## Correcting a line noise problem (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

If the MAP response	Do
is +LINE100, and other information	step 7
is +LINE101, and other information	step 9
is -COULD NOT SEIZE LINE	step 9

---

**7** To perform a noise test, type

>**LTPMAN;NOISE**

and press the Enter key.

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR              DN 613 621 4777 IDL          TTT 36
```

**8** Record the test results for the next level of support.

Go to step 10.

**9** For additional help, contact the next level of support.

**10** The procedure is complete.

## **Correcting a line pad test problem**

---

### **Application**

Use this procedure to diagnose and correct problems for a line pad test.

### **Definition**

The next level of support identifies problems for a line pad test error. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

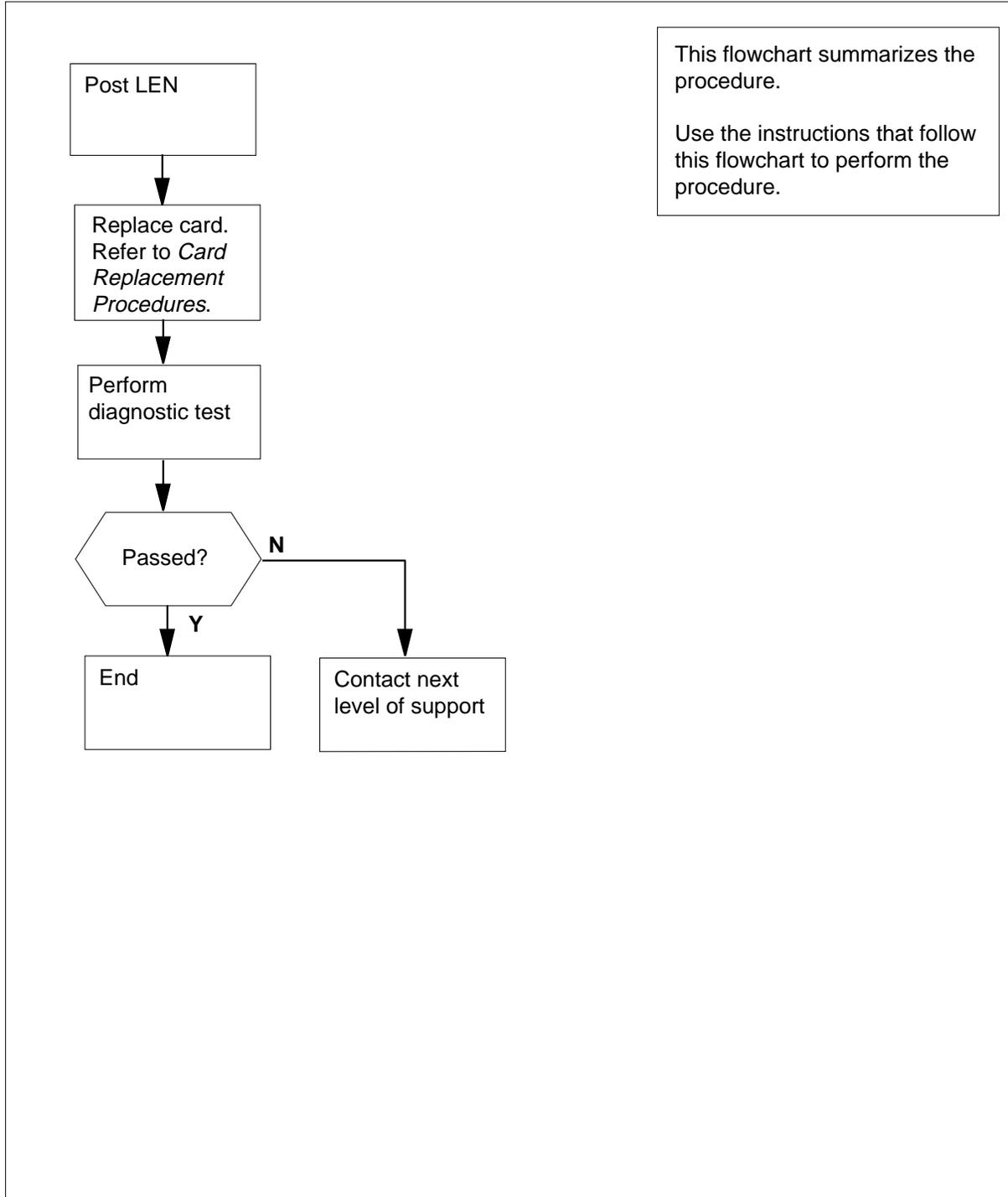
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line pad test problem (continued)

### Summary of Correcting a line pad test problem



---

## Correcting a line pad test problem (continued)

---

### Correcting a line pad test problem

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type  
`>MAPCI ;MTC ;LNS ;LTP`  
 and press the Enter key.
- 2 To post the line equipment number (LEN) of the defective D-channel line, type  
`>POST L len`  
 and press the Enter key.

*where*

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3 To locate the defective line card, type  
`>CKTLOC`  
 and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.  
**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.
- 5 Replace the defective line card recorded in step 4. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 6 To perform a diagnostic test on the line card you replaced in step 5, type  
`>DIAG`  
 and press the Enter key.

*Example of a MAP response:*

## Correcting a line pad test problem (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

<b>If the MAP response</b>	<b>Do</b>
is +LINE100, and other information	step 8
is +LINE101, and other information	step 7
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 7

---

- 7** For additional help, contact the next level of support.
- 8** The procedure is complete.

## **Correcting a line ringing failure**

---

### **Application**

Use this procedure to diagnose and correct line ringing failure on each line.

### **Definition**

The next level of support identifies line ringing failure. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

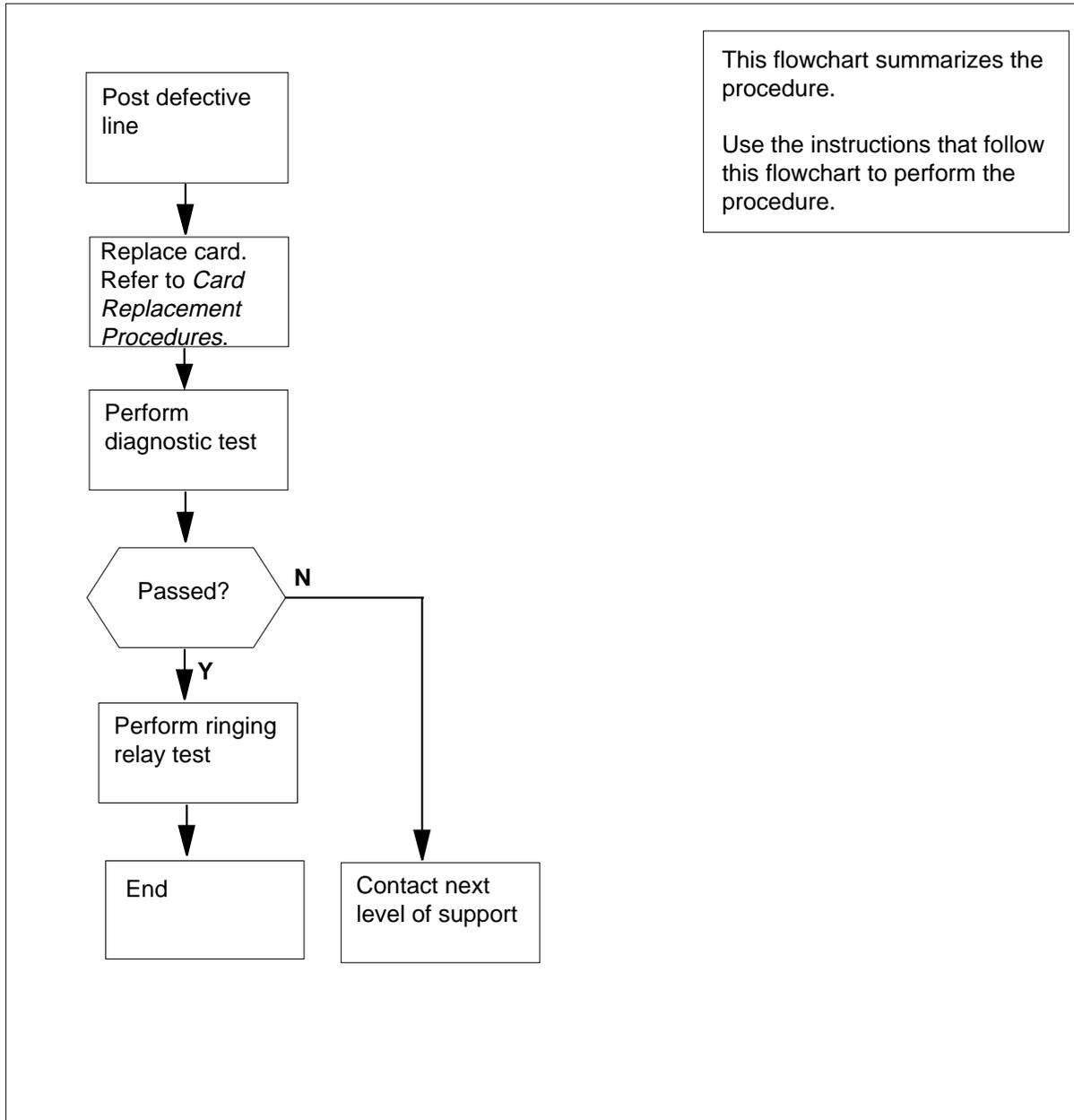
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line ringing failure (continued)

### Summary of Correcting a line ringing failure



### Correcting a line ringing failure

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
>MAPCI ;MTC ;LNS ;LTP  
and press the Enter key.

---

## Correcting a line ringing failure (continued)

---

- 2** To post the line equipment number (LEN) of the defective line, type

>POST L len

and press the Enter key.

where

**len**

is the LEN of the defective line. Use the format ff u dd cc for, frame, unit, drawer, and circuit number.

*Example input:*

>POST L 00 1 00 01

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3** To locate the defective line card, type

>CKTLOC

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC
00:01 6X17AC
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4** Record the product engineering code (PEC), the PEC suffix, and the location of the damaged line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5** To replace the damaged line card recorded in step 4, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 6** To perform a diagnostic test on the line card you replaced in step 5, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

## Correcting a line ringing failure (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT   Card Diagnostic OK
ACTION REQUIRED   None
CARD TYPE   6X17AC
```

---

<b>If the MAP response</b>	<b>Do</b>
is +LINE100, and other information	step 7
is +LINE101, and other information	step 9
is COULD NOT SEIZE LINE	step 9

---

- 7** To perform a ringing relay test on the set of the subscriber, type  
**>LTPMAN;TSTRING**  
and press the Enter key.  
*Example of a MAP response:*
- ```
TEST PASSED
```
- 8** Record the test results for your next level of support.  
Go to step 10.
- 9** For additional help, contact the next level of support.
- 10** The procedure is complete.

## **Correcting a line synchronization loss at a U-loop**

---

### **Application**

Use this procedure to diagnose and correct a line synchronization loss at a U-loop.

### **Definition**

The next level of support identifies a line synchronization loss at a U-loop. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

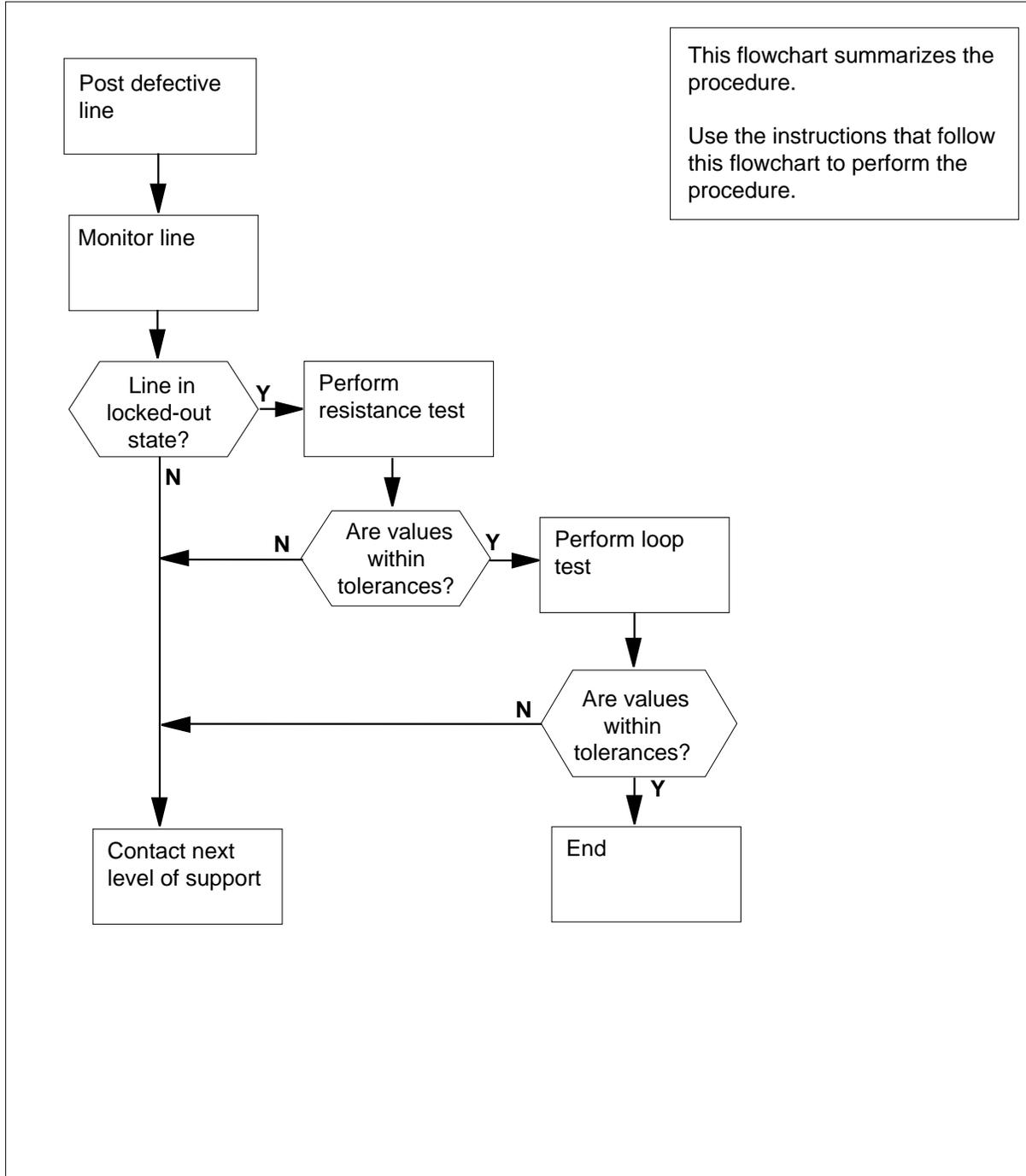
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line synchronization loss at a U-loop (continued)

### Summary of Correcting a line synchronization loss at a U-loop



---

## Correcting a line synchronization loss at a U-loop (continued)

---

### Correcting a line synchronization loss at a U-loop

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

*where*

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 MB
```

- 3 To return the posted line to the idle state, type

```
>RTS
```

and press the Enter key.

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

---

| If the line state         | Do      |
|---------------------------|---------|
| is IDL                    | step 10 |
| is other than listed here | step 4  |

- 4 Monitor the state of the line at the LTP level.

---

| If the line state         | Do     |
|---------------------------|--------|
| is LO                     | step 5 |
| is other than listed here | step 9 |

**Correcting a line synchronization loss at a U-loop** (continued)

**5** To perform a resistance test to determine if power to the network termination 1 (NT1) is OFF, type

**>LEVEL LTPLTA;RES**

and press the Enter key.

*Example of a MAP response:*

```

Test OK

RES          CAP          VAC          VDC
TIP          999.0K        0.000UF      0           0
RNG          999.0K        0.000UF      0           0
TIP TO RNG   999.0K        1.200UF
    
```

| <b>If the RES value in the MAP response</b> | <b>Do</b> |
|---------------------------------------------|-----------|
| is between 1.2 kΩ and 3 kΩ                  | step 6    |
| is not between 1.2 kΩ and 3 kΩ              | step 9    |

**6** To perform a test on the loop, type

**>LNTST**

and press the Enter key.

*Example of a MAP response:*

```

Test OK

RES          CAP          VAC          VDC
TIP          999.0K        0.000UF      0           0
RNG          999.0K        0.000UF      0           0
TIP TO RNG   999.0K        1.200UF
    
```

| <b>If the test</b> | <b>Do</b> |
|--------------------|-----------|
| passes             | step 7    |
| fails              | step 9    |

**7** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC), and direct current voltage (VDC) values from the MAP response.

**8** Determine if the values recorded in step 7 are within the list of tolerances in the *Lines Maintenance Guide*, 297-1001-294.

| <b>If the RES, CAP, VAC, and VDC values</b> | <b>Do</b> |
|---------------------------------------------|-----------|
| are within the tolerances                   | step 10   |
| are outside the tolerances                  | step 9    |

**9** For additional help, contact the next level of support.

---

**Correcting a line synchronization loss at a U-loop (end)**

---

10 The procedure is complete.

## Correcting a line test unit problem

---

### Application

Use this procedure to correct line test unit (LTU) problems.

When an LTU problem is present, normally the LTU has the wrong voltage, impedance, capacitance, or resistance measurements.

The reasons for LTU trouble are:

- metal test access (MTA) problems
- a defective NT2X10BA or NT2X11BA card
- a defective NT4X97AA or NT4X98AA card

### Definition

The LTU performs tests and measurements on subscriber lines. For the North American market, the LTU contains an NT2X10BA card and an NT2X11BA card. For international markets, the cards in the LTU are the NT4X97AA and the NT4X98AA.

The two cards in the LTU connect to lines under test by the MTA card. The two cards have a single trunk appearance.

You can find LTUs in:

- maintenance trunk modules (MTM)
- remote maintenance modules (RMM)
- remote service modules (RSM)

### Common procedures

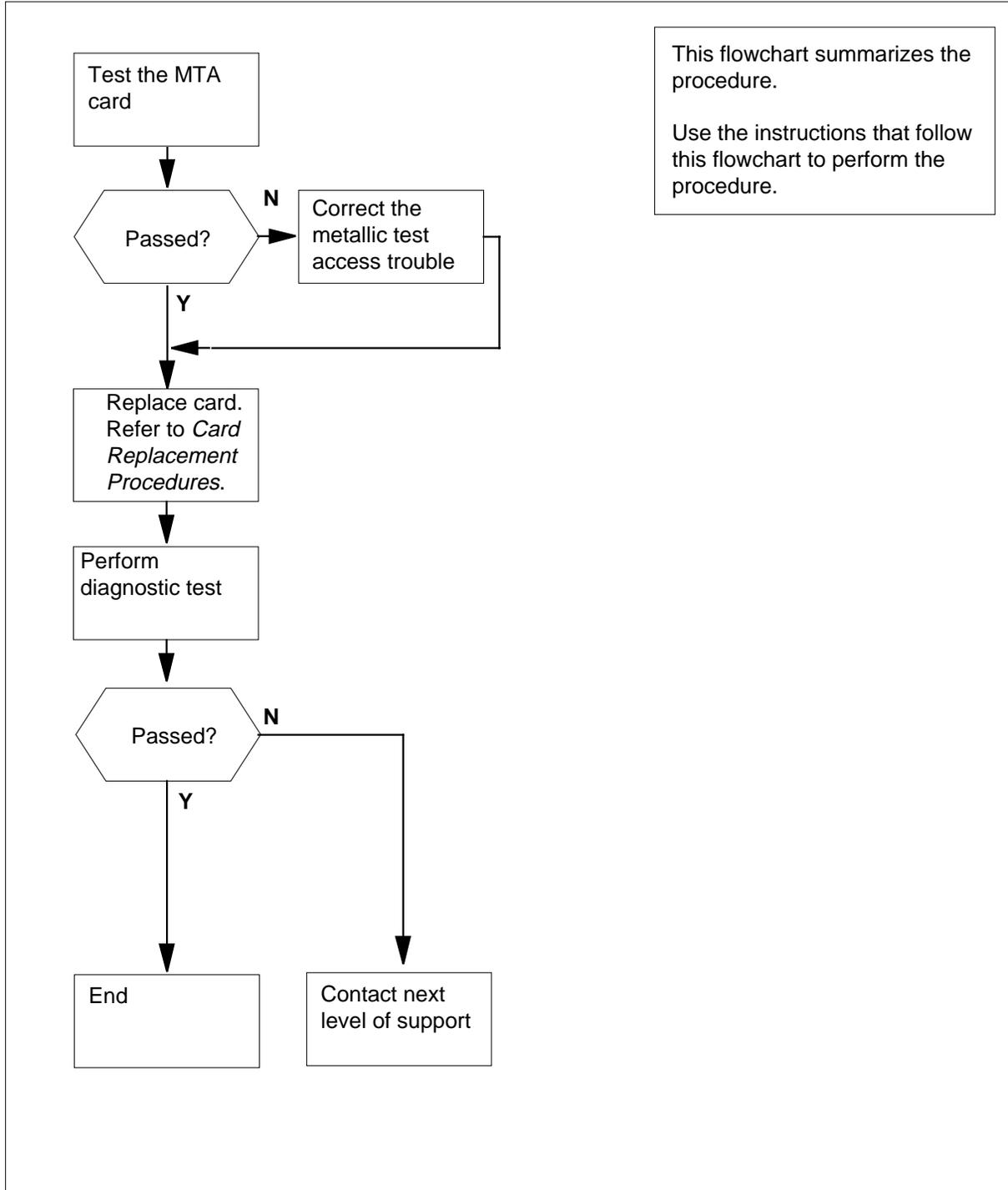
This procedure refers to *How to correct metallic test access trouble*.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line test unit problem (continued)

### Summary of Correcting line test unit problems



## Correcting a line test unit problem (continued)

### Correcting line test unit problems

#### At the MAP terminal

- 1 To access the TTP level of the MAP display, type  

```
>MAPCI ;MTC ;TRKS ;TTP
```

 and press the Enter key.
- 2 To post the MTA circuit that connects to the defective LTU, type  

```
>POST G clli member_no
```

 and press the Enter key.  
*where*  
**clli**  
 is the common-language location identifier (CLLI) of the MTA card (table CLLI)  
**member\_no**  
 is the unit number of the MTA card (table MTAMDRVE)

*Example input:*

```
>POST G MTADRIVER 8
```

*Example of a MAP response:*

```
POST      3  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE  PM NO.  COM LANG      STA S R  DOT TE  RESULT
MISC MTM   2  0  MTADRIVER  8  IDL
```

- 3 To test the MTA card, type  

```
>TST
```

 and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 MAY10 12:09:27 4400 PASS CKT  MTADRIVER  8
```

| If the TST command | Do     |
|--------------------|--------|
| passes             | step 5 |
| fails              | step 4 |

- 4 Perform the procedure "Correcting metallic test access trouble" in this document. Complete the procedure and return to this point.
- 5 To post the defective LTU circuit, type  

```
>POST G clli member_no
```

 and press the Enter key.  
*where*

## Correcting a line test unit problem (continued)

**cli**  
is the CLLI of the MTA card (table CLLI)

**member\_no**  
is the unit-number of the defective LTU (table TRKMEM)

*Example input:*

**>POST G LTU 0**

*Example of a MAP response:*

```

POST      8  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE  PM NO.  COM LANG      STA S R  DOT TE  RESULT
OG  MTM    2  2  LTU          8  IDL
    
```

**Note:** An LTU has a single trunk appearance.

**6** To manually busy the LTU circuit, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

```

POST      8  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE  PM NO.  COM LANG      STA S R  DOT TE  RESULT
OG  MTM    2  2  LTU          8  MB
    
```

**7** To seize the LTU circuit, type

**>SEIZE**

and press the Enter key.

*Example of a MAP response:*

```

POST      8  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE  PM NO.  COM LANG      STA S R  DOT TE  RESULT
OG  MTM    2  2  LTU          8  SZD . .
                                P_MB
    
```

**8** To test the LTU circuit, type

**>TST**

and press the Enter key.

*Example of a MAP response:*

## Correcting a line test unit problem (continued)

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 9  |

- 9 Determine the cards in the LTU.

| If the LTU                           | Do      |
|--------------------------------------|---------|
| contains NT2X10BA and NT2X11BA cards | step 10 |
| contains NT4X97AA and NT4X98AA cards | step 17 |

- 10 To replace the NT2X11BA card, perform the correct procedure in Card Replacement Procedures. Complete the procedure and return to this point.

- 11 To test the LTU circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 12 |

- 12 To replace the new NT2X11BA card with the old NT2X11BA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT2X10BA and NT2X11BA cards are now in the MTM shelf.

- 13 To replace the old NT2X10BA card with the new NT2X10BA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT2X10BA card and the old NT2X11BA card are now in the MTM shelf.

- 14 To test the LTU circuit, type

>TST

**Correcting a line test unit problem** (continued)

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 15 |

- 15** To replace the old NT2X11BA card with the new NT2X11BA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT2X10BA card and a new NT2X11BA card are now in the MTM shelf.

- 16** Go to step 23.

- 17** To replace the NT4X98AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 18** To test the LTU circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 19 |

- 19** To replace the new NT4X98AA card with the old NT4X98AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT4X97AA and NT4X98AA cards are now in the MTM shelf.

- 20** To replace the old NT4X97AA card with the new NT4X97AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT4X97AA card and the old NT4X98AA card are now in the MTM shelf.

- 21** To test the LTU circuit, type

>TST

and press the Enter key.

## Correcting a line test unit problem (continued)

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT          LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 22 |

- 22** To replace the old NT4X98AA card with the new NT4X98AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT4X97AA card and a new NT4X98AA card are now in the MTM shelf.

- 23** To test the LTU circuit, type

>**TST**

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT          LTU      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 24 |
| fails              | step 29 |

- 24** To release the LTU circuit, type

>**RLS**

and press the Enter key.

*Example of a MAP response:*

```
POST      8  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE   PM NO.  COM LANG      STA S R  DOT TE  RESULT
OG  MTM    2  2  LTU          8  IDL
```

- 25** To return the LTU circuit to service, type

>**RTS**

and press the Enter key.

*Example of a MAP response:*

---

## Correcting a line test unit problem (continued)

---

```

POST      8  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE  PM NO.  COM LANG      STA S R  DOT TE  RESULT
OG  MTM    2  2  LTU          8  SZD . .
                                P_IDL
    
```

- 26** To access the LTP level of the MAP display, type

**>LNS ;LTP**

and press the Enter key.

- 27** Post a good line card (that is, one you know is not defective and that passed the test). To post the line card in a line concentrating module (LCM) that connects to the defective LTU, type defective

**>POST D dn**

and press the Enter key.

**dn**

is a directory number (DN) of an LCM line card that connects to the

defective LTU (table MTAVERT), without spaces

*Example input:*

**>POST D 6216062**

*Example of a MAP response:*

```

LEN HOST 02 0 00 30
LCC PTY RNG          STA F S LTA TE RESULT
RES          DN 613 621 6062 IDL
    
```

- 28** To perform a diagnostic test on the line card, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```

+LINE100 JAN09 13:04:24 6700 PASS LN_DIAG
      LEN HOST 02 0 00 30  DN 6216062
      DIAGNOSTIC RESULT  Card Diagnostic OK
      ACTION REQUIRED  None
      CARD TYPE  6X17AC
    
```

---

**If the LCM card test**

**Do**

---

passes

step 30

fails

step 29

---

- 29** For additional help, contact the next level of support.

**Correcting a line test unit problem** (end)

---

30 The procedure is complete.

## **Correcting a line that does not receive calls**

---

### **Application**

Use this procedure to correct a line that does not receive calls.

### **Definition**

The next level of support identifies a line that does not receive calls. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

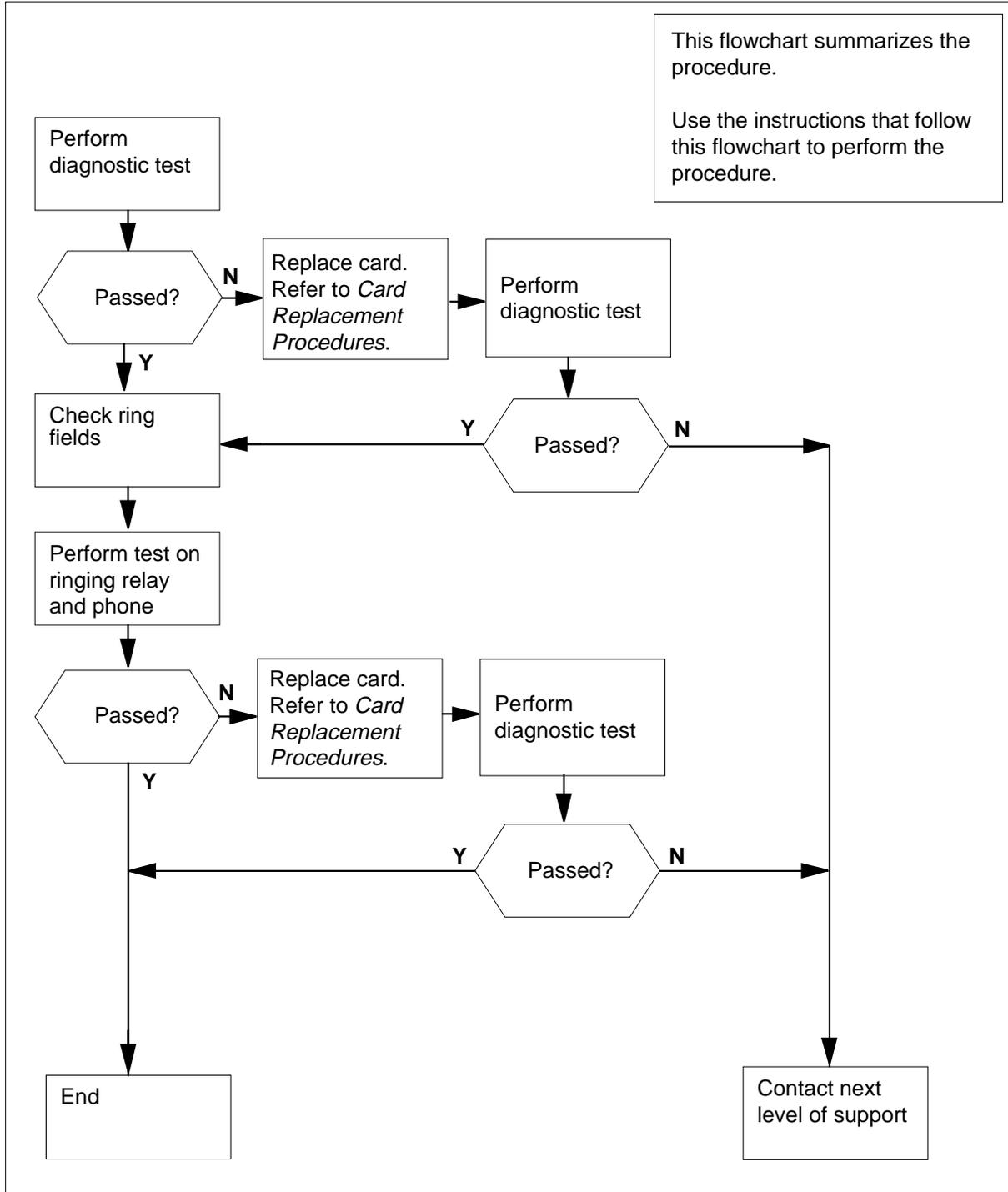
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line that does not receive calls (continued)

### Summary of Correcting a line that does not receive calls



---

## Correcting a line that does not receive calls (continued)

---

### Correcting a line that does not receive calls

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 Post the directory number (DN) of the line of the subscriber. The DN corresponds to the telephone that does not receive calls. Type  
**>POST D dn**  
 and press the Enter key.  
*where*  
     **dn**  
         is the 10- or 11-digit DN of the line of the subscriber, without spaces

*Example input:*

**>POST D 6136214777**

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR R1          DN 613 621 4777 IDL
```

- 3 To perform a diagnostic test on the line of the subscriber, type  
**>DIAG**  
 and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

| If the MAP response                | Do      |
|------------------------------------|---------|
| is +LINE100, and other information | step 10 |
| is +LINE101, and other information | step 6  |
| is COULD NOT SEIZE LINE            | step 4  |

## Correcting a line that does not receive calls (continued)

- 4 Locate the line state.  
**Note:** The line state is under the STA column of the MAP display.

| If the line state         | Do     |
|---------------------------|--------|
| is PLO,CUT or LMB         | step 6 |
| is other than listed here | step 5 |

- 5 To perform a diagnostic test on the line of the subscriber, type  
**>DIAG**  
 and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

| If the MAP response                | Do      |
|------------------------------------|---------|
| is +LINE100, and other information | step 10 |
| is +LINE101, and other information | step 6  |
| is COULD NOT SEIZE LINE            | step 17 |

- 6 To locate the defective line card, type  
**>CKTLOC**  
 and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18A
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 7 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 6, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

**Correcting a line that does not receive calls** (continued)

**8** To replace the defective line card recorded in step 7, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**9** To perform a diagnostic test on the replaced line card in step 8, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

| If the MAP response                  | Do      |
|--------------------------------------|---------|
| is +LINE100, and other information   | step 10 |
| is +LINE101, and other information   | step 17 |
| s COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 17 |

**10** To perform a test on the ringing relay and the telephone of the subscriber, type

**>LTPMAN;TSTRING**

and press the Enter key.

*Example of a MAP response:*

```
WARNING - This command will RING the Subscriber
Please confirm ("YES" or "NO"):
```

**11** To confirm the command, type

**>YES**

and press the Enter key.

| If the test | Do      |
|-------------|---------|
| passes      | step 18 |
| fails       | step 12 |

**12** To locate the line card that caused the TSTRING test to fail, type

**>LTP;CKTLOC**

and press the Enter key.

---

## Correcting a line that does not receive calls (end)

---

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 13** Record the product engineering code (PEC), the PEC suffix and location of the defective line card.

**Note:** In the MAP response in step 12, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 14** To replace the defective line card recorded in step 13, perform the correct procedure in *Card Replacement Procedures*, and press the Enter key four times. Complete the procedure and return to this point.

- 15** To perform a test on the ringing relay and the telephone of the subscriber, type

**>LTPMAN;TSTRING**

and press the Enter key.

*Example of a MAP response:*

```
WARNING - This command will RING the Subscriber
Please confirm ("YES" or "NO"):
```

- 16** To confirm the command, type

**>YES**

and press the Enter key.

---

| <b>If the test</b> | <b>Do</b> |
|--------------------|-----------|
| passes             | step 18   |
| fails              | step 17   |

---

- 17** For additional help, contact the next level of support.

- 18** The procedure is complete.

## **Correcting a line that does not ring**

---

### **Application**

Use this procedure to correct a line that does not ring.

### **Definition**

The next level of support identifies a line ringing failure. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

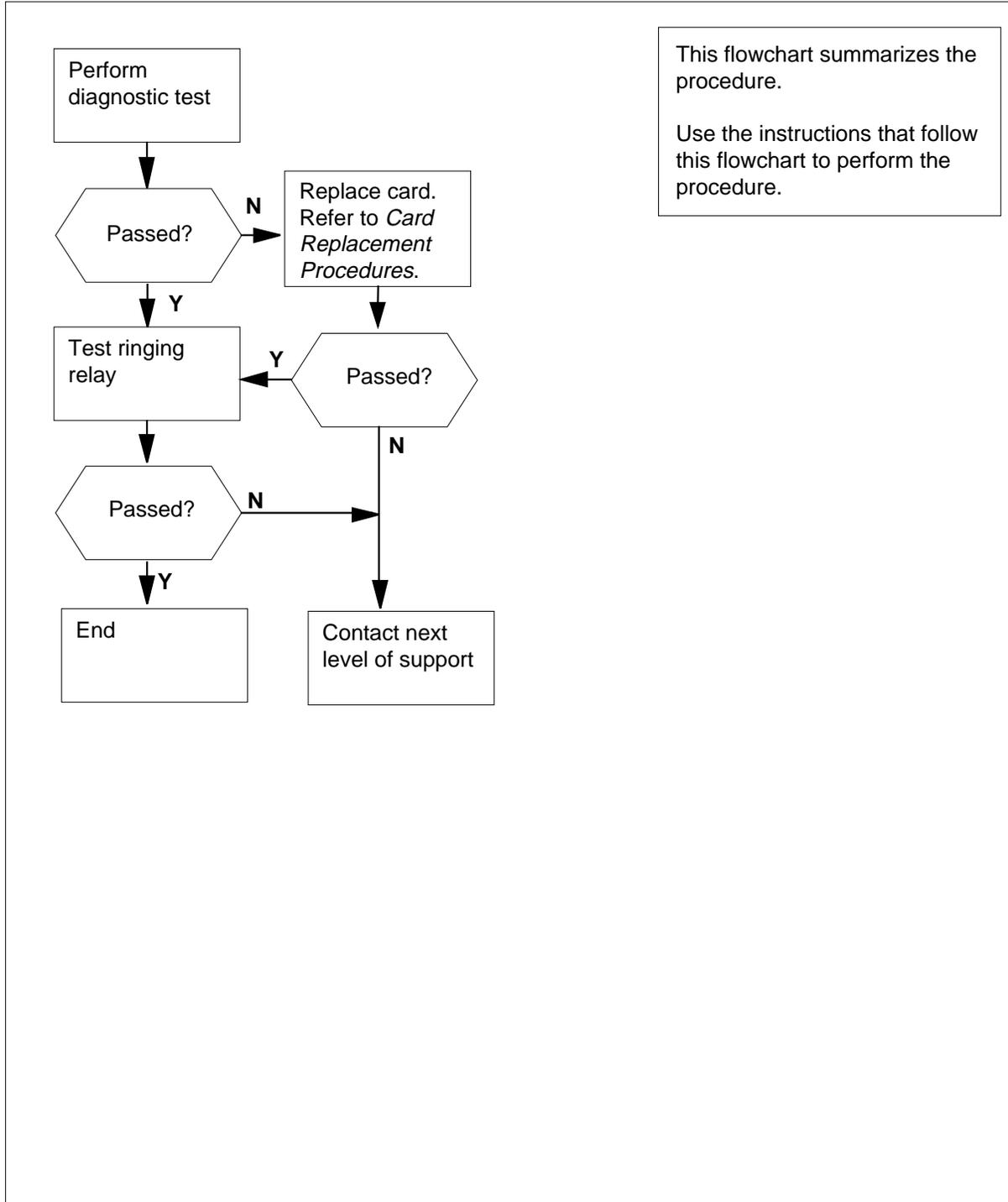
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line that does not ring (continued)

### Summary of Correcting a line that does not ring



---

## Correcting a line that does not ring (continued)

---

### Correcting a line that does not ring

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 Post the directory number (DN) of the line of the subscriber. The DN corresponds to the telephone that does not ring. Type,  
**>POST D dn**  
 and press the Enter key.  
*where*  
     **dn**  
         is the 10- or 11-digit DN of the line of the subscriber, without spaces

*Example input:*

**>POST D 6136214777**

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3 To perform a diagnostic test on the line of the subscriber, type  
**>DIAG**  
 and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01    DN 6136214777
DIAGNOSTIC RESULT    Card Diagnostic OK
ACTION REQUIRED    None
CARD TYPE    6X17AC
```

---

| If the MAP response                | Do      |
|------------------------------------|---------|
| is +LINE100, and other information | step 7  |
| is +LINE101, and other information | step 4  |
| is COULD NOT SEIZE LINE            | step 10 |

- 4 To locate the defective line card, type  
**>CKTLOC**

## Correcting a line that does not ring (continued)

and press the Enter key.

```
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18AA
```

- 5 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6 To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7 To perform a diagnostic test on the line card you replaced in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

| If the MAP response                                    | Do      |
|--------------------------------------------------------|---------|
| is +LINE100, and other information                     | step 8  |
| is +LINE101, and other information                     | step 10 |
| is <b>COULD NOT RUN</b><br><b>LINE_CARD_DIAGNOSTIC</b> | step 10 |

- 8 To perform a diagnostic test on the ringing relay and the telephone of the subscriber, type

**>LTPMAN;TSTRING**

and press the Enter key.

*Example of a MAP response:*

```
WARNING - This command will RING the Subscriber
Please confirm ("YES" or "NO"):
```

- 9 To confirm the command, type

**>YES**

---

**Correcting a line that does not ring** (end)

---

and press the Enter key.

---

**If the test**

**Do**

passes

step 11

fails

step 10

---

- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## **Correcting a line transhybrid error**

---

### **Application**

Use this procedure to diagnose and correct a line transhybrid error.

### **Definition**

The next level of support identifies a line transhybrid error. The next level of support can request a performance of the procedure to correct a problem or provide additional information.

### **Common procedures**

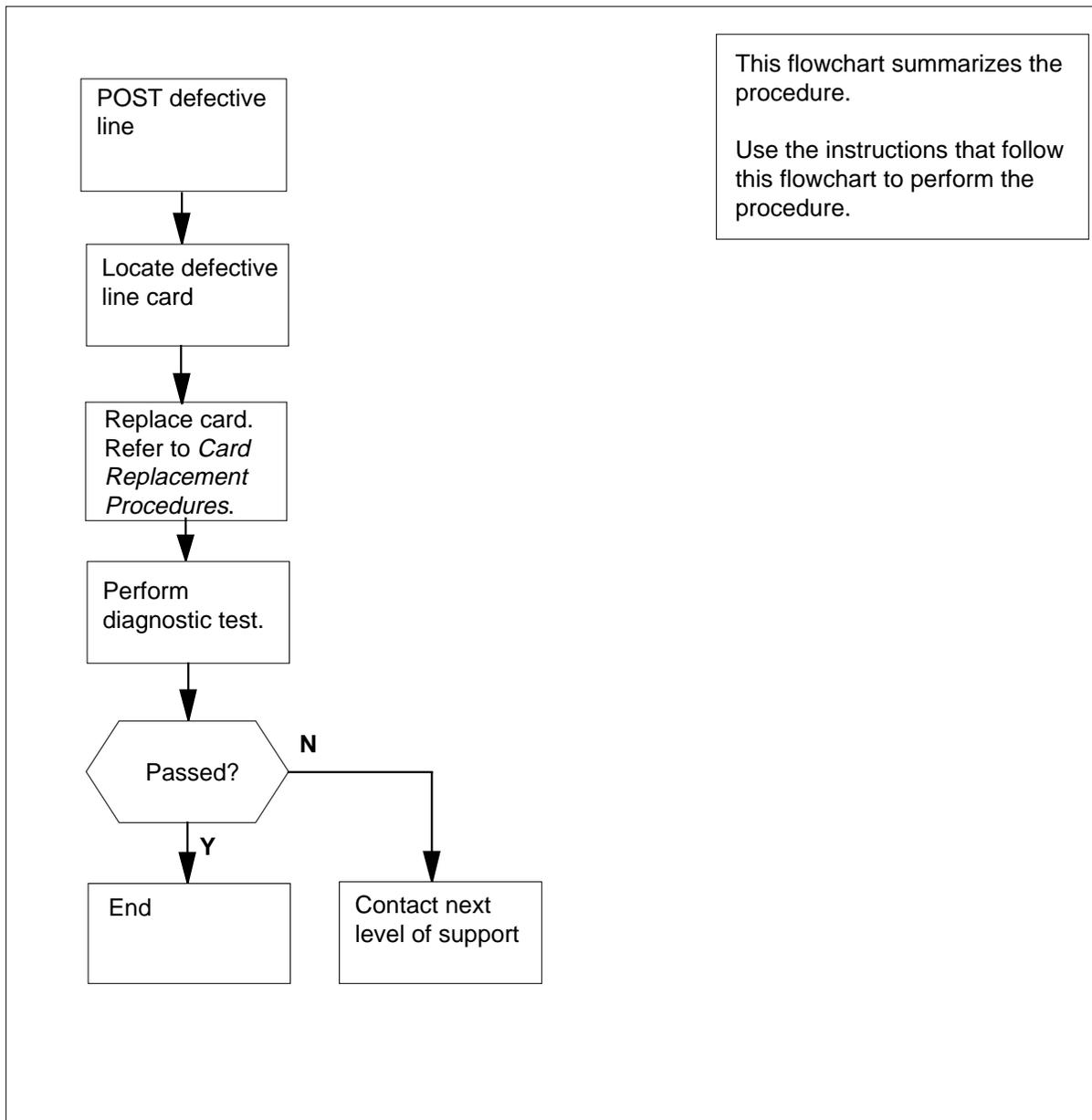
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line transhybrid error (continued)

### Summary of Correcting a line transhybrid error



### Correcting a line transhybrid error

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.

## Correcting a line transhybrid error (continued)

---

- 2 To post the line equipment number (LEN) of the defective line, type  
>POST L len  
and press the Enter key.  
where  
len  
is the LEN of the defective line. Use the format ff u dd cc for frame,  
unit,drawer, and circuit number.

*Example input:*

```
>POST L 00 1 00 01
```

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG..... STA F S LTA TE RESULT
IFR DN 613 621 4777 IDL
```

- 3 To locate the defective line card, type  
>CKTLOC  
and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5 To perform a diagnostic test on the defective line card, type  
>DIAG  
and press the Enter key.

*Example of a MAP response:*

---

## Correcting a line transhybrid error (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

| If the MAP response                | Do     |
|------------------------------------|--------|
| is +LINE100, and other information | step 9 |
| is +LINE101, and other information | step 6 |
| is COULD NOT SEIZE LINE            | step 8 |

**6** To replace the defective line card recorded in step 4, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**7** To perform a diagnostic test on the replaced line card in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

| If the MAP response                | Do     |
|------------------------------------|--------|
| is +LINE100, and other information | step 9 |
| is +LINE101, and other information | step 8 |
| is COULD NOT SEIZE LINE            | step 8 |

**8** For additional help, contact the next level of support.

**9** The procedure is complete.

## **Correcting a line with free pay telephone service**

---

### **Application**

Use this procedure to correct a line with free payphone service.

### **Definition**

The next level of support identifies a payphone line with service problems. The problems are for free payphone service. The next level of support can request a performance of the procedure to correct the problem or to provide additional information.

### **Common procedures**

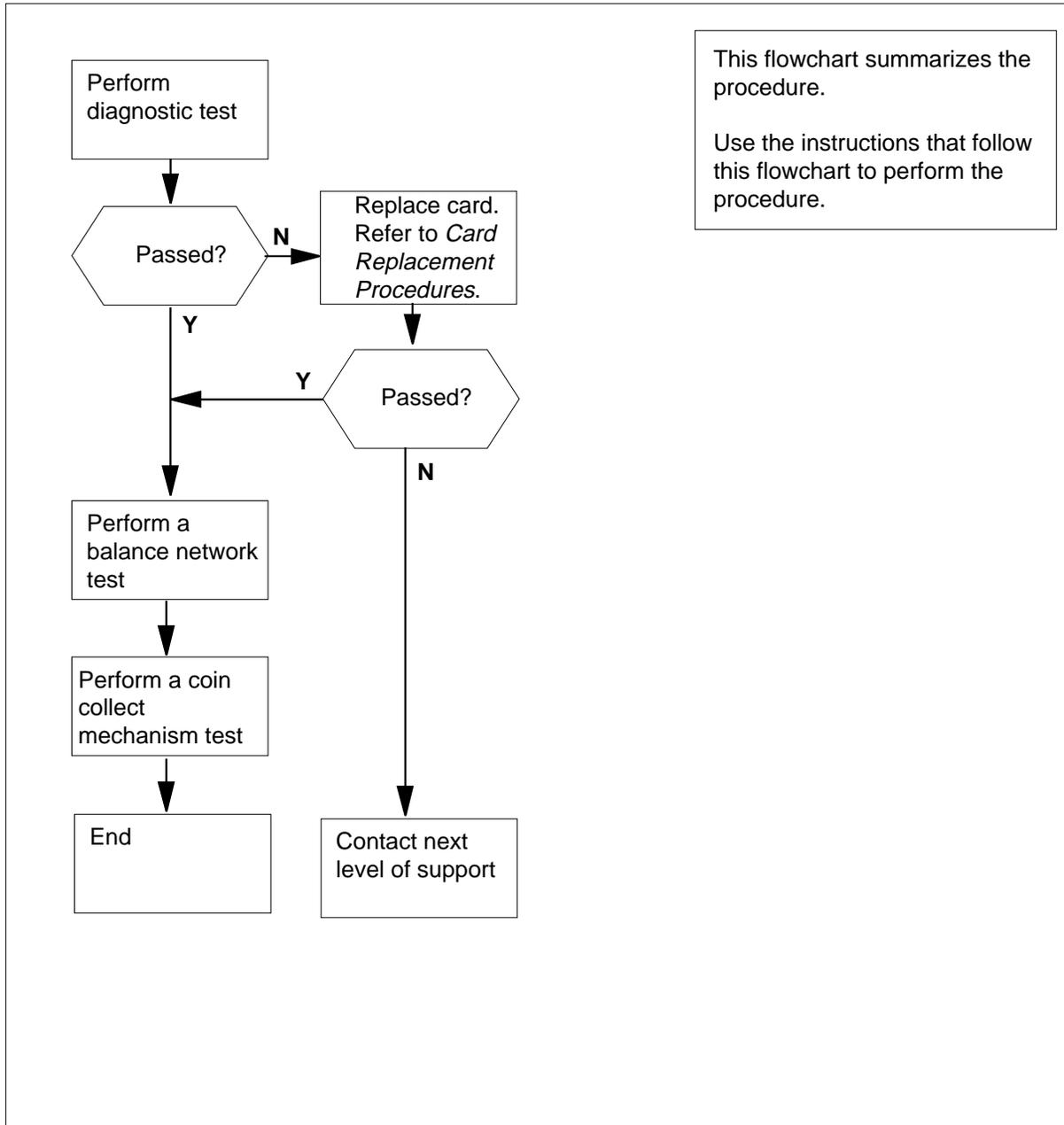
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a line with free pay telephone service (continued)

### Summary of Correcting a line with free pay telephone service



---

## Correcting a line with free pay telephone service (continued)

---

### Correcting a line with free pay telephone service

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
and press the Enter key.
- 2 To post the directory number (DN) of the line that corresponds to the payphone that allows free telephone calls, type  
**>POST D dn**  
and press the Enter key.

where

**dn**

is the 10- or 11-digit DN of the payphone, without spaces

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR              DN 613 621 4777 IDL
```

- 3 To perform a diagnostic test on the line that corresponds to the payphone that allows free calls, type  
**>DIAG**  
and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

| If the MAP response | Do |
|---------------------|----|
|---------------------|----|

---

|                                    |        |
|------------------------------------|--------|
| is +LINE100, and other information | step 8 |
|------------------------------------|--------|

|                                    |        |
|------------------------------------|--------|
| is +LINE101, and other information | step 4 |
|------------------------------------|--------|

|                         |        |
|-------------------------|--------|
| is COULD NOT SEIZE LINE | step12 |
|-------------------------|--------|

---

- 4 To locate the defective line card, type  
**>CKTLOC**  
and press the Enter key.

*Example of a MAP response:*

## Correcting a line with free pay telephone service (continued)

```
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18AA
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 5 Record the product engineering code (PEC), the PEC suffix and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6 To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7 To perform a diagnostic test on the line card replaced in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

---

**If the MAP response**

**Do**

is +LINE100, and other information step 8

is +LINE101, and other information step 12

is **COULD NOT RUN** step12  
**LINE\_CARD\_DIAGNOSTIC**

---

- 8 To perform a network balance test, type

**>LTPLTA;BALNET**

and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook Balnet 2DB Pad
PREVIOUS Non loaded No
RESULT Non loaded No
```

- 9 Record the test results for the next level of support.

## **Correcting a line with free pay telephone service** (end)

---

- 10** To perform a test for a coin collect mechanism, type  
>COIN CC  
and press the Enter key.  
*Example of a MAP response:*
- COIN SIGNAL OK
- 11** Record the test results for the next level of support.  
Go to step 13.
- 12** For additional help, contact the next level of support.
- 13** The procedure is complete.

## Correcting locked-out trunks

---

### Application

Use this procedure to correct locked-out (LO) trunk circuits.

### Definition

An LO trunk circuit seizes at the far end. The trunk is out of service. The trunk alarm threshold of the office determines if an LO trunk circuit produces an alarm. The alarm appears under the Trks alarm header of the MAP. TRK110 logs identify LO trunks.

LO trunk circuits can cause EX, G, GC and GM trunk alarms.

The section *Alarm Clearing and Performance Monitoring Procedures* describes procedures to clear a trunk alarm.

### Common procedures

There are no common procedures.

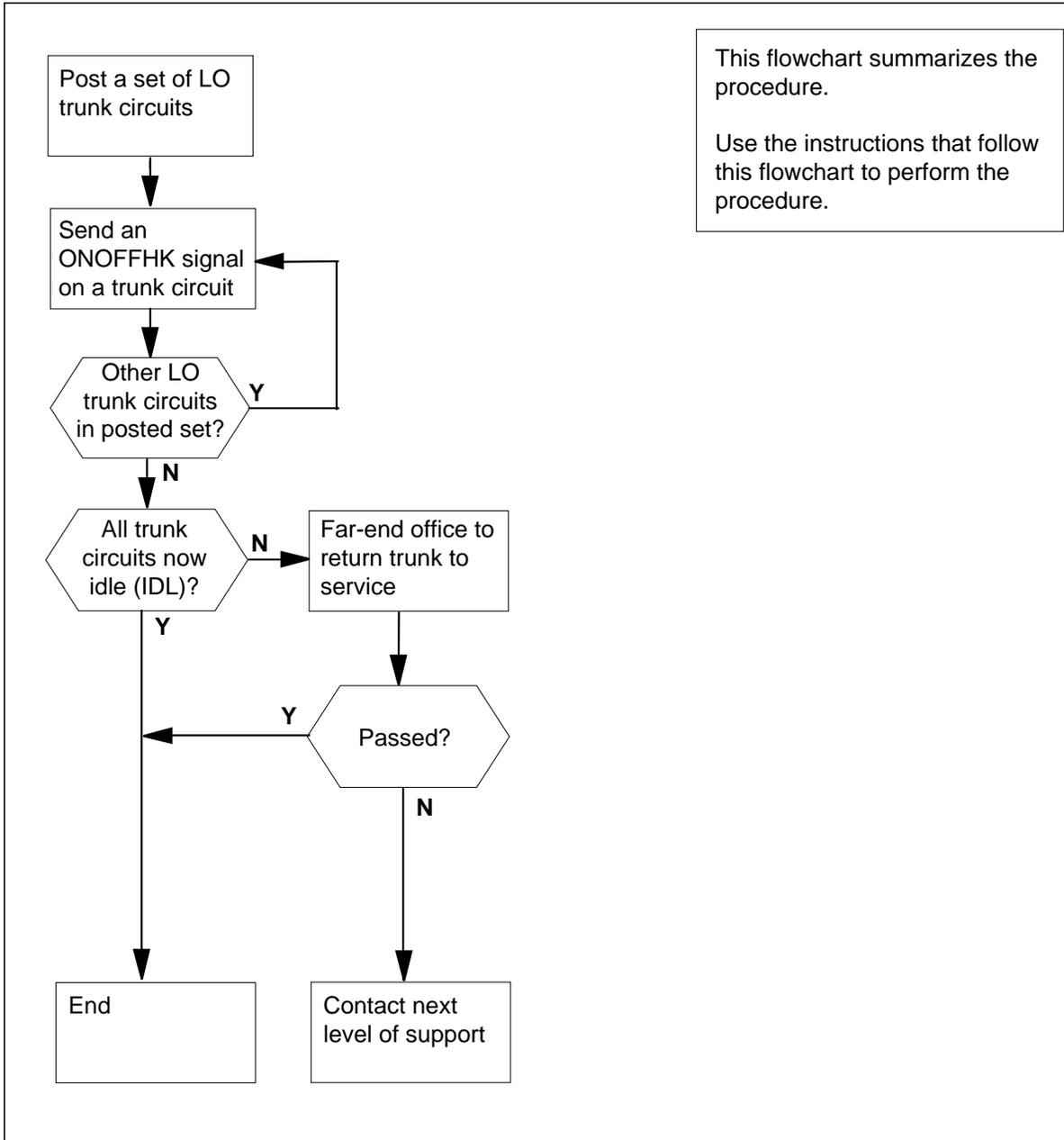
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Note:** This procedure can require you to work together with the operating company personnel at the office at the far end of the trunk.

## Correcting locked-out trunks (continued)

### Summary of Correcting locked-out trunks



## Correcting locked-out trunks (continued)

### Correcting locked-out trunks

#### At the MAP terminal

1 To access the MANUAL level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;MANUAL**  
 and press the Enter key.

2 To post all LO trunk circuits, type  
**>POST A LO**  
 and press the Enter key.

**Note:** The system displays only one LO trunk circuit. The system queues the rest of the LO trunk circuits in the posted set.

3 To send an on-hook and off-hook signal on the circuit, type  
**>SGNL ONOFFHK**  
 and press the Enter key.

*Example of a MAP response:*

```

POST   LO   DELQ           BUSYQ           DIG
TTP   6-002
CKT TYPE   PM NO.     COM LANG     STA S R  DOT TE  RESULT
2W   LTC    4 11  1  SPRINT1    1  SZD + .
                                   P_LO  R
    
```

4 To release the circuit, type  
**>RLS**  
 and press the Enter key.

*Example of a MAP response:*

```
STATE CHANGED
```

5 To return the trunk circuit to service, type  
**>RTS**  
 and press the Enter key.

*Example of a MAP response:*

```

POST   LO   DELQ           BUSYQ           DIG
TTP   6-002
CKT TYPE   PM NO.     COM LANG     STA S R  DOT TE  RESULT
2W   LTC    4 11  1  SPRINT1    1  IDL
    
```

| If the trunk state        | Do     |
|---------------------------|--------|
| is IDL                    | step 9 |
| is other than listed here | step 6 |

## Correcting locked-out trunks (continued)

**6** To force the release of the trunk circuit, type  
**>FRLS**  
 and press the Enter key.

**7** To return the trunk circuit to service, type  
**>RTS**  
 and press the Enter key.

*Example of a MAP response:*

```

POST   LO   DELQ           BUSYQ           DIG
TTP   6-002
CKT TYPE   PM NO.   COM LANG   STA S R   DOT TE   RESULT
2W   LTC     4 11 1 SPRINT1   1   IDL
  
```

| If the trunk state        | Do     |
|---------------------------|--------|
| is IDL                    | step 9 |
| is other than listed here | step 8 |

**8** Record the trunk circuit that did not return to service.

**9** Determine if other LO trunk circuits in the posted set need return to service.

| If more LO trunk circuits | Do      |
|---------------------------|---------|
| are present               | step 10 |
| are not present           | step 11 |

**10** To move the next circuit into the control position, type  
**>NEXT**  
 and press the Enter key.  
 Go to step 3.

**11** Determine if LO trunk circuits are present that cannot return to service.

| If all LO trunk circuits | Do      |
|--------------------------|---------|
| return to service        | step 12 |
| do not return to service | step 14 |

**12** Contact the far-end offices of the recorded LO trunk circuits in step 8.

---

**Correcting locked-out trunks (end)**

---

- 13** Instruct the maintenance personnel at the far end office to return the LO trunk circuits to service.

---

**If the far-end office**

**Do**

---

returned the LO trunk circuits to service step 15

did not return the LO trunk circuits to service step 14

- 
- 14** For additional help, contact the next level of support.

- 15** The procedure is complete

## Correcting metallic test access problems

---

### Application

Use this procedure to correct metallic test access (MTA) problems.

The reasons for MTA problems are:

- a defective NT3X09 card
- a defective NT2X50 control card and an NT2X46 minibar card

### Definition

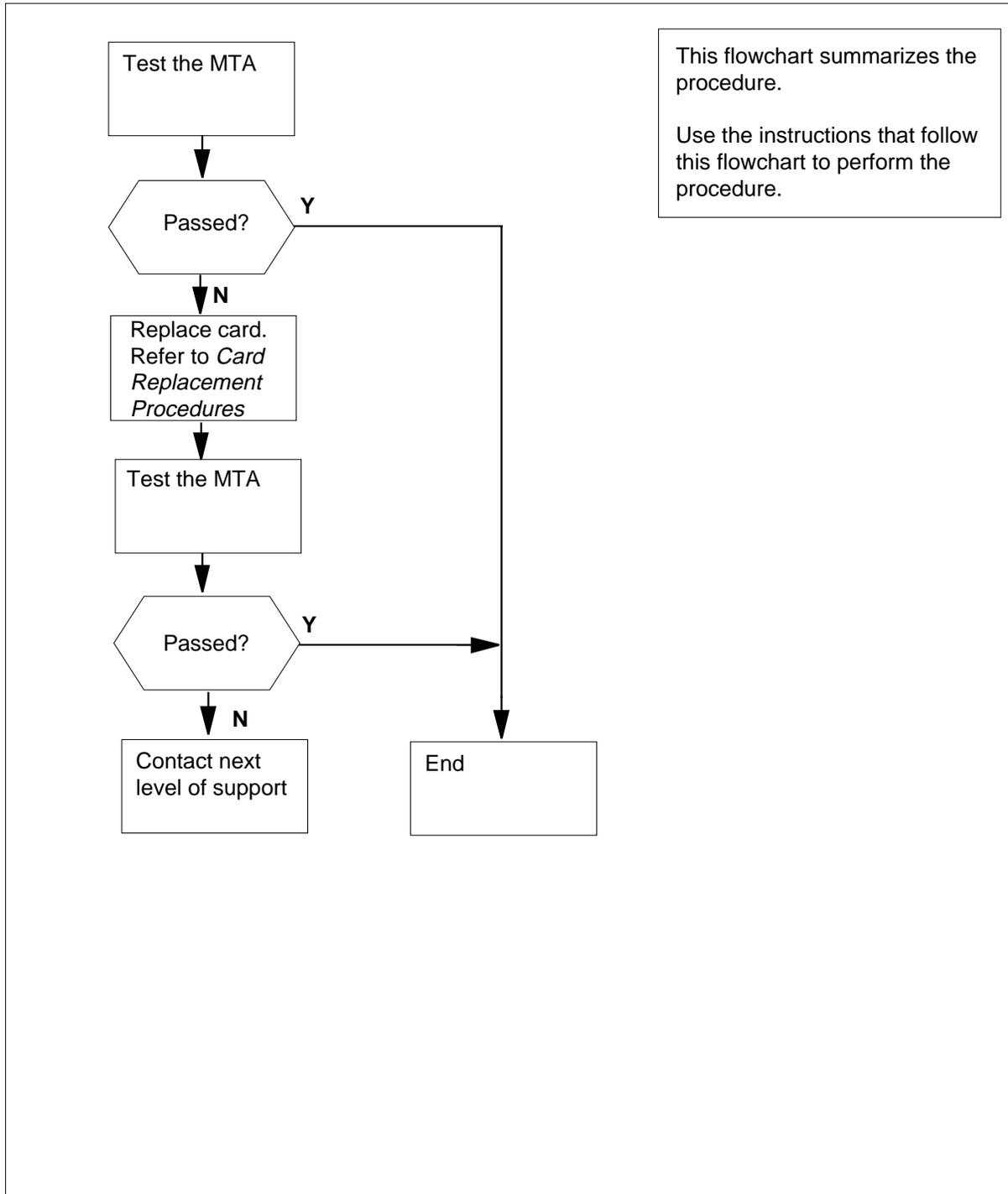
MTA is a hardware device that provides metal connections between test access points. An example of the device is subscriber line circuits in a digital switching center. MTA also provides connections with different types of test equipment.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Correcting metallic test access problems** (continued)

**Summary of Correcting metallic test access problems**



## Correcting metallic test access problems (continued)

### Correcting metallic test access problems



#### CAUTION

##### Possible equipment damage or service interruption

Proceed only if a step in a maintenance procedure directed you to this procedure. Use of this procedure separately can cause equipment damage or service interruption.



#### DANGER

##### Loss of maintenance services

This procedure seizes the MTA circuit. When the MTA circuit seizes, a loss of associated metallic test unit (MTU) and line test unit (LTU) service occurs. Perform this procedure when traffic is low and a schedule for automatic line testing (ALT) is not present.

#### At the MAP terminal

- 1 Determine the type of MTA design that is defective.

| If the defective design                              | Do     |
|------------------------------------------------------|--------|
| is an NT3X09 card                                    | step 2 |
| is an NT2X50 control card and an NT2X46 minibar card | step 4 |

- 2 To replace the NT3X09 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 3 To test the MTA circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 MAY10 12:09:27 4400 PASS
          CKT      MTADRIVER      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 10 |
| fails              | step 11 |

---

## Correcting metallic test access problems (end)

---

4 To replace the NT2X50 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

5 To test the MTA circuit, type

>TST

and press the Enter key.

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 10 |
| fails              | step 6  |

6 To replace the new NT2X50 card with the old NT2X50 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT2X50 card and the old NT2X46 card are now in the shelf.

7 To replace the NT2X46 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT2X50 card and a new NT2X46 card are now in the shelf.

### **At the MAP terminal**

8 To test the MTA circuit, type

>TST

and press the Enter key.

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 9  |
| fails              | step 11 |

9 To return the MTA card to service, type

>RTS

and press the Enter key.

10 To release the MTA circuit, type

>RLS

and press the Enter key.

Go to step 12.

11 For additional help, contact next level of support.

12 The procedure is complete. Return to the main procedure that sent you to this procedure. Continue as directed.

## Correcting metallic test unit problems

---

### Application

Use this procedure to correct metallic test unit (MTU) problems.

When MTU trouble is present, the MTU normally has the wrong voltage, impedance, capacitance, or resistance measurements.

The reasons for MTU problems are:

- metallic test access (MTA) problems
- a defective NT2X10BA or NT2X11BA card
- a defective NT4X97AA or NT4X98AA card
- a defective MTU firmware load

### Definition

The MTU performs tests and measurements on subscriber lines. For the North American market, the MTU contains an NT2X10BA card and an NT2X11BA card. For international markets, the cards in the MTU are the NT4X97AA and the NT4X98AA.

The MTU connects to lines under test by the MTA card that have a single trunk appearance. MTUs are in maintenance trunk modules (MTM).

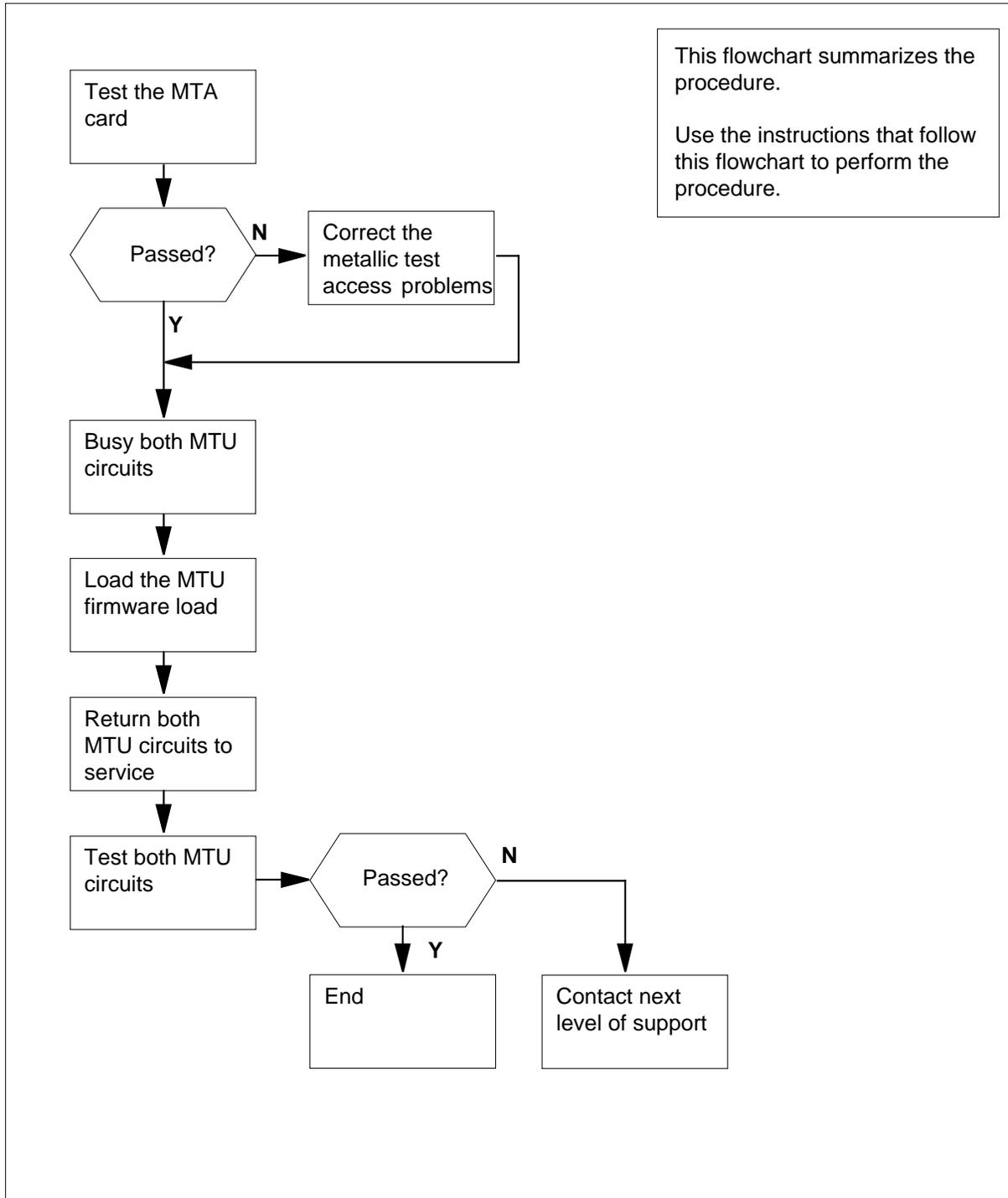
### Common procedures

This procedure refers to *Correcting metallic test access problems*.

### Action

## Correcting metallic test unit problems (continued)

### Summary of Correcting metallic test unit problems



## Correcting metallic test unit problems (continued)

---

### Correcting metallic test unit problems

#### At the MAP terminal

1



#### **DANGER**

##### **Degradation of line testing services**

This procedure removes the MTU from service. Do not perform this procedure while an automatic line test (ALT) is running. If you do not know the schedule of the ALT tests, contact the next level of support to proceed.

To access the TTP level of the MAP display, type

```
>MAPCI;MTC;TRKS;TTP
```

and press the Enter key.

2

To post the MTA circuit that connects to the defective MTU, type

```
>POST G clli member_no
```

and press the Enter key.

where

#### **cli**

is the common-language language location identifier (CLLI) of the MTA (table CLLI)

#### **member\_no**

is the unit-number of the MTA (table MTAMDRVE)

Example input:

```
>POST G MTADRIVER 0
```

Example of a MAP response:

```
POST      3  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT
TE  RESULT
MISC      MTM      0  0  MTADRIVER      0  IDL
```

**Note:** The MTA card connects the MTU to lines under test.

3

To test the MTA circuit, type

```
>TST
```

and press the Enter key.

Example of a MAP response:

**Correcting metallic test unit problems** (continued)

```
TEST OK
+ TRK107 MAY10 12:09:27 4400 PASS CKT MTADRIVER 0
```

| If the TST command | Do     |
|--------------------|--------|
| passes             | step 5 |
| fails              | step 4 |

**4** Perform the procedure "Correcting metallic test access problems" in this document. Complete the procedure and return to this point.

**5** To post one of the defective MTU circuits, type

```
>POST G clli mtu_no
```

and press the Enter key.

where

**cli**

is the CLLI of the MTA (table CLLI)

**mtu\_no**

is the MTU number

Example input:

```
>POST G MTU 0
```

Example of a MAP response:

```
POST      1  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE      PM NO.          COM LANG          STA S R DOT
TE RESULT
OG          MTM      6  2  MTU          0  IDL
```

**6** To manually busy the MTU circuit, type

```
>BSY
```

and press the Enter key.

Example of a MAP response:

```
POST      1  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE      PM NO.          COM LANG          STA S R DOT
TE RESULT
OG          MTM      6  2  MTU          0  MB
```

**7** To seize the MTU circuit, type

```
>SEIZE
```

and press the Enter key.

Example of a MAP response:



**Correcting metallic test unit problems** (continued)

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE  RESULT
OG          MTM    6  3  MTU          1  SZD . .
                                     P_MB
                                     0  SZD . .
                                     HOLD1 MTU

```

- 11** To hold the second MTU circuit, type

**>HOLD**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE  RESULT
OG          RMM    2  2  MTU          2  IDL
                                     0  SZD . .
                                     1  SZD . .
                                     HOLD1 MTU
                                     HOLD2 MTU

```

- 12** Find the load file name of the MTU.

| If you                                    | Do      |
|-------------------------------------------|---------|
| know the load file name of the MTU        | step 19 |
| do not know the load file name of the MTU | step 13 |

- 13** Record the name of the system load module (SLM) disk and volume that contain the MTU load file from office records.

- 14** To access the disk utility, type

**>DISKUT**

and press the Enter key.

*Example of a MAP response:*

```

Disk utility is now active.
DISKUT:

```

- 15** To list the volumes on the two SLM disks, type

**>LISTVOL CM**

and press the Enter key.

## Correcting metallic test unit problems (continued)

---

- 16 To list all the files on the volume that contains the MTU load, type  
>LISTFL **disk\_volume\_name**  
and press the Enter key.  
*where*  
**disk\_volume\_name**  
is the name of the SLM disk (S00D or S01D) and the name of the  
volume on the disk

*Example input:*

```
>LISTFL S00DIMAGE1
```

*Example of a MAP response:*

**Correcting metallic test unit problems** (continued)

File information for volume S00DIMAGE1:  
 {NOTE: 1 BLOCK = 512 BYTES }

```

-----
          LAST FILE O R I O          FILE      NUM
OF   MAX   FILE NAME
MODIFY CODE R E T P          SIZE
RECORDS   REC
   DATE      G C O E          IN
IN   LEN
          C N      BLOCKS
FILE
-----
930215    0 I F          12744
6372  1020 930215_CM
930215    0 I F          188180
94090  1020 930215_MS
930212    0 O F          13460
6730  1020 APX35CG
930212    0 O F          7154
3577  1020 ERS35CG
930216    0 O F          33936
16968  1020 FPX35CG
930216    0 O F          5334
2667  1020 LRC35CG
930215    0 O F          5334
2667  1020 LCC35CG
930129    0 O F           12
24   256 ASN1UI$LD
920109    0 I F          5464
2732  1020 LRS35CD
930212    0 I F          9104
4552  1020 LPX35CG
930212    0 I F          13432
7160  1024 930212_CM
930212    0 I F          189272
93136  1024 930212_MS
  
```

**Note:** The FILE ORG, FILE CODE, REC TYPE, and FILE STATUS columns of the MAP display do not appear in the example above.

**17** Record the MTU load.

**Note:** The MTU load is MTULD04 in the MAP example in step 16.

**18** To quit the disk utility, type

**>QUIT**

and press the Enter key.

**Correcting metallic test unit problems** (continued)

19



**DANGER**  
**Loss of recording device service**  
 A download of the MTU file from the SLM to the MTU requires 15 minutes. Make sure you do not require the recording device for higher priority service before you load the MTU.

To load the MTU, type

>LOADFW CC mtu\_load

and press the Enter key.

where

**mtu\_load**

is the name of the MTU load file

Example of a MAP response:

```
Loadfile found : START LOADING...
Load Completed
```

20

To post one of the defective MTU circuits, type

>POST G MTU mtu\_no

and press the Enter key.

where

**mtu\_no**

is the number of the MTU

Example of a MAP response:

```
POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE RESULT
OG           MTM      6 2  MTU          0  SZD . .
                P_MB
                HOLD1  MTU          0  SZD . .
                HOLD2  MTU          1  SZD . .
```

21

To force the release of the circuit in the control position, type

>FRLS

and press the Enter key.

Example input:

**Correcting metallic test unit problems** (continued)

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE  RESULT
OG          MTM    6  2  MTU          0  MB
                HOLD1  MTU          0  SZD . .
                HOLD2  MTU          1  SZD . .
    
```

| If the state of the circuit | Do      |
|-----------------------------|---------|
| is MB                       | step 28 |
| is other than listed here   | step 22 |

- 22 To access the PM level of the MAP display, type  
**>PM**  
 and press the Enter key.
- 23 To post the MTM, type  
**>POST MTM mtm\_no**  
 and press the Enter key.  
*where*  
     **mtm\_no**  
     is the number of the MTM that contains the MTU
- 24 To manually busy the MTM, type  
**>BSY**  
 and press the Enter key.
- 25 To return the MTM to service, type  
**>RTS**  
 and press the Enter key.
- 26 To access the TTP level of the MAP display, type  
**>TRKS ;TTP**  
 and press the Enter key.
- 27 To force the release of the circuit in the control position, type  
**>FRLS**  
 and press the Enter key.  
*Example input:*

**Correcting metallic test unit problems** (continued)

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE RESULT
OG           MTM    6  2  MTU          0 MB
                HOLD1  MTU          0 MB
                HOLD2  MTU          1 SZD . .
    
```

| If the state of the circuit | Do      |
|-----------------------------|---------|
| is MB                       | step 28 |
| is other than listed here   | step 41 |

**28** To return the circuit to service, type

>RTS  
and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE RESULT
OG           MTM    6  2  MTU          0 IDL
                HOLD1  MTU          0 IDL
                HOLD2  MTU          1 SZD . .
    
```

| If the RTS command | Do      |
|--------------------|---------|
| passes             | step 29 |
| fails              | step 22 |

**29** To test the MTU circuit, type

>TST  
and press the Enter key.

*Example of a MAP response:*

**Correcting metallic test unit problems** (continued)

TEST OK  
 COMB\_CO \*\*\*\*+ TRK107 MAY09 19:20:27 6400 PASS CKT MTU  
 0

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 30 |
| fails              | step 41 |

**30** To post the second MTU circuit, type

>POST G MTU mtu\_no

and press the Enter key.

where

**mtu\_no**

is the number of the second MTU circuit

Example of a MAP response:

```

POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE RESULT
OG           MTM      6 3  MTU           1  SZD . .
                               P_MB
                               HOLD1  MTU           0  IDL
                               HOLD2  MTU           1  SZD . .
    
```

**31** To force the release of the circuit, type

>FRLS

and press the Enter key.

Example of a MAP response:

```

POST          DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE      PM NO.      COM LANG      STA S R DOT
TE RESULT
OG           MTM      6 3  MTU           1  MB
                               HOLD1  MTU           0  IDL
                               HOLD2  MTU           1  MB
    
```

| If the state of the circuit | Do      |
|-----------------------------|---------|
| is MB                       | step 39 |

**Correcting metallic test unit problems** (continued)

|           | <b>If the state of the circuit</b>                                                                                                                                                                                                                                                                                                                          | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is other than MB                                                                                                                                                                                                                                                                                                                                            | step 32   |
| <b>32</b> | To access the PM level of the MAP, type<br><b>&gt;PM</b><br>and press the Enter key.                                                                                                                                                                                                                                                                        |           |
| <b>33</b> | To post the MTM, type<br><b>&gt;POST MTM mtm_no</b><br>and press the Enter key.<br><i>where</i><br><b>mtm_no</b><br>is the number of the MTM that contains the MTU                                                                                                                                                                                          |           |
| <b>34</b> | To manually busy the MTM, type<br><b>&gt;BSY</b><br>and press the Enter key.                                                                                                                                                                                                                                                                                |           |
| <b>35</b> | To return the MTM to service, type<br><b>&gt;RTS</b><br>and press the Enter key.                                                                                                                                                                                                                                                                            |           |
| <b>36</b> | To access the TTP level of the MAP display, type<br><b>&gt;TRKS ;TTP</b><br>and press the Enter key.                                                                                                                                                                                                                                                        |           |
| <b>37</b> | To post the second MTU circuit, type<br><b>&gt;POST G MTU mtu_no</b><br>and press the Enter key.<br><i>where</i><br><b>mtu_no</b><br>is the number of the second defective MTU circuit<br><i>Example of a MAP response:</i>                                                                                                                                 |           |
|           | <pre> POST          DELQ          BUSYQ          DIG TTP  6-002 CKT TYPE      PM NO.          COM LANG      STA S R  DOT TE  RESULT OG          MTM    6  3  MTU          1  SZD . .                                P_MB                                HOLD1  MTU          0  SZD . .                                HOLD2  MTU          1  SZD . . </pre> |           |
| <b>38</b> | To force the release of the circuit, type<br><b>&gt;FRLS</b>                                                                                                                                                                                                                                                                                                |           |

---

## Correcting metallic test unit problems (end)

---

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R  DOT
TE RESULT
OG          MTM    6  3  MTU          1  MB
                HOLD1  MTU          0  IDL
                HOLD2  MTU          1  MB
    
```

- 39** To return the second MTU circuit to service, type

**>RTS**

and press the Enter key.

*Example of a MAP response:*

```

POST          DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.      COM LANG      STA S R  DOT
TE RESULT
OG          MTM    6  3  MTU          1  IDL
                HOLD1  MTU          0  IDL
                HOLD2  MTU          1  IDL
    
```

- 40** To test the second MTU circuit, type

**>TST**

and press the Enter key.

*Example of a MAP response:*

```

TEST OK
+ TRK107 MAY09 19:20:27 6400 PASS CKT      MTU    0
    
```

---

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 42 |
| fails              | step 41 |

- 41** For additional help, contact the next level of support.

- 42** The procedure is complete.

## **Correcting a no ANI on coin line condition**

---

### **Application**

Use this procedure to diagnose and correct a no automatic number identification (ANI) on coin line condition.

### **Definition**

The next level of support identifies a no ANI on coin line condition. This level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

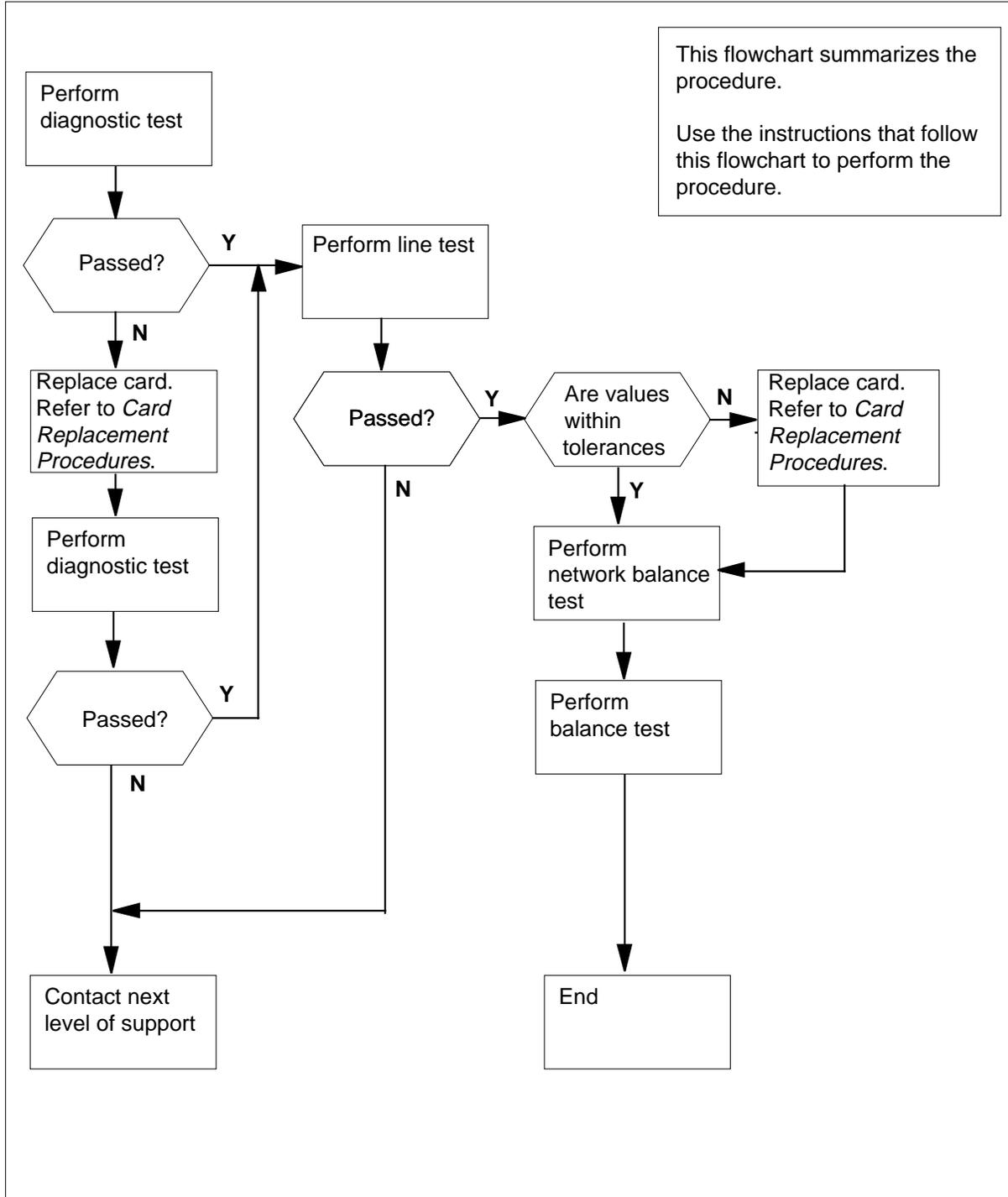
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a no ANI on coin line condition (continued)

### Summary of Correcting a no ANI on coin line condition



## Correcting a no ANI on coin line condition (continued)

### Correcting a no ANI on coin line condition

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 To post the directory number (DN) of the damaged line, type  
**>POST D dn**  
 and press the Enter key.

where

**dn**

is the 10- or 11-digit DN of the line of the subscriber, without spaces

Example input:

```
>POST D 6136214777
```

Example of a MAP response:

```
LEN HOST 00 1 00 01
LCC PTY RNG..... STA F S LTA TE RESULT
IFR DN 613 621 4777 IDL
```

- 3 To perform a diagnostic test on the line of the subscriber, type  
**>DIAG**  
 and press the Enter key.

Example of a MAP response:

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
```

| If the MAP response                | Do      |
|------------------------------------|---------|
| is +LINE100, and other information | step 8  |
| is +LINE101, and other information | step 4  |
| is COULD NOT SEIZE LINE            | step 19 |

- 4 To locate the defective line card, type  
**>CKTLOC**  
 and press the Enter key.

---

## Correcting a no ANI on coin line condition (continued)

---

*Example of a MAP response:*

```

Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

- 5** Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6** To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7** To perform a diagnostic test on the replaced line card in step 6, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```

+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
    
```

| If the MAP response                   | Do      |
|---------------------------------------|---------|
| is +LINE100, and other information    | step 8  |
| is +LINE101, and other information    | step 19 |
| is COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 19 |

- 8** To perform a line test for faults in the outside plant, type

**>LTPLTA;LNTST**

and press the Enter key.

*Example of a MAP response:*

**Correcting a no ANI on coin line condition** (continued)

| Test OK    | RES    | CAP     | VAC | VDC |
|------------|--------|---------|-----|-----|
| TIP        | 999.0K | 0.000UF | 0   | 0   |
| RNG        | 999.0K | 0.000UF | 0   | 0   |
| TIP TO RNG | 999.0K | 1.200UF |     |     |

| If the test | Do      |
|-------------|---------|
| passes      | step 9  |
| fails       | step 19 |

**9** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.

**10** Determine if the values recorded in step 9 are within the tolerances listed in the *Maintenance Guide*.

| If the RES, CAP, VAC, and VDC values | Do      |
|--------------------------------------|---------|
| are within the tolerances            | step 15 |
| are outside the tolerances           | step 11 |

**11** To locate the defective line card, type

**>LTP ;CKTLOC**

and press the Enter key.

*Example of a MAP response:*

| Site | Flr   | RPos | Bay_id | Sh  | Description | Slot  | EqPEC  |     |
|------|-------|------|--------|-----|-------------|-------|--------|-----|
| HOST | 00    | B00  | LCE 00 | 38  | LCM 00 1    | 00:01 | 6X17AC |     |
| GRD  | START | 2DB  | LOSS   | BAL | NETWORK     | MAN   | OVR    | SET |
| NO   |       | NO   |        | NON | LOADED      |       | NO     |     |

**12** Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 11, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

**13** To replace the defective line card recorded in step 12, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**14** To perform a diagnostic test on the replaced line card in step 13, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

---

## Correcting a no ANI on coin line condition (end)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

| If the MAP response                   | Do      |
|---------------------------------------|---------|
| is +LINE100, and other information    | step 15 |
| is +LINE101, and other information    | step 19 |
| is COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 19 |

- 15** To perform a network balance test, type  
**>LTPLTA;BALNET**  
 and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS    Non loaded    No
      RESULT      Non loaded    No
```

- 16** Record the test results for the next level of support.

- 17** To perform a balance test, type  
**>LTPMAN;BAL**  
 and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS    Non loaded    No
      RESULT      Non loaded    No
```

- 18** Record the test results for the next level of support.

Go to step 20.

- 19** For additional help, contact the next level of support.

- 20** The procedure is complete.

## **Correcting no response from a peripheral module**

---

### **Application**

Use this procedure to return a peripheral module (PM) to service from a no response condition.

### **Definition**

The next level of support identifies a no response condition from a PM. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

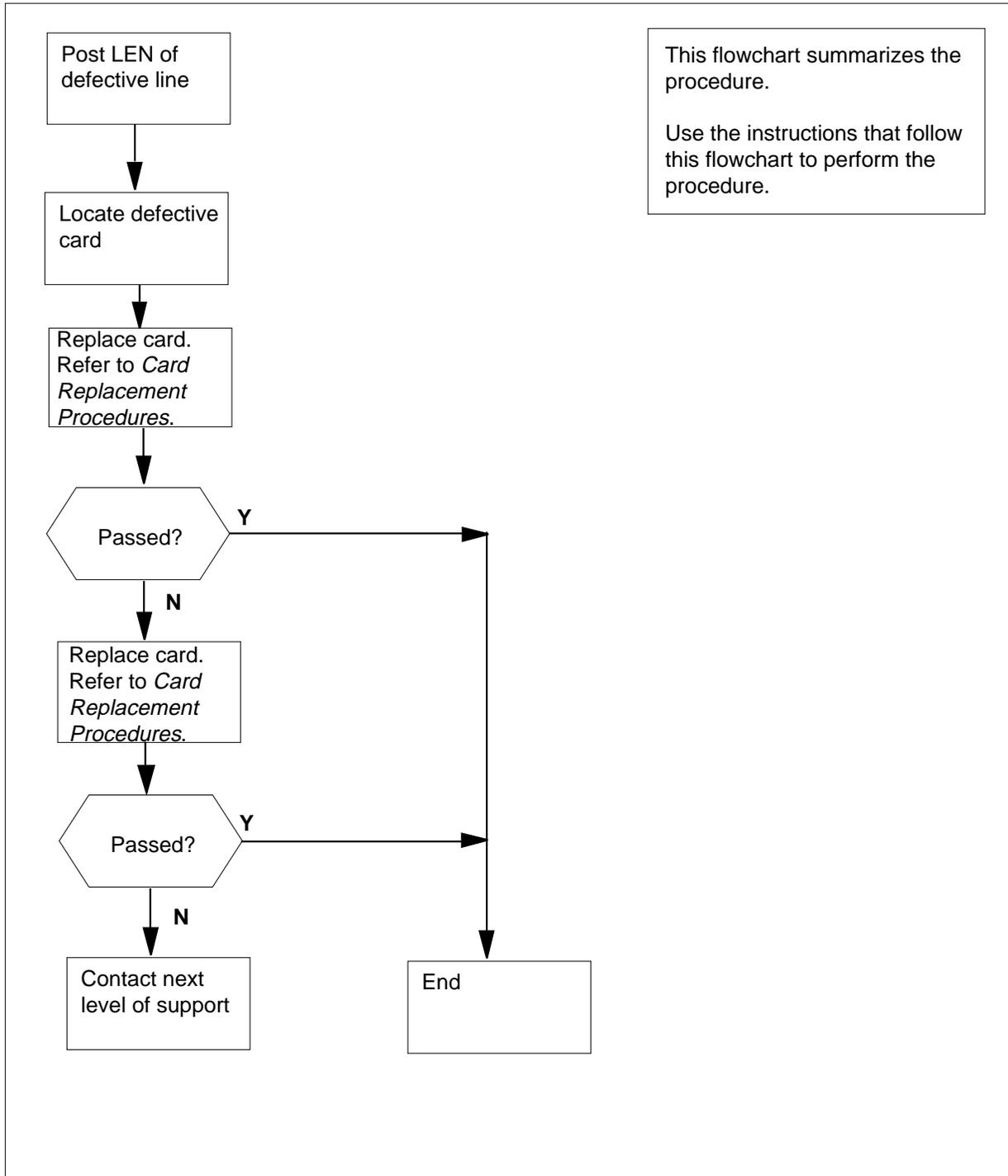
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting no response from a peripheral module (continued)

### Summary of Correcting no response from a peripheral module



## Correcting no response from a peripheral module (continued)

### Correcting no response from a peripheral module

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type

```
>MAPCI ;MTC ;LNS ;LTP
```

and press the Enter key.

- 2 To post the line equipment number (LEN) of the defective line, type

```
>POST L len
```

and press the Enter key.

where

**len**

is the LEN of the defective line. Use the format ff u dd cc for frame, unit, drawer, and circuit number.

Example input:

```
>POST L 00 1 00 01
```

Example of a MAP response:

```
LCC PTY RNG LEN STA F S LTA TE RESULT
1FR DN 621 4777 IDL
```

- 3 To locate the defective line card, type

```
>CKTLOC
```

and press the Enter key.

Example of a MAP response:

```
Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

- 4 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 3, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 5 Replace the defective line card recorded in step 4. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 6 To perform a diagnostic test on the replaced line card in step 5, type

```
>DIAG
```

and press the Enter key.

Example of a MAP response:

---

## Correcting no response from a peripheral module (continued)

---

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED         None
CARD TYPE              6X17AC
```

*Example of a MAP response:*

```
+LINE101 NOV04 18:34:21 0700 FAIL LN_DIAG
LEN HOST 00 1 00 01      DN 6214777
DIAGNOSTIC RESULT      Card Diagnostic FAIL
ACTION REQUIRED         Replace card
CARD TYPE              6X17AC
```

*Example of a MAP response:*

COULD NOT SEIZE LINE

---

| If the MAP response                   | Do      |
|---------------------------------------|---------|
| is +LINE100, and other information    | step 10 |
| is +LINE101, and other information    | step 7  |
| is COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 9  |

**7** Replace the defective line card identified in the MAP response in step 6. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**8** To perform a diagnostic test on the line card you replaced in step 7, type

>DIAG

and press Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED         None
CARD TYPE              6X17AC
```

*Example of a MAP response:*

---

## Correcting no response from a peripheral module (end)

---

```
+LINE101 NOV04 18:34:21 0700 FAIL LN_DIAG
LEN HOST 00 1 00 01      DN 6214777
DIAGNOSTIC RESULT   Card Diagnostic FAIL
ACTION REQUIRED      Replace card
CARD TYPE          6X17AC
```

*Example of a MAP response:*

```
COULD NOT RUN LINE_CARD_DIAGNOSTIC
```

---

| <b>If the MAP response</b>                   | <b>Do</b> |
|----------------------------------------------|-----------|
| is +LINE100, and other information           | step 10   |
| is +LINE101, and other information           | step 9    |
| is <b>COULD NOT RUN LINE_CARD_DIAGNOSTIC</b> | step 9    |

---

**9** For additional help, contact the next level of support.

**10** The procedure is complete.

---

## Correcting PCM level meter card problems

---

### Application

Use this procedure to test, and replace as required, the pulse code modulation (PCM) level meter card.

The following characterize problems in PCM level meter cards:

- noise and loss measurements which are not the same (different values for the same trunk circuit)
- loss measurements which are repeatedly different from the expected measured loss (EML) values of posted trunk circuits

**Note:** If a complete failure of a transmission test trunk (TTT) happens, refer to the procedure *Correcting transmission test trunk problems* in this document.

### Definition

The TTT has a PCM level meter card for PCM (NT2X96) and a card (NT1X90) for a test signal generator (TSG). The TTT provides test facilities for circuits. The TTT has a single trunk appearance. The PCM level meter card measures the level and frequency of digital PCM signals. The PCM level meter card is in a maintenance trunk module (MTM).

### Common procedures

There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

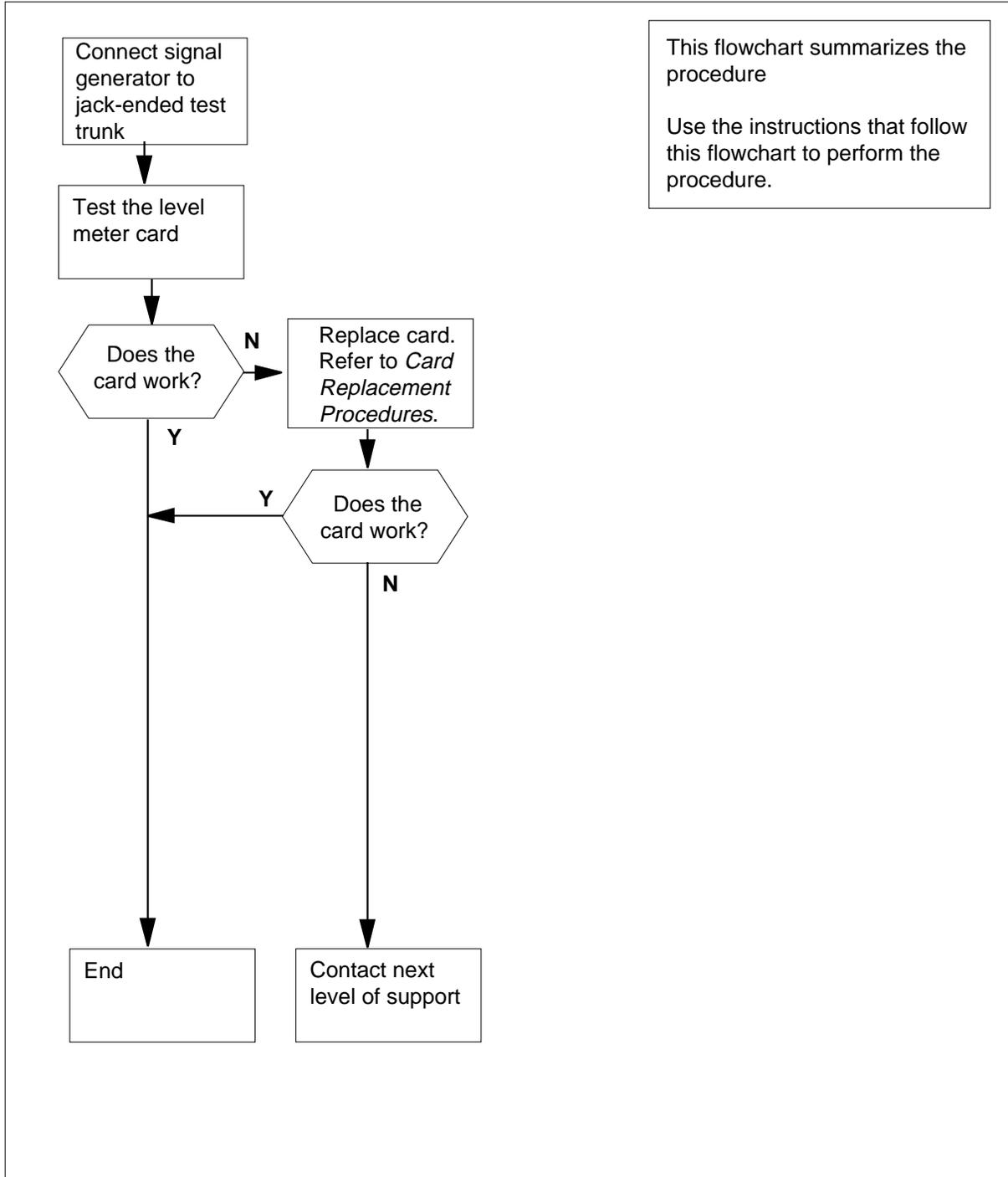
**Note 1:** In some MTM shelves, the NT4X65 card replaces the NT0X70, NT2X45, and NT2X53 cards.

**Note 2:** In ISM shelves, the NTFX42 card replaced the NT0X70, NT2X45, NT2X53, and NT2X59 cards.

**Note 3:** This procedure requires a signal generator.

## Correcting PCM level meter card problems (continued)

### Summary of Correcting PCM level meter card problems



## Correcting PCM level meter card problems (continued)

### Correcting PCM level meter card problems

#### At the MAP terminal

1



#### **DANGER**

##### **Loss of maintenance services**

Do not perform this procedure while an automatic line test (ALT) or an automatic trunk test (ATT) is running. If you do not know the schedule of ALT and ATT tests, contact the next level of support to proceed.

To access the TTP level of the MAP display, type

```
>MAPCI;MTC;TRKS;TTP
```

and press the Enter key.

2

To post the circuit for the transmission test trunk (TTT) associated with the defective PCM level meter card, type

```
>POST G clli member_no
```

and press the Enter key.

where

#### **CLLI**

is the common language location identifier (CLLI) of the TTT (table CLLI)

#### **member\_no**

is the member number assigned to the TTT (table TRKMEM)

Example input:

```
>POST G TTT 0
```

Example of a MAP response:

```
POST      1  DELQ          BUSYQ          DIG
TTP  6-003
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
OG  MTM    1  18    TTT          0  IDL
```

**Note:** The NT2X96 and the NT1X90 cards share the same trunk appearance (TTT).

3

To manually busy the TTT circuit, type

```
>BSY
```

and press the Enter key.

Example of a MAP response:

---

## Correcting PCM level meter card problems (continued)

---

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-003
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
OG  MTM    1  18     TTT          0  MB
    
```

- 4** To seize the TTT circuit, type

**>SEIZE**

and press the Enter key.

*Example of a MAP response:*

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-003
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
OG  MTM    1  18     TTT          0  SZD . .
                                     P_MB
    
```

- 5** To access the Manual level of the MAP display, type

**>MANUAL**

and press the Enter key.

- 6** To select the trunk for a jack-ended test, type

**>JACK jack\_no**

and press the Enter key.

*where*

**jack\_no**

is the number of a jack to the trunk test position (1 to 6)

*Example of a MAP response:*

```
jack 1
```

```
Please confirm ("YES" or "NO")
```

- 7** To confirm the command, type

**>YES**

and press the Enter key.

- 8** Set up a signal generator terminated with a 600-Ω load to produce a signal within the loss meter range (88.8 dB to -6.0 dB, 0 kHz to 4 kHz).

- 9** Plug the signal generator lead into the selected jack in step 6.

- 10** To measure the loss, type

**>LOSS**

and press the Enter key.

*Example of a MAP response:*

## Correcting PCM level meter card problems (continued)

```

POST      3  DELQ          BUSYQ          DIG
TTP  6-015
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
OG  MTM    1  8     JACK        1  SZD . .      LVM -64.0
                                   P_MB
    
```

```

EML  0.0 DB
PAD PC 0 TE 0
    
```

- 11** Vary the signal generator level and note the level that corresponds under the RESULT header.

| If the signal generator levels | Do      |
|--------------------------------|---------|
| match the MAP levels           | step 17 |
| do not match the MAP levels    | step 12 |

- 12** Obtain a replacement NT2X96 card. Make sure the replacement card has the same product engineering code (PEC) and the PEC suffix as the removed card.

- 13** To replace the NT2X96 card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 14** To access the MANUAL level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;MANUAL**  
 and press the Enter key.

- 15** To measure the loss, type  
**>LOSS**  
 and press the Enter key.

*Example of a MAP response:*

```

POST      3  DELQ          BUSYQ          DIG
TTP  6-015
CKT TYPE   PM NO.   COM LANG   STA S R  DOT TE  RESULT
OG  MTM    1  8     JACK        1  SZD . .      LVM -64.0
                                   P_MB
    
```

```

EML  0.0 DB
PAD PC 0 TE 0
    
```

- 16** Vary the signal generator level and note the level that corresponds under the RESULT header.

| If the signal generator levels | Do      |
|--------------------------------|---------|
| match the MAP levels           | step 17 |

---

## Correcting PCM level meter card problems (end)

---

|           | <b>If the signal generator levels</b>                                                                                                                                          | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | do not match the MAP levels                                                                                                                                                    | step 20   |
| <b>17</b> | To access the TTP level of the MAP display, type<br><b>&gt;TTP</b><br>and press the Enter key.                                                                                 |           |
| <b>18</b> | To release the TTT circuit, type<br><b>&gt;RLS</b><br>and press the Enter key.<br><i>Example of a MAP response:</i>                                                            |           |
|           | <pre> POST      1  DELQ          BUSYQ          DIG TTP  6-003 CKT TYPE   PM NO.    COM LANG   STA S R  DOT TE  RESULT OG  MTM    1 18     TTT         0  MB           </pre>  |           |
| <b>19</b> | To return the TTT circuit to service, type<br><b>&gt;RTS</b><br>and press the Enter key.<br><i>Example of a MAP response:</i>                                                  |           |
|           | <pre> POST      1  DELQ          BUSYQ          DIG TTP  6-003 CKT TYPE   PM NO.    COM LANG   STA S R  DOT TE  RESULT OG  MTM    1 18     TTT         0  IDL           </pre> |           |
|           | <b>If the state of the TTT circuit</b>                                                                                                                                         | <b>Do</b> |
|           | is IDL                                                                                                                                                                         | step 21   |
|           | is other than listed here                                                                                                                                                      | step 20   |
| <b>20</b> | For additional help, contact the next level of support.                                                                                                                        |           |
| <b>21</b> | The procedure is complete.                                                                                                                                                     |           |

## **Correcting poor line transmission or reception**

---

### **Application**

Use this procedure to correct bad line transmission or reception.

### **Definition**

The next level of support identifies bad line transmission or reception. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

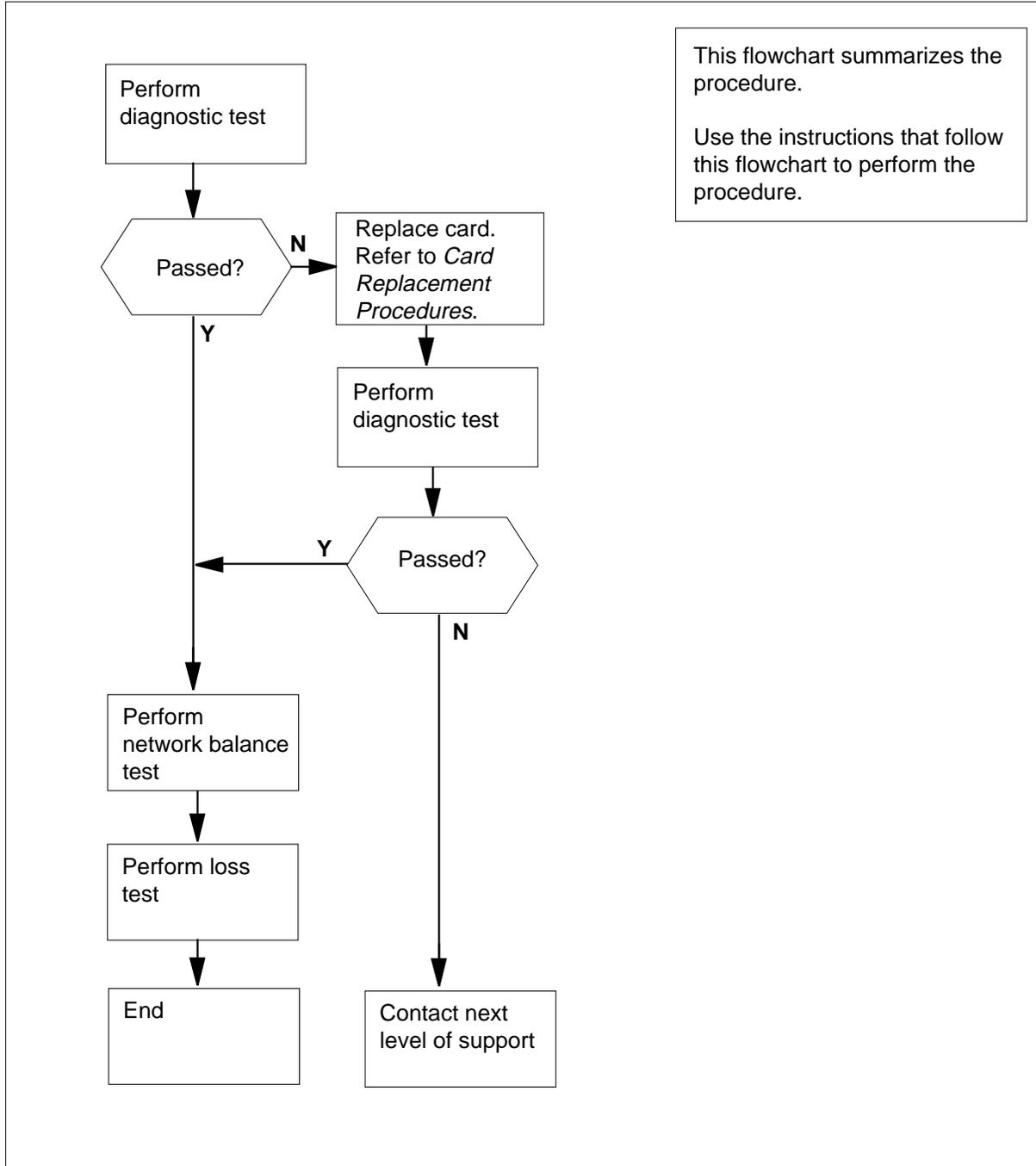
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting poor line transmission or reception (continued)

### Summary of Correcting poor line transmission or reception



---

## Correcting poor line transmission or reception (continued)

---

### Correcting poor line transmission or reception

#### *At the MAP terminal*

- 1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
 and press the Enter key.
- 2 Post the directory number (DN) of the line of the subscriber. The DN corresponds to the telephone with bad transmission or reception. Type  
**>POST D dn**  
 and press the Enter key.

*where*

**dn**

is the seven-digit DN of the line of the subscriber, without spaces

*Example input:*

**>POST D 6136214777**

*Example of a MAP response:*

```
LEN HOST 00 1 00 01
LCC PTY RNG.....          STA F S LTA TE RESULT
IFR                DN 613 621 4777 IDL
```

- 3 To perform a diagnostic test on the line of the subscriber, type  
**>DIAG**  
 and press the Enter key.

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

---

| If the MAP response                | Do     |
|------------------------------------|--------|
| is +LINE100, and other information | step 7 |
| is +LINE101, and other information | step 4 |
| is COULD NOT SEIZE LINE            | step 7 |

---

- 4 To locate the defective line card, type

**>CKTLOC**

## Correcting poor line transmission or reception (continued)

and press the Enter key.

*Example of a MAP response:*

```

Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

- 5** Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6** To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7** To perform a diagnostic test on the loop, type

>LTP;LNTST

and press the Enter key.

*Example of a MAP response:*

```

Test OK

RES CAP VAC VDC
TIP 999.0K 0.000UF 0 0
RNG 999.0K 0.000UF 0 0
TIP TO RNG 999.0K 1.200UF
    
```

| If the test | Do      |
|-------------|---------|
| passes      | step 8  |
| fails       | step 17 |

- 8** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC), and direct current voltage (VDC) values from the MAP response.

- 9** Determine if the values recorded in step 8 are within the list of tolerances in the *Maintenance Guide*.

| If the RES, CAP, VAC, and VDC values | Do      |
|--------------------------------------|---------|
| are within the tolerances            | step 13 |
| are outside the tolerances           | step 10 |

- 10** To locate the defective line card, type

>LTP;CKTLOC

---

## Correcting poor line transmission or reception (end)

---

and press the Enter key.

*Example of a MAP response:*

```

Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
      NO      NO      NON LOADED      NO
    
```

- 11** Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 10, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 12** To replace the defective line card recorded in step 11, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 13** To perform a network balance test, type

**>LTPLTA;BALNET**

and press the Enter key.

*Example of a MAP response:*

```

Test: Onhook      Balnet      2DB Pad
      PREVIOUS    Non loaded    No
      RESULT     Non loaded    No
    
```

- 14** Record the test results for the next level of support.

- 15** To perform a loss test, type

**>LTPMAN;LOSS**

and press the Enter key.

- 16** Record the test results for the next level of support.

Go to step 18.

- 17** For additional help, contact the next level of support.

- 18** The procedure is complete.

## Correcting receive-level problems on T1 trunks

---

### Application

Use this procedure to correct receive (RX) level problems on T1 trunks.

### Definition

In RX-level problems, the measured loss on a trunk circuit differs from the expected value.

Reasons for RX-level problems on trunk circuits are:

- common carrier problems
- incorrectly padded incoming, outgoing or two-way trunk circuits at the near or far-end office
- trunk data entries that do not match the trunk design of your office

### Common procedures

There are no common procedures.

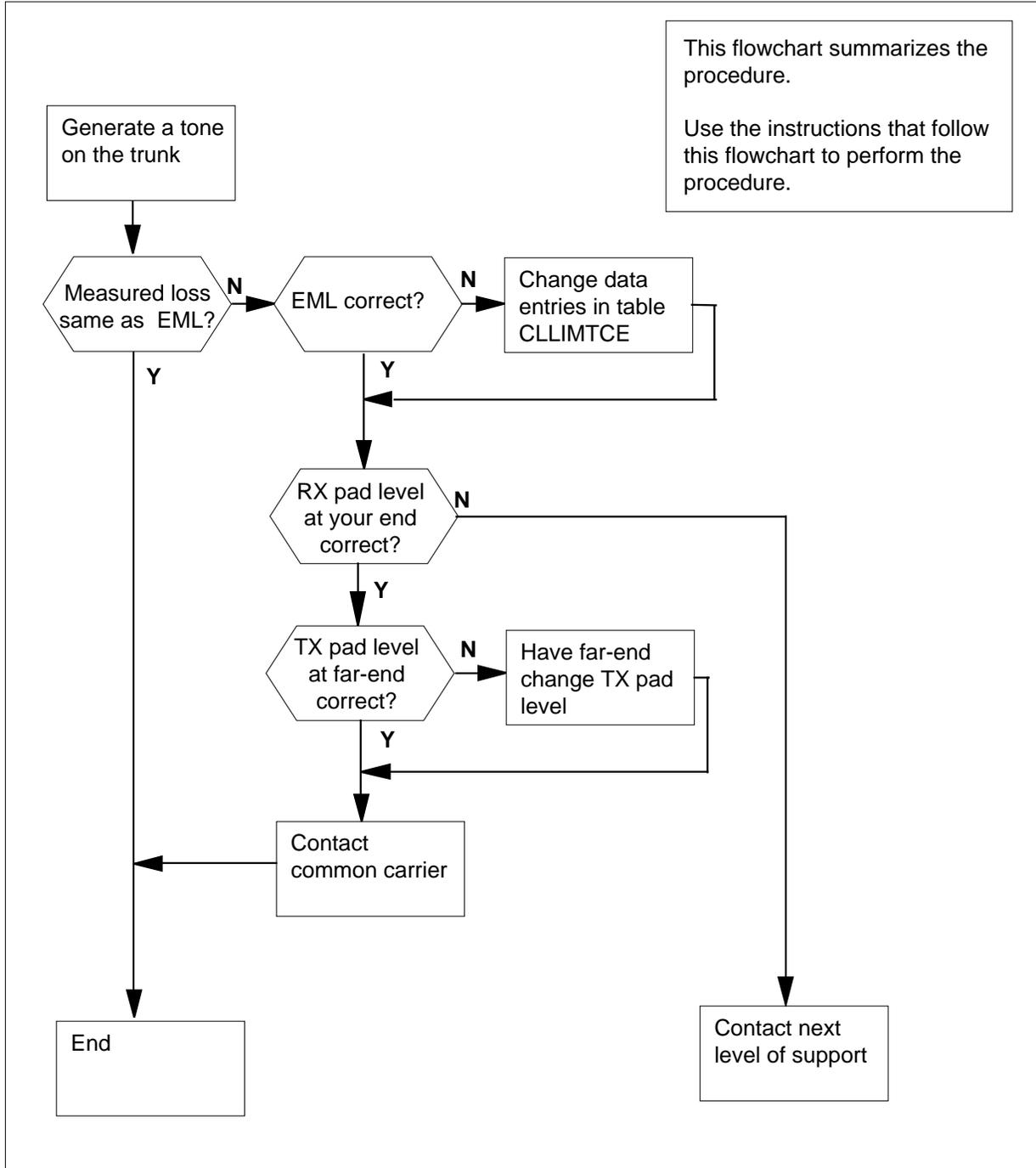
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

*Note:* This procedure can require the help of the office at the far end of the trunk and the common carrier.

## Correcting receive-level problems on T1 trunks (continued)

### Summary of Correcting receive-level problems on T1 trunks



---

## Correcting receive-level problems on T1 trunks (continued)

---

### Correcting receive-level problems on T1 trunks

#### At the MAP terminal

1



#### CAUTION

##### Loss of service

This procedure removes a trunk from service. Perform this procedure during periods of low traffic.

To access the Manual level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;MANUAL
```

and press the Enter key.

2

To post the defective trunk circuit, type

```
>POST G clli member_no
```

and press the Enter key.

where

**cli**

is the CLLI of the trunk group (table CLLI)

**member\_no**

is the unit-number of the trunk circuit (table TRKMEM)

Example input:

```
>POST G MAID 0
```

Example of a MAP response:

```
POST      5  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE   PM NO.  COM LANG      STA S R  DOT TE  RESULT
2W  DTC    1 15 16 MAID          0   IDL
```

**Note:** In this MAP example, the posted circuit is a two-way circuit.

3

If necessary, wait for the state of the circuit to change to idle (IDL).

4

To seize the trunk circuit, type

```
>SEIZE
```

and press the Enter key.

Example of a MAP response:

```
CKT SEIZED
```

**Correcting receive-level problems on T1 trunks (continued)**

5 Determine which type of trunk you posted

| If the trunk type | Do      |
|-------------------|---------|
| is incoming       | step 6  |
| is outgoing       | step 10 |
| is two way        | step 10 |

6 Contact operating company personnel at the far end office.

7 Ask operating company personnel at the far end office to send a 1004-Hz tone at 0 dBm (a milliwatt tone). Ask the operating company personnel to send the tone on the same trunk circuit you posted.

8 To measure the loss, type

>LOSS

and press the Enter key.

*Example of a MAP response:*

```

POST      5  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE   PM NO.    COM LANG    STA S R  DOT TE  RESULT
2W  DTC    1 15 16    MAID      0  SZD . .    LVM -11.8
                TTT      0  P_IDL R
    
```

```

EML 12.0 DB
PAD PC - TE 3
    
```

9 From the MAP response, determine if the measured loss is within 1 dB of the expected measured loss.

**Note:** The measured loss is under the RESULT header. The expected measured loss is on the right side of the EML header.

| If the loss measurements | Do      |
|--------------------------|---------|
| are 1 dB or closer       | step 14 |
| are more than 1 dB apart | step 13 |

10 To perform a T102 test, type

>OP T102

and press the Enter key.

*Example of a MAP response:*

```

***+ TRK125 JAN27 11:08:40 9600 PASS TL102 PASSED
      CKT          MAID      0
    
```

11 To measure the loss, type

>LOSS

## Correcting receive-level problems on T1 trunks (continued)

and press the Enter key.

*Example of a MAP response:*

```

POST      5  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE   PM NO.   COM LANG   STA S R   DOT TE   RESULT
2W  DTC    1 15 16   MAID      0  SZD . .   LVM -11.8
                TTT      0  P_IDL R

EML 12.0 DB
PAD PC - TE 3
    
```

- 12** From the MAP response, determine if the measured loss is within 1 dB of the expected measured loss.

**Note:** The measured loss is under the RESULT header. The expected measured loss is on the right side of the EML header.

| If the loss measurements | Do      |
|--------------------------|---------|
| are 1 dB or closer       | step 14 |
| are more than 1 dB apart | step 13 |

- 13** The EML value can be wrong. Check the *DMS-100 Family Commands Reference Manual*, office records, or trunk circuits in the same group to determine the correct EML value.

| If the EML value | Do      |
|------------------|---------|
| is correct       | step 14 |
| is wrong         | step 18 |

- 14** Check office records or trunk circuits in the same group to determine what the RX padding for this circuit must be.

| If the RX padding level | Do      |
|-------------------------|---------|
| is correct              | step 15 |
| is wrong                | step 18 |

- 15** Determine if a common carrier is present between your office and the far end of the trunk circuit.

| If a common circuit | Do      |
|---------------------|---------|
| is present          | step 16 |
| is not present      | step 17 |

- 16** Contact the common carrier.

---

## Correcting receive-level problems on T1 trunks (end)

---

**17** To release the trunk circuit, type

**>RLS**

and press the Enter key.

*Example of a MAP response:*

```

POST      5  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE   PM NO.  COM LANG      STA S R  DOT TE  RESULT
2W  DTC    1 15 16 MAID          0   IDL
    
```

Go to step 19.

**18** For additional help, contact the next level of support.

**19** The procedure is complete.

## **Correcting release mismatch problems**

---

### **Application**

Use this procedure to correct a release mismatch.

### **Definition**

When a card fails a release compatibility check against baselines during a routine exercise (REx) test, this failure generates a log report. A computing module (CM) card failure generates a CM160 log report if it fails a release compatibility check against baselines. A message switch (MS) card failure generates an MS105 log report if it fails a release compatibility check against baselines.

### **Common procedures**

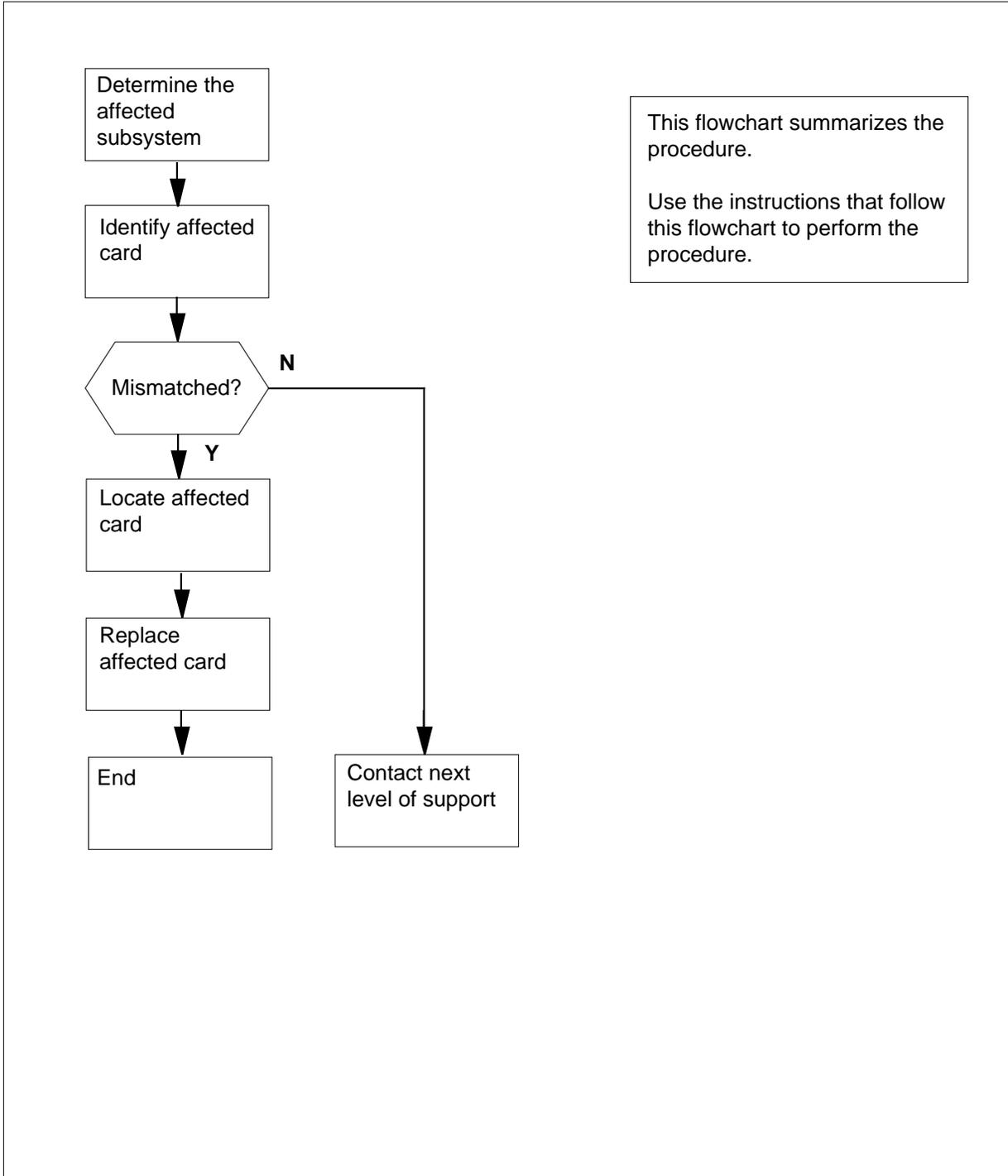
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Correcting release mismatch problems** (continued)

**Summary of Correcting release mismatch problems**



## Correcting release mismatch problems (continued)

### Correcting release mismatch problems

#### At the MAP terminal

- 1 To access the CI level of the MAP display, type  
`>QUIT ALL`  
 and press the Enter key.
- 2 To open the log utility, type  
`>LOGUTIL`  
 and press the Enter key.
- 3 To determine if the REx test generated an MS105 log report, type  
`>OPEN MS 105`  
 and press the Enter key.

| IfMS105 log report | Do      |
|--------------------|---------|
| is present         | step 4  |
| is not present     | step 19 |

- 4 To access the latest MS105 log report, type  
`>OPEN MS 105`  
 and press the Enter key.

*Example of a MAP response:*

```
MS105 Jan07 14:17:14 4701 MS HW MONITOR
STATE: A DISCOVERY BY REX TEST
MS: 0 SHELF: 0 CARD: 7 SLOT: 26R SIDE: BACK
PEC: NT9X23BA
CARD REL: 10 BASE: 40 EXCEPT: NONE
Card release is below baseline. Upgrade card.
```

- 5 Record the MS number and shelf number of the affected MS. Record the card number of the affected card.  
**Note:** In the example in step 4, the number of the affected MS is 0. The shelf number of the affected MS is 0. The card number of the affected card is 7.
- 6 To determine if the last REx test generated any MS 105 log reports, type `BACK` and press `ENTER`. Continue to check until you locate all the MS 105 log reports the last test generated.
- 7 Record the MS number and shelf number of the affected MS. Also, record the card number of the affected card in each MS 105 log report.

| If                   | Do     |
|----------------------|--------|
| one MS card affected | step 9 |

**Correcting release mismatch problems** (continued)

|           | If                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Do        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | more than one MS card affected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | step 8    |
| <b>8</b>  | Choose a card to work on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
| <b>9</b>  | To quit the log utility, type<br>>QUIT<br>and press the Enter key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| <b>10</b> | To access the Shelf level of the MAP display for the affected MS, type<br>>MAPCI ;MTC ;MS ;SHELF <b>shelf_number</b><br>and press the Enter key.<br><i>where</i><br><b>shelf_number</b><br>is the shelf number (0 to 3) of the affected MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| <b>11</b> | To determine if the card is not compatible with the software load, type<br>>QUERYMS MS <b>ms_number</b> CARD <b>card_number</b> IDPROM<br>and press the Enter key.<br><i>where</i><br><b>ms_number</b><br>is the number of the affected MS (0 or 1)<br><b>card_number</b><br>is the number of the affected card (1 to 26)<br><br><b>Note:</b> A card that is not a compatible card has a label NO under the COMPATIBLE header of the MAP response.<br><br><i>Example input:</i><br>>QUERYMS MS 0 CARD 7 IDPROM<br><br><i>Example of a MAP response:</i><br><br>MS0 load contents: MS-S release 36CE<br>There are 16 slots equipped on MS: 0 shelf: 0<br>REx test last run MS: 0 90:05:10 00:00:00 AUTO SUCCESSFUL<br>MS card information:<br>Site Flr Rpos Bay_id Shf Description Slot EqPEC<br>HOST 01 A01 DPCC 0 39 MS 0:0:20 26 9X17AA FRNT<br>HOST 01 A01 DPCC 0 39 MS 0:0:20 26 9X73AA BACK<br>MS SHELF CARD SLOT SIDE EQPEC BASE EXCEPT REL COMPATIBLE<br>0 0 7 26 FRNT NT9X17AA SO SA S9 YES<br>0 0 7 26 BACK NT9X23BA 40 NONE 10 *NO |           |
|           | <b>If the card</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Do</b> |
|           | is compatible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | step 63   |
|           | is not compatible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | step 12   |
| <b>12</b> | Obtain a compatible replacement card.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |

## Correcting release mismatch problems (continued)

- 13** To determine if the replacement card is compatible with the software load, type  
**>CHECKREL MS pec release**  
 and press the Enter key.  
*where*  
**PEC**  
 is the PEC and suffix of the new card  
**release**  
 is the two-character code located on the bottom of the faceplate of the replacement card

*Example input:*

**>CHECKREL MS NT9X13DB 10**

*Example of a MAP response:*

```

PEC   BASELINE   EXCEPT  RELEASE COMPATIBLE
NT9X13DB   S0           SC           10           *NO
Card release is below baseline.
Do not plug the card into the MS.
```

| <b>If the replacement card</b> | <b>Do</b> |
|--------------------------------|-----------|
| is compatible                  | step 14   |
| is not compatible              | step 63   |

- 14** To access the Card level of the MAP display for card to be replaced, type  
**>CARD card\_number**  
 and press the Enter key.  
*where*  
**card\_number**  
 is the number of the card that is not compatible. (1 to 26)

*Example of a MAP response:*

```

Card 04 CMIC Interface Card Port: 0 1
MS 0           I           . .
MS 1           I           . .
```

- 15** Busy the MS that contains the card that is not compatible, type  
**>BSY ms\_number**  
 and press the Enter key.  
*where*  
**ms\_number**  
 is the number of the MS (0 or 1) that contains the card that is not compatible

*Example of a MAP response:*

---

## Correcting release mismatch problems (continued)

---

Request to MAN BUSY MS:0 shelf:0 card:13 submitted.

Request to MAN BUSY MS:0 shelf:0 card:13 passed.

|           | <b>If the BSY command</b>                                                                                                                                                                                                   | <b>Do</b> |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | passes                                                                                                                                                                                                                      | step 16   |
|           | fails                                                                                                                                                                                                                       | step 63   |
| <b>16</b> | Perform the correct card replacement in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point.                                                                                               |           |
| <b>17</b> | To return the manual busy MS to service, type<br>>RTS <b>ms_number</b><br>and press the Enter key.<br><i>where</i><br><b>ms_number</b><br>is the number of the manual busy MS (0 or 1)<br><i>Example of a MAP response:</i> |           |

Request to RTS MS:0 shelf:0 card:22 submitted.

Request to RTS MS:0 shelf:0 card:22 passed.

|           | <b>If the RTS command</b>                                                                                                                                  | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | passes                                                                                                                                                     | step 18   |
|           | fails                                                                                                                                                      | step 63   |
| <b>18</b> | Determine if other MS cards that are not compatible are present.<br><b>Note:</b> Step 7 contains a record of this information.                             |           |
|           | <b>If other MS cards</b>                                                                                                                                   | <b>Do</b> |
|           | are present                                                                                                                                                | step 19   |
|           | are not present                                                                                                                                            | step 22   |
| <b>19</b> | To open the CM logs, type<br>>OPEN <b>CM</b><br>and press the Enter key.                                                                                   |           |
| <b>20</b> | To display the CM log reports, type<br>>BACK<br>and press the Enter key.<br><br>Enter this command as many times as needed to make the log reports appear. |           |

## Correcting release mismatch problems (continued)

- 21** Choose a card to work on.  
Go to step 11.
- 22** To access the most recent CM160 log report, type  
`>OPEN CM 160`  
and press the Enter key.

*Example of a MAP response:*

```
CM160 Jan07 14:17:14 4701 INFO CM CARD CM 0
CPU: 1 SHELF: 0 SLOT: 30 CARD: 24 SIDE: BACK
PEC: NT9X12AB
CARD REL: 08 BASE: 10
Card release is below baseline. Upgrade card.
```

| If the response                            | Do      |
|--------------------------------------------|---------|
| indicates Not found.                       | step 23 |
| indicates a CM160 log the system generated | step 24 |

- 23** The MS105 or CM160 logs can be disabled.  
Go to step 63.
- 24** To quit the log utility, type  
`>QUIT`  
and press the Enter key.
- 25** To access the CM level of the MAP display, type  
`>MAPCI ;MTC ;CM`  
and press the Enter key.

*Example of a MAP response:*

```
CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC
0 no cpu 1 . . yes . . . .
```

- 26** To find CM cards that are not compatible, type  
`>QUERYCM NOEMPTY`  
and press the Enter key.

**Note:** The identification for a card that is not compatible is the word \*NO under the COMPATIBLE header of the MAP response.

*Example of a MAP response:*

**Correcting release mismatch problems** (continued)

Querycm basic print-out

| CPU | SHELF | SLOT | SIDE | EQPEC    | BASE | EXCEPT | REL | COMPATIBLE |
|-----|-------|------|------|----------|------|--------|-----|------------|
| 0   | 0     | 17   | FRNT | NT9X12AB | 10   | None   | 15  | YES        |
| 0   | 0     | 17   | BACK | NT9X20AA | 50   | None   | 5K  | YES        |
| 0   | 0     | 18   | FRNT | NT9X12AB | 10   | None   | 15  | YES        |
| 0   | 0     | 18   | BACK | NT9X20AA | 50   | None   | 5J  | YES        |
| 1   | 0     | 21   | FRNT | NT9X12AB | 10   | None   | 1A  | YES        |
| 1   | 0     | 21   | BACK | NT9X20AA | 50   | None   | 5I  | YES        |
| 1   | 0     | 22   | FRNT | NT9X12AB | 10   | None   | 02  | *NO        |
| 1   | 0     | 22   | BACK | NT9X20AA | 50   | None   | 5H  | YES        |

**If cards that are not compatible Do**

|                 |         |
|-----------------|---------|
| are present     | step 27 |
| are not present | step 63 |

**27** Record the PEC and the application for each card that is not compatible.

**Note 1:** The message controller (MC) has four NT9X12 cards (slots 17F, 18F, 21F, and 22F on shelf 0). The controller has four NT9X20 cards (slots 17R, 18R, 21R, and 22R on shelf 0), and two NT9X22 cards (slots 16R and 23R on shelf 0).

**Note 2:** The peripheral message controller (PMC) has two NT9X12 cards (slots 18F and 21F on shelf 1). The controller consists of two NT9X22 cards (slots 16R and 23R on shelf 1), and two NT9X27 cards (slots 7R and 32R on shelf 1). The controller also has two NT9X46 cards (slots 18R and 21R on shelf 1). NT9X46 cards on shelf 0 are part of the CM.

**Note 3:** CM memory consists of NT9X14 cards (slots 7F to 16F and 23F to 32F).

**28** Determine if more than one CM card that is not compatible is present.

**Note:** Step 27 contains a record of this information.

| If                                                   | Do      |
|------------------------------------------------------|---------|
| one card that is not compatible is present           | step 30 |
| more than one card that is not compatible is present | step 29 |

**29** Choose a card to work on.

**Note 1:** If cards that are not compatible are present on the active CPU side and the inactive CPU side, work on the inactive side first.

**Note 2:** The content under the Act header of the MAP display identifies the active CPU. In the example in step 25, the active CPU is CPU 1.

**30** Obtain a compatible replacement card.

**31** To decide if the replacement card is compatible with the software load, type

**>CHECKREL CM pec release**

## Correcting release mismatch problems (continued)

and press the Enter key.

where

**pec**

is the PEC and suffix of the new card

**release**

is the two-character code located on the face of the replacement card

Example input:

```
>CHECKREL CM NT9X13DB 10
```

Example of a MAP response:

```
PEC BASELINE EXCEPT RELEASE COMPATIBLE
NT9X13DB S0 SC 10 *NO
Card release is below baseline.
Do not plug the card into the MS.
```

| If the replacement card | Do      |
|-------------------------|---------|
| is compatible           | step 32 |
| is not compatible       | step 63 |

- 32** Decide if the card that is not compatible is on the same side of the CM as the active CPU.

**Note:** Identification for the active CPU is under the Act header of the MAP response. In example step 25, the active CPU is CPU 1.

| If the card that is not compatible | Do      |
|------------------------------------|---------|
| is on the active side              | step 33 |
| is on the inactive side            | step 45 |

- 33** Determine if the inactive CPU is jammed.

**Note:** The word yes under the Jam header means that the inactive CPU is jammed. The area is blank when the CPU is not jammed. In example step 25, the inactive CPU is jammed.

| If the inactive CPU | Do      |
|---------------------|---------|
| is jammed           | step 34 |
| is not jam          | step 35 |

---

## Correcting release mismatch problems (continued)

---

**At the CM reset terminal for the inactive CPU**

- 34** To proceed, determine why the inactive CPU is jammed. When you can, release the jam on the inactive CPU. Type

>\RELEASE JAM

and press the Enter key.

*RTIF response:*

RELEASE JAM DONE

**At the MAP terminal**

- 35** Decide if the CM is in sync.

**Note:** A dot under the Sync header means the CM is in sync. The word "no" means the CM is not in sync. In example step 25, the CM is not in sync.

| If the CM      | Do      |
|----------------|---------|
| is in sync     | step 37 |
| is not in sync | step 36 |

- 36** To continue, decide why synchronization dropped. When possible, synchronize the CM. Type,

>SYNC

and press the Enter key.

| If the response                                                           | Do      |
|---------------------------------------------------------------------------|---------|
| indicates the SYNC command passed                                         | step 37 |
| indicates the SYNC command failed                                         | step 63 |
| indicates Inactive CPU configuration do not support burst mode operation. | step 63 |

**Correcting release mismatch problems** (continued)

|           | <b>If the response</b>                                                                                                                                                                                                                                                                | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | indicates Burst mode operation will disable when there is no support by both CPUs. Current high call processing utilization indicates that burst mode operation that disables can result in raising call processing utilization to a point where CALL ORIGINATION FAILURES can occur. | step 63   |
|           | indicates a response other than listed here                                                                                                                                                                                                                                           | step 63   |
| <b>37</b> | To switch activity, type<br>> <b>SWACT</b><br>and press the Enter key.<br><i>Example of a MAP response</i>                                                                                                                                                                            |           |
|           | Switch of activity will cause the CM to be running on the inactive CPU's processor clock. System will drop SYNC and then re-SYNC in order to switch to the active CPU's clock. Do you wish to continue?<br>Please confirm ("YES", "Y", "NO", or "N"):                                 |           |
| <b>38</b> | To confirm the command, type<br>> <b>YES</b><br>and press the Enter key.                                                                                                                                                                                                              |           |
|           | <b>If the response</b>                                                                                                                                                                                                                                                                | <b>Do</b> |
|           | is Maintenance action submitted. Switch of activity successful.                                                                                                                                                                                                                       | step 39   |
|           | is other than listed here                                                                                                                                                                                                                                                             | step 63   |
| <b>39</b> | To match the memories of the CPUs, type<br>> <b>MEMORY;MATCH ALL</b>                                                                                                                                                                                                                  |           |

---

## Correcting release mismatch problems (continued)

---

and press the Enter key.

*Example of a MAP response:*

```
Matching memory between CPUs in sync.
Match ok.
```

---

| If the response indicates mem-<br>ory match | Do      |
|---------------------------------------------|---------|
| is successful                               | step 40 |
| fails                                       | step 63 |

---

**40** To access the CI level of the MAP display, type  
>QUIT ALL  
and press the Enter key.

**41** To access the log utility, type  
>LOGUTIL  
and press the Enter key.

**42** To determine if the memory-match generates a MM100 log report, type  
>OPEN MM 100  
and press the Enter key.

**Note:** If the memory match does not generate a MM100 log report, the response is that the Log is empty.

---

| If the response indicates an<br>MM100 log report | Do      |
|--------------------------------------------------|---------|
| is not generated                                 | step 43 |
| is generated                                     | step 63 |

---

**43** To determine if the memory match generates a MM101 log report, type  
>OPEN MM 101  
and press the Enter key.

---

| If the response indicates an<br>MM101 log report | Do      |
|--------------------------------------------------|---------|
| is not generated                                 | step 44 |
| is generated                                     | step 63 |

---

**44** To quit the log utility, type  
>QUIT  
and press the Enter key.

---

## Correcting release mismatch problems (continued)

---

**At the CM RTIF**

**45**



**CAUTION**

**Loss of service**

Do not jam the active CPU. A cold restart will occur if you jam an active CPU when the CM is out of sync. The word Active on the top banner of the display identifies the reset terminal for the active CPU.

To jam the CPU that is not active, type

**>\JAM**

and press the Enter key.

*RTIF response:*

PLEASE CONFIRM ("YES" OR "NO"):

**46** To confirm the command, type

**>YES**

and press the Enter key.

*RTIF response:*

JAM DONE

**At the MAP terminal**

**47** To drop synchronization, type

**>CM;DPSYNC**

and press the Enter key.

---

| <b>If the response</b>                                                                                                                    | <b>Do</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| is About to drop sync with CPU n active. There is an inactive CPU is a jammed. Do you want to continue? Confirm("YES", "Y", "NO" OR "N"): | step 48   |
| is Drop synchronization failed                                                                                                            | step 63   |

---

**Correcting release mismatch problems** (continued)

|  | <b>If the response</b>                                          | <b>Do</b> |
|--|-----------------------------------------------------------------|-----------|
|  | is aborted. Active CPU<br>n has a damaged pro-<br>cessor clock. | step 63   |
|  | is other than listed here                                       | step 63   |

- 48** To confirm the command, type  
>YES  
and press the Enter key.

**At the CM reset terminal for the inactive CPU**

- 49** Wait until A1 flashes on the reset terminal interface (RTIF) for the CPU that is not active.  
**Note:** Allow 5 min for A1 to start flashing.

| <b>If A1</b>  | <b>Do</b> |
|---------------|-----------|
| flashes       | step 50   |
| did not flash | step 63   |

- 50** Determine the application and PEC for the replaced cards.  
**Note:** You recorded this information is in step 27.

| <b>If the application and PEC for the card that requires replacement</b>    | <b>Do</b> |
|-----------------------------------------------------------------------------|-----------|
| is CM: NT9X10, NT9X13,<br>NT9X21, NT9X22, NT9X26,<br>NT9X30, NT9X31, NT9X46 | step 51   |
| is MC: NT9X12, NT9X20,<br>NT9X22                                            | step 51   |
| is memory: NT9X14                                                           | step 51   |
| is PMC: NT9X12, NT9X22,<br>NT9X27, NT9X46                                   | step 51   |

**At the MAP terminal**

- 51** To manually busy the MC, type  
>MC;BSY mc\_number  
and press the Enter key.  
where

## Correcting release mismatch problems (continued)

---

- mc\_number**  
is the number of the affected MC on the inactive side (0 or 1)
- 52** To confirm the command, type  
**>YES**  
and press the Enter key.  
*Example of a MAP response:*

Maintenance action submitted.  
MC busied OK.

Go to step 53.

- 53** To manually busy the affected PMC port, type  
**>PMC;BSY 0 PORT port\_number**  
and press the Enter key.  
*where*

**port\_number**  
is the number of the affected port on the inactive side (0 or 1)

- 54** Perform the correct card replacement procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 55** Determine the PEC and application of the cards that you replaced.

**Note:** A record of this information is in step 27.

---

| <b>If the card</b>         | <b>Do</b> |
|----------------------------|-----------|
| was an NT9X12 (in a PMC)   | step 57   |
| was an NT9X14 (memory)     | step 56   |
| was an NT9X22 (in a PMC)   | step 57   |
| was an NT9X27 (in a PMC)   | step 57   |
| was an NT9X46 (in a PMC)   | step 57   |
| was other than listed here | step 57   |

---

- 56** To test the memory card you replaced, type  
**>MEMORY;TST CARD card\_number**  
and press the Enter key.  
*where*
- card\_number**  
is the number of the memory card replaced
- Example of a MAP response:*

---

## Correcting release mismatch problems (continued)

---

Maintenance action submitted.  
Memory test ok.

|           | <b>If the TST command</b>                                                                                                                                                                                        | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | passes                                                                                                                                                                                                           | step 57   |
|           | fails                                                                                                                                                                                                            | step 63   |
| <b>57</b> | To return the manual busy PMC port to service, type<br><b>&gt;PMC;RTS 0 PORT port_number</b><br>and press the Enter key.<br><i>where</i><br><b>port_number</b><br>is the number of the manual busy port (0 or 1) |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                        | <b>Do</b> |
|           | passes                                                                                                                                                                                                           | step 58   |
|           | fails                                                                                                                                                                                                            | step 63   |
| <b>58</b> | To return the manual busy MC to service, type<br><b>&gt;MC;RTS mc_number</b><br>and press the Enter key.<br><i>where</i><br><b>mc_number</b><br>is the number of the manual busy MC (0 or 1)                     |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                        | <b>Do</b> |
|           | passes                                                                                                                                                                                                           | step 59   |
|           | fails                                                                                                                                                                                                            | step 63   |
| <b>59</b> | Locate other incompatible CM cards.<br><b>Note:</b> You recorded this information is in step 27.                                                                                                                 |           |
|           | <b>If other incompatible cards</b>                                                                                                                                                                               | <b>Do</b> |
|           | are present                                                                                                                                                                                                      | step 29   |
|           | are not present                                                                                                                                                                                                  | step 60   |

## Correcting release mismatch problems (continued)

---

### *At the CM reset terminal for the inactive CPU*

**60** To release the jam on the CPU that is not active, type

>\RELEASE JAM

and press the Enter key.

*RTIF response:*

PLEASE CONFIRM ("YES" OR "NO"):

**61** To confirm the command, type

>YES

and press the Enter key.

*RTIF response:*

JAM RELEASE DONE

**62** To synchronize the CM, type

>CM;SYNC

and press the Enter key.

---

| <b>If the response</b>                                                      | <b>Do</b> |
|-----------------------------------------------------------------------------|-----------|
| indicates the SYNC command passes                                           | step 64   |
| the SYNC command fails                                                      | step 63   |
| indicates Inactive CPU configuration does not support burst mode operation. | step 63   |

---

---

**Correcting release mismatch problems (end)**

---

| If the response                                                                                                                                                                                                                                                                                | Do             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <p>indicates Burst mode operation will now disable as it is not supported by both CPUs. Current high call processing utilization indicates that burst mode operation that disables can result in raising call processing utilization to a point where CALL ORIGINATION FAILURES can OCCUR.</p> | <p>step 63</p> |
| <p>indicates other than listed here</p>                                                                                                                                                                                                                                                        | <p>step 63</p> |

- 63** For additional help, contact the next level of support.
- 64** The procedure is complete.

## **Correcting a ringing pretrip problem**

---

### **Application**

Use this procedure to diagnose and correct a ringing pretrip problem.

### **Definition**

The next level of support identifies a ringing pretrip problem. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

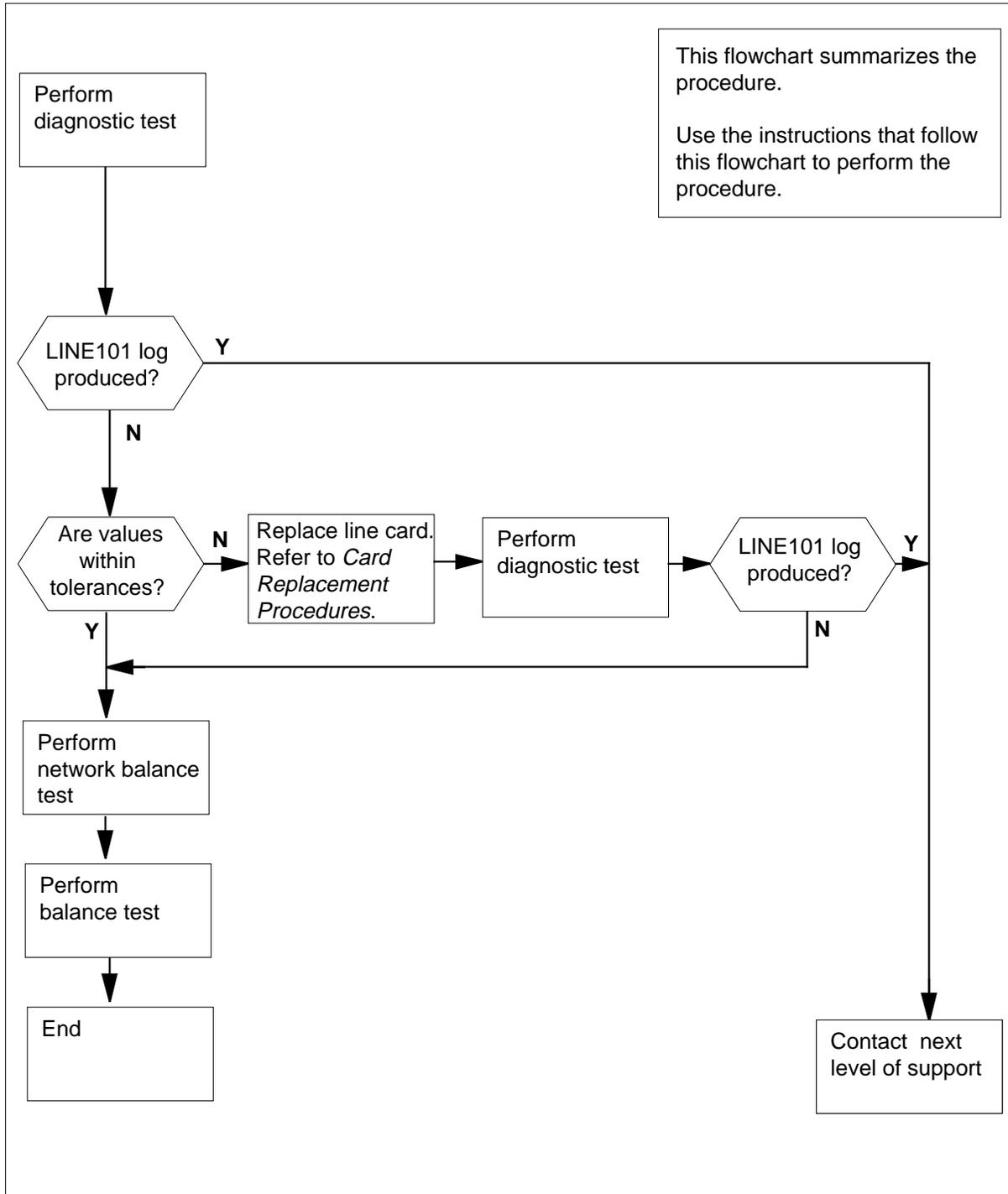
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a ringing pretrip problem (continued)

### Summary of Correcting a ringing pretrip problem



---

## Correcting a ringing pretrip problem (continued)

---

### Correcting a ringing pretrip problem

#### At the MAP terminal

1 To access the LTP level of the MAP display, type  
**>MAPCI ;MTC ;LNS ;LTP**  
and press the Enter key.

2 To post the directory number (DN) of the line that has a ringing pretrip problem, type

**>POST D dn**

and press the Enter key.

where

**dn**

is the 10- or 11-digit DN of the line of the subscriber, without spaces

*Example input:*

**>POST D 6136211076**

*Example of a MAP response:*

```
LEN HOST 00 0 12 19
LCC PTY RNG          STA F S LTA TE RESULT
8FR T4      DN 613 621 1076 IDL
```

3 To perform a diagnostic test on the line of the subscriber, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

```
+LINE100 SEP30 10:28:21 5900 PASS LN_DIAG
LEN HOST 00 0 12 19 DN 6136211076
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE 6X18AA
```

---

| If the MAP response | Do |
|---------------------|----|
|---------------------|----|

---

|                                 |        |
|---------------------------------|--------|
| +LINE100, and other information | step 8 |
|---------------------------------|--------|

|                                    |        |
|------------------------------------|--------|
| is +LINE101, and other information | step 4 |
|------------------------------------|--------|

|                         |         |
|-------------------------|---------|
| is COULD NOT SEIZE LINE | step 19 |
|-------------------------|---------|

---

4 To locate the defective line card, type

**>CKTLOC**

## Correcting a ringing pretrip problem (continued)

and press the Enter key.

*Example of a MAP response:*

```

Site Flr RPos Bay_id Sh Description Slot EqPEC
HOST 00 B00 LCE 00 38 LCM 00 1 00:01 6X17AC

GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
    
```

- 5 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 4, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

- 6 To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7 To perform a diagnostic test on the replaced line card in step 6, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

```

+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01 DN 6136214777
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE 6X17AC
    
```

| If the MAP response                   | Do      |
|---------------------------------------|---------|
| is +LINE100, and other information    | step 8  |
| is +LINE101, and other information    | step 19 |
| is COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 19 |

- 8 To perform a line test on the loop, type

>LTPLTA;LNTST

and press the Enter key.

*Example of a MAP response:*

## Correcting a ringing pretrip problem (continued)

| Test       | OK | RES    | CAP     | VAC | VDC |
|------------|----|--------|---------|-----|-----|
| TIP        |    | 999.OK | 0.000UF | 0   | 0   |
| RNG        |    | 999.OK | 0.000UF | 0   | 0   |
| TIP TO RNG |    | 999.OK | 1.200UF |     |     |

| If the test | Do      |
|-------------|---------|
| passes      | step 9  |
| fails       | step 19 |

**9** Record the resistance (RES), capacitance (CAP), alternating current voltage (VAC ), and direct current voltage (VDC) values from the MAP response.

**10** Determine if the values recorded in step 9 are within the list of tolerances in *Maintenance Guide*.

| If the RES, CAP, VAC, and VDC values | Do      |
|--------------------------------------|---------|
| are within the tolerances            | step 15 |
| are outside the tolerances           | step 11 |

**11** To locate the defective line card, type

**>LTP ;CKTLOC**

and press the Enter key.

*Example of a MAP response:*

```
CktLoc
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 00 B00 LCE00 04 LCM 00 0 12:19 6X18AA
```

```
GRD START 2DB LOSS BAL NETWORK MAN OVR SET
NO NO NON LOADED NO
```

**12** Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.

**Note:** In the MAP response in step 11, the PEC appears under the EqPEC header. The location appears under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.

**13** To replace the defective line card recorded in step 12, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**14** To perform a diagnostic test on the line card you replaced in step 13, type

**>DIAG**

and press the Enter key.

## Correcting a ringing pretrip problem (end)

*Example of a MAP response:*

```
+LINE100 NOV04 18:34:21 0700 PASS LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT      Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE      6X17AC
```

| If the MAP response                   | Do      |
|---------------------------------------|---------|
| is +LINE100, and other information    | step 15 |
| is +LINE101, and other information    | step 19 |
| is COULD NOT RUN LINE_CARD_DIAGNOSTIC | step 19 |

- 15** To perform a network balance test, type  
**>LTPLTA;BALNET**  
 and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS      Non loaded      No
      RESULT      Non loaded      No
```

- 16** Record the results for the next level of support.  
**17** To perform a balance test, type

**>LTPMAN;BAL**  
 and press the Enter key.

*Example of a MAP response:*

```
Test: Onhook      Balnet      2DB Pad
      PREVIOUS      Non loaded      No
      RESULT      Non loaded      No
```

- 18** Record the results for your next level of support.  
 Go to step 20.  
**19** For additional help, contact the next level of support.  
**20** The procedure is complete.

## **Correcting a stuck test access line relay**

---

### **Application**

Use this procedure to diagnose and correct a stuck test of an access line relay.

### **Definition**

The next level of support identifies a stuck test of an access line relay. The next level of support can request that you perform this procedure to correct the problem or to provide additional information.

### **Common procedures**

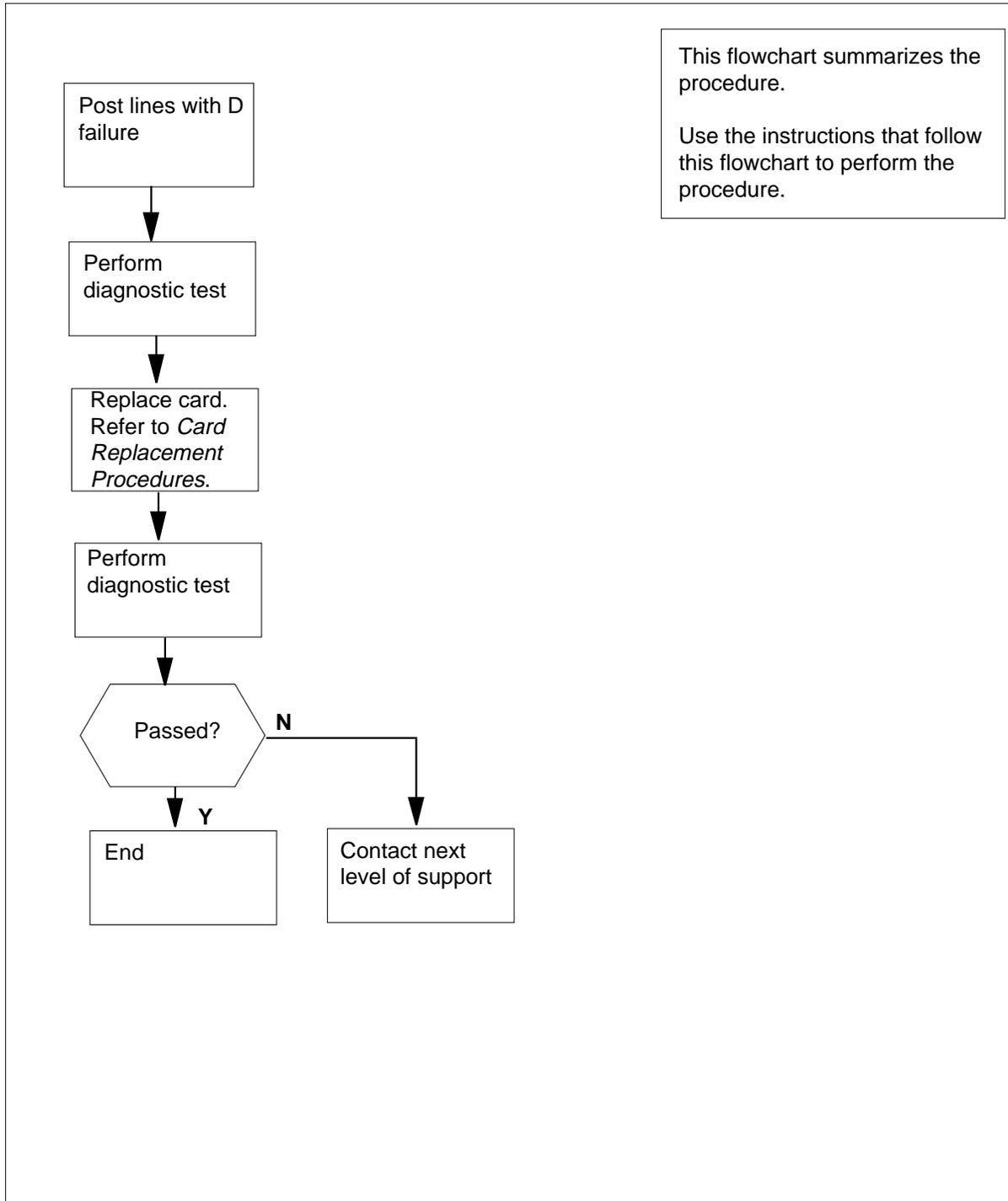
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting a stuck test access line relay (continued)

### Summary of Correcting a stuck test access line relay



## Correcting a stuck test access line relay (continued)

---

### Correcting a stuck test access line relay

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type  
`>MAPCI ;MTC ;LNS ;LTP`  
and press the Enter key.
- 2 To post all lines that have a diagnostic (D) failure flag, type  
`>POST DF D`  
and press the Enter key.
- 3 To perform a diagnostic test, type  
`>DIAG`  
and press the Enter key.

*Example of a MAP response:*

```
+LINE101 NOV04 18:34:21 0700 FAIL LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT   Card Diagnostic TEST ACC RLY
ACTION REQUIRED     Replace card
CARD TYPE          6X17AC
```

- 4 To locate the defective line card, type  
`>CKTLOC`  
and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos  Bay_id  Sh  Description  Slot  EqPEC
HOST  00 B00   LCE 00  38   LCM 00 1    00:01 6X17AC

GRD START  2DB LOSS  BAL NETWORK  MAN  OVR  SET
      NO          NO      NON LOADED      NO
```

- 5 Record the product engineering code (PEC), the PEC suffix and the location of the defective line card.  
**Note:** In the MAP response in step 4, the PEC is under the EqPEC header. The location is under the Site, Flr, RPos, Bay\_id, Sh, Description, and Slot headers.
- 6 To replace the defective line card recorded in step 5, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 7 To perform a diagnostic test on the card you replaced in step 6, type  
`>DIAG`  
and press the Enter key.

*Example of a MAP response:*

---

**Correcting a stuck test access line relay (end)**

---

```

+LINE100 NOV04 18:34:21 0700 PASS
LN_DIAG
LEN HOST 00 1 00 01      DN 6136214777
DIAGNOSTIC RESULT   Card Diagnostic OK
ACTION REQUIRED      None
CARD TYPE           6X17AC
    
```

---

| <b>If the MAP response</b>         | <b>Do</b> |
|------------------------------------|-----------|
| is +LINE100, and other information | step 9    |
| is +LINE101, and other information | step 8    |
| is DIAGNOSTIC ABORTED              | step 8    |

- 8** For additional help, contact the next level of support. is
- 9** The procedure is complete.

## **Correcting supervision trouble on intertoll T1 trunks**

---

### **Application**

Use this procedure to correct supervision problems on intertoll T1 trunks.

This process tests the following supervisory signals:

- on- and off-hook
- ring forward
- clear forward

### **Definition**

Supervision is the function of monitoring and controlling the status of a call.

### **Common procedures**

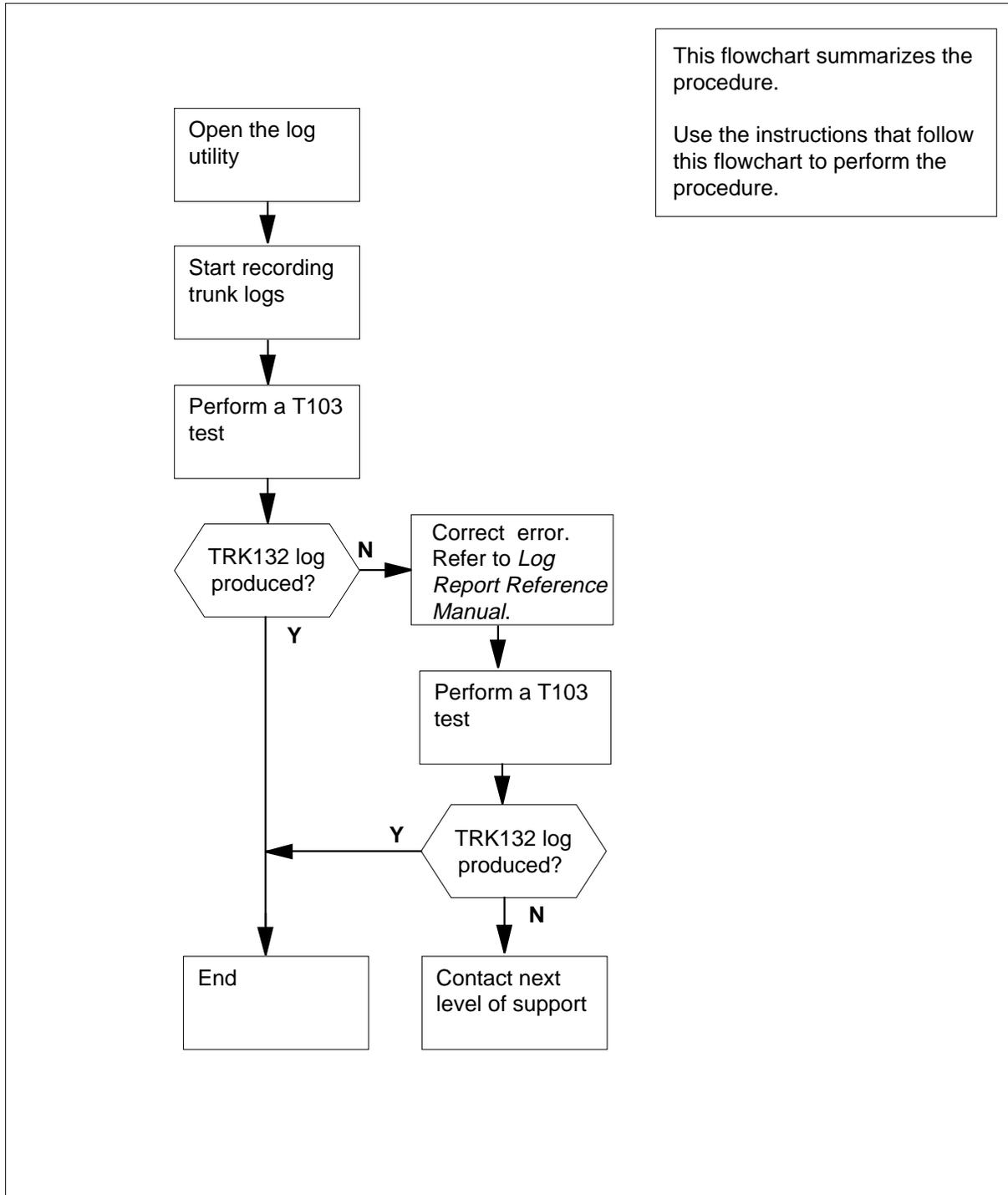
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting supervision trouble on intertoll T1 trunks (continued)

### Summary of Correcting supervision trouble on intertoll T1 trunks



## Correcting supervision trouble on intertoll T1 trunks (continued)

---

### Correcting supervision trouble on intertoll T1 trunks

#### At the MAP terminal

1 To access the MAPCI level of the MAP display, type  
>MAPCI  
and press the Enter key.

2 To open the log utility, type  
>LOGUTIL  
and press the Enter key.

3 To start to record the trunk (TRK) log reports, type  
>STARTDEV device\_name;ADDREPS device\_name TRK  
and press the Enter key.

where

**device\_name**  
is the name of a printer

Example of a MAP response

```
ONE REPORT ADDED
```

4 To access the TTP level of the MAP display, type  
>MTC;TRKS;TTP  
and press the Enter key.

5 To post the damaged trunk circuit, type  
>POST G clli member\_no  
and press the Enter key.

where

**clli**  
is the CLLI of the trunk group (table CLLI)

**member\_no**  
is the member number of the trunk circuit table (table TRKMEM)

Example input:

```
>POST G TDTC0OGD 0
```

Example of a MAP response:

```
POST    11  DELQ          BUSYQ          DIG
TTP    6-002
CKT TYPE    PM NO.          COM LANG          STA S R  DOT TE  RESULT
OG    MF DTC    0  7  1 TDTC0OGD          0  IDL
```

6 To seize the trunk, type  
>SEIZE  
and press the Enter key.

---

## Correcting supervision trouble on intertoll T1 trunks (continued)

---

*MAP response:*

```

POST    11  DELQ          BUSYQ          DIG
TTP    6-002
CKT TYPE    PM NO.          COM LANG          STA S R  DOT TE  RESULT
OG    MF DTC   0  7  1 TDTC00GD          0  SZD . .
                                     P_IDL
    
```

**7** To perform a T103 test, type

**>TST T103**

and press the Enter key.

*Example of a MAP response:*

```

+ TRK132 JAN21 09:55:06 2500 PASS TL103 PASSED
      CKT          TDTC00GD    0
    
```

*Example of a MAP response:*

```

+ TRK133 JAN21 09:55:06 2500 FAIL TL103 FAILED
      CKT          TDTC00GD    0
      TTT = TTT    1 REASON = TLINE PROTOCOL FAULT
    
```

**8** Determine if the supervision test passes.

---

| If the log in the MAP response | Do      |
|--------------------------------|---------|
| is TRK132                      | step 12 |
| is TRK133                      | step 9  |

---

**9** Perform the action indicated by *Log Report Reference Manual* for the error message indicated on the right side of the TRK133 REASON field.

**10** To perform a T103 test, type

**>TST T103**

and press the Enter key.

*Example of a MAP response:*

```

+ TRK132 JAN21 09:55:06 2500 PASS TL103 PASSED
      CKT          TDTC00GD    0
    
```

*Example of a MAP response:*

```

+ TRK133 JAN21 09:55:06 2500 FAIL TL103 FAILED
      CKT          TDTC00GD    0
      TTT = TTT    1 REASON = TLINE PROTOCOL FAULT
    
```

---

## Correcting supervision trouble on intertoll T1 trunks (end)

---

**11** Determine if the supervision test passes.

---

| If the log in the MAP response | Do      |
|--------------------------------|---------|
| is TRK132                      | step 12 |
| is TRK133                      | step 13 |

---

**12** To release the circuit, type

>RLS

and press the Enter key.

*Example of a MAP response:*

```
POST    11  DELQ          BUSYQ          DIG
TTP    6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT TE  RESULT
OG    MF DTC   0 7 1 TDTCOOGD      0  IDL
```

Go to step 14.

**13** For additional help, contact the next level of support.

**14** The procedure is complete.

## Correcting transmission test trunk trouble

---

### Application

Use this procedure to correct the transmission test trunk (TTT) problems.

### Definition

The TTT consists of two cards:

- the level meter card (NT2X96) for pulse code modulation (PCM)
- the card (NT2X90) for the test signal generator (TSG)

The PCM level meter card measures the level and frequency of analog signals. The TSG card controls the functions of the PCM level meter card and provides test signal output. The two cards share the same trunk appearance (TTT).

A complete failure of circuit testing facilities normally characterizes TTT problems. The test signal generator (NT2X90) or PCM level meter (NT2X96) card trouble can cause TTT problems.

*Note:* The PCM level meter can display wrong noise or loss measurements while the TTT test facilities are active. This procedure refers to *Correcting PCM level meter card problems*.

### Common procedures

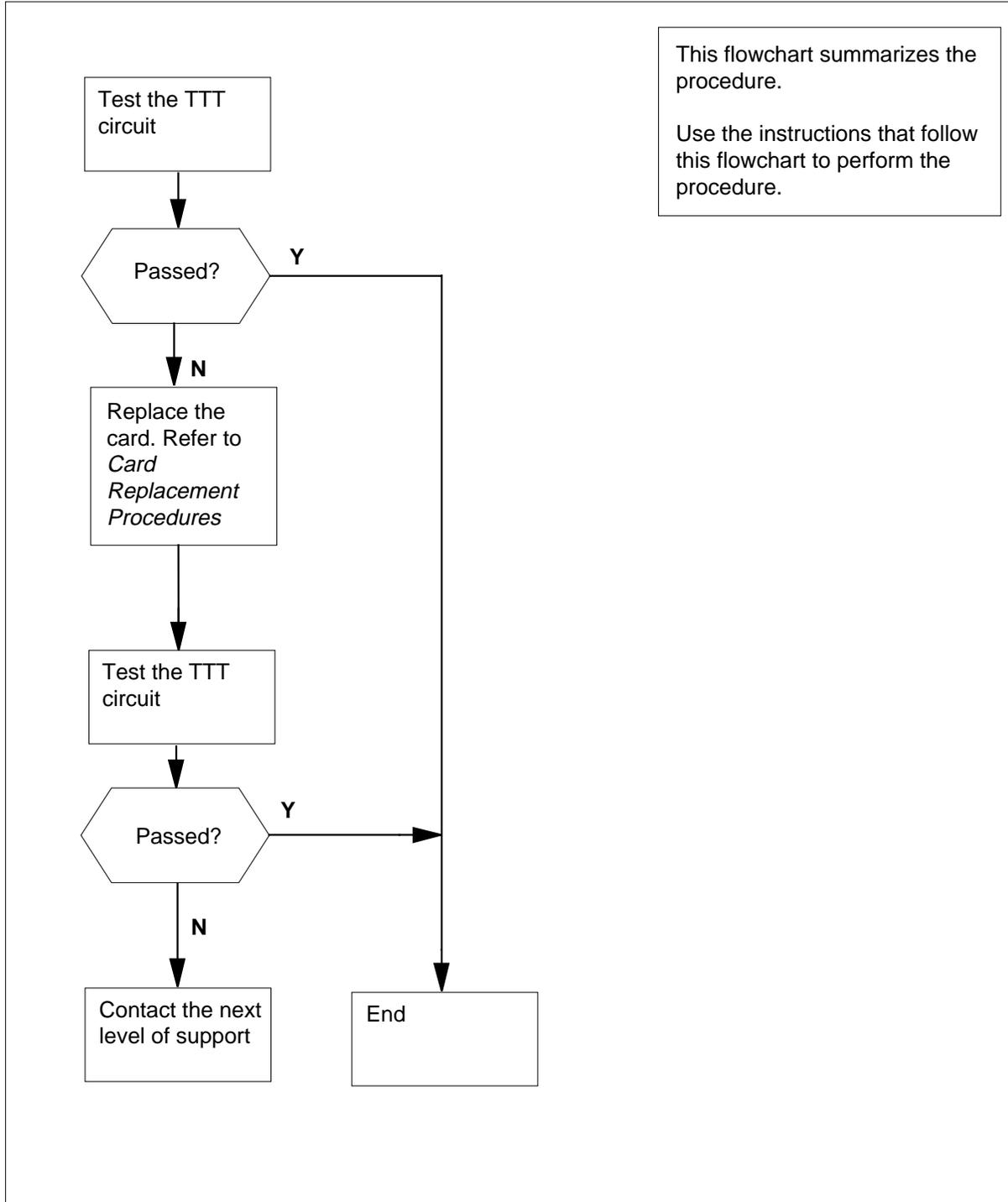
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Correcting transmission test trunk trouble (continued)

### Summary of Correcting transmission test trunk trouble



---

## Correcting transmission test trunk trouble (continued)

---

### Correcting transmission test trunk trouble

#### *At the MAP terminal*

- 1 To access the TTP level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP
```

and press the Enter key.

- 2 To post the damaged TTT circuit, type

```
>POST G clli member_no
```

and press the Enter key.

*where*

**clli**

is the common language location identifier (CLLI) of the TTT(table CLLI)

**member\_no**

is the member number of the damaged TTT (table TRKMEM)

*Example input:*

```
>POST G TTT 0
```

*Example of a MAP response:*

```
POST      8  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE   PM NO.          COM LANG      STA S R
DOT TE    RESULT
OG      MTM    2  2  TTT          0  IDL
```

**Note:** A TTT has a single trunk appearance.

- 3 To manually busy the TTT circuit, type

```
>BSY
```

and press the Enter key.

*Example of a MAP response:*

```
POST      8  DELQ          BUSYQ          DIG
TTP 6-002
CKT TYPE   PM NO.          COM LANG      STA S R  DOT TE
RESULT
OG      MTM    2  2  TTT          0  MB
```

- 4 To seize the TTT circuit, type

```
>SEIZE
```

and press the Enter key.

*Example of a MAP response:*

## Correcting transmission test trunk trouble (continued)

```

POST      8  DELQ          BUSYQ      DIG
TTP 6-002
CKT TYPE      PM NO.      COM LANG      STA S R  DOT TE
RESULT
OG      MTM  2  2  TTT          0  SZD . .
                                P_MB
    
```

- 5 To test the TTT circuit, type

>**TST**

and press the Enter key.

*Example of a MAP response:*

```

TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      TTT      0
    
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 14 |
| fails              | step 6  |

- 6 To replace the NT2X90AA card, perform the procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7 To test the TTT circuit, type

>**TST**

and press the Enter key.

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 14 |
| fails              | step 8  |

- 8 To replace the new NT2X90AA card with the old NT2X90AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT2X90AA and NT2X96AA cards now occupy the MTM shelf.

- 9 To replace the old NT2X96AA card, perform the correct procedure in *Card Replacement Procedures*. Return to this point.

**Note:** A new NT2X96AA card and the old NT2X90AA card now occupy the MTM shelf.

- 10 To test the TTT circuit, type

>**TST**

and press the Enter key.

*Example of a MAP response:*

**Correcting transmission test trunk trouble** (continued)

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      TTT      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 14 |
| fails              | step 11 |

- 11** To replace the old NT2X90AA card with the new NT2X90AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** New NT2X90AA and NT2X96AA cards now occupy the MTM shelf.

- 12** To test the TTT circuit, type

**>TST**

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT      TTT      0
```

| If the TST command | Do      |
|--------------------|---------|
| passes             | step 13 |
| fails              | step 15 |

- 13** To release the TTT circuit, type

**>RLS**

and press the Enter key.

*Example of a MAP response:*

```
POST      8  DELQ          BUSYQ      DIG
TTP 6-002
CKT TYPE   PM NO.          COM LANG   STA S R  DOT TE
RESULT
OG      MTM    2  2  TTT          0  IDL
```

- 14** To return the TTT circuit to service, type

**>RTS**

and press the Enter key.

*Example of a MAP response:*

## Correcting transmission test trunk trouble (end)

---

```
POST      8  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT TE  RESULT
OG          MTM    2  2  TTT          0  SZD  .  .
                                     P_IDL
```

---

| <b>If the TTT circuit</b>  | <b>Do</b> |
|----------------------------|-----------|
| returns to service         | step 16   |
| does not return to service | step 15   |

---

- 15** For additional help, contact the next level of support.
- 16** This procedure is complete.

## Correcting transmission test unit trouble

---

### Application

Use this procedure to correct transmission test unit (TTU) problems.

### Definition

A failure to generate test tones on trunk circuits normally characterizes TTU problems. Defective NT2X47 and NT2X56 cards normally cause these TTU problems.

The TTU provides tests for tones on trunk circuits. The TTU consists of a control processor (CP) card (NT2X47) and a digital filter (DF) card (NT2X56). The TTU has a single trunk appearance. Maintenance trunk modules (MTMs) contain TTUs.

### Common procedures

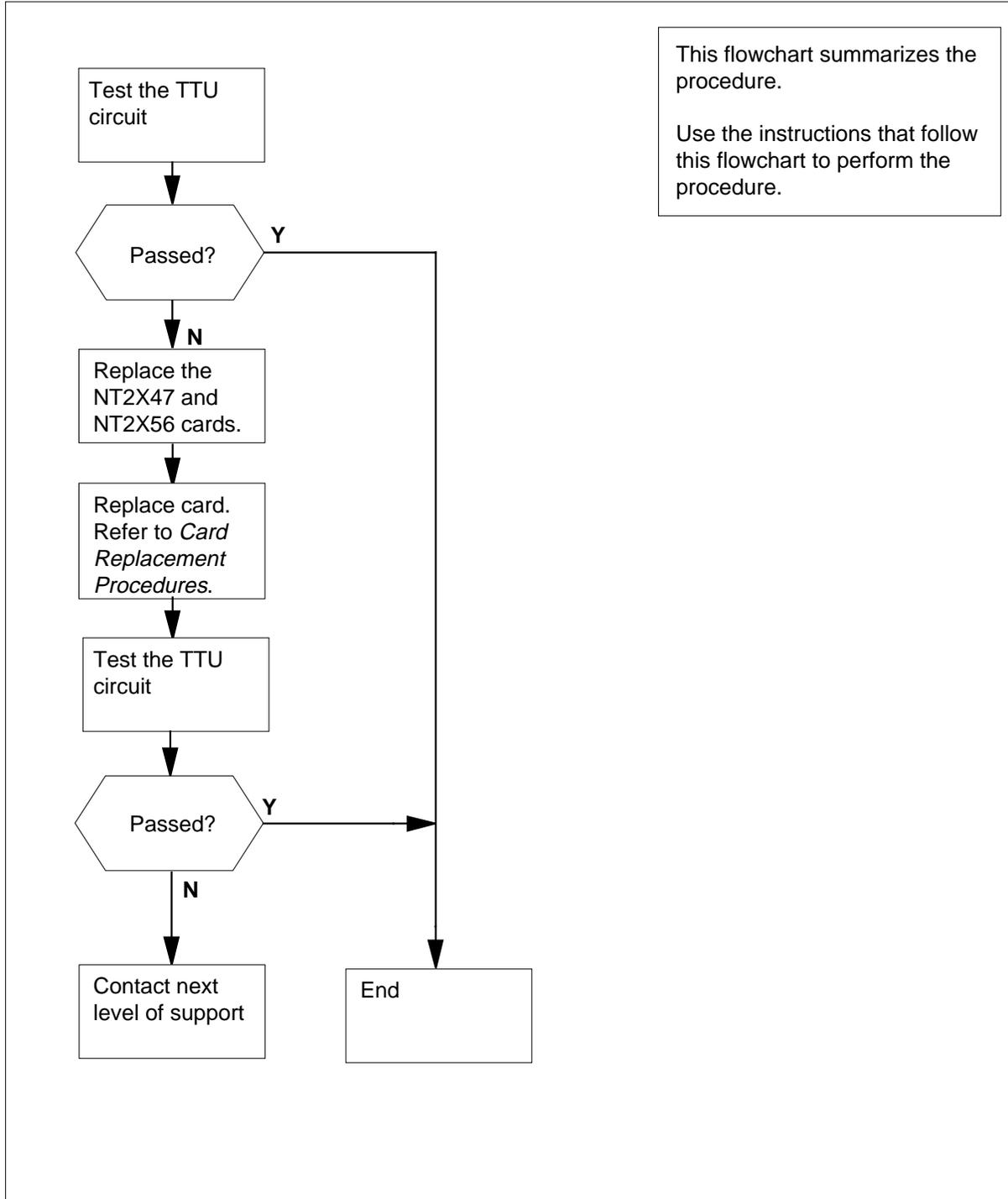
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart as a summary of the procedure. Follow the steps to perform the procedure.

## Correcting transmission test unit trouble (continued)

### Summary of Correcting transmission test unit trouble



---

## Correcting transmission test unit trouble (continued)

---

### Correcting transmission test unit trouble

#### *At the MAP terminal*

- 1 To access the TTP level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP
```

and press the Enter key.

- 2 To post the damaged TTU circuit, type

```
>POST G clli member_no
```

and press the Enter key.

where

**CLLI**

is the common language location identifier (CLLI) of the TTU (table CLLI)

**member\_no**

is the member number of the TTU card (table TRKMEM)

*Example input:*

```
>POST G TTU 0
```

*Example of a MAP response:*

```
POST 8 DELQ BUSYQ DIG
```

```
TTP 6-002
```

```
CKT TYPE PM NO. COM LANG STA S R DOT TE RESULT
```

```
OG MTM 2 2 TTU 0 IDL
```

**Note:** A TTU has a single trunk appearance.

- 3 To manually busy the TTU circuit, type

```
>BSY
```

and press the Enter key.

*Example of a MAP response:*

```
POST 8 DELQ BUSYQ DIG
```

```
TTP 6-002
```

```
CKT TYPE PM NO. COM LANG STA S R DOT TE RESULT
```

```
OG MTM 2 2 TTU 0 MB
```

- 4 To seize the TTU circuit, type

```
>SEIZE
```

and press the Enter key.

*Example of a MAP response:*

```
POST 8 BUSYQ DIG
```

```
TTP 6-002
```

```
CKT TYPE PM NO. COM LANG STA S R DOT TE RESULT
```

```
OG MTM 2 2 TTU 0 SZD . .
```

```
P_MB
```

## Correcting transmission test unit trouble (continued)

- 5 To test the TTU circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

TEST OK  
+ TRK107 JAN09 09:44:57 3400 PASS CKT TTU 0

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 6  |

- 6 To replace the NT2X47AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 7 To test the TTU circuit, type

>TST

and press the Enter key.

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 8  |

- 8 To replace the new NT2X47AA card with the old NT2X47AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** The old NT2X47AA and NT2X56AA cards now occupy the shelf.

- 9 To replace the old NT2X56AA, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT2X56AA and the old NT2X47AA cards now occupy the shelf.

- 10 To test the TTU circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

TEST OK  
\*\*\*+ TRK107 JAN09 09:44:57 3400 PASS CKT TTU 0

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 11 |

---

## Correcting transmission test unit trouble (end)

---

- 11** To replace the old NT2X47AA card with the new NT2X47AA card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

**Note:** A new NT2X47AA card and a new NT2X56AA card now occupy the shelf.

- 12** To test the TTU circuit, type

>TST

and press the Enter key.

*Example of a MAP response:*

```
TEST OK
+ TRK107 JAN09 09:44:57 3400 PASS CKT    TTU  0
```

---

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 14 |

- 13** To return the TTU circuit to service, type

>RTS

and press the Enter key.

*Example of a MAP response:*

```
POST  8 DELQ    BUSYQ    DIG
TTP 6-002
CKT TYPE  PM NO.  COM LANG  STA S R DOT TE RESULT
OG   MTM  2 2  TTU      0 IDL
```

---

| If the TTU circuit        | Do      |
|---------------------------|---------|
| returned to service       | step 15 |
| did not return to service | step 14 |

- 14** For additional help, contact the next level of support.

- 15** The procedure is complete.

## Correcting transmission-level trouble on T1 trunks

---

### Application

Use this procedure to correct transmission (TX) level problems on T1 trunks.

### Definition

TX-level problems are a condition in which measured loss on a trunk circuit differs from the expected value.

TX-level problems on trunk circuits result from

- common carrier problems
- outgoing or two-way trunk circuits that are not padded correctly at the near- or far-end office
- trunk entries that do not match the trunk configuration of your office

### Common procedures

There are no common procedures.

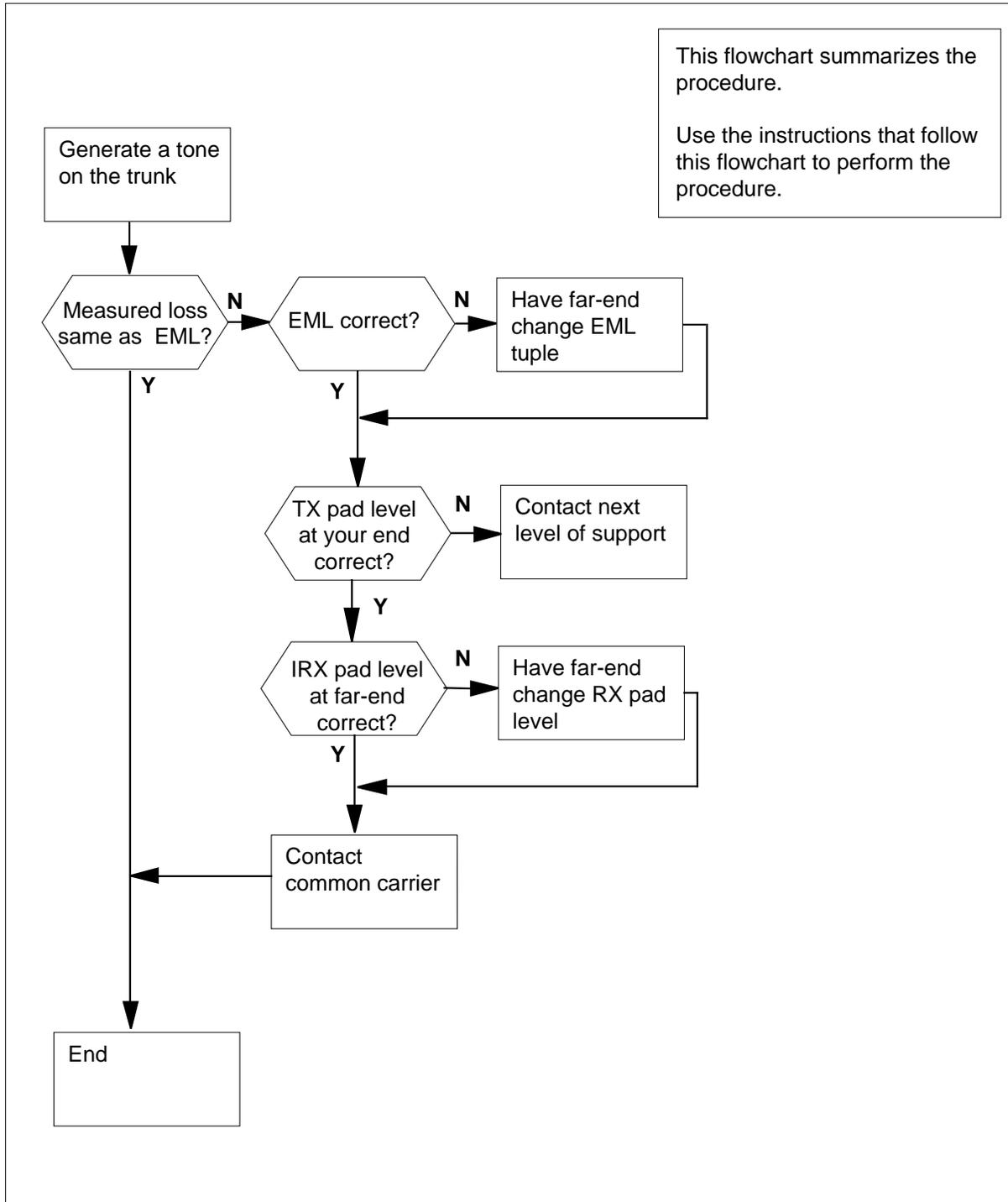
### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

*Note:* This procedure can require help from the office at the far end of the trunk and from the common carrier.

## Correcting transmission-level trouble on T1 trunks (continued)

### Summary of Correcting transmission-level trouble on T1 trunks



---

## Correcting transmission-level trouble on T1 trunks (continued)

---

### Correcting transmission-level trouble on T1 trunks

*At the MAP terminal*

1



**CAUTION**

**Loss of service**

This procedure removes a trunk from service. Perform this procedure during periods of low traffic.

To access the MANUAL level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;MANUAL
```

and press the Enter key.

2

To post the defective trunk circuit, type

```
>POST G clli member_no
```

and press the Enter key.

*where*

**cli**

is the CLLI of the trunk group (table CLLI)

**member\_no**

is the member number of the trunk circuit (table TRKMEM)

*Example input:*

```
>POST G MAID 0
```

*Example of a MAP response:*

```
POST      5  DELQ          BUSYQ          DIG
TTP  6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT
TE  RESULT 2W S7 S7 DTC    1 15 16 MAID          0  IDL
```

```
EML 12.0 DB
PAD PC - TE 3
```

3

If necessary, wait for the circuit to go idle (IDL).

4

To seize the trunk circuit, type

```
>SEIZE
```

and press the Enter key.

*Example of a MAP response:*

**Correcting transmission-level trouble on T1 trunks (continued)**

```

POST      5  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT TE
RESULT      2W          DTC      1 15 16 MAID          0  SZD
P_IDL
    
```

5 Contact the operating company personnel at the far-end office to seize the same trunk circuit.

6 To send a tone on the trunk circuit, type

>**TGEN**

and press the Enter key.

*Example of a MAP response:*

```

POST      5  DELQ          BUSYQ          DIG
TTP      6-002
CKT TYPE      PM NO.          COM LANG      STA S R  DOT
TE RESULT      2W          DTC      1 15 16 MAID          0  SZD . .
MW          0.0          TTT          1
P_IDL
    
```

**Note:** The TGEN command produces a 1004-Hz tone at 0 dBm.

7 Contact the operating company personnel at the far-end office to measure the loss with the LOSS command.

**Note:** At the far-end office, the measured loss appears under the RESULT header. The expected measured loss appears on the right side of the EML header.

| If the loss measurements | Do     |
|--------------------------|--------|
| are 1 db or closer       | step 9 |
| more than 1 db apart     | step 8 |

8 Check office records or trunk circuits in the same group to determine the correct level of the transmission pad (TPAD).

| If the TPAD level | Do      |
|-------------------|---------|
| is correct        | step 9  |
| is wrong          | step 12 |

9 Determine if a common carrier is present between your office and the far-end office.

| If a common carrier | Do      |
|---------------------|---------|
| is present          | step 10 |

## Correcting transmission-level trouble on T1 trunks (end)

---

|           | <b>If a common carrier</b>                                                                        | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------|-----------|
|           | is not present                                                                                    | step 11   |
| <b>10</b> | Ask the operating company personnel for the common carrier if it has transmission-level problems. |           |
| <b>11</b> | To release the circuit, type<br>>RLS<br>and press the Enter key.<br>Go to step 13.                |           |
| <b>12</b> | For additional help, contact the next level of support.                                           |           |
| <b>13</b> | The procedure is complete.                                                                        |           |

## **Determining the D-channel state ISDN PRI primary and backup D-channels**

---

### **Application**

Use this procedure to determine the state of a D-channel. You must determine the state of the D-channel before you decide which problem location and clearing procedure to perform next.

### **Definition**

A D-channel is out of service and the cause is not known. The primary rate interface (PRI) trunk is in the D-channel fail (DFL) state. The system can generate logs ISDN110, ISDN111, or ISDN112 can generate.

Normal activity continues on an in-service D-channel when you address problems on an out-of-service D-channel. This procedure clears problems on the out-of-service D-channel only. If both D-channels are out of service, perform a procedure to clear each D-channel. Start with the condition that affects service the most. The first restored D-channel becomes the primary D-channel and is in service (INS). The second restored D-channel becomes the backup D-channel and is in standby (STB) state.

### **Common procedures**

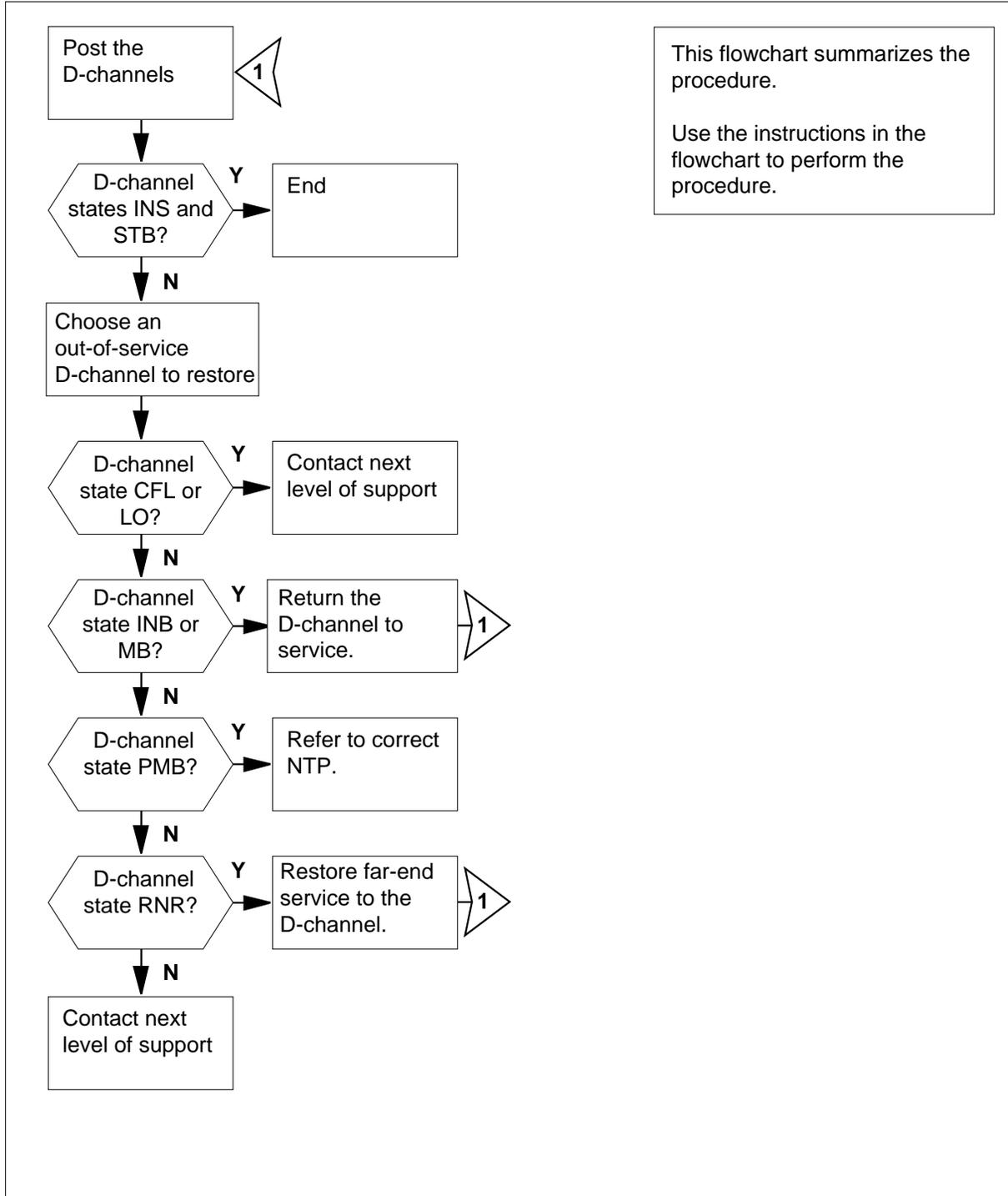
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Determining the D-channel state ISDN PRI primary and backup D-channels (continued)

### Summary of Determining the D-channel state in ISDN PRI primary and backup D-channels



## Determining the D-channel state ISDN PRI primary and backup D-channels (continued)

### Determining the D-channel state

#### At the MAP terminal

1 Determine the name of the trunk group from office records or operating company personnel.

2 To access the PRADCH level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;PRADCH
```

and press the Enter key.

3 To post the D-channels, type

```
>POST GD group_name
```

and press the Enter key.

where

**group\_name**  
is the trunk group name

Example input:

```
>POST GD F5678935PAV
```

and press the Enter key.

Example of a MAP display:

```
POST          DELQ          BUSYQ          DIG
TTP 6-005
CKT TYPE      PM NO          COM LANG          STA S R DOT TE RESULT
2W IS IS      LTC 2 3 24 F5678935PAV D1  INS
                LTC 2 5 24 F5678935PAV D2  MB    R
```

Example of a MAP response:

```
SHORT CLLI IS: F56789
OK,CKT POSTED
```

4 Determine the states of the D-channels.

**Note:** The state of the D-channel is to the right side of the DCHL header on the MAP display.

| If D-channel states                                                              | Do      |
|----------------------------------------------------------------------------------|---------|
| are INS (in service) for one D-channel and STB (standby) for the other D-channel | step 10 |
| are INS for one D-channel and the other D-channel is not STB                     | step 5  |
| are not INS                                                                      | step 5  |

## Determining the D-channel state

### ISDN PRI primary and backup D-channels (end)

- 5 Choose an out-of-service D-channel to restore. Record the identifier (D1 or D2).

**Note 1:** Do not choose an in-service or standby channel to clear. In service (INS) is the normal state for primary D-channels. Standby (STB) is the normal state for backup D-channels. The STB state is only for a backup D-channel when the primary D-channel is INS.

**Note 2:** You must use the same identifier (D1 or D2) for all procedures and steps used to clear the chosen D-channel. The identifier is under the LANG header on the MAP display.

**Note 3:** When both D-channels are out of service, restore each channel separately. The first restored D-channel becomes the primary and goes into the INS state. The second restored D-channel becomes the backup and goes into the STB state.

| If state of the D-channel       | Do     |
|---------------------------------|--------|
| is CFL (carrier fail)           | step 9 |
| is INB (installation busy)      | step 6 |
| is LO (lock out)                | step 9 |
| is MB (manual busy)             | step 6 |
| is PMB (peripheral manual busy) | step 8 |
| is RNR (remote not responding)  | step 7 |
| is other than above             | step 9 |

- 6 Perform the procedure *ISDN PRI primary and backup channels Returning a busy D-channel to service* in this document. Do not return to this procedure.
- 7 Perform the procedure *ISDN PRI primary and backup channels Restoring far-end service for a D-channel* in this document. Do not return to this procedure.
- 8 To isolate and correct the problem, perform the correct procedure in *Alarm Clearing and Performance Monitoring Procedures*. Do not return to this procedure.
- 9 For additional help, contact the next level of support.
- 10 The procedure is complete.

## **Determining the D-channel state ISDN PRI single D-channel**

---

### **Application**

Use this procedure to determine the state of a D-channel. You must determine the state of the D-channel before you decide which problem location and clearing procedure to perform next.

### **Definition**

A D-channel is out of service and the cause is not known. The primary rate interface (PRI) trunk is in the D-channel fail (DFL) state.

### **Common procedures**

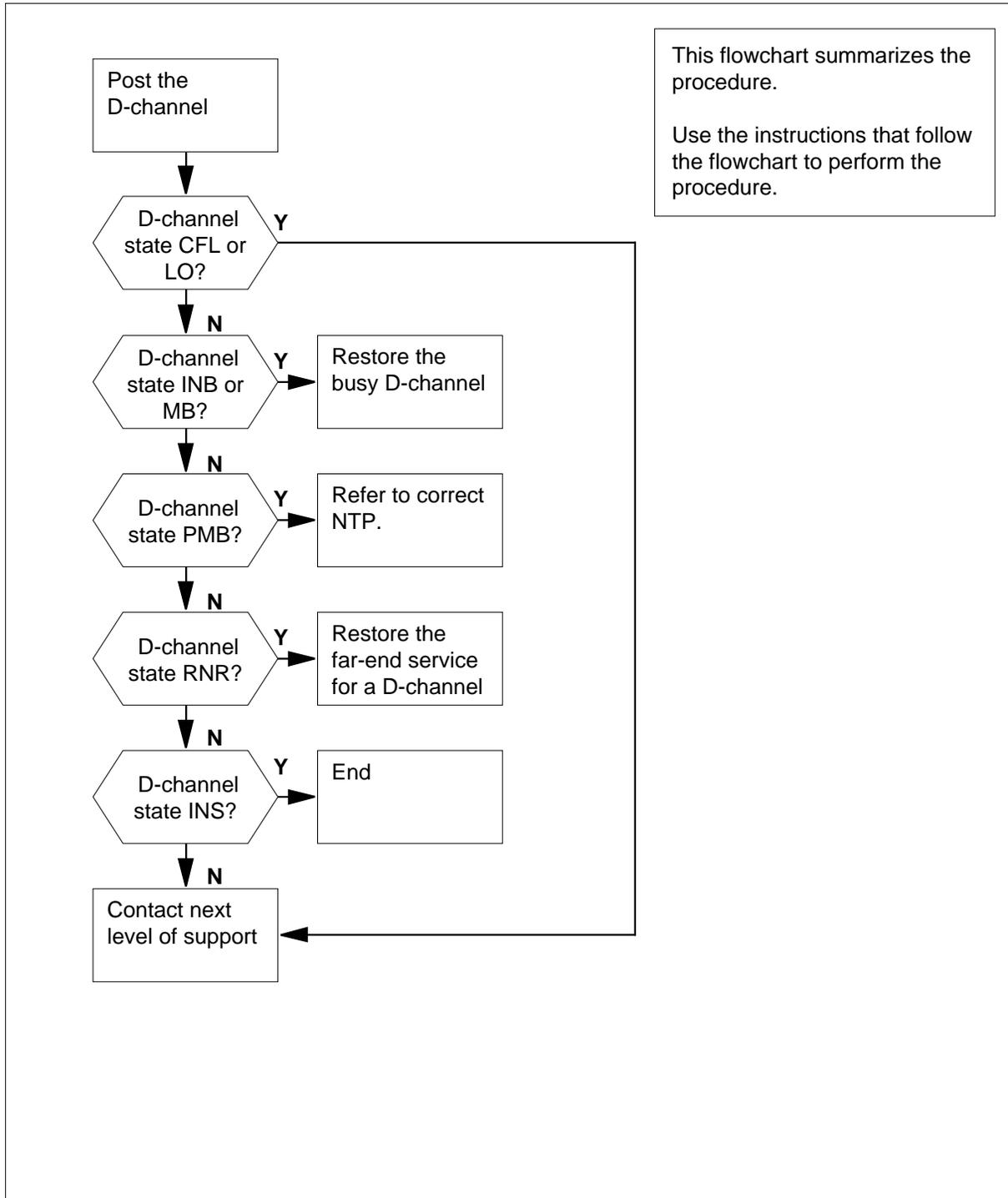
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Determining the D-channel state ISDN PRI single D-channel (continued)

### Summary of Determining the D-channel state in an ISDN PRI single D-channel



## Determining the D-channel state ISDN PRI single D-channel (continued)

### Determining the D-channel state

#### At the MAP terminal

- 1 Determine the name of the trunk group from office records or operating company personnel.
- 2 To access the PRADCH level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH**  
 and press the Enter key.
- 3 To post the D-channel, type  
**>POST GD group\_name**  
 and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

**>POST GD F9876035PRAPRV**

Example of a MAP display:

```

POST          DELQ          BUSYQ          DIG
TTP  6-005
CKT TYPE    PM NO          COM LANG          STA S R DOT TE RESULT
2W IS IS DTCI 2 3 24 F9876035PRAPRV DCHL          MB   R
    
```

Example of a MAP response:

```

LAST CKT 3 24
POSTED CKT IDLED
SHORT CLLI IS: F98760
OK,CKT POSTED
    
```

- 4 Determine the state of the D-channel.  
**Note:** The state of the D-channel is to the right side of the DCHL header on the MAP.

| If the D-channel state     | Do     |
|----------------------------|--------|
| is CFL (carrier fail)      | step 8 |
| is INB (installation busy) | step 5 |
| is INS (in service)        | step 9 |
| is LO (lock out)           | step 8 |
| is MB (manual busy)        | step 5 |

## Determining the D-channel state ISDN PRI single D-channel (end)

---

|          | <b>If the D-channel state</b>                                                                                                                       | <b>Do</b> |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|          | is PMB (peripheral manual busy)                                                                                                                     | step 7    |
|          | is RNR (remote does not answer)                                                                                                                     | step 6    |
|          | is other than listed here                                                                                                                           | step 8    |
| <b>5</b> | Perform the procedure <i>ISDN PRI single D-channel Returning a busy D-channel to service</i> in this document. Do not return to this procedure.     |           |
| <b>6</b> | Perform the procedure <i>ISDN PRI single D-channel Restoring far-end service for a D-channel</i> in this document. Do not return to this procedure. |           |
| <b>7</b> | Perform the procedure in <i>Alarm Clearing and Performance Monitoring Procedures</i> . Do not return to this procedure.                             |           |
| <b>8</b> | For additional help, contact the next level of support.                                                                                             |           |
| <b>9</b> | The procedure is complete.                                                                                                                          |           |

## Determining the line state

### Application

Use this procedure to determine the line state.

### Definition

The following table lists and describes the ISDN BRI line and channel states.

#### Summary of line and special connection states (Sheet 1 of 3)

| State | Description                                                                                                                                                                                                                                                                              |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ***   | <p><i>Invalid state</i></p> <p>The connection type and status in table SPECCONN do not correspond.</p>                                                                                                                                                                                   |
| CMB   | <p><i>Connection PM busy</i></p> <p>You cannot use the SPECCONN channel because one of the PMs in the connection is busy (BSY).</p>                                                                                                                                                      |
| CMT   | <p><i>Connection in maintenance</i></p> <p>You cannot use the SPECCONN channel because it is under maintenance.</p>                                                                                                                                                                      |
| CNA   | <p><i>Connection not available</i></p> <p>The SPECCONN channel contains data, but a request to the peripheral module to set the connection fails.</p>                                                                                                                                    |
| CON   | <p><i>Connection connected</i></p> <p>The SPECCONN channel connects and can handle traffic.</p>                                                                                                                                                                                          |
| CPB   | <p><i>Call processing busy</i></p> <p>The system is processing one of the following:</p> <ul style="list-style-type: none"> <li>• circuit-switched calls</li> <li>• DMS packet handler (PH) packet-switched calls</li> <li>• ISDN line with a permanent virtual circuit (PVC)</li> </ul> |
| CPD   | <p><i>Call processing deload</i></p> <p>The system is processing the circuit-switched calls or DMS PH packet-switched calls. The system waits for manual maintenance.</p>                                                                                                                |

## Determining the line state (continued)

### Summary of line and special connection states (Sheet 2 of 3)

| State              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CUT                | <p><i>Cutoff</i></p> <p>The cut-off relay starts, and cuts the ISDN line card off from the subscriber.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| DEL                | <p><i>Deloaded</i></p> <p>A request to manually busy the channel from the CPD state. Between CPB and MB (manual busy) is the DEL state. A request to manual-busy issues for circuit-switched calls or DMS PH packet-switched calls.</p>                                                                                                                                                                                                                                                                                                                                |
| DMB                | <p><i>D-channel maintenance busy</i></p> <p>The path between the DCH or EDCH card and the ISDN line does not work for one of the following reasons:</p> <ul style="list-style-type: none"> <li>• The DCH or EDCH is out of service.</li> <li>• The ISG channel is out of service.</li> <li>• The LCME link has defects.</li> <li>• The connection between the DCH or EDCH and the ISDN line card does not connect or is not active.</li> <li>• The DMB lines, which also babble and register as incoming message overload (ICMO), have the I fail flag set.</li> </ul> |
| DMB(inverse video) | <p><i>D-channel maintenance busy</i></p> <p>The path between the DCH or EDCH card and the ISDN line does not work for one of the following reasons:</p> <ul style="list-style-type: none"> <li>• A DCH babbler is busying the ISDN line. You cannot use the line for call processing.</li> <li>• The ISDN line can report as an ICMO line. The I fail flag represents the DCH and ICMO conditions or the DCH condition.</li> </ul>                                                                                                                                     |
| IDL                | <p><i>Idle</i></p> <p>Customers can use circuit-switched and packet-data services</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Determining the line state** (continued)

**Summary of line and special connection states (Sheet 3 of 3)**

| <b>State</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INB          | <p><i>Installation busy</i></p> <p>The ISDN line is out of service for one of the following reasons:</p> <ul style="list-style-type: none"> <li>• The line data is not in tables.</li> <li>• The BSY INB command sets the line to INB.</li> </ul>                                                                                                                                                                                               |
| LMB          | <p><i>Line module busy</i></p> <p>The LCME, LCME drawer, or LGC is out of service.</p>                                                                                                                                                                                                                                                                                                                                                          |
| LO           | <p><i>Lock out</i></p> <p>The ISDN line card and the NT1 lose synchronization. Lockout does not apply to the S/T-line card.</p>                                                                                                                                                                                                                                                                                                                 |
| MB           | <p><i>Manual busy</i></p> <p>Maintenance activity occurs. For example, an operator at a line test position (LTP) performs tests on the line, or the BSY command sets the line to MB.</p>                                                                                                                                                                                                                                                        |
| NEQ          | <p><i>Not equipped</i></p> <p>Table LNINV does not contain this line.</p>                                                                                                                                                                                                                                                                                                                                                                       |
| PSU          | <p><i>Packet service unavailable</i></p> <p>D-channel or B-channel access to the DMS PH is not available.</p>                                                                                                                                                                                                                                                                                                                                   |
| SB           | <p><i>System busy</i></p> <p>SB allows an ISDN line to leave service for a time. Later, the line enters service automatically. You cannot use the line for call processing. When the lines cannot return to service (RTS), they remain SB until the next RTS attempt. Lines in the SB state can enter the MB state through the FRLS or BSY command. The I fail flag indicates the line waits for a return to service by the babblers audit.</p> |

## Determining the line state (continued)

---

The following table lists and describes the ISDN BRI fail flags. Line quality problems require a bit error rate test (BERT).

### Summary of fail flags (Sheet 1 of 2)

| Flag | Description                                                                                                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D    | The line failed extended or fast diagnostics.                                                                                                                                                                                                                |
| F    | A facility fault caused an extended diagnostic to fail.                                                                                                                                                                                                      |
| I    | An incoming message overload (layer 1 messages that were not planned) major failure for the line is present. The line has had at least one diagnostic. An I flag and a line state of DMB (inverse video) indicate a DCH message overload.                    |
| i    | The line has a minor failure for an incoming message overload. The line waits to enter the ICMO queue for diagnostics.                                                                                                                                       |
| L    | CKTTST failure is present at the line card.                                                                                                                                                                                                                  |
| l    | CKTTST failure is present at the set.                                                                                                                                                                                                                        |
| M    | The system lacks an ISDN line card.                                                                                                                                                                                                                          |
| m    | The system lacks an NT1.                                                                                                                                                                                                                                     |
| N    | After a previous diagnostic failure, a passed LC diagnostic needs an extended diagnostic.                                                                                                                                                                    |
| P    | Line performance decreases. A line quality problem is present.                                                                                                                                                                                               |
| Q    | The system detected a defect, and <ul style="list-style-type: none"><li>• the system scheduled an in-service diagnostic</li><li>• the line is in the shower queue, or</li><li>• the line is in a diagnostic queue for an incoming message overflow</li></ul> |

**Determining the line state** (continued)

**Summary of fail flags (Sheet 2 of 2)**

| Flag | Description                                                                                                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S    | <p>A failed short in-service diagnostic is present in the following;</p> <ul style="list-style-type: none"> <li>• the shower queue</li> <li>• the DIAG command with the INS parameter, or</li> <li>• the automatic line test (ALT).</li> </ul> <p>The system generates a log when the failure occurs.</p> |
| U    | <p>A utility card fails. The failure applies to the 2B1Q line card in the LCME. The point-of-use power supply fails.</p>                                                                                                                                                                                  |

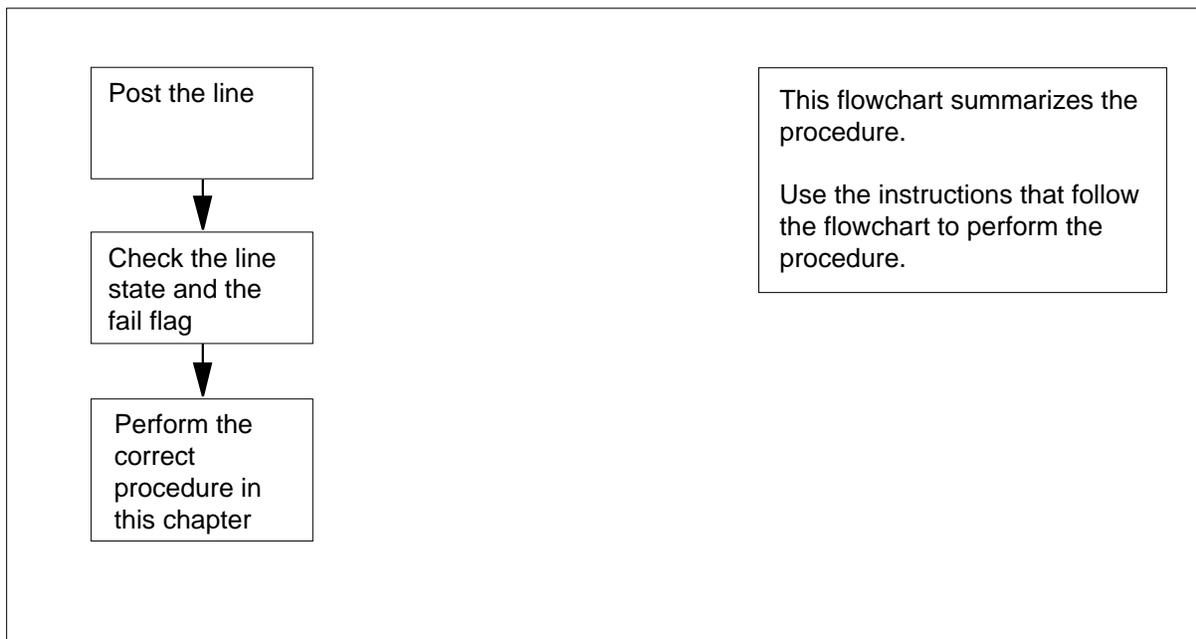
**Common procedures**

There are no common procedures.

**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Summary of Determining the line state**



## Determining the line state (continued)

---

### Determining the line state

#### At the MAP terminal

- 1 To access the LTP level of the MAP display, type

>MAPCI ;MTC ;LNS ;LTP

And press the Enter key.

- 2 To post the line, type

>POST D dn

and type the Enter key.

where

**dn**

is the directory number

*Example of a MAP display:*

LCC PTY RNG .

STA F/S LTA TE RESULTISDN LOOP HOST 67 1 15 06 DN 7428118 IDL

- 3 Determine the state of the line and the fail flag.

| If the line state         | Do      |
|---------------------------|---------|
| is CPB                    | step 4  |
| is CPD                    | step 5  |
| is CUT                    | step 6  |
| is DEL                    | step 7  |
| is DMB                    | step 8  |
| is IDL                    | step 9  |
| is INB                    | step 10 |
| is LMB                    | step 11 |
| is LO                     | step 12 |
| is MB                     | step 13 |
| is PSU                    | step 14 |
| is other than listed here | step 15 |

- 4 Perform the procedure *Line state is Call processing busy (CPB)*. Do not return to this procedure.

- 5 Wait until the line state changes to MB. Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.

- 6 Perform the procedure *Line state is Cut (CUT)*. Do not return to this procedure.

---

## Determining the line state (end)

---

- 7 Wait until the line state changes to MB. Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 8 Perform the procedure *Line state is D-channel maintenance busy (DMB)*. Do not return to this procedure.
- 9 Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 10 Perform the procedure *Line state is Installation busy (INB.)* Do not return to this procedure.
- 11 Perform the procedure *Line state is Line module busy (LMB)*. Do not return to this procedure.
- 12 Perform the procedure *Line state is Lock out (LO)*. Do not return to this procedure.
- 13 Perform the procedure *Line state is Maintenance busy (MB)*. Do not return to this procedure.
- 14 Perform the procedure *Line state is Packet service unavailable (PSU)*. Do not return to this procedure.
- 15 For additional help, contact the next level of support.

## Determining the location of the problem

---

### Application

Use this procedure to determine if a problem is inside or outside the central office (CO).

### Definition

Problems can occur in any of the three components that follow:

- DMS-100
- data link
- customer premises equipment

This procedure helps CO personnel determine if the problem is present inside or outside the CO. The CO personnel trace the location of the problem through the communications interface between the DMS switch and the host computer. This procedure has three subprocedures to check physical connections. Perform the subprocedures in order:

- Check for an input/output device (IOD) alarm.
- Check the CO data unit or modem.
- Check for disconnected cables.

If the problem is inside the CO, follow these subprocedures to determine and correct the problem.

The procedure has two subprocedures that deal with connections at the host:

- Verify the session is logged on.
- Perform a continuity test for a switch-computer application interface (SCAI).

If the fault is outside the CO, there can be other indications of a problem. The SCAI200 log or a customer complaint can be indications of a problem. Refer to the procedure to clear the SCAI link.

### Common procedures

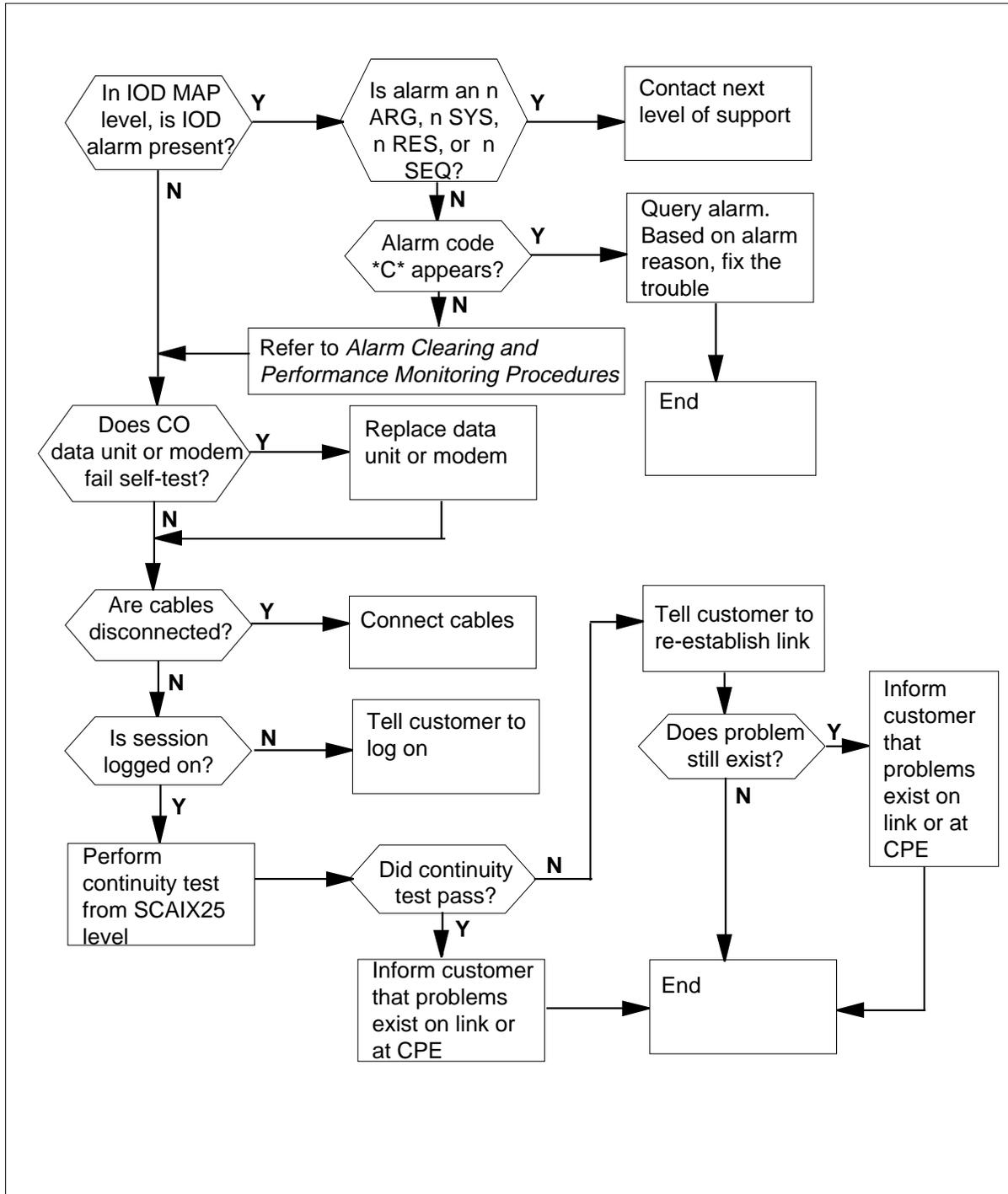
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Determining the location of the problem (continued)

### Summary of Determining the location of the problem



## Determining the location of the problem (continued)

### Determining the location of the problem

#### At the MAP terminal

- 1 To access the IOD menu at the MAP terminal, type  
`>MAPCI ;MTC ; IOD`  
 and press the Enter key.
- 2 To check for an IOD alarm, look for an alarm code under the IOD subsystem header.

*Example of a MAP display:*

```
CC  MS  IOD   Net  PM  CCS  Lns  Trks  Ext
.  .  .      .   .   .   .   .   .
```

| If                    | Do      |
|-----------------------|---------|
| a dot (.) appears     | step 19 |
| an alarm code appears | step 3  |

- 3 Identify the alarm code under the IOD subsystem header.

*Example of a MAP display:*

```
CC  MS  IOD   Net  PM  CCS  Lns  Trks  Ext
.  .  n ARG   .   .   .   .   .   .
      M
```

| If an alarm code                      | Do                                                                                                                                                                                                                                                      |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| n ARG, n SYS, n RES, or n SEQ appears | step 32 Note: When another user attempts to log in on the same X.25 link, an ARG alarm appears and clears itself in a few seconds. Contact the next level of support if the ARG alarm is permanent. If the ARG alarm appears temporarily, go to step19. |
| other than those listed here appears  | Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> for the procedure to clear the alarm. Clear the alarm, and go to step19.                                                                                                           |
| *C* appears                           | step 4                                                                                                                                                                                                                                                  |

---

## Determining the location of the problem (continued)

---

- 4 At the IOD level, display the multi-protocol controllers (MPCs) to determine where the problem originates. To display the MPCs, type

>LISTDEV MPC

and press the Enter key.

Observe the STATUS column.

*Example of a MAP display:*

| MPC | USER   | STATUS | IOC | CARD | PORT |
|-----|--------|--------|-----|------|------|
| 1   | System | Ready  | 0   | 3    | 0    |
| 2   | System | Ready  | 1   | 7    | 0    |
| 3   | System | SysB   | 2   | 8    | 0    |

- 5 To access the SCAIX25 MAP level, type

>SCAIX25

and press the Enter key.

- 6 To query the alarms, type

>QUERY ALARM

and press the Enter key.

*Example of a MAP display:*

| Severity | M L C | Remote_DNA | Reason         |
|----------|-------|------------|----------------|
| CRIT     | 0 2 1 | 01208097   | DMS LVL3 reset |

- 7 Check the text in the Reason field. The MAP display states the SCAI link is clear or states a reason for a problem.

---

| If the reason displayed   | Do      |
|---------------------------|---------|
| is SCAI application clear | step 19 |
| is Host call cleared      | step 24 |
| is Host LVL3 reset        | step 24 |
| is DMS LVL3 reset         | step 8  |
| is MPC SysBusied          | step 8  |
| is MPC link reset         | step 8  |

---

- 8 To exit the SCAIX25 MAP level, type

>QUIT

and press the Enter key.

- 9 To post the MPC for the problem determined in step 4, type

>IOC n;CARD y

and press the Enter key.

## Determining the location of the problem (continued)

*where*

**n**  
is the number of the IOC for the problem

**y**  
is the number of the MPC card. In step 4, the system assigns CARD 8.

**10** Locate the download file for the MPC.

**11** Busy all equipped links for the MPC.

**a** To busy the link if the link is SysBsy, type

**>BSY LINK n**

and press the Enter key.

*where*

**n**  
is the link number

**b** To busy the link if the system enabled the link (communication is active on the link), type

**>BSY LINK n FORCE**

and press the Enter key.

*where*

**n**  
is the link number

*Example of a MAP display:*

TYPE YES TO VERIFY FORCE, NO TO CANCEL COMMAND  
Please confirm ("Yes" or "No"):

**12** Enter YES to verify the FORCE.

**13** To busy the MPC, type

**>BSY**

and press the Enter key.

**14** To test the MPC, type

**>TST**

and press the Enter key.

| <b>If the test</b>    | <b>Do</b> |
|-----------------------|-----------|
| passed                | step 16   |
| failed                | step 15   |
| indicated C-side busy | step 33   |

**15** Perform the correct procedure in *Card Replacement Procedures* to replace the MPC card. Return to this point.

---

**Determining the location of the problem** (continued)

---

- 16** To return the MPC to service, type  
**>RTS**  
 and press the Enter key.
- 17** To return each MPC link on service, type (for each link)  
**>RTS LINK link#**  
 and press the Enter key.  
*where*  
     **link#**  
         is the link number you return to service
- 18** Check the alarm display.

---

| <b>If the link</b> | <b>Do</b> |
|--------------------|-----------|
| is cleared         | step 19   |
| is not cleared     | step 33   |

***At the IOD shelf***

- 19** To verify the operation of the CO data unit, perform a self-test on the NT4X25 data unit.  
 Lift the flip-flop lid of the data unit. Toggle the self-test/normal option switch to the self-test position and back to the normal position.  
 You will hear a short beep. After a short delay, all LEDs on the data unit will illuminate for approximately four seconds.  
 If the directory number LEDs flash, the system indicates a self-test failure.  
 You will hear a short beep. All LEDs turn off except the power LED.
- 
- | <b>If the CO data unit</b> | <b>Do</b> |
|----------------------------|-----------|
| fails the self-test        | step 20   |
| passes the self-test       | step 21   |
- 20** Replace the data unit with a new data unit.
- 21** Check for disconnected cables between the MPC circuit pack and the data unit or modem. Also check between the data unit or modem and the jack.  
 The 32-pin connector of the cable connects to port 2 or port 3 of the MPC circuit pack.  
 The 25-pin connector of the cable connects to the data unit or modem.

## Determining the location of the problem (continued)

The data unit or modem connects to the jack by a cable with RJ11 connectors. If the connect light on the data unit flashes, the data unit is bad or you must connect the cable.

| <b>If</b>                           | <b>Do</b> |
|-------------------------------------|-----------|
| you find disconnected cables        | step 22   |
| you do not find disconnected cables | step 24   |

**22** Connect the disconnected cables.

**23** Go to step 34.

### ***At the MAP terminal***

**24** The problem is not in the CO.

To access the IOD MAP level at the MAP terminal, type

**>MAPCI ;MTC ;IOD**

and press the Enter key.

**25** To post the MPC, type

**>IOC n ;CARD y**

and press the Enter key.

*where*

**n**

is the number of the IOC for the problem

**y**

is the number of the MPC card. In step 4, the system assigns CARD 8.

**26** Determine if the session is logged on. "L" indicates the session is logged on.

| <b>If the session</b> | <b>Do</b> |
|-----------------------|-----------|
| is logged on          | step 29   |
| is not logged on      | step 27   |

**27** Inform the subscriber the session is not logged on. The subscriber must log on to clear the problem.

**28** Go to step 34.

**29** To access the SCAIX25 MAP level at the MAP terminal, type

**>SCAIX25**

and press the Enter key.

**30** To perform a SCAI continuity test, type

**>SCAITEST**

---

**Determining the location of the problem (end)**

---

and press the Enter key.

|           | <b>If the test</b>                                                                                                               | <b>Do</b> |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed                                                                                                                           | step 31   |
|           | passed                                                                                                                           | step 32   |
| <b>31</b> | Tell the subscriber to establish the link again and to log on.                                                                   |           |
|           | <b>If the problem</b>                                                                                                            | <b>Do</b> |
|           | stops                                                                                                                            | step 34   |
|           | continues                                                                                                                        | step 32   |
| <b>32</b> | Inform operating company personnel a problem is present in the data link outside the CO or with the customer premises equipment. |           |
| <b>33</b> | For additional help, contact the next level of support.                                                                          |           |
| <b>34</b> | The procedure is complete.                                                                                                       |           |

## Determining the location of problems (ACDMIS, NACD, MACD)

---

### Application

Use this procedure to find problems in:

- automatic call distribution management information system (ACDMIS)
- network automatic call distribution (NACD)
- meridian automatic call distribution (MACD)

Use this procedure to determine if the problem is at the central office (CO) or outside the CO. This procedure applies to ACDMIS, NACD, and MACD with CompuCALL Option. This procedure does not apply to Base automatic call distribution (ACD).

### Definition

Problems occur in three components:

- DMS-100 switch
- data link
- customer premises equipment (CPE)

The procedure in this section helps CO personnel determine if a problem exists inside or outside the CO. The procedure traces the communication interface between the DMS switch and the CO. Perform the three subprocedures in order:

- check for an input/output device (IOD) alarm
- check the CO data unit/modem
- check for disconnected cables

If the problem is at the CO, follow these subprocedures to reveal and correct the problem.

CO maintenance personnel must contact the correct operating company personnel if the problem is outside the CO. Inform the operating company personnel that a problem exists with the data link or the CPE.

### Common procedures

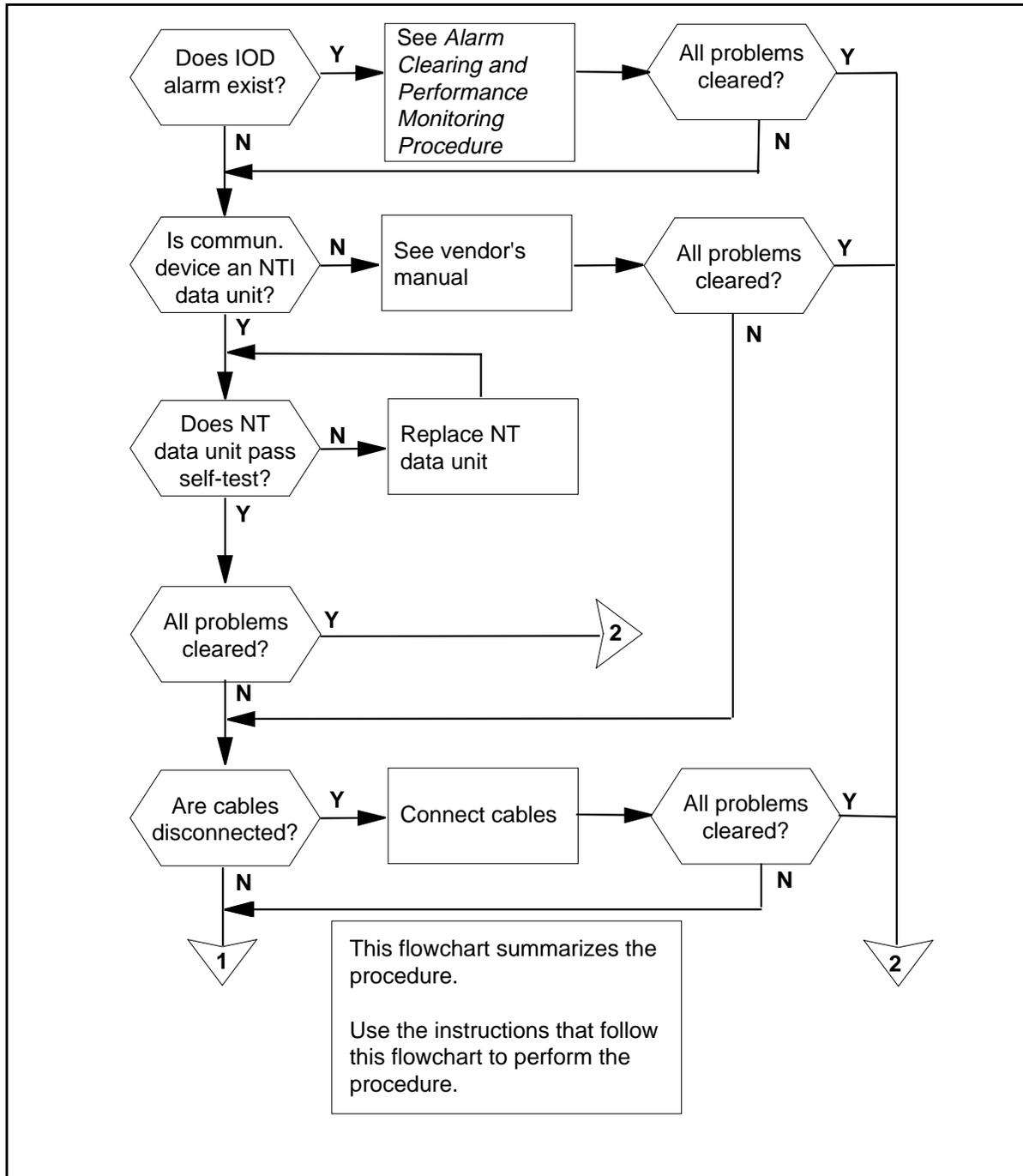
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

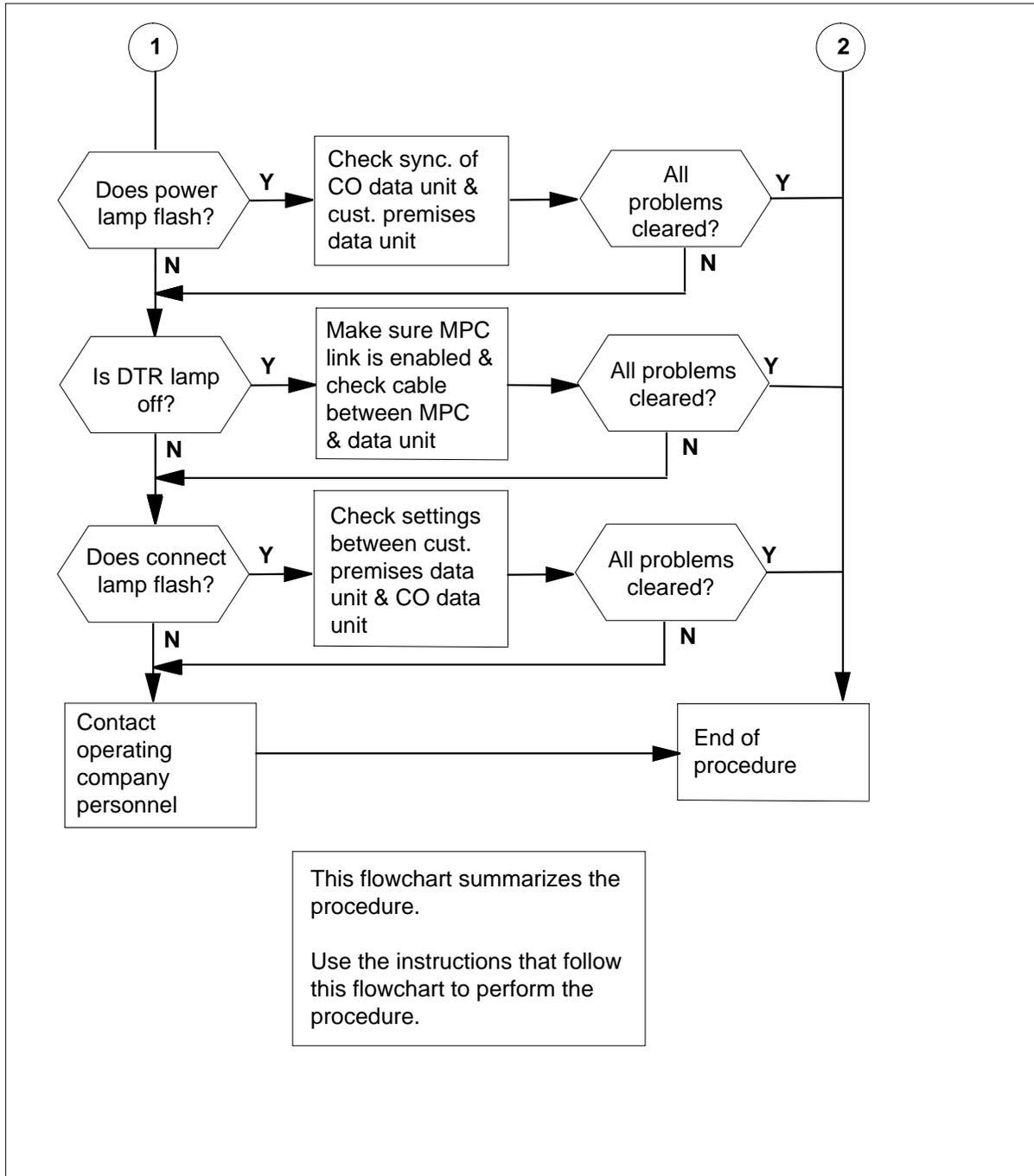
## Determining the location of problems (ACDMIS, NACD, MACD)

### Summary of Determining location of trouble



## Determining the location of problems (ACDMIS, NACD, MACD)

### Summary of Determining location of trouble (continued)



## Determining the location of problems (ACDMIS, NACD, MACD)

### Determining location of trouble

#### At the MAP terminal:

- 1 To access the IOD menu at a maintenance and administration position (MAP), type  
**>MAPCI ;MTC ;IOD**  
 and press the Enter key.
- 2 To check for an IOD alarm, look for an alarm code under the IOD subsystem header.

Example of a MAP display:

| CM | MS | IOD | Net | PM | CCS | LnS | Trks | Ext | APPL |
|----|----|-----|-----|----|-----|-----|------|-----|------|
| .  | .  | .   | .   | .  | .   | .   | .    | .   | .    |

| If under the IOD subsystem header | Do |
|-----------------------------------|----|
|-----------------------------------|----|

|                                                                                                                           |        |
|---------------------------------------------------------------------------------------------------------------------------|--------|
| a alarm code appears under the IOD subsystem header. Possible alarm codes are: ARG, RES, SEQ, SYS, NOP, MPCOS, and IOCOS. | step 3 |
|---------------------------------------------------------------------------------------------------------------------------|--------|

|                                                                                                                                                            |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| a dot (.) appears under the IOD subsystem header. A fault is not present with the network operations protocol (NOP) or the multiprotocol controller (MPC). | step 5 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|

- 3 Refer to *Alarm Clearing and Performance Monitoring Procedures* to clear alarms. Complete the procedure and return to this point.
- 4 Contact the customer premises to determine if the premises received data .

| If customer premises | Do |
|----------------------|----|
|----------------------|----|

|                                                    |        |
|----------------------------------------------------|--------|
| do not receive data, or other problems are present | step 5 |
|----------------------------------------------------|--------|

|                                                 |         |
|-------------------------------------------------|---------|
| receive data and other problems are not present | step 18 |
|-------------------------------------------------|---------|

- 5 Check the communication device to determine if the device is an NT data unit.

| If the communication device | Do |
|-----------------------------|----|
|-----------------------------|----|

|                        |        |
|------------------------|--------|
| is not an NT data unit | step 6 |
|------------------------|--------|

---

## Determining the location of problems (ACDMIS, NACD, MACD)

---

|          |                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|          | <b>If the communication device</b>                                                                                                                                                                                                                                                                                                                                                                                      | <b>Do</b> |
|          | is an NT data unit                                                                                                                                                                                                                                                                                                                                                                                                      | step 7    |
| <b>6</b> | Check the vendor manual for the communication device. Follow the instructions to test, repair, or replace the communication device.                                                                                                                                                                                                                                                                                     |           |
|          | <b>If customer premises</b>                                                                                                                                                                                                                                                                                                                                                                                             | <b>Do</b> |
|          | do not receive data                                                                                                                                                                                                                                                                                                                                                                                                     | step 9    |
|          | receive data                                                                                                                                                                                                                                                                                                                                                                                                            | step 18   |
| <b>7</b> | To verify the operation of the data unit for the CO NT4X25 Meridian, perform a self-test.<br>Lift the cover of the data unit. Toggle the self-test/normal option switch to the self-test position and back to the normal position.<br>A short beep sounds.<br>All panel lamps illuminate on the face of the data unit. The lamps illuminate for approximately four seconds, or until you turn OFF the self-test switch. |           |
|          | <b>If the CO data unit</b>                                                                                                                                                                                                                                                                                                                                                                                              | <b>Do</b> |
|          | fails the self-test, all panel lamps flash, except power, under test, and the lamps that indicate the source of the failure. Speed call, automatic dial, resource, and directory number (DN) are the lamps that indicate the source of failure. A long tone sounds after the test.                                                                                                                                      | step 8    |
|          | passes the self-test, a short beep sounds. All panel lamps turn OFF, except power and under test. The data unit returns to normal operation. Other problems are present.                                                                                                                                                                                                                                                | step 9    |
|          | passes the self-test, a short beep sounds. All panel lamps turn OFF, except power and under test. The data unit returns to normal operation. Other problems are not present.                                                                                                                                                                                                                                            | step 18   |

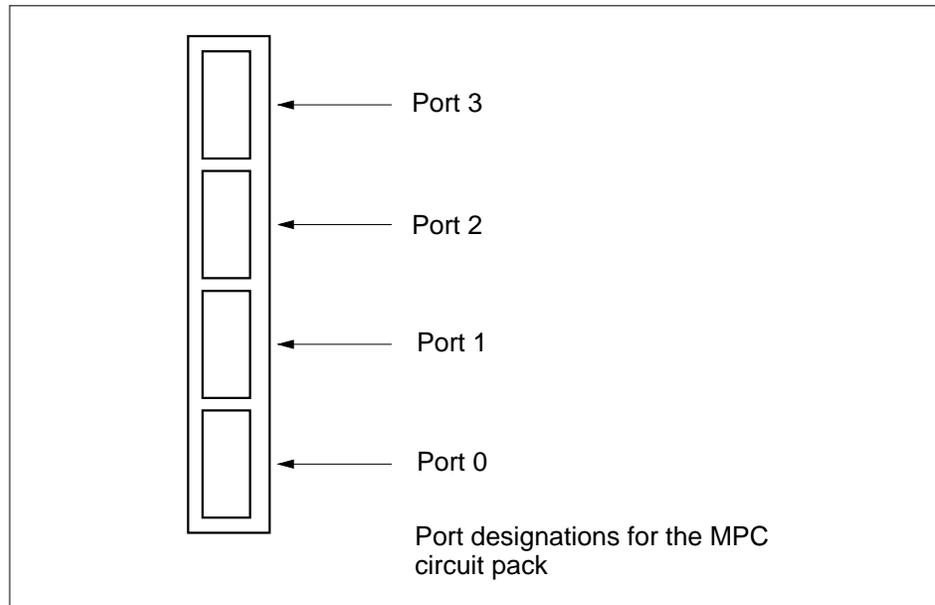
---

## Determining the location of problems (ACDMIS, NACD, MACD)

- 8** Use the unit instructions to replace the data unit with a new NT4X25 Meridian data unit. Return to Step 7.
- 9** Check for disconnected cables between the NT1X89AA MPC circuit pack and the NT4X25 Meridian data unit. Also check for disconnected cables between the data unit and the jack.

The 34-pin connector of the NT0X26LY cable connects to port two or port three of the MPC circuit pack.

The 25-pin connector of the NT0X26LY cable connects to the data unit or modem.



|           | <b>If you</b>                                                 | <b>Do</b> |
|-----------|---------------------------------------------------------------|-----------|
|           | find disconnected cables                                      | step 10   |
|           | do not find disconnected cables                               | step 11   |
| <b>10</b> | Connect the disconnected cables.                              |           |
|           | <b>If you</b>                                                 | <b>Do</b> |
|           | find the problem                                              | step 11   |
|           | find and clear the problem and other problems are not present | step 18   |

## Determining the location of problems (ACDMIS, NACD, MACD)

- 11 Check the data unit or modem for the CO. Check the data unit or modem for the customer premises. Make sure both units or modems run in synchronous mode.

| If the power lamp | Do      |
|-------------------|---------|
| flashes           | step 12 |
| does not flash    | step 13 |

- 12 A 2-wire circuit connects one of the following:
- the digital line card (DLC) in a switched mode
  - the data unit or modem in a back-to-back mode.

Check the master/slave settings in the data unit or modem. In a switched configuration, the data unit for the CO and for the customer premises must be set to slave. The DLC acts as the master data unit in the switched configuration. In a back-to-back configuration, the data unit for the CO must be set to master. The data unit for the customer premises must be set to slave. (Use the SW1 internal switch to determine the master/slave settings.)

| If you                                                        | Do      |
|---------------------------------------------------------------|---------|
| do not find the problem                                       | step 13 |
| find and clear the problem and other problems are not present | step 18 |

- 13 Check the MPC link.

| If the data terminal ready (DTR) lamp | Do      |
|---------------------------------------|---------|
| is OFF                                | step 14 |
| is ON                                 | step 15 |

- 14 From the MAP display, to make sure the MPC link works, type

```
>MAPCI ;MTC ;IOD ;IOC_x ;CARD_x
```

and press the Enter key.

Make sure the cable between the MPC and the data unit or modem is correct (cable OX26LY).

| If you                                                        | Do      |
|---------------------------------------------------------------|---------|
| do not find the problem                                       | step 15 |
| find and clear the problem and other problems are not present | step 18 |

---

**Determining the location of problems (ACDMIS, NACD, MACD) (end)**

---

- |                                                               |                                                                                                                                                                                                                                                                                                               |                            |           |                         |         |                                                               |         |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|-------------------------|---------|---------------------------------------------------------------|---------|
| <b>15</b>                                                     | Check for correct design settings.                                                                                                                                                                                                                                                                            |                            |           |                         |         |                                                               |         |
|                                                               | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b>If the connect lamp</b></td> <td style="width: 50%;"><b>Do</b></td> </tr> <tr> <td>flashes</td> <td>step 16</td> </tr> <tr> <td>does not flash</td> <td>step 17</td> </tr> </table>                                                   | <b>If the connect lamp</b> | <b>Do</b> | flashes                 | step 16 | does not flash                                                | step 17 |
| <b>If the connect lamp</b>                                    | <b>Do</b>                                                                                                                                                                                                                                                                                                     |                            |           |                         |         |                                                               |         |
| flashes                                                       | step 16                                                                                                                                                                                                                                                                                                       |                            |           |                         |         |                                                               |         |
| does not flash                                                | step 17                                                                                                                                                                                                                                                                                                       |                            |           |                         |         |                                                               |         |
| <b>16</b>                                                     | Set the correct configuration settings between the data unit for the CO and the data unit for the customer premises. The NT/800 PAD must run at 9600 bits/s in the synchronous mode. The NT/830 PAD must run at 4800 bits/s in the synchronous mode.                                                          |                            |           |                         |         |                                                               |         |
|                                                               | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b>If you</b></td> <td style="width: 50%;"><b>Do</b></td> </tr> <tr> <td>do not find the problem</td> <td>step 17</td> </tr> <tr> <td>find and clear the problem and other problems are not present</td> <td>step 18</td> </tr> </table> | <b>If you</b>              | <b>Do</b> | do not find the problem | step 17 | find and clear the problem and other problems are not present | step 18 |
| <b>If you</b>                                                 | <b>Do</b>                                                                                                                                                                                                                                                                                                     |                            |           |                         |         |                                                               |         |
| do not find the problem                                       | step 17                                                                                                                                                                                                                                                                                                       |                            |           |                         |         |                                                               |         |
| find and clear the problem and other problems are not present | step 18                                                                                                                                                                                                                                                                                                       |                            |           |                         |         |                                                               |         |
| <b>17</b>                                                     | Inform the correct operating company personnel of a problem with the data link outside the CO or with the CPE.                                                                                                                                                                                                |                            |           |                         |         |                                                               |         |
| <b>18</b>                                                     | The procedure is complete.                                                                                                                                                                                                                                                                                    |                            |           |                         |         |                                                               |         |

## **Determining the trunk state ISDN PRI trunk**

---

### **Application**

Use this procedure to determine the state of the primary rate interface (PRI) trunk (B-channel). You must determine the state of the PRI trunk before you decide which problem location and clearing procedure to perform next.

### **Definition**

A PRI trunk is out of service and the cause is not known.

### **Common procedures**

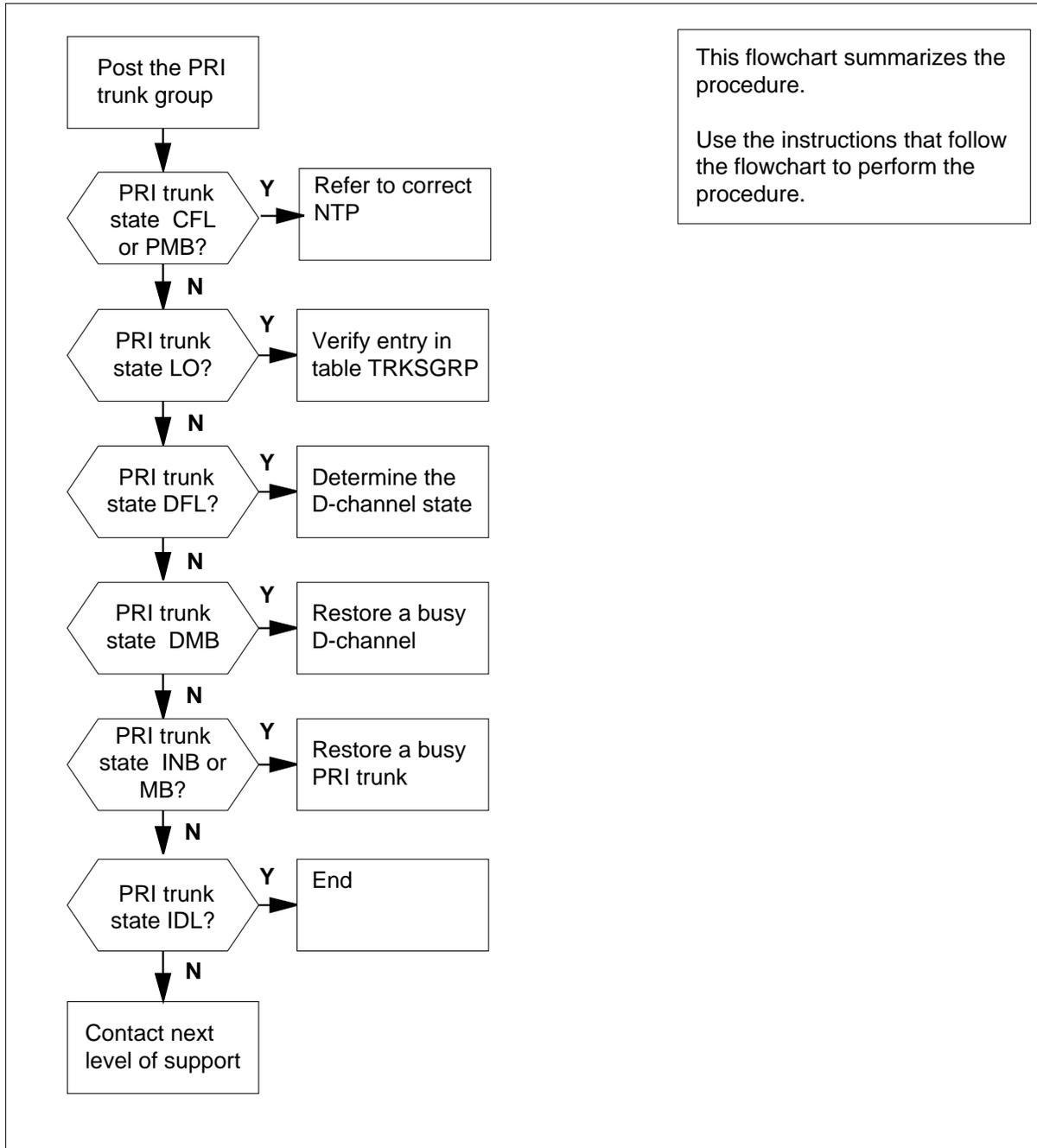
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Determining the trunk state ISDN PRI trunk (continued)

### Summary of Determining the trunk state



## Determining the trunk state

### ISDN PRI trunk (continued)

---

#### Determining the trunk state

##### *At the MAP terminal*

- 1 To access the TTP level of the MAP display, type  
`>MAPCI ;MTC ;TRKS ;TTP`  
 and press the Enter key.
- 2 From office records or operating company personnel, determine the name of the trunk group.
- 3 To post the PRI trunk, type  
`>POST G group_name`  
 and press the Enter key.

*where*

**group\_name**

is the name of the trunk group

*Example input:*

`>POST G F1AAA105IPTLA`

*Example of a MAP display:*

```

POST          DELQ          BUSYQ          DIG
TTP 6-005
CKT TYPE    PM NO          COM LANG          STA S R DOT TE RESULT
2W IS IS DTCI 7 9 1 F1AAA105IPTLA          MB    R
    
```

*Example of a MAP response:*

```

LAST CKTN = 9
POSTED CKT IDLED
SHORT CLLI IS: F1AAA1
OK,CKT POSTED
    
```

- 4 Determine the state of the PRI trunk.  
**Note:** PRI trunk state is under the STA header on the MAP. Do not choose an idle (IDL) PRI trunk to clear. IDL is a normal state for PRI trunks.

| If the state of the PRI trunk                                     | Do      |
|-------------------------------------------------------------------|---------|
| is CFL (carrier failure)                                          | step 13 |
| is DFL (D-channel failure) for a single D-channel                 | step 5  |
| is DFL (D-channel failure) for both primary and backup D-channels | step 6  |

---

## Determining the trunk state ISDN PRI trunk (end)

| If the state of the PRI trunk                                         | Do                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is DMB (D-channel manual busy) for a single D-channel                 | step 7                                                                                                                                                                                                                                                                 |
| is DMB (D-channel manual busy) for both primary and backup D-channels | step 8                                                                                                                                                                                                                                                                 |
| is INB (installation busy)                                            | step 9                                                                                                                                                                                                                                                                 |
| is IDL (idle)                                                         | step 15                                                                                                                                                                                                                                                                |
| is LO (lock out)                                                      | step 11                                                                                                                                                                                                                                                                |
| is MB (manual busy)                                                   | step 9                                                                                                                                                                                                                                                                 |
| is PMB (peripheral manual busy)                                       | step 10                                                                                                                                                                                                                                                                |
| is other than listed here                                             | step 14                                                                                                                                                                                                                                                                |
| <b>5</b>                                                              | Perform the procedure <i>ISDN PRI single D-channel Determining the D-channel state</i> in this document. Do not return to this procedure.                                                                                                                              |
| <b>6</b>                                                              | Perform the procedure <i>ISDN PRI primary and backup D-channels Determining the D-channel state</i> in this document. Do not return to this procedure.                                                                                                                 |
| <b>7</b>                                                              | Perform the procedure <i>ISDN PRI single D-channel Returning a busy D-channel to service</i> in this document. Do not return to this procedure.                                                                                                                        |
| <b>8</b>                                                              | Perform the procedure <i>ISDN PRI primary and backup D-channels Returning a busy D-channel to service</i> in this document. Do not return to this procedure.                                                                                                           |
| <b>9</b>                                                              | Perform the procedure <i>ISDN PRI trunk Returning a busy PRI trunk to service</i> in this document. Do not return to this procedure.                                                                                                                                   |
| <b>10</b>                                                             | Perform the procedure to clear the alarm in <i>Alarm Clearing and Performance Monitoring Procedures</i> . Do not return to this procedure.                                                                                                                             |
| <b>11</b>                                                             | To access table TRKSGRP, type<br><b>&gt;TABLE TRKSGRP</b><br>and press the Enter key.                                                                                                                                                                                  |
| <b>12</b>                                                             | Verify that the entry for field SGRPVAR, subfield IFCLASS is NETWORK or USER. NETWORK refers to the HOST switch side. USER refers to the PBX side. Refer to "Find faults in B- and D-channels" in <i>ISDN PRI Maintenance Guide</i> . Do not return to this procedure. |
| <b>13</b>                                                             | Perform the procedure, "DS-1 Trouble Isolation and Correction Methods" in the <i>ISDN PRI Maintenance Guide</i> . Do not return to this procedure.                                                                                                                     |
| <b>14</b>                                                             | For additional help, contact the next level of support.                                                                                                                                                                                                                |
| <b>15</b>                                                             | The procedure is complete.                                                                                                                                                                                                                                             |

## Digital test access for BRI lines

---

### Application

The BAS ESMU ISDN Support computing module extends digital test access (DTA) to the enhanced subscriber carrier module urban (ESMU)-remote carrier urban (RCU) integrated digital loop carrier (IDLC) system.

### Definition

Use this procedure to monitor RCU integrated services digital network (ISDN) lines with a host equipped with an NTAX78AB time switch.

The system monitors in upstream and downstream directions.

### Common procedures

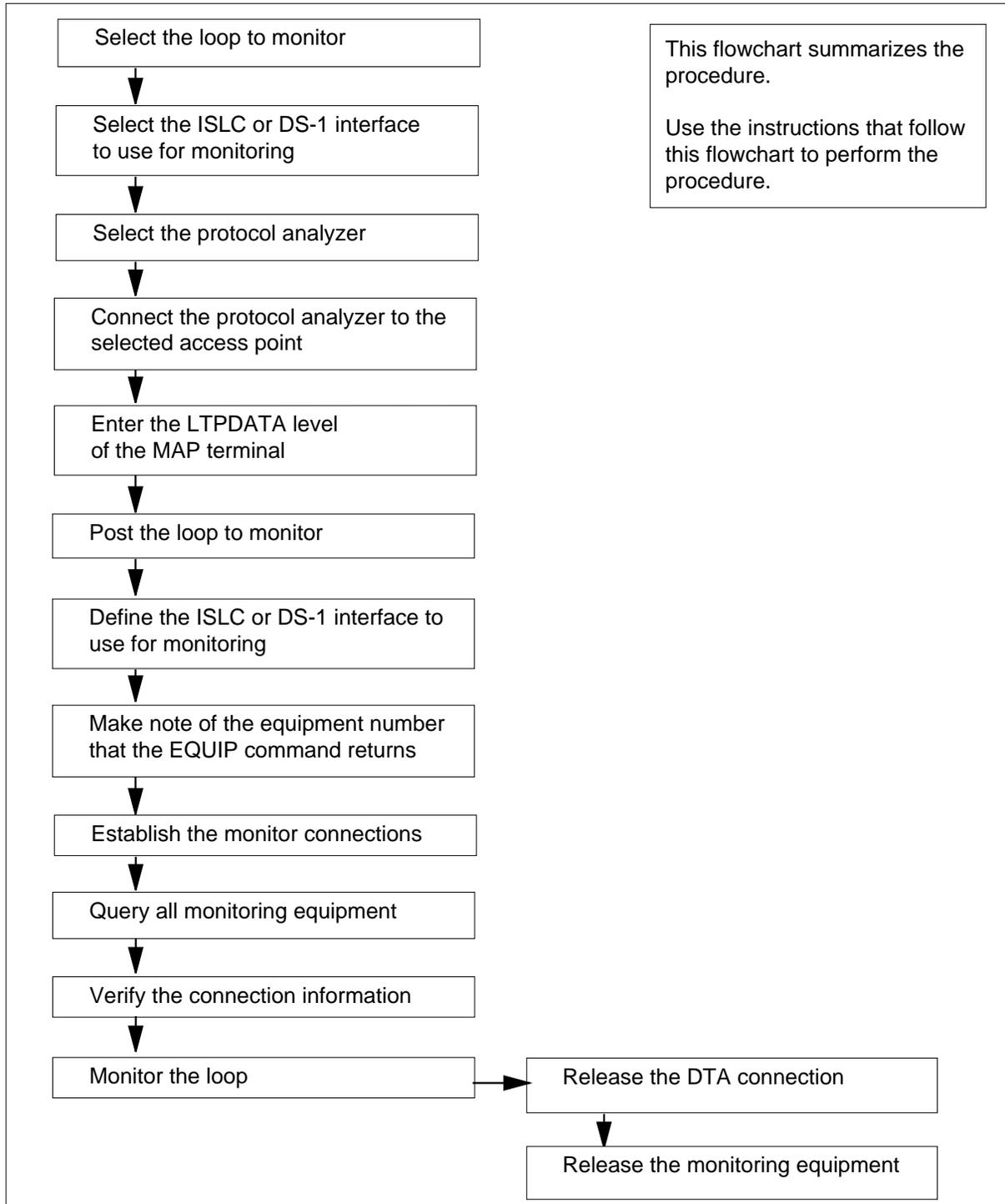
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to perform the procedure. Follow the steps to perform the procedure.

## Digital test access for BRI lines (continued)

### Summary of How to set up and release equipment that monitors digital test access



## Digital test access for BRI lines (continued)

---

### How to set up and release equipment that monitors digital test access

#### At the piece of equipment

- 1 Select the loop to monitor.

DTA can monitor loops for ISDN basic rate interface (BRI). The BRI loops consist of two 64-kbit/s B-channels and one 16-kbit/s D-channel.

DTA can monitor the following ISDN B-channels:

- circuit switched voice and data B-channels
- nailed up connections (NUC) that link two B-channels
- Bb channels and Bb channels that are routed to either a DMS packet handler (PH) or to a DS-1 digital trunk interface serving a Data Packet Network (DPN) PH

**Note 1:** Each loop monitors one Bd channel at a time. More than one loop at a time can monitor the Bd channel because different loops can use the same Bd channel.

**Note 2:** You also can monitor the D-channel. To monitor the D-channel, direct the packet data with a low speed toward the packet handler (PH). To direct the packet data to the PH, nail up the D-channel handler (DC) channels. You must nail the channels either to a DS-1 interface that serves the DPNPH, or to a DMSPH. For more efficient use, the four D-channels are time-division multiplexed (TDM) into one 64kbit/s channel for delivery to the protocol analyzer.

- 2 Select the ISDN line card (ISLC) or DS-1 interface to use for monitoring.

- Monitor with an ISLC

Monitored data becomes available to the protocol analyzer through the B1 and B2 channels of an ISLC. This ISLC must be on the module for enhanced line concentrating using ISDN (LCME), the AccessNode, or the RCU. The B1 channel receives the upstream data. The B2 channel receives the downstream data.

- Monitor with a DS-1 interface

Monitored data becomes available to the protocol analyzer through two DS-0 channels of a DS-1 interface. One of the following extended multiprocessor system-based peripheral modules (XPM) supports the DS-1 interface:

- digital trunk controller (DTC)
- ISDN digital trunk controller (DTCI)
- line trunk controller (LTC)
- remote cluster controller 2 (RCC2)
- ESMU

**Note 1:** DTA requires two B-channels. The last line card slot of an RCU ISLC carrier has only one B-channel available for ISDN applications. Use one of the first three line cards in the RCU ISLC

## Digital test access for BRI lines (continued)

carrier. All three line cards have two B-channels available for ISDN applications.

**Note 2:** You cannot nail up either of the two B-channels. The loop state must be installation busy (INB). The loop status must be HASU (hardware assigned-software unassigned) in table LNINV (line circuit inventory).

When you use a DSI interface to monitor the DTA, you must reset the channels. Until you reset the channels, you cannot nail up connections to the two DS-0 channels. Use the EQUIP DTA RESET command to reset the channels.

The following table shows the DTA monitor connections.

### Time switch endpoints on ESMU

| Monitored channel          | Channel connects to                         | Upstream endpoint              | Downstream endpoint                           |
|----------------------------|---------------------------------------------|--------------------------------|-----------------------------------------------|
| Circuit-switched B1 and B2 | Any endpoint that supports circuit switches | P-side of the ESMU time switch | Central side (C-side) of the ESMU time switch |
| NUC B1 and B2              | DS-1 interface                              | P-side of the ESMU time switch | C-side of the ESMU time switch                |
| Bb channel                 | DS-1 interface or ISLC                      | P-side of the ESMU time switch | C-side of the ESMU time switch                |
| Bd channel                 | ISDN service group (DCH)                    | P-side of the ESMU time switch | C-side of the ESMU time switch                |
| TDM D-channel              | DS-1 interface or DMS PH                    | C-side of the ESMU time switch | P-side of the ESMU time switch                |

#### 3 Select the protocol analyzer.

The protocol analyzer ensures you can read ISDN protocols from DTA connections. The protocol analyzer has the following requirements:

- must analyze X.25, Q.921, and Q.931 protocols
- must interconnect with one of the following:
  - an ISDN network termination 1 (NT1) S/T bus
  - a DS-1 interface
- must monitor a 64-kbit/s Bd channel
- must resolve separate D-channel units from the TDM group and use the unit number for the TDM group.

#### 4 Connect the protocol analyzer to the selected access point.

You can connect the external protocol analyzer to any DMS-100 ISDN U-line card (U-ISLC) or XPM that can support DTA. All loop monitor points are in the NTAX78AB time switch.

## Digital test access for BRI lines (end)

---

- 5 To access the line test position data (LTPDATA) level of the MAP terminal, type  
`>MAPCI ;MTC ;LNS ;LTP ;LTPDATA`  
and press the Enter key.
- 6 To post the loop that you want to monitor, type  
`>POST L len_no`  
and press the Enter key.  
*where*  
**len\_no**  
is the line equipment number of the loop that you want to monitor
- 7 To define the ISLC or DS-1 interface to use to monitor use, type  
`> EQUIP DTA <EQUIPMENT> <XPM> <XPMNO> <PORT> <UPCHNL>  
<DOWNCHNL>`  
and press the Enter key.
- 8 Make note of the <EQUIPNO> returned by the EQUIP command.  
<EQUIPNO> is the location of the equipment that monitors DTA.
- 9 To set the monitor connections, type  
`> CONNECT <EQUIPNO> <CHANNEL>`  
and press the Enter key.  
Use NUCs to create a connection between the monitoring equipment and the monitored channel. These NUCs must stay in place until you use the MAP command to remove the NUCs.
- 10 To query all monitoring equipment (optional), type  
`> EQUIP DTA QUERY ALL`  
and press the Enter key.
- 11 To make sure that the XPMs that support the monitoring connection received the connection information, type  
`> CONNECT <EQUIPNO> VERIFY`  
and press the Enter key.  
This test takes the place of channel supervision messages (CSM).
- 12 Monitor the loop.
- 13 To release the DTA connection, type  
`> CONNECT <EQUIPNO> RLS`  
and press the Enter key.
- 14 To release the monitoring equipment (optional), type  
`> EQUIP DTA RESET <EQUIPNO>`  
and press the Enter key.
- 15 The procedure is complete.

## Digital test access for PRI lines

---

### Application

Feature package NTXS12AA enables operating company personnel to monitor primary rate interface (PRI) primary or backup D-channels with digital test access (DTA). DTA is nonintrusive, the monitored data is broadcast to its normal destination and to the DTA endpoint.

### Definition

The PRI D-channel being monitored must use a DS-0 channel of a DS-1 on a DTCI or LTC equipped with NTMX77A unified processor (UP) cards and an NTB01AB, enhanced ISDN signalling pre-processor (EISP). Upstream and downstream digital data streams are derived from the monitored channel.

The downstream data is flowing toward the subscriber and away from the switch. The upstream data is flowing toward the switch and away from the subscriber

Before DTA monitoring can begin, the DMS-100 network must have data transmission quality. Errored data transmission damages the digital data streams to the protocol analyzer. The monitoring equipment must be chosen, provisioned, reserved, and connected to the protocol analyzer. The monitored PRI D-channel must connect to the protocol analyzer, for monitoring.

### Common procedures

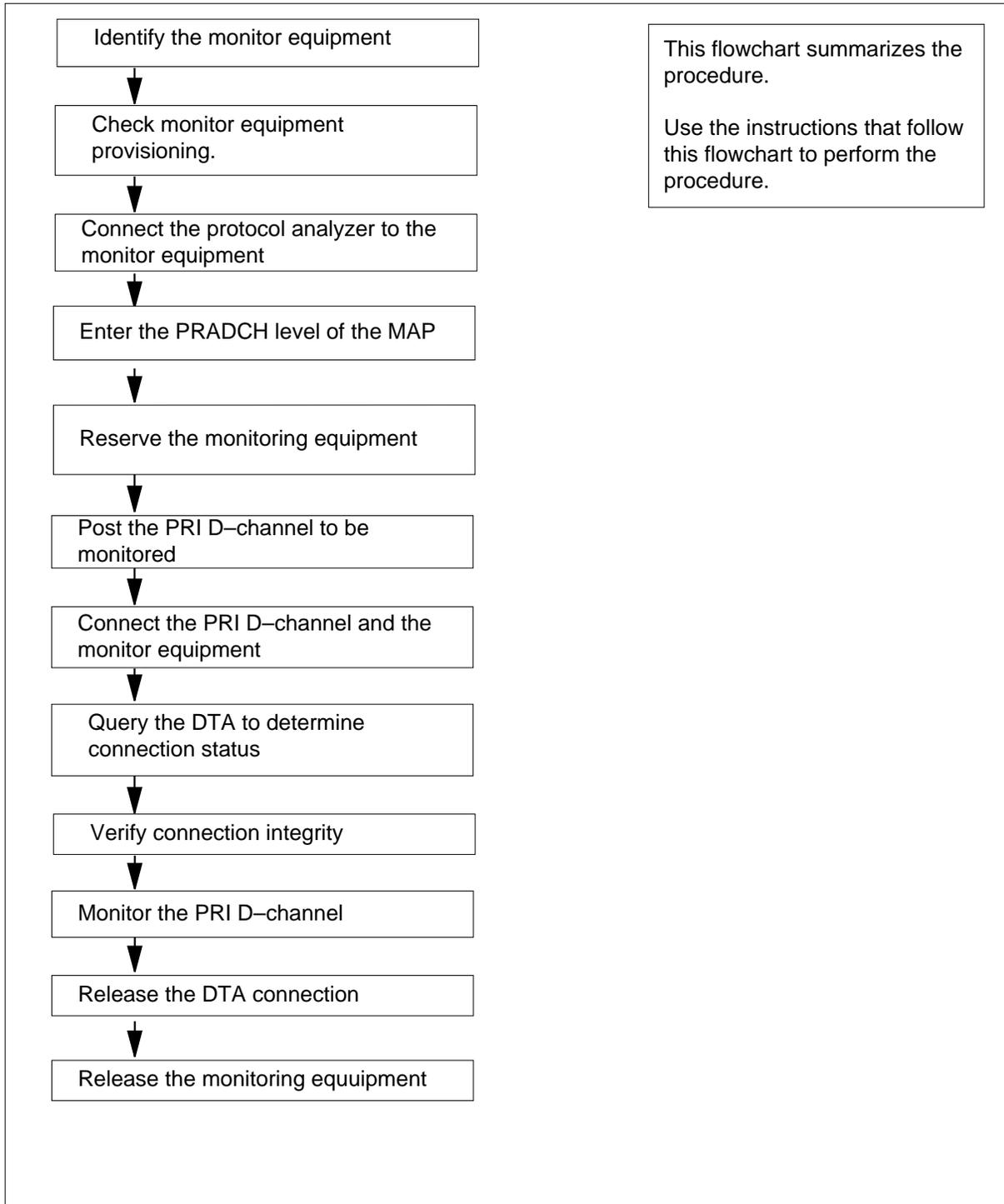
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to understand the procedure. Follow the steps to perform the procedure.

## Digital test access for PRI lines (continued)

### Summary of How to set up and release equipment that monitors PRI lines



---

## Digital test access for PRI lines (continued)

---

### How to set up and release equipment that monitors PRI lines

#### At the piece of equipment

**1** Identify the monitor equipment.

The monitor equipment is two 64-kbit/s DS-0 channels or a BRI ISLC.

- Monitor with an ISLC

Monitored data becomes available to the protocol analyzer through the B1 and B2 channels of an ISLC. This ISLC must be on the module for enhanced line concentrating using ISDN (LCME), the AccessNode, or the RCU. The B1 channel receives the upstream data. The B2 channel receives the downstream data.

**Note 1:** DTA requires two B-channels. The last line card slot of an RCU ISLC carrier has only one B-channel available for ISDN applications. Use one of the first three line cards in the RCU ISLC carrier. All three line cards have two B-channels available for ISDN applications.

**Note 2:** You cannot nail up either of the two B-channels. The loop state must be installation busy (INB). The loop status must be HASU (hardware assigned-software unassigned) in table LNINV (line circuit inventory).

- Monitor with a DS-1 interface

Monitored data becomes available to the protocol analyzer through two DS-0 channels of a DS-1 interface. One of the following extended multiprocessor system-based peripheral modules (XPM) supports the DS-1 interface:

- digital trunk controller (DTC)
- line group controller (LGC)
- ISDN digital trunk controller (DTCI)
- line trunk controller (LTC)
- remote cluster controller 2 (RCC2)

When you use a DS-1 interface to monitor the DTA, you must reset the channels. Until you reset the channels, you cannot nail up connections to the two DS-0 channels. Use the EQUIP DTA RESET command to reset the channels.

**2** Check monitor equipment provisioning.

Check the carrier or line datafill to ensure that the monitor equipment is provisioned correctly.

**3** Connect the protocol analyzer to the monitor equipment.

The protocol analyzer ensures you can read ISDN protocols from DTA connections. The protocol analyzer has the following requirements:

- must analyze X.25, Q.921, and Q.931 protocols
- must interconnect with one of the following:

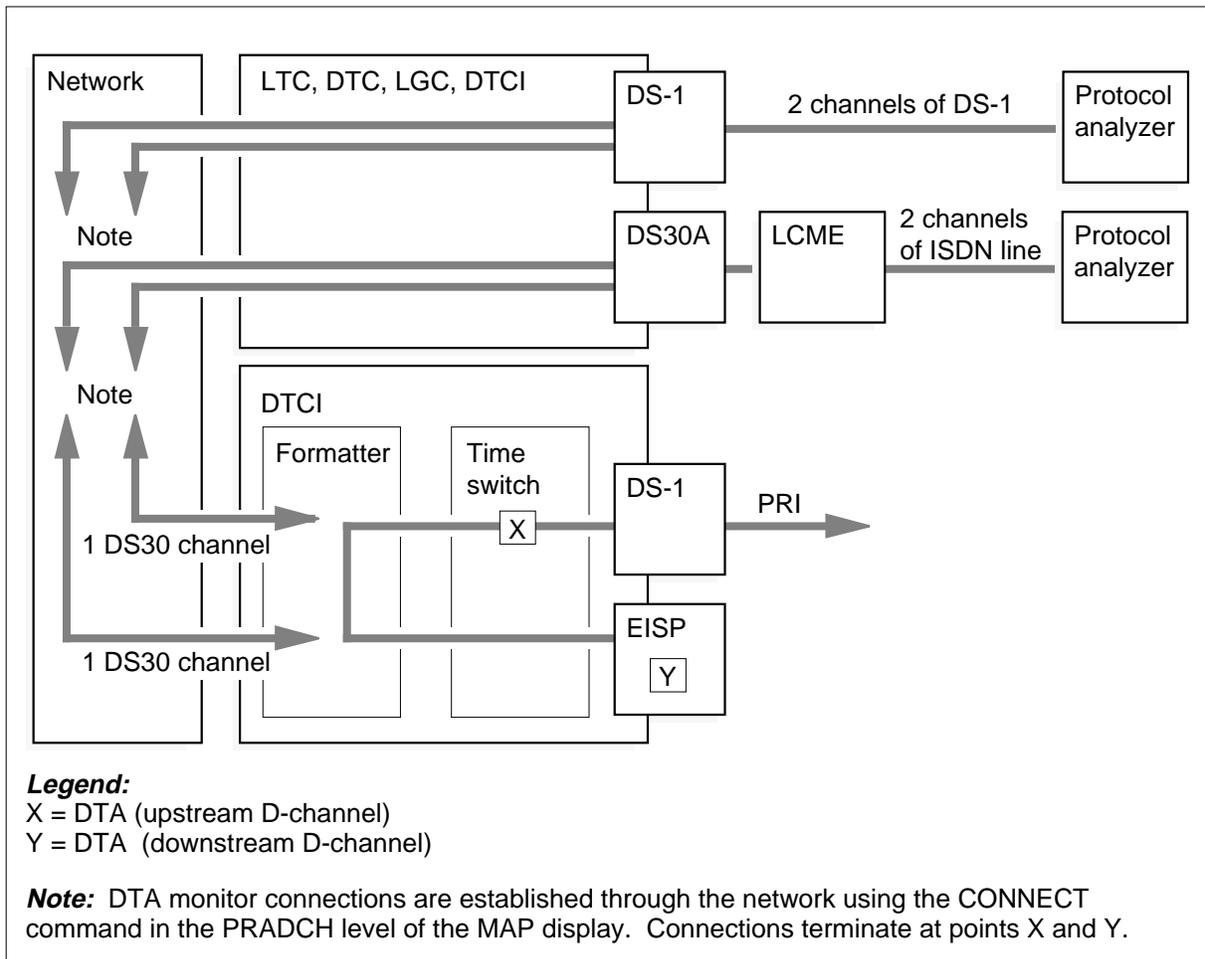
## Digital test access for PRI lines (continued)

- an ISDN network termination 1 (NT1) S/T bus
- a DS-1 interface
- must monitor a 64-kbit/s Bd channel
- must resolve separate D-channel units from the TDM group and use the unit number for the TDM group.

You can connect the external protocol analyzer to any DMS-100 ISDN U-line card (U-ISLC) or XPM that can support DTA. All loop monitor points are in the NT64XX time switch.

The following figure shows the access points for connecting the protocol analyzer.

### 1xDTA access points, monitoring the PRI D-channel



4 Enter the PRADCH level of the MAP.

---

## Digital test access for PRI lines (end)

---

All DTA commands for PRI D-channel monitoring are at the primary rate access D-channel handler (PRADCH) level of the MAP (sublevel of TTP). To access the PRADCH level, type

**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH LEVEL**

and press the Enter key.

- 5** Reserve the monitoring equipment.

Use the EQUIP command and note the <EQUIPNO> returned by the EQUIP command.

**>EQUIP CARRIER XPM XPMNO PORTNO UPCH DOWNCH**

and press the Enter key.

For example, if two DS-0 are LTC 0 6 22 and LTC 0 6 23 they can be equipped by

**>EQUIP CARRIER LTC 0 6 22 23**

This reserves DTA on two 64 kbps DS-0 channels (22 and 23 on LTC 0 6)

- 6** Post the PRI D-channel to be monitored.

**>POST gd CILLINAME**

and press the Enter key.

This posts both D1 and D2, the D-channel and backup D-channel.

- 7** Connect the PRI D-channel and the monitor equipment.

The EQUIPNO to use in the CONNECT command is the one returned when the monitor equipment was reserved. Type,

**> CONNECT <EQUIPNO>**

and press the Enter key.

- 8** Query the DTA to determine connection status.

Type,

**> EQUIP QUERY ALL**

and press the Enter key.

- 9** Verify connection integrity (optional). To make sure that the XPMs that support the monitoring connection received the connection information, type

**> CONNECT <EQUIPNO> VERIFY**

and press the Enter key.

- 10** Monitor the PRI D-channel messages with the protocol analyzer.

- 11** To release the DTA connection, type

**> CONNECT <EQUIPNO> RLS**

and press the Enter key.

- 12** To release the monitoring equipment (optional), type

**> EQUIP DTA RESET <EQUIPNO>**

and press the Enter key.

- 13** The procedure is complete.

## **DIRP 101 logs**

### **Reason 2**

---

#### **Application**

Use this procedure to clear the problem condition that reason code 2 indicates.

#### **Definition**

Reason code 2 indicates that a Device Independent Recording Package (DIRP) parallel recording device did not pass an audit.

Problems occur as a result of the following:

- system-busy disk
- input/output controller (IOC) powered down
- lower level software fault

#### **Common procedures**

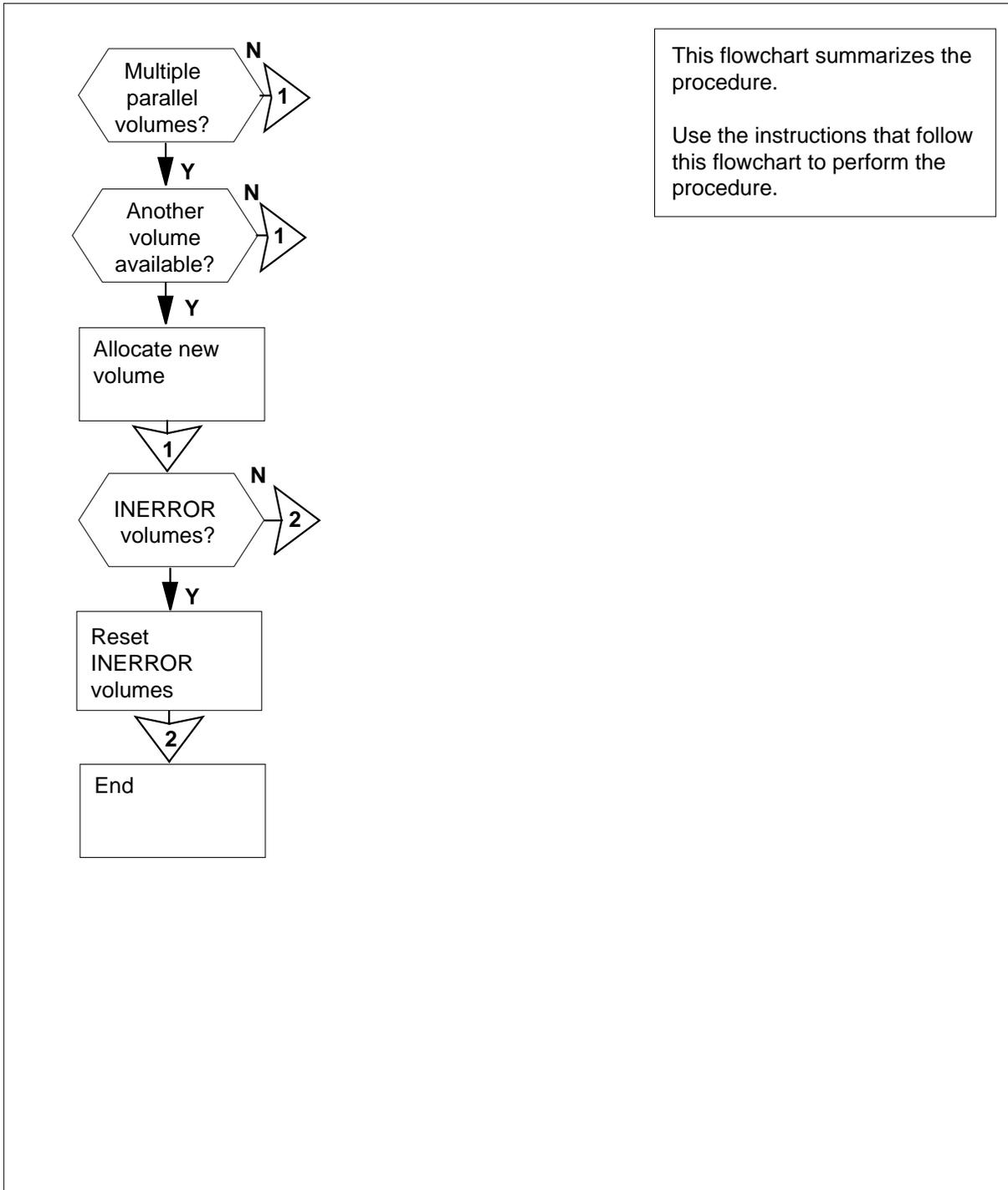
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 2** (continued)

**Summary of Reason 2**



This flowchart summarizes the procedure.  
 Use the instructions that follow this flowchart to perform the procedure.

## DIRP 101 logs

### Reason 2 (continued)

#### Reason 2



#### **DANGER**

##### **Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### *At the MAP terminal*

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

`>SOC`

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

`>select option bas00001`

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

---

**If**

**Do**

yes

step 3

no

step 9

- 3 To access the DIRP level of the MAP display, type

`>MAPCI ;MTC ;IOD ;DIRP`

and press the Enter key.

- 4 To query the subsystem indicated by the log, type

`>QUERY ssys VOLUMES`

and press the Enter key.

*where*

**DIRP 101 logs**  
**Reason 2** (continued)

**ssys**  
is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP response:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|---------|-----|------|-----|------|------|------|------|
| 0    | T0      | INERROR | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY   | 1   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to identify a volume that is available for parallel recording.
- 7 Determine if another volume is available.

| If another volume | Do     |
|-------------------|--------|
| is available      | step 8 |
| is not available  | step 9 |

- 8 Allocate the volume that the next level of support in step 6 identified as the affected subsystem.

*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*

- 9 To query the subsystem indicated by the log, type

**>QUERY ssys VOLUMES**

and press the Enter key.

*where*

**ssys**  
is the subsystem

- 10 Note the MAP response in the PARALLEL field.

*Example of a MAP response:*

## DIRP 101 logs

### Reason 2 (end)

---

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|---------|-----|------|-----|------|------|------|------|
| 0    | T0      | INERROR | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY   | 1   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 11** Determine if any parallel volumes have a state of INERROR.

---

**If parallel volumes**

**Do**

---

are INERROR

step 12

are not INERROR

step 14

---

- 12** Reset the parallel volumes state as INERROR.  
Refer to *Recovering volumes marked INERROR* in *Recovery Procedures*.
- 13** For additional help, contact the next level of support.
- 14** The procedure is complete.

**DIRP 101 logs**  
**Reason 26**

---

**Application**

Use this procedure to clear the problem condition that reason code 26 indicates.

**Definition**

Reason code 26 indicates that the Device Independent Recording Package (DIRP) utility cannot use a parallel volume as a result of an error condition. A rotation occurs and the DIRP utility marks the volume RECOVERING.

**Common procedures**

There are no common procedures.

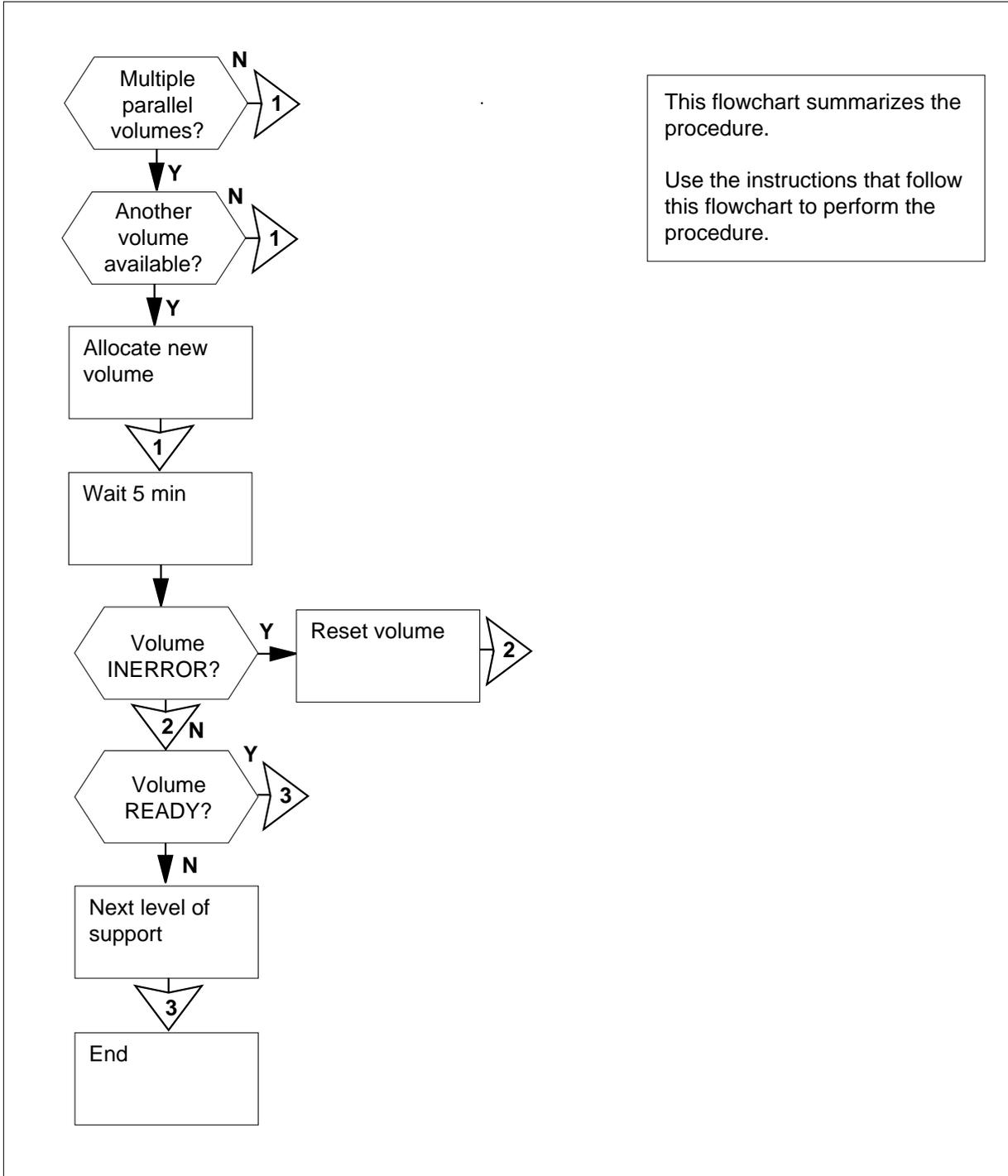
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs

### Reason 26 (continued)

#### Summary of Reason 26



**DIRP 101 logs**  
**Reason 26** (continued)

**Reason 26**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or corrupt automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

`>SOC`

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

`>select option bas00001`

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 9  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

`>MAPCI;MTC;IOD;DIRP`

and press the Enter key.

- 4 To query the affected subsystem indicated by the log, type

`>QUERY ssys VOLUMES`

and press the Enter key.

## DIRP 101 logs

### Reason 26 (continued)

---

where

**ssys**

is the subsystem

- 5 Note the parallel volume marked RECOVERING.

*Example of a MAP display:*

```
SSNAME  SSNO  SEQNO  ROTATES  POOLNO  PARLPOOL  EMERGENCY
AMA      0      1       2        0        6      ***YES***
```

REGULAR VOLUME(S)

```
VOL#  VOLNAME  STATE  IOC  CARD  VOL  FSEG  ROOM  VLID  FILE
22    D000AMA  READY  0    1    6    7     7   2806  A
23    D010AMA  READY  1    0    2    1     9   2155  S1
```

PARALLEL VOLUME(S)

```
VOL#  VOLNAME  STATE  IOC  CARD  VOL  FSEG  ROOM  VLID  CURR
0      T0      READY  0    0    0    N/A   1   2400  YES
1      T1      READY  2    1    0    N/A   1   2401  NO
```

- 6 Contact the next level of support to identify a volume available for parallel recording.
- 7 Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 8

is not available

step 9

---

- 8 Allocate the parallel volume that the next level of support identified in step 6 to the affected subsystem.

Refer to *Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures* and return to this point.

- 9 Obtain the log and wait 5 min.
- 10 To query the subsystem indicated by the log, type

```
>QUERY ssys VOLUMES
```

and press the Enter key.

where

**ssys**

is the subsystem

- 11 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

**DIRP 101 logs**  
**Reason 26 (end)**

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2805 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE      | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|------------|-----|------|-----|------|------|------|------|
| 0    | T0      | RECOVERING | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY      | 1   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 12** Determine the state of the volume marked RECOVERING in step 5.

| If the volume                       | Do      |
|-------------------------------------|---------|
| is marked INERROR                   | step 13 |
| is marked READY                     | step 15 |
| is not marked READY or INER-<br>ROR | step 14 |

- 13** Reset the volume marked INERROR.  
Refer to *Recovering volumes marked INERROR* in *Recovery Procedures*.
- 14** For additional help, contact the next level of support.
- 15** The procedure is complete.

## **DIRP 101 logs**

### **Reason 27**

---

#### **Application**

Use this procedure to clear the trouble condition that reason code 27 indicates.

#### **Definition**

Reason code 27 shows that an audit or input/output (I/O) error occurred on a parallel volume. The Device Independent Recording Package (DIRP) utility marked the parallel volume INERROR and the utility cannot recover the volume without manual action.

#### **Common procedures**

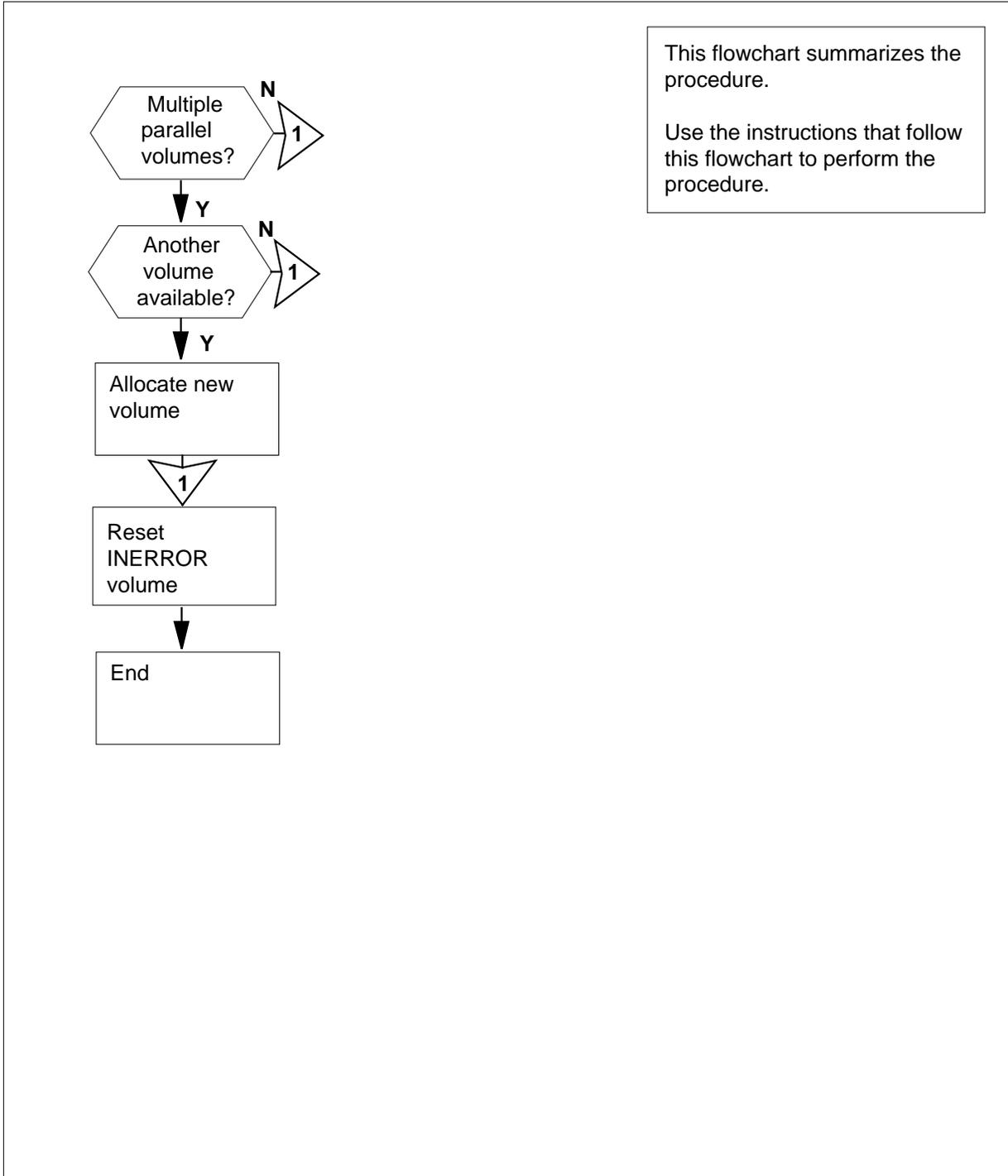
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 27** (continued)

**Summary of Reason 27**



## DIRP 101 logs

### Reason 27 (continued)

#### Reason 27



#### **DANGER**

#### **Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or corrupt automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### **At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

#### **If the switch**

#### **Do**

has the functionality group step 3  
BAS00001

does not have the functionality step 9  
group BAS00001

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem indicated by the log, type

>QUERY ssys VOLUMES

and press the Enter key.

**DIRP 101 logs  
Reason 27 (end)**

where

**ssys**  
is the subsystem

- 5** Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|---------|-----|------|-----|------|------|------|------|
| 0    | T0      | INERROR | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY   | 1   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6** Contact the next level of support to identify a volume available for parallel recording.
- 7** Determine if another volume is available.

| If another volume | Do     |
|-------------------|--------|
| is available      | step 8 |
| is not available  | step 9 |

- 8** In step 6, the next level of support identifies the volume that will move to the affected subsystem.  
*Read Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures and return to this point.*
- 9** Reset the parallel volume marked INERROR.  
*Refer to Recovering volumes marked INERROR in Recovery Procedures.*
- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## **DIRP 101 logs**

### **Reason 46**

---

#### **Application**

Use this procedure to clear the trouble condition that reason code 46 indicates.

#### **Definition**

Reason code 46 indicates that the Device Independent Recording Package (DIRP) utility attempted a MANUAL or AUTOMATIC parallel rotation. The DIRP utility found no other parallel volume available. As a result, parallel recording continues on the same volume.

If the DIRP utility attempted a MANUAL rotation, parallel recording continues on the next block on the current parallel file. If the DIRP utility attempted an AUTOMATIC rotation, the current parallel file rewinds before parallel recording continues.

#### **Common procedures**

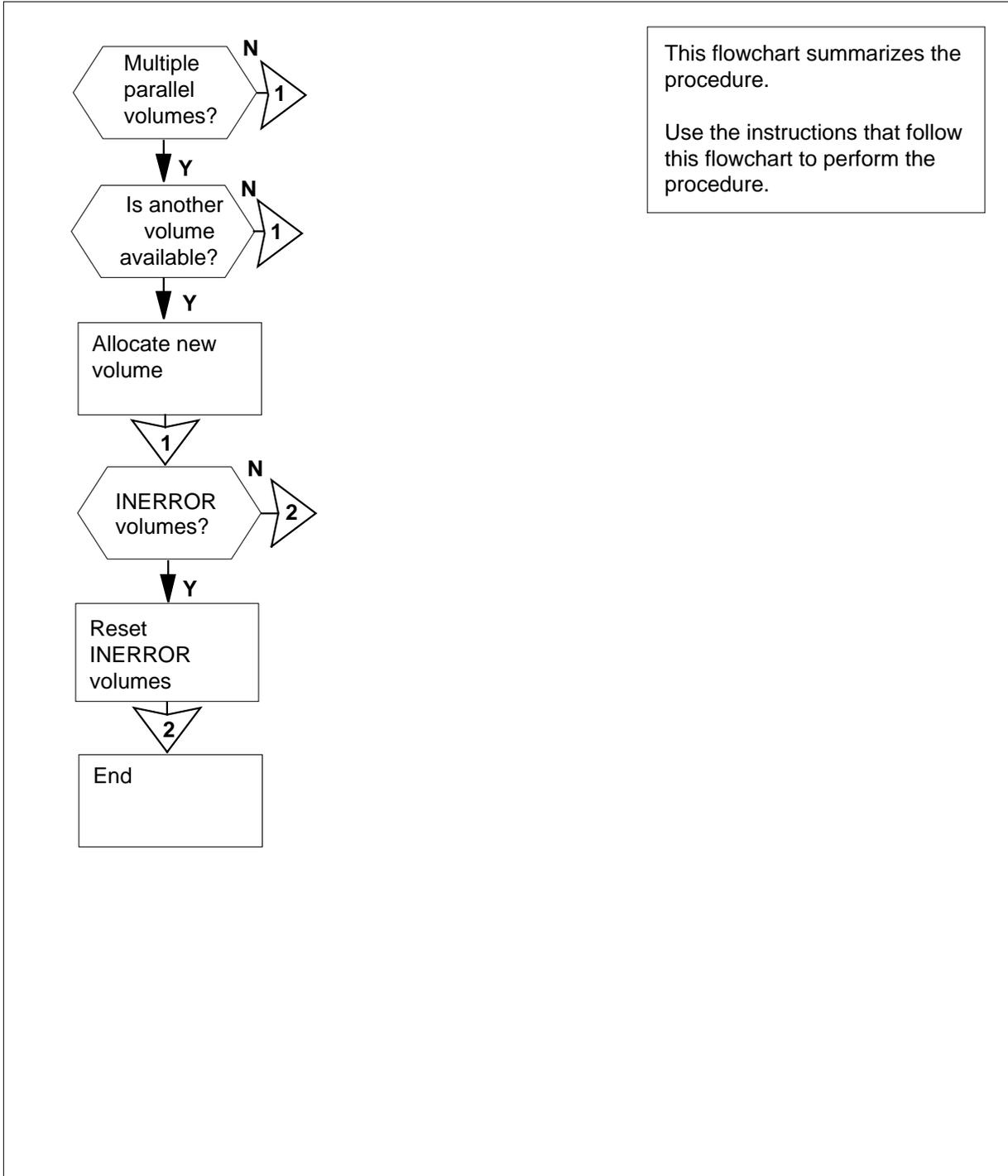
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 46** (continued)

**Summary of Reason 46**



## DIRP 101 logs

### Reason 46 (continued)

#### Reason 46



#### **DANGER**

#### **Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or corrupt automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### **At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

**>SOC**

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

**>select option bas00001**

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

---

#### **If the switch**

#### **Do**

has functionality group step 3  
BAS00001

does not have functionality step 9  
group BAS00001

---

- 3 To access the DIRP level of the MAP display, type

**>MAPCI ;MTC ;IOD ;DIRP**

and press the Enter key.

- 4 To query the subsystem indicated by the log, type

**>QUERY ssys VOLUMES**

and press the Enter key.

**DIRP 101 logs**  
**Reason 46** (continued)

where

**ssys**  
 is the subsystem

- 5 Note the MAP response in the PARALLEL field.

Example of a MAP display:

```
SSNAME  SSNO  SEQNO  ROTATES  POOLNO  PARLPOOL  EMERGENCY
AMA      0     1       2         0         6       ***YES***
```

```
REGULAR VOLUME(S)
VOL# VOLNAME  STATE   IOC  CARD  VOL  FSEG  ROOM  VLID  FILE
22   D000AMA  READY   0    1    6    7     7   2806  A
23   D010AMA  READY   1    0    2    1     9   2155  S1
```

```
PARALLEL VOLUME(S)
VOL# VOLNAME  STATE   IOC  CARD  VOL  FSEG  ROOM  VLID  CURR
0     T0      INERROR  0    0    0    N/A   1   2400  YES
1     T1      READY    1    1    0    N/A   1   2401  NO
```

- 6 Contact the next level of support to identify a volume available for parallel recording.
- 7 Determine if another volume is available.

| If another volume | Do     |
|-------------------|--------|
| is available      | step 8 |
| is not available  | step 9 |

- 8 In step 6, the next level of support identifies the volume that will move to the affected subsystem.  
 Refer to *Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures*.

- 9 To query the subsystem indicated by the log, type  
 >QUERY **ssys** VOLUMES  
 and press the Enter key.

where

**ssys**  
 is the subsystem

- 10 Note the MAP response in the PARALLEL field.

## DIRP 101 logs

### Reason 46 (end)

---

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|---------|-----|------|-----|------|------|------|------|
| 0    | T0      | INERROR | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY   | 1   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 11** Determine if any parallel volumes are marked INERROR.

---

**If**

**Do**

---

parallel volumes are marked IN- step 12  
ERROR

no parallel volumes are marked step 13  
INERROR

---

- 12** Reset the parallel volumes marked INERROR.  
Refer to *Recovering volumes marked INERROR* in *Recovery Procedures*.
- 13** For additional help, contact the next level of support.
- 14** The procedure is complete.

**DIRP 101 logs**  
**Reason 51**

---

**Application**

Use this procedure to clear the trouble condition that reason code 51 indicates.

**Definition-**

Reason code 51 indicates that a parallel volume did not open again after a warm or a cold restart. Either the subsystem failed to come in after the restart or a recording device was not available.

You will not be successful if you attempt to record the file. As a result, the Device Independent Recording Package (DIRP) utility will close the file. A rotation occurs if the subsystem receives other parallel volumes.

**Common procedures**

There are no common procedures.

**Action**

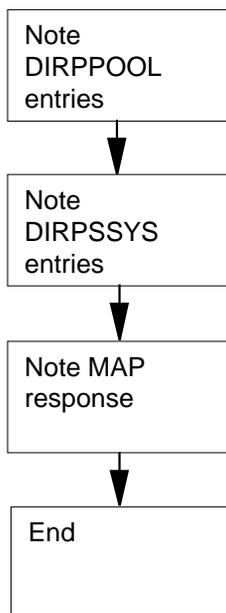
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs

### Reason 51 (continued)

---

#### Summary of Reason 51



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

## DIRP 101 logs Reason 51 (continued)

### Reason 51



#### **DANGER**

##### **Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### ***At the MAP terminal***

- 1 To access the DIRP level of the MAP display, type  
`>MAPCI ;MTC ;IOD ;DIRP`  
and press the Enter key.
- 2 To access table DIRPPPOOL , type  
`>TABLE DIRPPPOOL`  
and press the Enter key.
- 3 To list the all the entries for table DIRPPPOOL , type  
`>LIST ALL`  
and press the Enter key.
- 4 Note the entries for DIRPPPOOL.
- 5 To exit table DIRPPPOOL, type  
`>TABLE DIRPSSYS`  
and press the Enter key.
- 6 To access table DIRPSSYS, type  
`>TABLE DIRPSSYS`  
and press the Enter key.
- 7 To list all the entries for table DIRPSSYS, type  
`>LIST ALL`  
and press the Enter key.
- 8 Note the entries for the DIRPSSYS table.
- 9 To exit the DIRPSSYS table, type  
`>QUIT`  
and press the Enter key.
- 10 To query the affected subsystem that the log indicates, type  
`>QUERY ssys VOLUMES`

## DIRP 101 logs

### Reason 51 (end)

---

and press the Enter key.

where

**ssys**

is the subsystem

- 11** Note the MAP response in the PARALLEL field.

*Example of a MAP response:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 12** To clear the alarm, contact the next level of support and obtain a procedure.
- 13** The procedure is complete.

## **DIRP 101 logs Reason 56**

---

### **Application**

Use this procedure to clear the problem condition that reason code 56 indicates.

### **Definition**

Reason code 56 indicates a regular volume failed an audit, or an input/output error occurred. The Device Independent Recording Package (DIRP) utility marks the volume INERROR. An operating company person can recover the volume with the label INERROR. Reason code 56 always precedes or leads other DIRP101 logs that point to a problem.

### **Common procedures**

There are no common procedures.

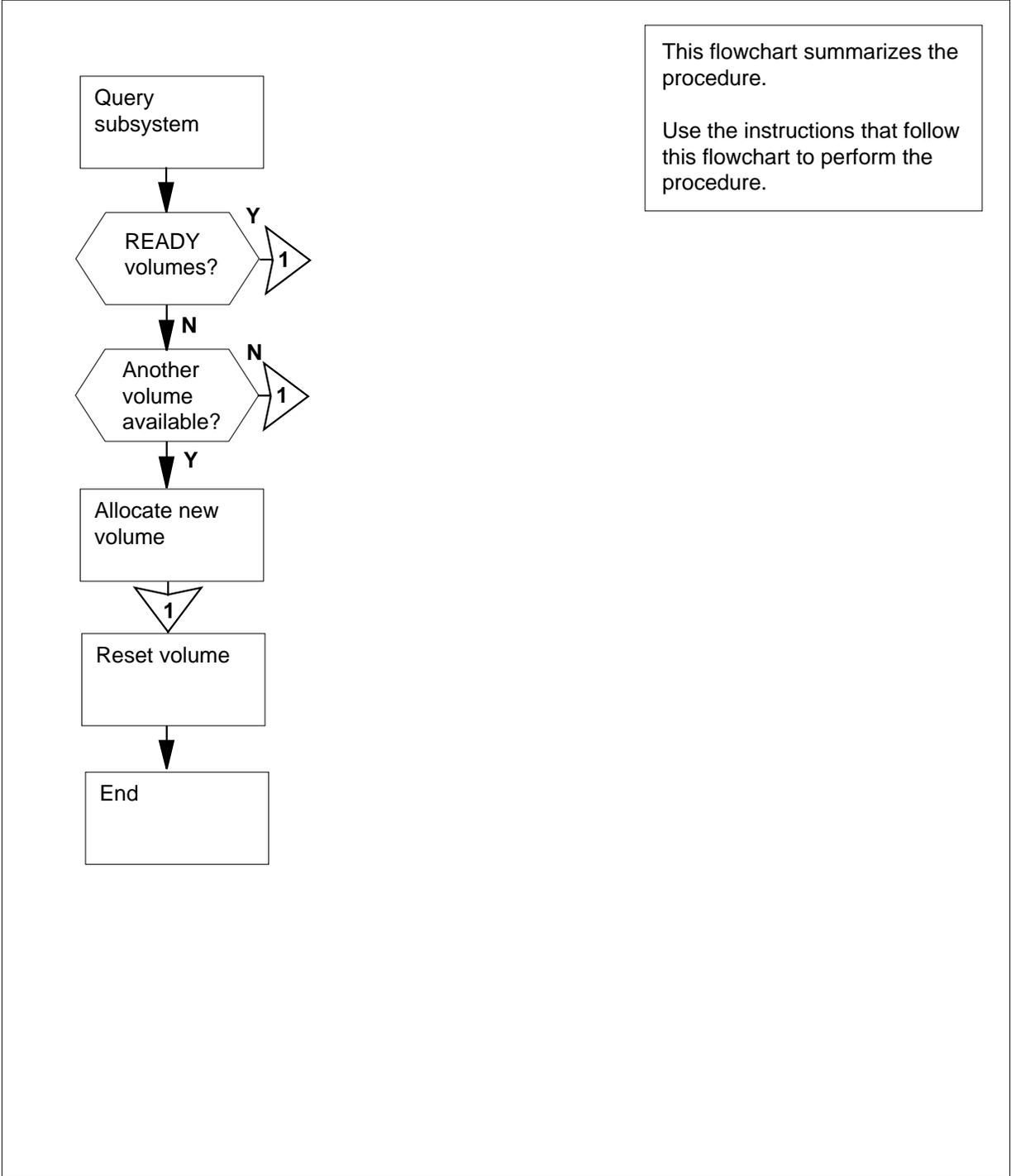
### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

# DIRP 101 logs

## Reason 56 (continued)

### Summary of Reason 56



**DIRP 101 logs**  
**Reason 56** (continued)

**Reason 56**

**At the MAP terminal**

1

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>DANGER</b><br/> <b>Possible loss or damage of AMA data</b><br/>                 If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.</p> |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

To access the DIRP level of the MAP display, type

**>MAPCI ;MTC ;IOD ;DIRP**

and press the Enter key.

2

To query the subsystem indicated by the log, type

**>QUERY *ssys* VOLUMES**

and press the Enter key.

*where*

***ssys***  
 is the subsystem

3

Note the MAP response in the REGULAR field.

*Example of a MAP response:*

|        |      |       |         |        |          |           |  |  |  |
|--------|------|-------|---------|--------|----------|-----------|--|--|--|
| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |  |  |  |
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |  |  |  |

|                   |         |         |     |      |     |      |      |      |      |
|-------------------|---------|---------|-----|------|-----|------|------|------|------|
| REGULAR VOLUME(S) |         |         |     |      |     |      |      |      |      |
| VOL#              | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
| 22                | D000AMA | INERROR | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23                | D010AMA | READY   | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

|                    |         |       |     |      |     |      |      |      |      |
|--------------------|---------|-------|-----|------|-----|------|------|------|------|
| PARALLEL VOLUME(S) |         |       |     |      |     |      |      |      |      |
| VOL#               | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
| 0                  | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1                  | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

4

Determine if any regular volumes are READY.

|                            |           |
|----------------------------|-----------|
| <b>If a regular volume</b> | <b>Do</b> |
| is READY                   | step 8    |

**DIRP 101 logs**  
**Reason 56** (end)

---

|           | <b>If a regular volume</b>                                                                                                                                                                                         | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is not READY                                                                                                                                                                                                       | step 5    |
| <b>5</b>  | Contact the next level of support to identify a volume available for regular recording.                                                                                                                            |           |
| <b>6</b>  | Determine if another volume is available.                                                                                                                                                                          |           |
|           | <b>If another volume</b>                                                                                                                                                                                           | <b>Do</b> |
|           | is available                                                                                                                                                                                                       | step 7    |
|           | is not available                                                                                                                                                                                                   | step 8    |
| <b>7</b>  | In step 5, the next level of support identifies the volume to move to the affected subsystem.<br><i>Refer to <b>Allocating recording volumes in the DIRP utility</b> in <b>Routine Maintenance Procedures</b>.</i> |           |
| <b>8</b>  | Reset the regular volume marked INERROR.<br><i>Refer to <b>Recovering volumes marked INERROR</b> in <b>Recovery Procedures</b>.</i>                                                                                |           |
| <b>9</b>  | For additional help, contact the next level of support.                                                                                                                                                            |           |
| <b>10</b> | The procedure is complete.                                                                                                                                                                                         |           |

**DIRP 101 logs**  
**Reason 78**

---

**Application**

Use this procedure to clear the problem condition that reason code 78 indicates.

**Definition**

Reason code 78 indicates that the Device Independent Recording Package (DIRP) utility is trying to recover a volume.

**Common procedures**

There are no common procedures.

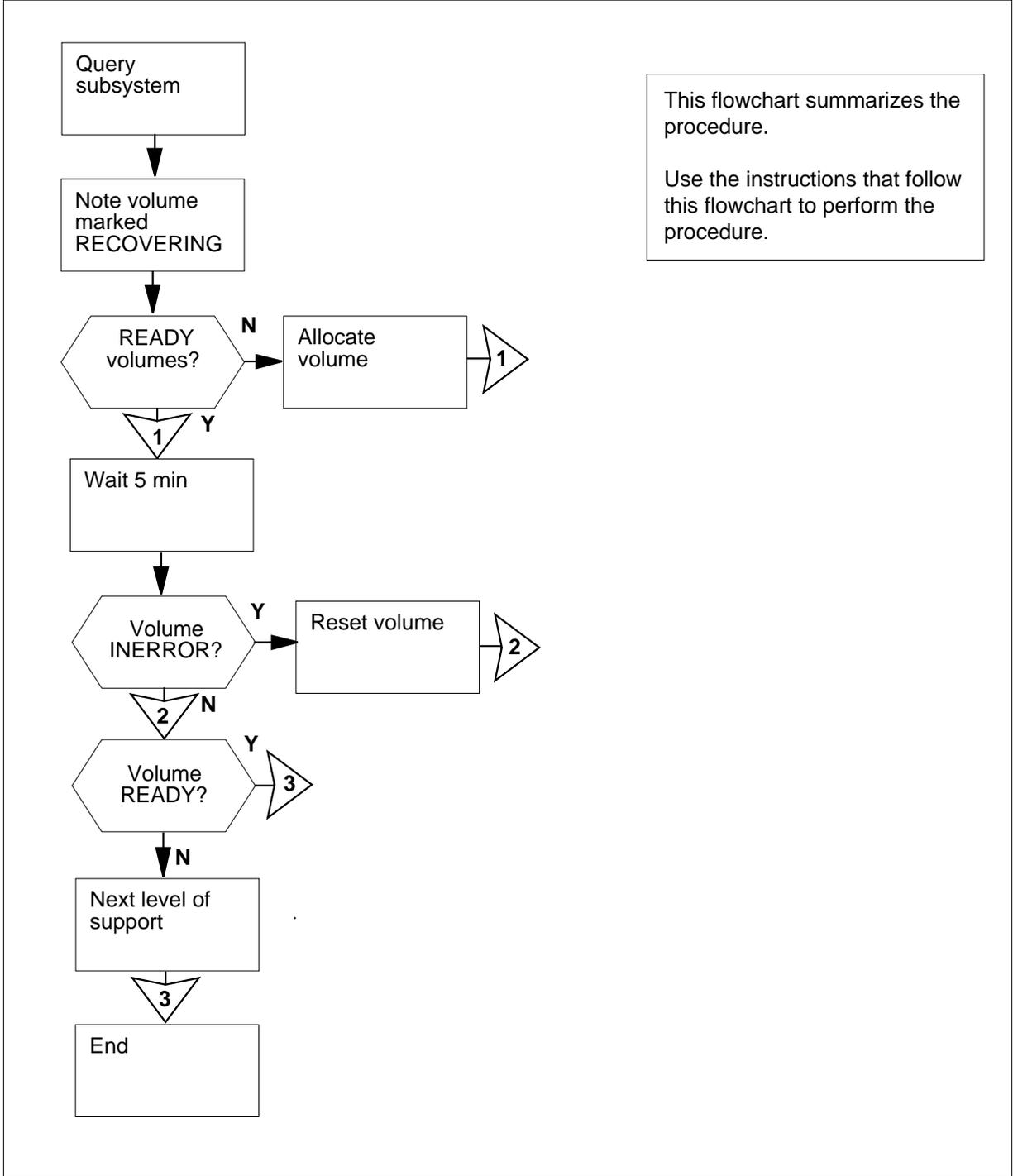
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

# DIRP 101 logs

## Reason 78 (continued)

### Summary of Reason 78



## DIRP 101 logs Reason 78 (continued)

### Reason 78

#### At the MAP terminal

1



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

To access the DIRP level of the MAP display, type

**>MAPCI ;MTC ;IOD ;DIRP**

and press the Enter key.

2

To query the subsystem indicated by the log, type

**>QUERY *ssys* VOLUMES**

and press the Enter key.

*where*

***ssys***

is the subsystem

3

Note the MAP response in the REGULAR field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

4

Note the regular volume marked RECOVERING.

## DIRP 101 logs

### Reason 78 (continued)

- 5 Determine if any regular volumes are READY.

| If a regular volume | Do     |
|---------------------|--------|
| is READY            | step 8 |
| is not READY        | step 6 |

- 6 Contact the next level of support to identify a volume that is available for normal recording.

- 7 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.

*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*

- 8 Wait 5 min after the system produces the log.

- 9 To query the subsystem the log indicates, type

**>QUERY ssys VOLUMES**

and press the Enter key.

*where*

**ssys**

is the subsystem

- 10 Note the MAP response in the REGULAR field.

*Example of a MAP display:*

```
SSNAME  SSNO  SEQNO  ROTATES  POOLNO  PARLPOOL  EMERGENCY
AMA      0      1       2         0         6      ***YES***
```

REGULAR VOLUME(S)

```
VOL#  VOLNAME  STATE  IOC  CARD  VOL  FSEG  ROOM  VLID  FILE
22    D000AMA  READY  0    1    6    7     7   2806  A
23    D010AMA  READY  1    0    2    1     9   2155  S1
```

PARALLEL VOLUME(S)

```
VOL#  VOLNAME  STATE  IOC  CARD  VOL  FSEG  ROOM  VLID  CURR
0      T0      READY  0    0    0    N/A   1   2400  YES
1      T1      READY  2    1    0    N/A   1   2401  NO
```

- 11 Determine the state of the volume marked RECOVERING in step 4.

| If the volume | Do      |
|---------------|---------|
| is INERROR    | step 12 |
| is READY      | step 14 |

---

**DIRP 101 logs**  
**Reason 78** (end)

---

| <b>If the volume</b>            | <b>Do</b>                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| is neither READY nor<br>INERROR | step 13                                                                                                               |
| <b>12</b>                       | Reset the volume marked INERROR.<br>Refer to <i>Recovering volumes marked INERROR</i> in <i>Recovery Procedures</i> . |
| <b>13</b>                       | For additional help, contact the next level of support.                                                               |
| <b>14</b>                       | The procedure is complete.                                                                                            |

## **DIRP 101 logs**

### **Reason 100**

---

#### **Application**

Use this procedure to clear the problem condition that reason 100 indicates.

#### **Definition**

Reason 100 indicates that a Device Independent Recording Package (DIRP) utility deletes all tape volumes from table DIRPPPOOL as a result of a restart reload.

#### **Common procedures**

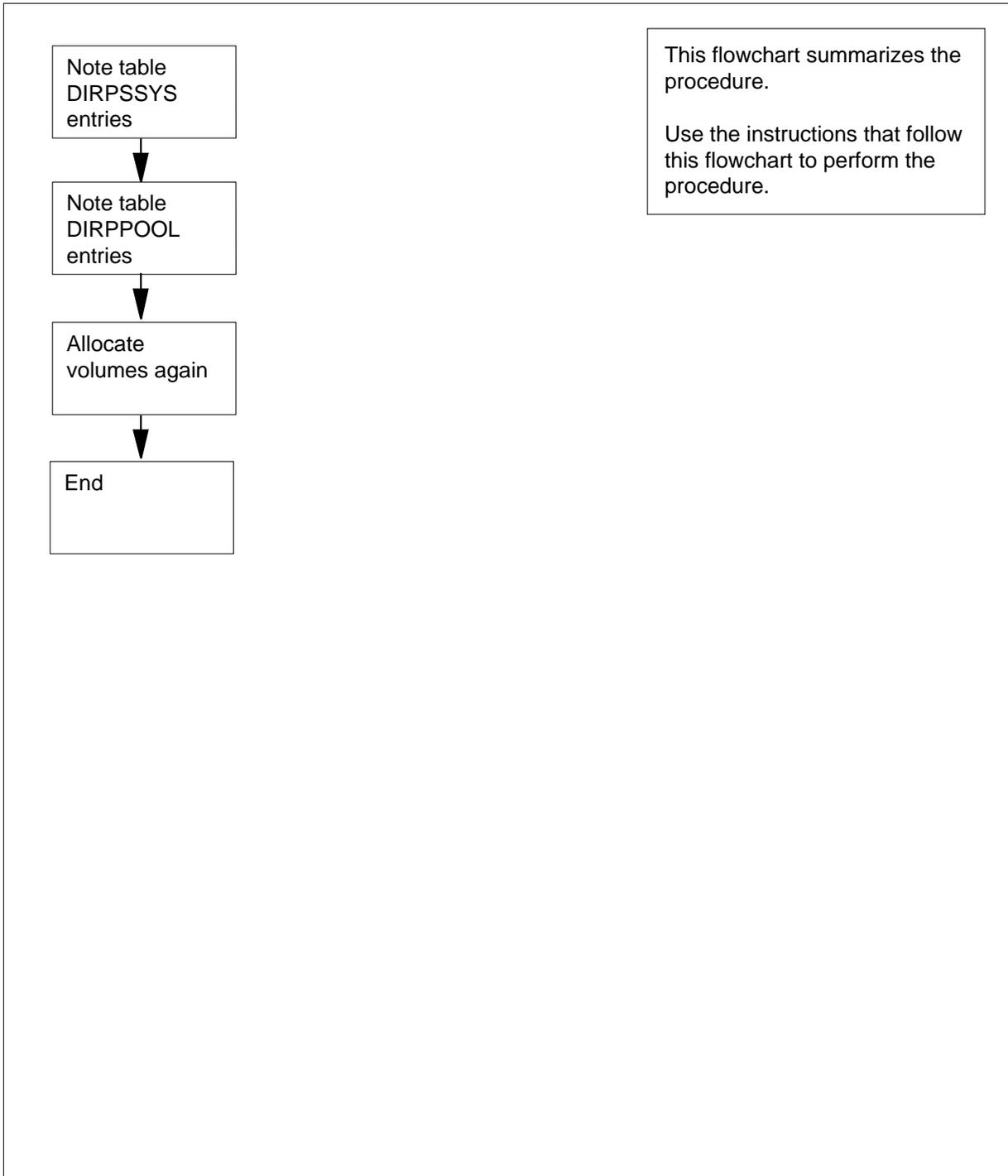
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs Reason 100 (continued)

### Summary of Reason 100



## DIRP 101 logs

### Reason 100 (end)

---

#### Reason 100

##### *At the MAP terminal*

- 1 To access the DIRP level of the MAP display, type  
`>MAPCI ;MTC ;IOD ;DIRP`  
and press the Enter key.
- 2 To access the DIRPPPOOL table, type  
`>TABLE DIRPPPOOL`  
and press the Enter key.
- 3 To list the all the entries for the DIRPPPOOL table, type  
`>LIST ALL`  
and press the Enter key.
- 4 Note the entries for DIRPPPOOL.
- 5 To exit the DIRPPPOOL table, type  
`>QUIT`  
and press the Enter key.
- 6 To access the DIRPSSYS table, type  
`>TABLE DIRPSSYS`  
and press the Enter key.
- 7 To list all the entries for the DIRPSSYS table, type  
`>LIST ALL`  
and press the Enter key.
- 8 Note the entries for the DIRPSSYS table.
- 9 To exit the DIRPSSYS table, type  
`>QUIT`  
and press the Enter key.
- 10 Contact the next level of support to identify volumes that you can allocate again.
- 11 Mount formatted tapes in place of the tapes that the system indicated on reload.
- 12 Move the volumes that the next level of support indicated in step 10.  
*Refer to *Allocating recording volumes in the DIRP utility* in *Routine Maintenance Procedures*.*
- 13 For additional help, contact the next level of support.
- 14 The procedure is complete.

**DIRP 101 logs**  
**Reason 127**

---

**Application**

Use this procedure to clear the problem condition for reason code 127.

**Definition**

Reason code 127 indicates that Device Independent Recording Package (DIRP) utility cannot remount a parallel tape volume or scan to the end of the tape.

**Common procedures**

There are no common procedures.

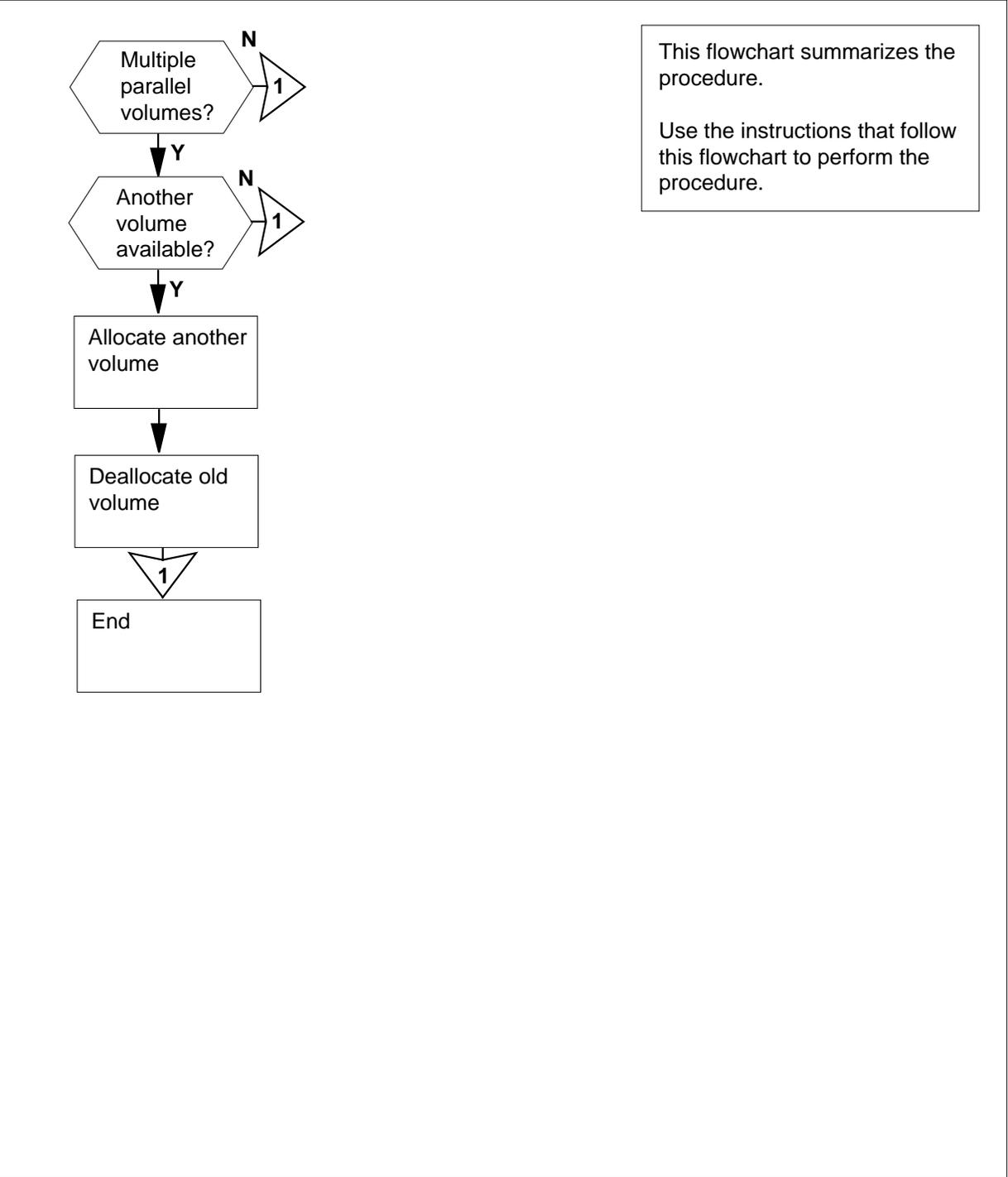
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

# DIRP 101 logs

## Reason 127 (continued)

### Summary of Reason 127



**DIRP 101 logs**  
**Reason 127** (continued)

**Reason 127**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 11  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem the log indicates, type

>QUERY ssys VOLUMES

and press the Enter key.

## DIRP 101 logs

### Reason 127 (end)

---

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to identify another volume that is available for parallel recording.
- 7 Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 8

is not available

step 11

---

- 8 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*
- 9 Remove the volume from the affected subsystem that the log identifies.  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*
- 10 For additional help, contact the next level of support.
- 11 The procedure is complete.

**DIRP 101 logs**  
**Reason 129**

---

**Application**

Use this procedure to clear the problem condition that reason code 129 indicates.

**Definition**

Reason code 129 indicates that a parallel tape fails to rewind correctly.

**Common procedures**

There are no common procedures.

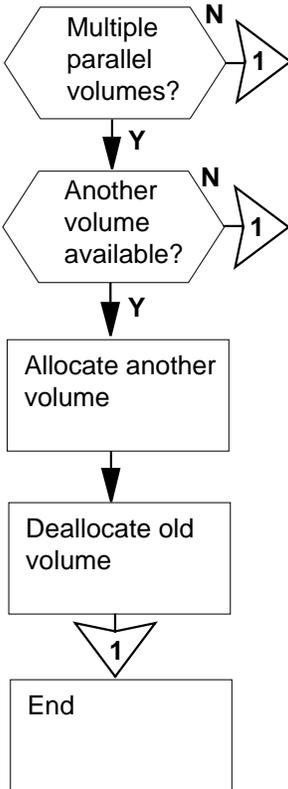
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs

### Reason 129 (continued)

#### Summary of Reason 129



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

**DIRP 101 logs**  
**Reason 129** (continued)

**Reason 129**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

`>SOC`

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

`>select option bas00001`

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 11  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

`>MAPCI;MTC;IOD;DIRP`

and press the Enter key.

- 4 To query the subsystem the log indicates, type

`>QUERY ssys VOLUMES`

and press the Enter key.

## DIRP 101 logs

### Reason 129 (end)

---

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to identify another volume available for parallel recording.
- 7 Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 8

is not available

step 11

---

- 8 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*
- 9 Remove the volume from the affected subsystem that the log identifies.  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*
- 10 For additional help, contact the next level of support.
- 11 The procedure is complete.

**DIRP 101 logs**  
**Reason 153**

---

**Application**

Use this procedure to clear the problem condition that reason code 153 indicates.

**Definition**

Reason code 153 indicates that the Device Independent Recording Package (DIRP) utility did not close a parallel tape file after a parallel rotation.

**Common procedures**

There are no common procedures.

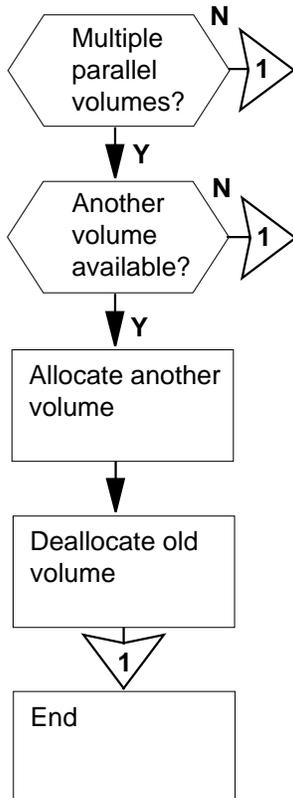
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs

### Reason 153 (continued)

#### Summary of Reason 153



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

**DIRP 101 logs**  
**Reason 153** (continued)

**Reason 153**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

`>SOC`

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

`>select option bas00001`

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 11  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

`>MAPCI;MTC;IOD;DIRP`

and press the Enter key.

- 4 To query the subsystem the log indicates, type

`>QUERY ssys VOLUMES`

and press the Enter key.

## DIRP 101 logs

### Reason 153 (end)

---

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to determine if another volume is available for parallel recording.
- 7 Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 8

is not available

step 11

---

- 8 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.*
- 9 Deallocate the volume from the affected subsystem that the log identifies.  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures, and return to this point.*
- 10 For additional help, contact the next level of support.
- 11 The procedure is complete.

**DIRP 101 logs**  
**Reason 154**

---

**Application**

Use this procedure to clear the problem condition that reason code 154 indicates.

**Definition**

Reason code 154 indicates that the Device Independent Recording Package (DIRP) utility fails to open a parallel tape volume during a parallel rotation.

**Common procedures**

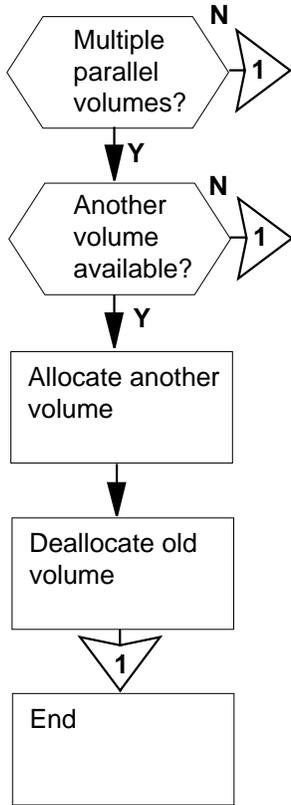
There are no common procedures.

**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 154** (continued)

**Summary of Reason 154**



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

**DIRP 101 logs**  
**Reason 154** (continued)

**Reason 154**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 10  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem the log indicates, type

>QUERY ssys VOLUMES

and press the Enter key.

## DIRP 101 logs

### Reason 154 (end)

---

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to identify a volume that is available for parallel recording.

---

**If a volume**

**Do**

is available

step 7

is not available

step 10

---

- 7 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.

*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures. Return to this point.*

- 8 Remove the volume from the affected subsystem that the log identifies.

*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures and return to this point.*

- 9 For additional help, contact the next level of support.

- 10 The procedure is complete.

**DIRP 101 logs**  
**Reason 155**

---

**Application**

Use this procedure to clear the problem that reason code 155 indicates.

**Definition**

Reason code 155 indicates that the Device Independent Recording Package (DIRP) utility cannot open a parallel tape volume again after a warm or cold restart.

**Common procedures**

There are no common procedures.

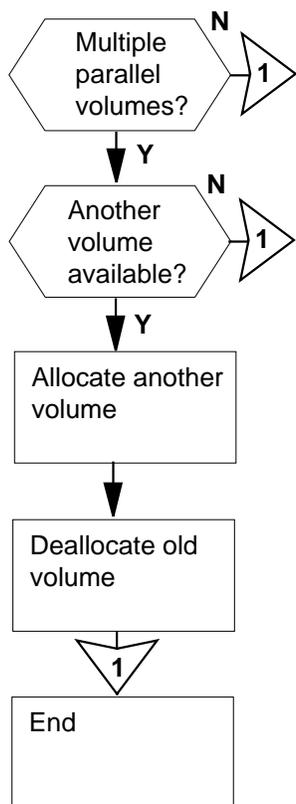
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs

### Reason 155 (continued)

#### Summary of Reason 155



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

**DIRP 101 logs**  
**Reason 155** (continued)

**Reason 155**



**DANGER**

**Possible loss or damage of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 11  
 group BAS00001

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem the log indicates, type

>QUERY ssys VOLUMES

and press the Enter key.

## DIRP 101 logs Reason 155 (end)

---

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6 Contact the next level of support to identify a volume that is available for parallel recording.
- 7 Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 8

is not available

step 11

---

- 8 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to [Allocating recording volumes in the DIRP utility](#) in [Routine Maintenance Procedures](#) and return to this point.*
- 9 Remove the volume from the affected subsystem that the log identifies.  
*Refer to [Deallocating recording volumes in the DIRP utility](#) in [Routine Maintenance Procedures](#) and return to this point.*
- 10 For additional help, contact the next level of support.
- 11 The procedure is complete.

**DIRP 101 logs**  
**Reason 223**

---

**Application**

Use this procedure to clear the problem that reason code 223 indicates.

**Definition**

Reason code 223 indicates that the Device Independent Recording Package (DIRP) utility cannot recover a parallel disk volume after a restart reload.

**Common procedures**

There are no common procedures.

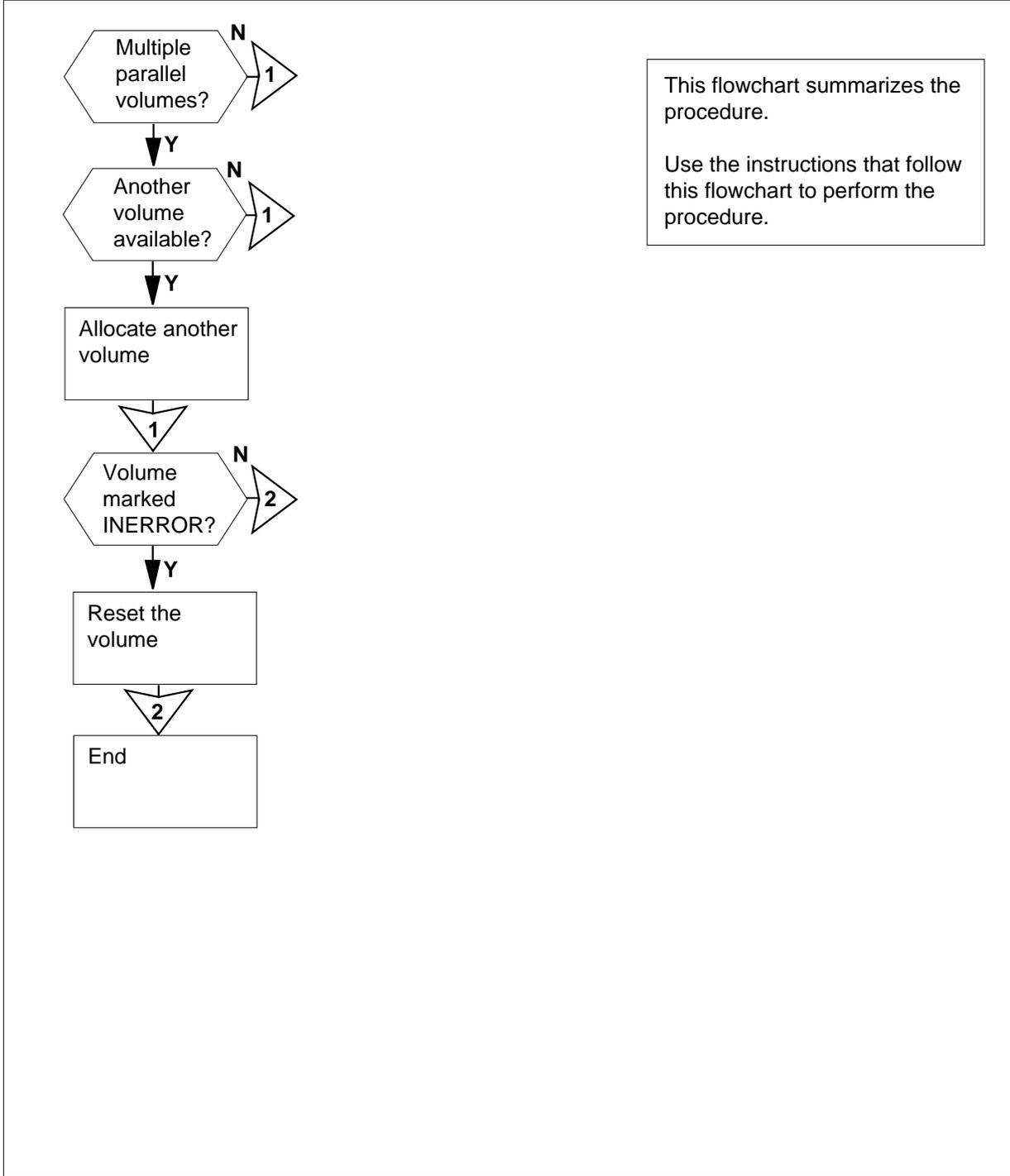
**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

# DIRP 101 logs

## Reason 223 (continued)

### Summary of Reason 223



**DIRP 101 logs**  
**Reason 223** (continued)

**Reason 223**



**DANGER**

**Possible loss or corruption of AMA data**

If you do not use this procedure or do not follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

**At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

`>SOC`

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

`>select option bas00001`

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 3  
 BAS00001

does not have the functionality step 9  
 group BAS00001

- 3 To access the DIRP level of the MAP, type

`>MAPCI;MTC;IOD;DIRP`

and press the Enter key.

- 4 To query the subsystem the log indicates, type

`>QUERY syss VOLUMES`

and press the Enter key.

## DIRP 101 logs

### Reason 223 (end)

where

**ssys**

is the subsystem

- 5 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME  | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|----------|---------|-----|------|-----|------|------|------|------|
| 0    | D000AMAP | INERROR | 0   | 0    | 0   | N/A  | 1    | 2966 | YES  |
| 1    | D010AMAP | READY   | 1   | 1    | 0   | N/A  | 1    | 3020 | NO   |

- 6 Contact the next level of support to identify another volume that is available for parallel recording.
- 7 Determine if another volume is available.

| If another volume | Do     |
|-------------------|--------|
| is available      | step 8 |
| is not available  | step 9 |

- 8 Allocate the volume that the next level of support identified in step 6 to the affected subsystem.

Refer to *Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures*. Return to this point.

- 9 Determine if any volumes are INERROR?

| If                      | Do      |
|-------------------------|---------|
| any volumes are INERROR | step 10 |
| volumes are not INERROR | step 12 |

- 10 Reset volumes marked INERROR.  
Refer to *Recovering volumes marked INERROR in Recovery Procedures* and return to this point.
- 11 For additional help, contact the next level of support.
- 12 The procedure is complete.

**DIRP 101 logs**  
**Reason 251**

---

**Application**

Use this procedure to clear the problem reason code 251 indicates.

**Definition**

Reason code 251 indicates that the Device Independent Recording Package (DIRP) utility cannot change the name of a normal or parallel file.

**Common procedures**

There are no common procedures.

**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

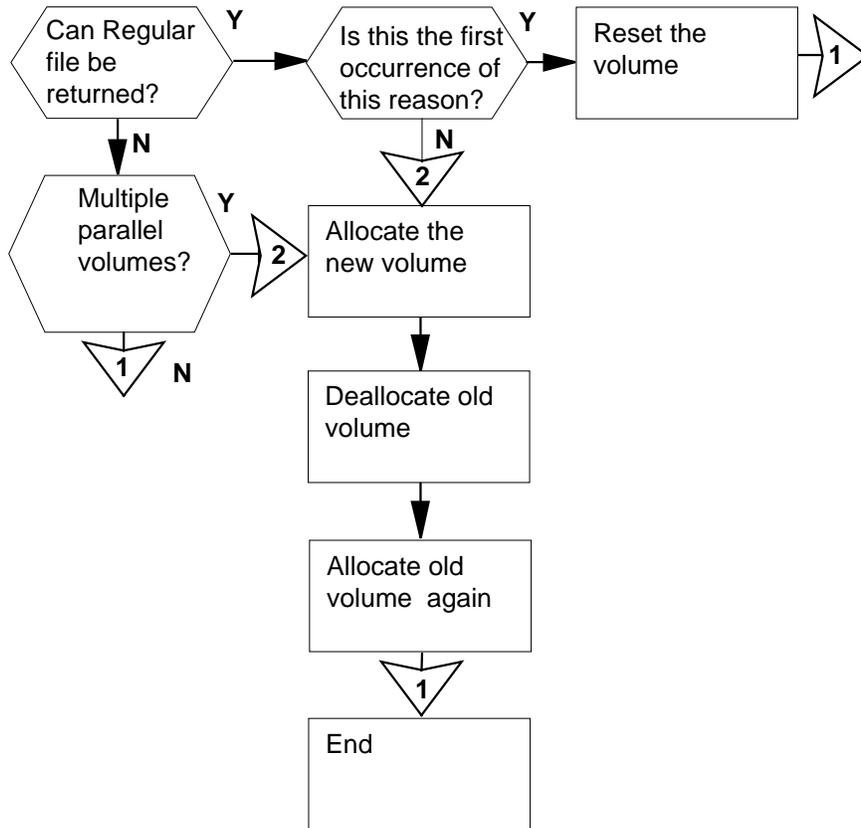
## DIRP 101 logs

### Reason 251 (continued)

#### Summary of Reason 251

This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.



**DIRP 101 logs**  
**Reason 251** (continued)

**Reason 251**

***At your current location***

**1**

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>DANGER</b><br/> <b>Possible loss or corruption of AMA data</b><br/>                 If you do not use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.</p> |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Read the TEXT1 field of the log and locate the file with the name that the DIRP utility did not change. Determine if the file is a regular or parallel file.

| <b>If the file</b> | <b>Do</b> |
|--------------------|-----------|
| is regular         | step 2    |
| is parallel        | step 9    |

**2** Determine if this occurrence is the first occurrence of this reason.

| <b>If this</b>              | <b>Do</b> |
|-----------------------------|-----------|
| is the first occurrence     | step 3    |
| is not the first occurrence | step 5    |

**3** Reset the normal volume that the log indicates.

Refer to *Routine Maintenance Procedures* and return to this point.

**4** Contact the next level of support to identify another volume that is available for regular recording.

**5** Determine if another volume is available.

| <b>If another volume</b> | <b>Do</b> |
|--------------------------|-----------|
| is available             | step 6    |
| is not available         | step 19   |

**6** Allocate the volume that the next level of support identifies in step 4.

Refer to *Allocating recording volumes in the DIRP utility* in *Routine Maintenance Procedures* and return to this point.

**7** Deallocate the normal volume that the log indicates.

## DIRP 101 logs

### Reason 251 (continued)

Refer to *Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures* and return to this point.

- 8 Replace the regular volume you deallocated in step 7.

Refer to *Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures* and return to this point.

**At the MAP terminal**

- 9 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 10 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

**If the switch**

**Do**

has the functionality group step 11  
BAS00001

does not have the functionality step 20  
group BAS00001

- 11 To access the DIRP level of the MAP display, type

>MAPCI ;MTC ;IOD ;DIRP

and press the Enter key.

- 12 To query the subsystem that the log indicates, type

>QUERY **ssys** VOLUMES

and press the Enter key.

*where*

**ssys**

is the subsystem

- 13 Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

**DIRP 101 logs**  
**Reason 251 (end)**

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

**14** Contact the next level of support to identify a volume that is available for parallel recording.

**15** Determine if another volume is available.

---

**If another volume**

**Do**

is available

step 16

is not available

step 19

---

**16** Allocate the volume that the next level of support identified in Step 14.

Refer to *Allocating recording volumes in the DIRP utility* in *Routine Maintenance Procedures* and return to this point.

**17** Deallocate the parallel volume that the log indicates.

Refer to *Deallocating recording volumes in the DIRP utility* in *Routine Maintenance Procedures*. Return to this point.

**18** Reallocate the parallel volume you deallocated in step 17.

Refer to *Allocating recording volumes in the DIRP utility* in *Routine Maintenance Procedures* and return to this point.

**19** For additional help, contact the next level of support.

**20** The procedure is complete.

## **DIRP 101 logs**

### **Reason 266**

---

#### **Application**

Use this procedure to clear the problem that reason code 266 indicates.

#### **Definition**

This reason code indicates that the Device Independent Recording Package (DIRP) utility did not open a parallel disk file on an incoming parallel rotation. The DIRP utility did not open a new active file.

#### **Common procedures**

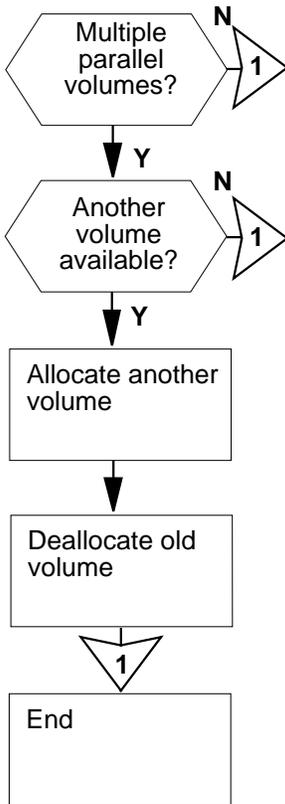
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## DIRP 101 logs Reason 266 (continued)

### Summary of Reason 266



This flowchart summarizes the procedure.

Use the instructions that follow this flowchart to perform the procedure.

## DIRP 101 logs

### Reason 266 (continued)

#### Reason 266



#### **DANGER**

#### **Possible loss or damage of AMA data**

If you do not use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or corruption of AMA data results in revenue loss for the operating company.

#### **At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

---

#### **If the switch**

#### **Do**

has the functionality group step 3  
BAS00001

does not have the functionality step 11  
group BAS00001

---

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem that the log indicates, type

>QUERY syss VOLUMES

and press the Enter key.

**DIRP 101 logs  
Reason 266 (end)**

where

**ssys**  
is the subsystem

- 5** Note the MAP response in the PARALLEL field.

*Example of a MAP:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME  | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|----------|---------|-----|------|-----|------|------|------|------|
| 0    | D000AMAP | INERROR | 0   | 0    | 0   | N/A  | 1    | 2966 | YES  |
| 1    | D010AMAP | READY   | 1   | 1    | 0   | N/A  | 1    | 3020 | NO   |

- 6** Contact the next level of support to identify another volume that is available for parallel recording.
- 7** Determine if another volume is available.

| If another volume | Do      |
|-------------------|---------|
| is available      | step 8  |
| is not available  | step 11 |

- 8** Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures and return to this point.*
- 9** Deallocate the volume that the log identified from the affected subsystem  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures. Return to this point.*
- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## **DIRP 101 logs**

### **Reason 267**

---

#### **Application**

Use this procedure to clear the problem that reason 267 indicates.

#### **Definition**

Reason 267 indicates that the Device Independent Recording Package (DIRP) utility did not open a parallel disk file again.

#### **Common procedures**

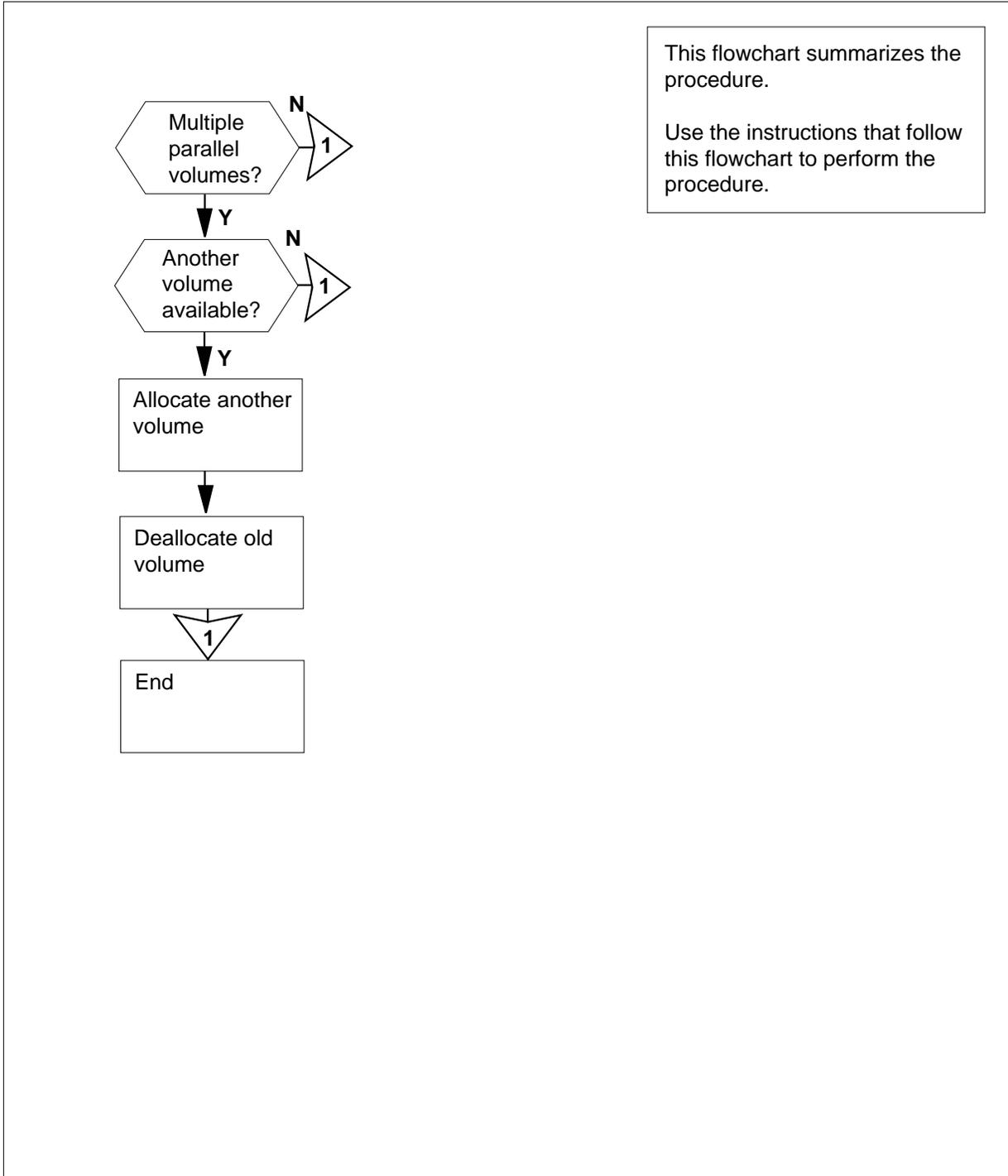
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 267** (continued)

**Summary of Reason 267**



## DIRP 101 logs

### Reason 267 (continued)

#### Reason 267



#### **DANGER**

##### **Possible loss or corruption of AMA data**

If you do not use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### **At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

**>SOC**

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

**>select option bas00001**

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

---

#### **If the switch**

#### **Do**

has the functionality group step 3  
BAS00001

does not have the functionality step 11  
group BAS00001

---

- 3 To access the DIRP level of the MAP display, type

**>MAPCI;MTC;IOD;DIRP**

and press the Enter key.

- 4 To query the subsystem that the log indicates, type

**>QUERY ssys VOLUMES**

and press the Enter key.

**DIRP 101 logs  
Reason 267 (end)**

where

**ssys**  
is the subsystem

- 5** Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME  | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|----------|---------|-----|------|-----|------|------|------|------|
| 0    | D000AMAP | INERROR | 0   | 0    | 0   | N/A  | 1    | 2966 | YES  |
| 1    | D010AMAP | READY   | 1   | 1    | 0   | N/A  | 1    | 3020 | NO   |

- 6** Contact the next level of support to identify another volume that is available for parallel recording.
- 7** Determine if another volume is available.

| If another volume | Do      |
|-------------------|---------|
| is available      | step 8  |
| is not available  | step 11 |

- 8** Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures. and return to this point.*
- 9** Deallocate the volume that the log identified from the affected subsystem.  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures. and return to this point.*
- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## **DIRP 101 logs**

### **Reason 279**

---

#### **Application**

Use this procedure to clear the problem that reason code 279 indicates.

#### **Definition**

Reason code 279 indicates the Device Independent Recording Package (DIRP) disk audit procedure (DIRPDSON), finds corrupt data in its internal table of file segments (FILESEGS). The procedure marks the disk volume INERROR indicated.

#### **Common procedures**

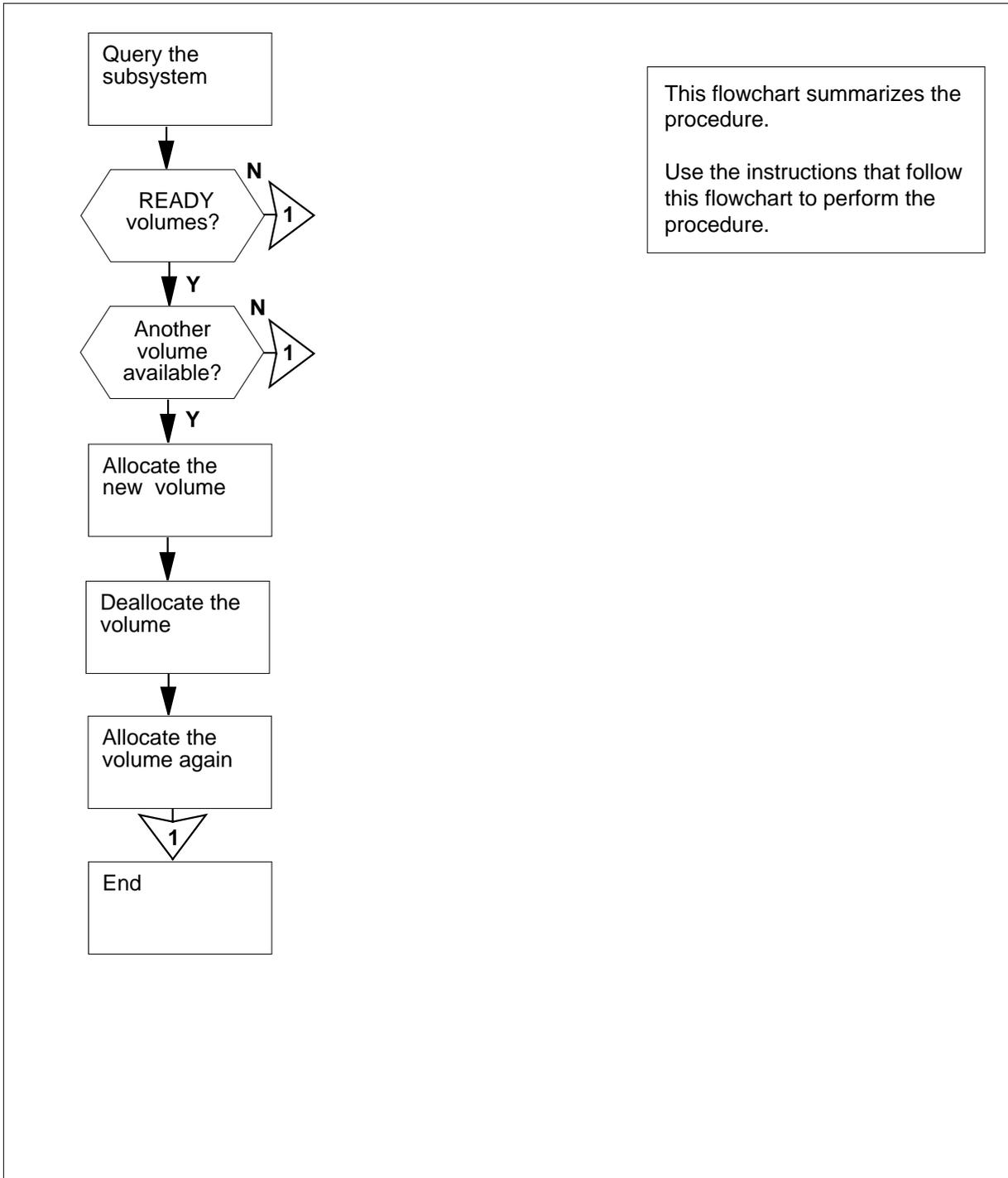
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 279** (continued)

**Summary of Reason 279**



# DIRP 101 logs

## Reason 279 (continued)

### Reason 279

#### At the MAP terminal

1



**DANGER**

**Possible loss or corruption of AMA data**

If you do not use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

To access the DIRP level of the MAP display, type

**>MAPCI ;MTC ;IOD ;DIRP**

and press the Enter key.

2

To query the subsystem that the log indicates, type

**>QUERY *ssys* VOLUMES**

and press the Enter key.

*where*

***ssys***

is the subsystem

3

Note the MAP response in the REGULAR field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE   | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|---------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | INERROR | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY   | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

4

Determine if any regular volumes are READY.

**If regular volumes**

**Do**

are READY

step 5

**DIRP 101 logs**  
**Reason 279 (end)**

|           | <b>If regular volumes</b>                                                                                                                                                                                                          | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | are not READY                                                                                                                                                                                                                      | step 11   |
| <b>5</b>  | Contact the next level of support to identify a volume that is available for regular recording.                                                                                                                                    |           |
| <b>6</b>  | Determine if another volume is available.                                                                                                                                                                                          |           |
|           | <b>If another volume</b>                                                                                                                                                                                                           | <b>Do</b> |
|           | is available                                                                                                                                                                                                                       | step 7    |
|           | is not available                                                                                                                                                                                                                   | step 11   |
| <b>7</b>  | Allocate the volume that the next level of support identified in step 5 to the affected subsystem.<br>Refer to <i>Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures</i> and return to this point. |           |
| <b>8</b>  | Deallocate the volume that the log identifies from the affected subsystem.<br>Refer to <i>Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures</i> and return to this point.                       |           |
| <b>9</b>  | Allocate the volume you deallocated in step 8 to the affected subsystem.<br>Refer to <i>Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures</i> and return to this point.                           |           |
| <b>10</b> | For additional help, contact the next level of support.                                                                                                                                                                            |           |
| <b>11</b> | The procedure is complete.                                                                                                                                                                                                         |           |

## **DIRP 101 logs**

### **Reason 280**

---

#### **Application**

Use this procedure to clear the problem that reason code 280 indicates.

#### **Definition**

Reason code 280 indicates that a parallel volume recovered after a restart reload. This volume was the current file before the restart reload. To prevent the deletion of data on this file, the Device Independent Recording Package (DIRP) utility closes this volume.

#### **Common procedures**

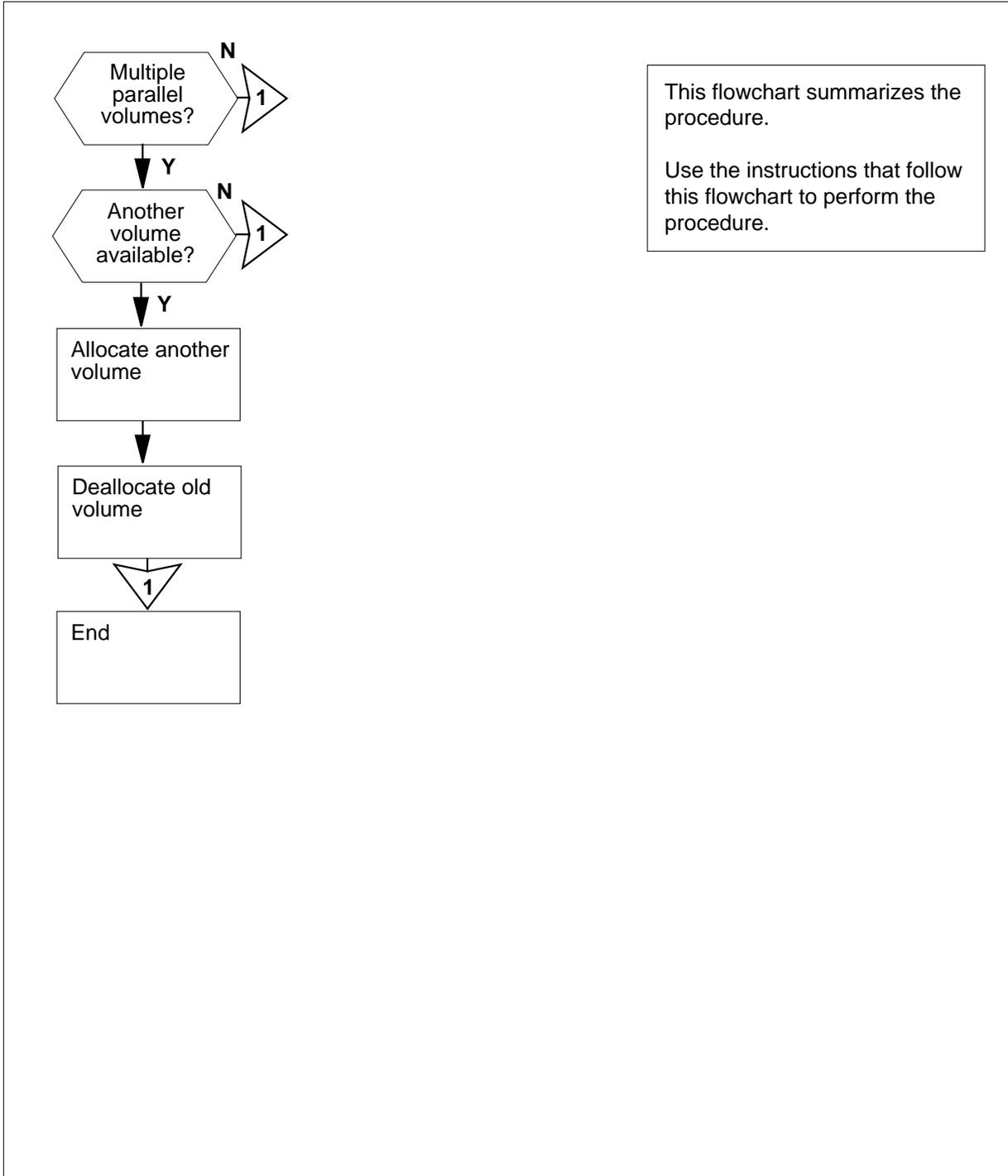
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**DIRP 101 logs**  
**Reason 280** (continued)

**Summary of Reason 280**



## DIRP 101 logs

### Reason 280 (continued)

#### Reason 280



#### **DANGER**

#### **Possible loss or corruption of AMA data**

If you do not to use this procedure or follow it exactly, you can lose or damage automatic message accounting (AMA) data. The operating company uses AMA data to produce billings. Loss or damage of AMA data results in revenue loss for the operating company.

#### **At the MAP terminal**

- 1 To determine if the switch has functionality group BAS00001 (BAS00001 allows more than one parallel volume to a subsystem), at the CI level of the MAP display type

>SOC

and press the Enter key.

- 2 To determine if the switch has functionality group BAS00001, type

>select option bas00001

and press the Enter key.

*Example of a MAP response:*

GROUP: BAS

| OPTION  | NAME | RTU | STATE | USAGE | LIMIT | UNITS | LAST_CHG |
|---------|------|-----|-------|-------|-------|-------|----------|
| BAS0001 | Base | Y   | ON    | -     | -     | -     | 95/09/26 |

#### **If the switch**

#### **Do**

has the functionality group step 3  
BAS00001

does not have the functionality step 11  
group BAS00001

- 3 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 4 To query the subsystem that the log indicates, type

>QUERY ssys VOLUMES

and press the Enter key.

**DIRP 101 logs**  
**Reason 280 (end)**

where

**ssys**  
is the subsystem

- 5** Note the MAP response in the PARALLEL field.

*Example of a MAP display:*

| SSNAME | SSNO | SEQNO | ROTATES | POOLNO | PARLPOOL | EMERGENCY |
|--------|------|-------|---------|--------|----------|-----------|
| AMA    | 0    | 1     | 2       | 0      | 6        | ***YES*** |

REGULAR VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | FILE |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 22   | D000AMA | READY | 0   | 1    | 6   | 7    | 7    | 2806 | A    |
| 23   | D010AMA | READY | 1   | 0    | 2   | 1    | 9    | 2155 | S1   |

PARALLEL VOLUME(S)

| VOL# | VOLNAME | STATE | IOC | CARD | VOL | FSEG | ROOM | VLID | CURR |
|------|---------|-------|-----|------|-----|------|------|------|------|
| 0    | T0      | READY | 0   | 0    | 0   | N/A  | 1    | 2400 | YES  |
| 1    | T1      | READY | 2   | 1    | 0   | N/A  | 1    | 2401 | NO   |

- 6** Contact the next level of support to identify another volume that is available for parallel recording.
- 7** Determine if another volume is available.

| <b>If another volume</b> | <b>Do</b> |
|--------------------------|-----------|
| is available             | step 8    |
| is not available         | step 11   |

- 8** Allocate the volume that the next level of support identified in step 6 to the affected subsystem.  
*Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures and return to this point.*
- 9** Deallocate the volume that the log identified from the affected subsystem.  
*Refer to Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures and return to this point.*
- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## Disconnecting a TOPS MPX terminal

### TOPS MPX

#### Application

Use this procedure to remove defective TOPS MPX position equipment.  
Replace the defective equipment with TOPS MPX equipment.

#### Action

Refer to the following cable list when you remove or replace a TOPS MPX position component.

#### Cable list reference table (Sheet 1 of 2)

| Nomenclature             | From                                     | To                                                      | Part No.                                                    |
|--------------------------|------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------|
| Display power cord       | Power strip                              | Monitor                                                 | Power strip A0368941                                        |
| Display signal cable     | Base unit display signal cable connector | Monitor                                                 | Supplied with work station                                  |
| Keyboard cable           | Keyboard                                 | Base unit keyboard connector                            | Keyboard equipped                                           |
| Headset jacks            | Headset jack                             | Base unit FGND, HS1, HS2                                | NTNX5303                                                    |
| Base unit power          | Power strip                              | Base unit power cord connector                          | Power strip A0368941                                        |
| Wiring closet cable      | Base unit TR and DT                      | Wiring closet TR to MAU, DT to BIX block voice teledapt | NTNX36DJ<br><b>Note:</b> Use with NTNX51BC or NTNX51BD card |
| Wiring closet cable      | Base unit TR and DT                      | Wiring closet TR to MAU, DT to BIX block voice teledapt | NTNX36QB<br><b>Note:</b> Use with NTNX51BD card only        |
| Wiring closet data cable | DSU DDS connector                        | Wiring closet to BIX block data teledapt                | NTNX36DP                                                    |
| DSU modem cable          | DSU DTE connector                        | Base unit RTIC card connector                           | NTNX36DM                                                    |
| MAU to MAU               | MAU RI                                   | MAU RO                                                  | NTNX36DK As token-ring configuration requires               |

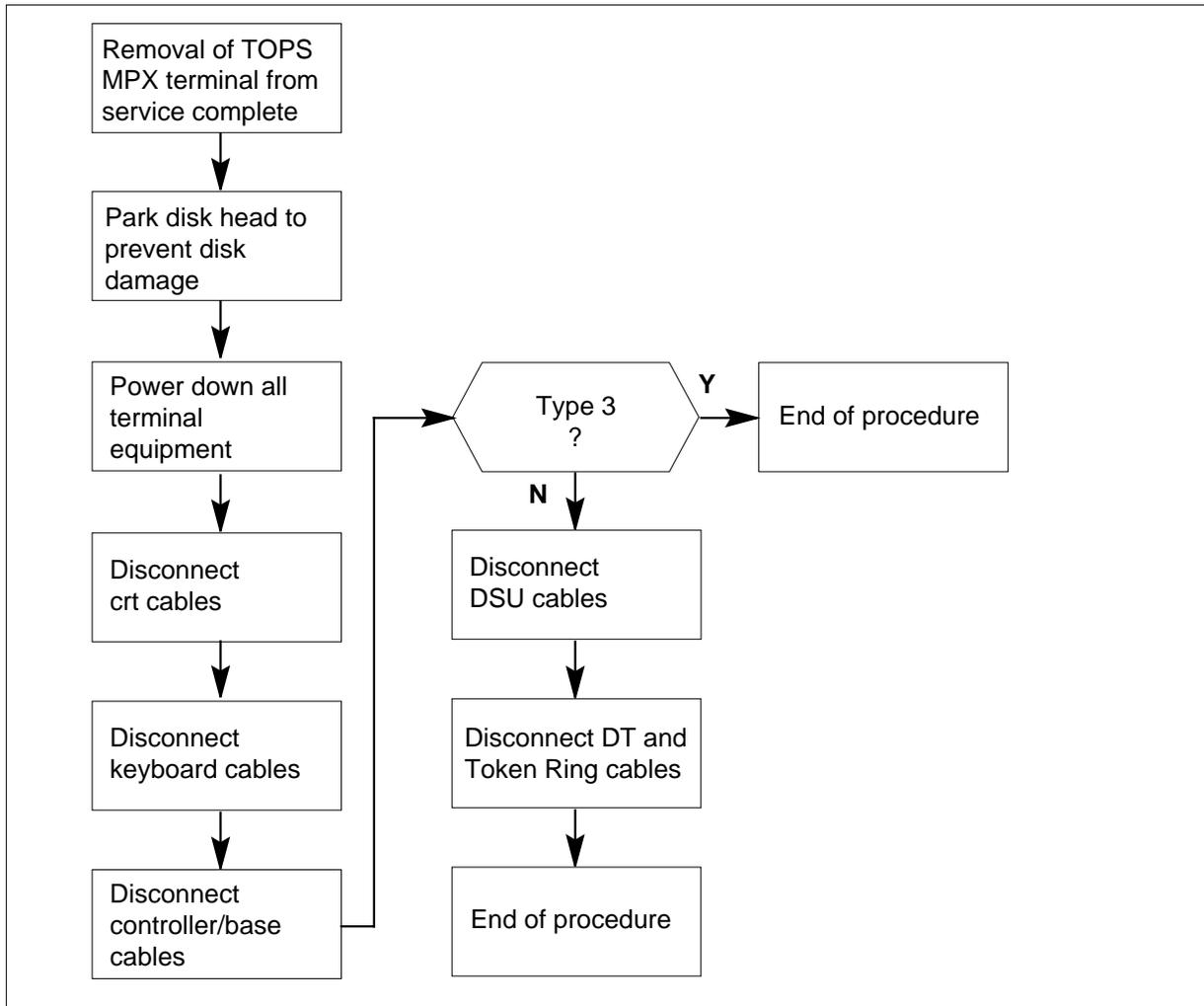
## Disconnecting a TOPS MPX terminal TOPS MPX (continued)

### Cable list reference table (Sheet 2 of 2)

| Nomenclature | From                             | To           | Part No. |
|--------------|----------------------------------|--------------|----------|
| TSG cable    | Miscellaneous frame              | TSG          | NTNX36DQ |
| Channel bank | Miscellaneous frame<br>BIX block | Channel bank | NTNX36DN |

The following flowchart summarizes the procedure. Use the instructions that follow this flowchart to perform the procedure.

### Summary of Disconnecting a TOPS MPX terminal



---

## Disconnecting a TOPS MPX terminal

### TOPS MPX (continued)

---

#### Disconnecting a TOPS MPX terminal

*At your current location*

1



**WARNING**

**Potential risk to equipment**

Place the defective TOPS MPX position equipment in an INB state. Perform the correct power down procedures before you disconnect.



**DANGER**

**Potential risk to personnel and equipment**

Make sure that all appropriate power down procedures are complete. Take appropriate precautions to protect personnel. Before you disconnect TOPS MPX controller, make sure you busy the TOPS MPX from the MAP.



**DANGER**

**Risk of electrocution**

Disconnect the 120-V ac power cord before you disconnect the TOPS MPX monitor.

You must enter this procedure from the procedure Removing a TOPS MPX terminal from service . Refer to Office Records to determine the type of position.

**type 1**

Bisync token-ring access point

**type 2**

TOPS MPX virtual position controller

**type 3**

TOPS MPX only

**type 3**

TOPS MPX with screen server

Record for later use.

2

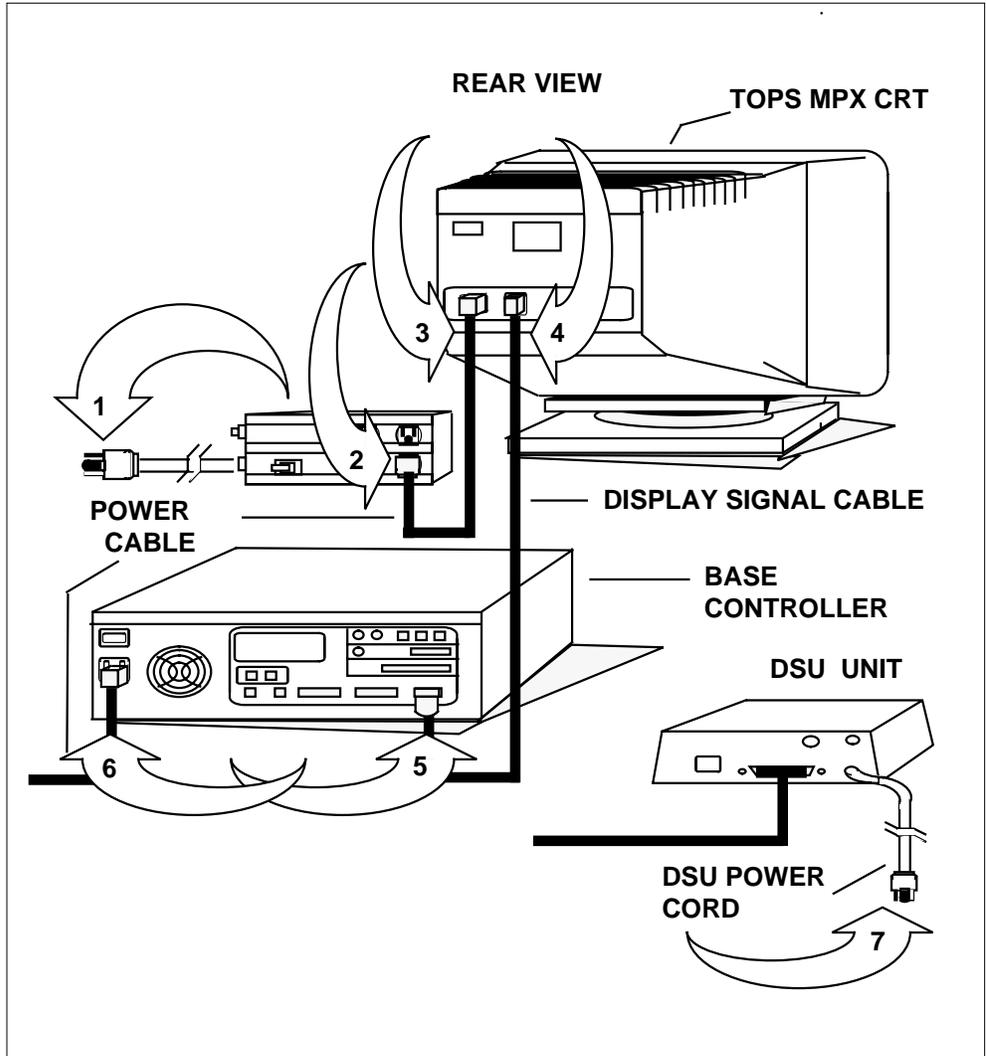
Park the disk heads before you remove power. This action prevents damage to the disk. Follow this procedure when you disconnect or move the TOPS MPX terminal:

## Disconnecting a TOPS MPX terminal TOPS MPX (continued)

---

- a Insert Hardware Reference diskette #4 of 4 into A Drive.
  - b Turn power off. Wait 5 seconds.
  - c Turn power on.  
The system boots to an IBM prompt display.
  - d Press Enter to display the menu. Press item #6. This item is the MOVE command.
- 3 Remove diskette from Drive A. Power down the TOPS MPX position and remove power cords and display cables from TOPS MPX CRT.  
Remove power cords (1, 2, 3, 6, and 7) and display cables (4 and 5).  
**Note:** Removal of DSU power cord (7) applies to type 1 or type 2 TOPS MPX positions.  
Move TOPS MPX crt (display) to local maintenance area.

## Disconnecting a TOPS MPX terminal TOPS MPX (continued)

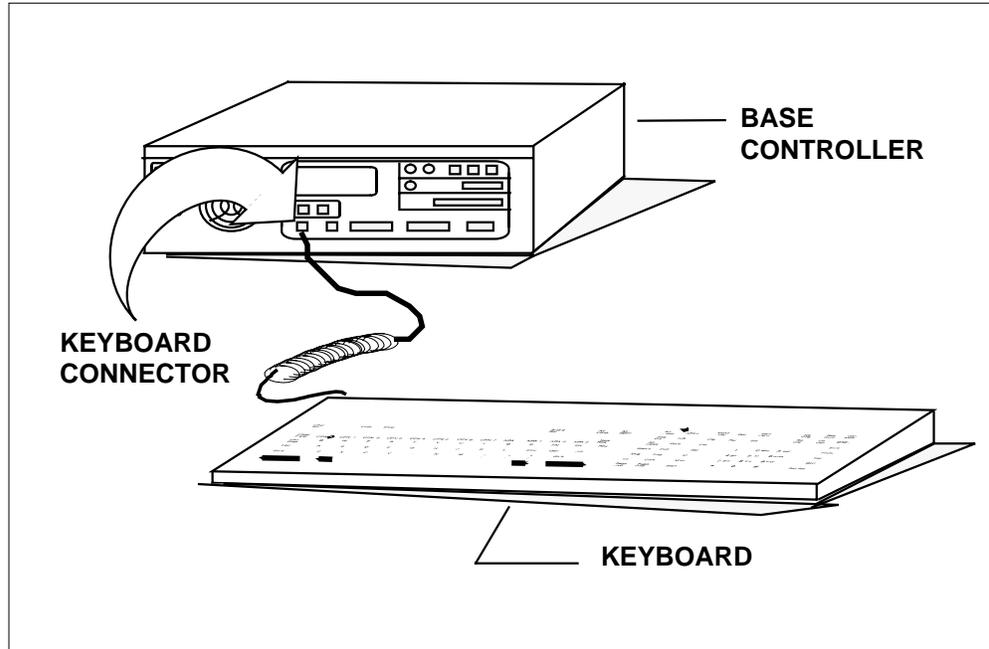


- 4 Disconnect the keyboard connector to remove the TOPS MPX keyboard. Disconnect keyboard from base controller and move keyboard to local maintenance area.

---

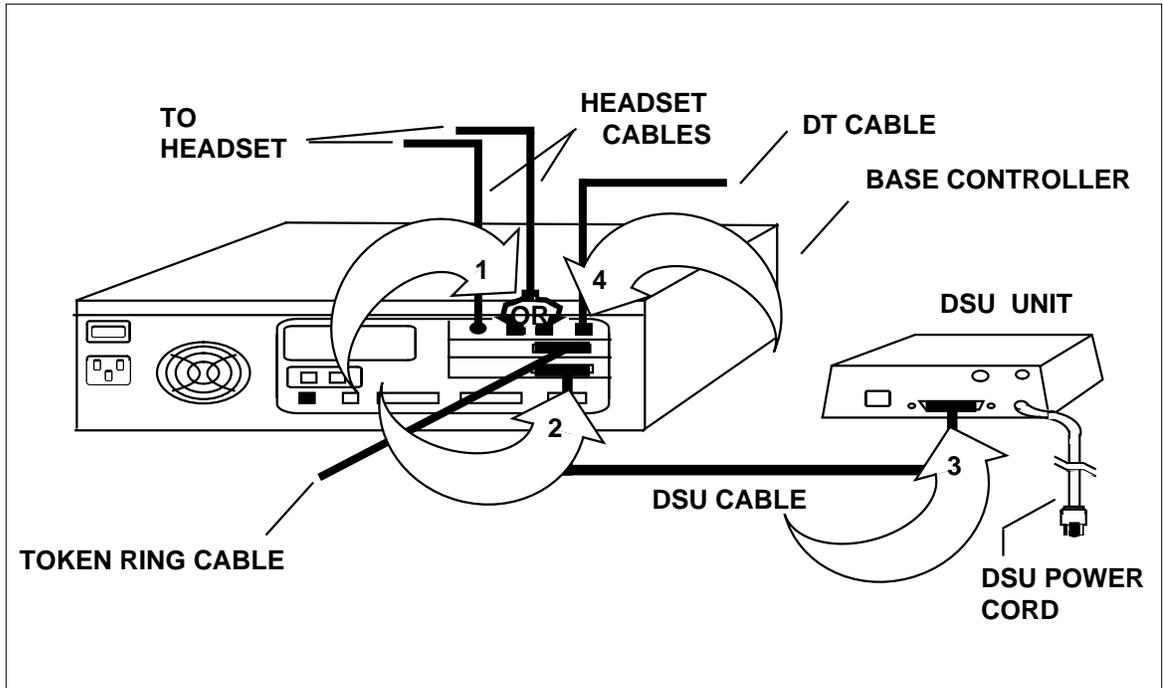
## Disconnecting a TOPS MPX terminal TOPS MPX (continued)

---



- 5 To remove the TOPS MPX terminal controller/base, complete the following:
- a Disconnect headset cables (1) and DSU cables (2) from the base controller.
  - b Disconnect DSU cable (3) from DSU.
  - c Disconnect DT cable and Token Ring cable (4) from the base controller.  
*Note:* Removal of DSU cables applies to type 1 or type 2 TOPS MPX positions.
  - d Move base controller to local maintenance area.

## Disconnecting a TOPS MPX terminal TOPS MPX (end)



## Downloading software to an APU

---

### Application

Use this procedure to download software to an application processor unit (APU).

### Definition

This procedure downloads software to the indicated APU and performs this procedure as required.

### Common procedures

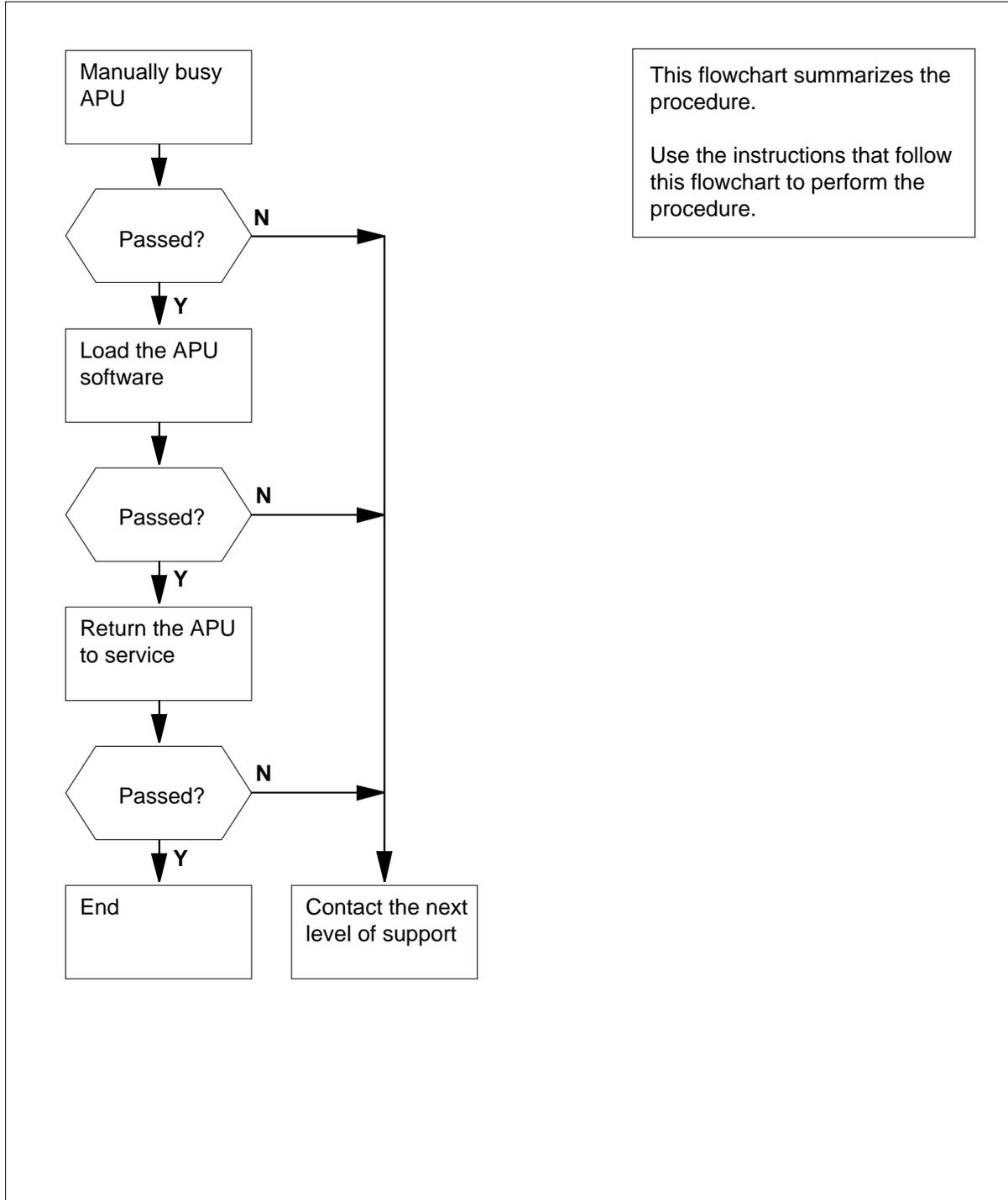
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Downloading software to an APU (continued)

### Summary of Downloading software to an APU



---

## Downloading software to an APU (continued)

---

### Downloading software to an APU

#### *At the MAP terminal*

- 1** To access the PM level of the MAP display, type  
**>MAPCI ;MTC ;PM**  
 and press the Enter key.

*Example of a MAP response:*

|    | SysB | ManB | OffL | CBSy | ISTb | InSv |
|----|------|------|------|------|------|------|
| PM | 1    | 10   | 12   | 0    | 6    | 49   |

- 2** To post the APU you want to load, type  
**>POST APU apu\_no**  
 and press the Enter key.

*where*

**apu\_no**  
 is the number of the APU (0 to 511)

*Example of a MAP*

```
APU 1 InSv
```

- 3** Determine the state of the posted APU.

| <b>If the APU</b> | <b>Do</b> |
|-------------------|-----------|
| is InSv           | step 5    |
| is ISTb           | step 4    |

- 4** Perform the correct procedure to clear alarms in the *Alarm and Performance Monitoring Procedures*.

- 5** To manually busy the posted APU, type  
**>BSY**  
 and press the Enter key.

| <b>If the BSY command</b>                | <b>Do</b> |
|------------------------------------------|-----------|
| passes                                   | step 8    |
| fails                                    | step 6    |
| causes the system to prompt for approval | step 7    |

- 6** To force the posted APU to busy, type  
**>BSY FORCE**

---

## Downloading software to an APU (end)

---

and press the Enter key.

|           | <b>If the BSY FORCE command</b>                                                | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------|-----------|
|           | passes                                                                         | step 8    |
|           | causes the system to prompt for approval                                       | step 7    |
| <b>7</b>  | To confirm the command, type<br>>YES<br>and press the Enter key.               |           |
| <b>8</b>  | To load the posted APU, type<br>>LOADPM<br>and press the Enter key.            |           |
|           | <b>If the LOADPM command</b>                                                   | <b>Do</b> |
|           | passes                                                                         | step 9    |
|           | fails                                                                          | step 10   |
| <b>9</b>  | To return the posted APU to service, type:<br>>RTS<br>and press the Enter key. |           |
|           | <b>If the RTS command</b>                                                      | <b>Do</b> |
|           | passes                                                                         | step 11   |
|           | fails                                                                          | step 10   |
| <b>10</b> | For additional help, contact the next level of support.                        |           |
| <b>11</b> | This procedure is complete.                                                    |           |

## **Downloading software to an EIU**

---

### **Application**

Use this procedure to download software to an ethernet interface unit (EIU).

### **Definition**

This procedure downloads software to the specified EIU.

### **Common procedures**

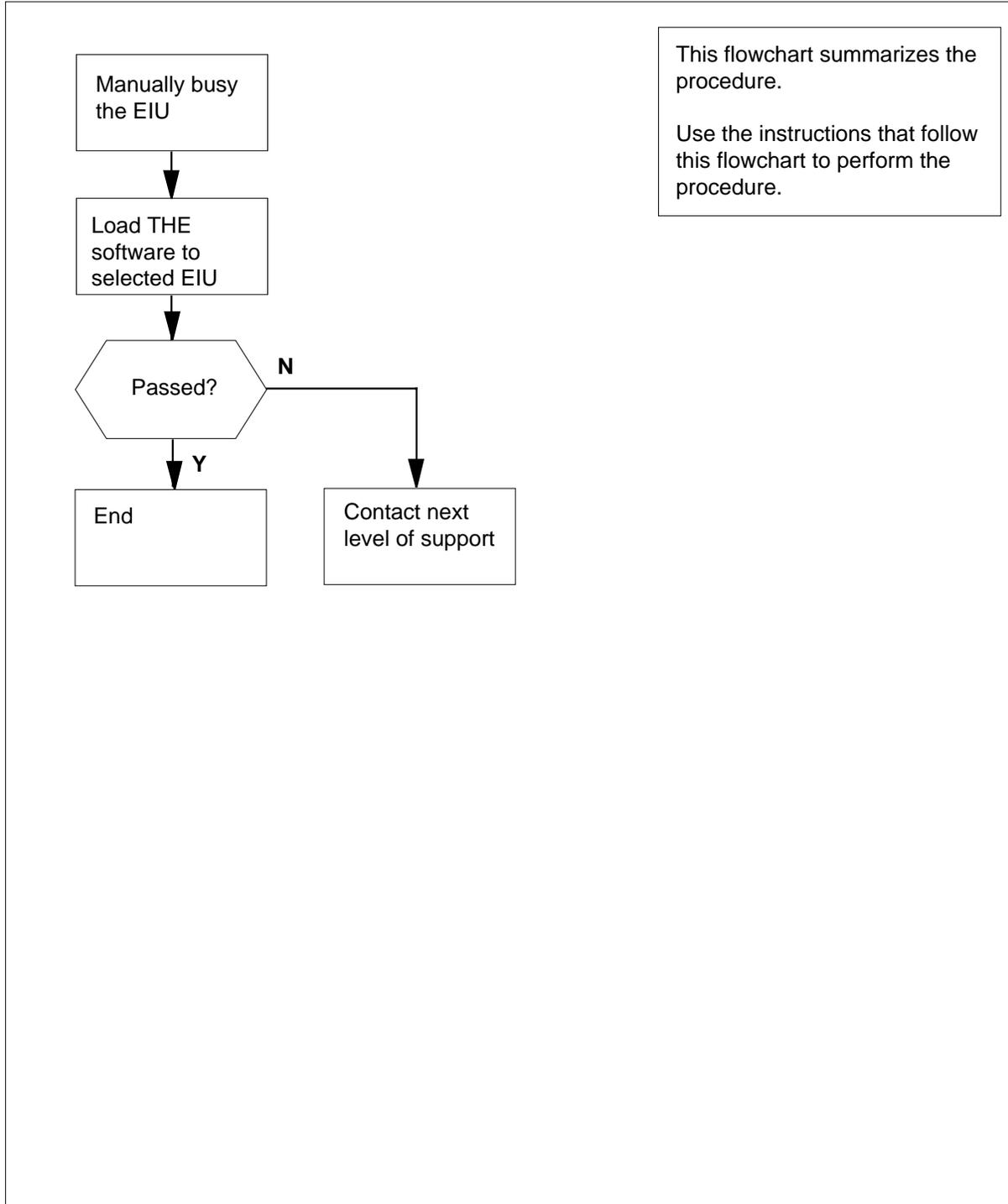
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Downloading software to an EIU (continued)

### Summary of Downloading software to an EIU



---

## Downloading software to an EIU (continued)

---

### Downloading software to an EIU

#### *At the MAP terminal*

- 1 To access the PM level of the MAP display, type  
`>MAPCI ;MTC ;PM`  
 and press the Enter key.
- 2 To post the EIU you want to load, type  
`>POST EIU eiu_no`  
 and press the Enter key.  
*where*  
     **eiu\_no**  
         is the number of the EIU to be posted (0 to 511)

*Example of a MAP response:*

```
EIU      205 ISTb      Rsvd
```

- 3 To manually busy the posted EIU, type  
`>BSY`  
 and press the Enter key.

| <b>If the response is</b>                                                                                                                            | <b>Do</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| BSY EIU 205 requires confirmation because the action may isolate the SuperNode from the nodes on the LAN. Please confirm ("YES", "Y", "NO", or "N"): | step 6    |
| Warning: The EIU 205 is currently being imaged. The BSY command will be aborted unless the FORCE option is used.                                     | step 4    |
| anything else including additional messages with above response                                                                                      | step 9    |

- 4 To load the software to the posted EIU, type  
`>BSY EIU FORCE`  
 and press the Enter key.  
*Example of a MAP response:*

## Downloading software to an EIU (continued)

---

```
WARNING:EIU 205 is currently being imaged.  
Do you wish to abort imaging to proceed with the BSY  
request?  
Please confirm ("YES", "Y", "NO", or "N"):
```

---

| <b>IfTo</b>                          | <b>Do</b> |
|--------------------------------------|-----------|
| proceed with BSY FORCE re-<br>quest. | step 5    |
| abort BSY FORCE request.             | step 10   |

---

- 5** To force bsy the EIU type

>**YES**

and press the Enter key. Go to step7

*Example of a MAP response:*

```
Imaging will be aborted on EIU.
```

```
Bsy EIU 205 requires confirmation because  
the action may isolate the SuperNode from  
the nodes on the LAN.
```

```
Please confirm ("YES", "Y", "NO", or "N")
```

- 6** To confirm the command, type

>**YES**

and press the Enter key.

- 7** To load the software to the selected EIU, type

>**LOADPDM**

and press the Enter key.

*Example of a MAP response:*

```
EIU 205 LOADPDM Passed
```

---

| <b>If the LOADPDM command</b> | <b>Do</b> |
|-------------------------------|-----------|
| passed                        | step 8    |
| failed                        | step 9    |

---

- 8** To return the EIU to service, type

>**RTS**

---

## Downloading software to an EIU (end)

---

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 11 |
| failed             | step 9  |

**9** For additional help, contact the next level of support.

**10** To abort BSY FORCE request, type

>NO

and press the Enter key.

*Example of a MAP response:*

BSY command aborted due to imaging in progress.

**11** This procedure is complete.

## Downloading software to an LIM unit

---

### Application

Use this procedure to download software to a link interface module (LIM) unit.

### Definition

This procedure downloads the software listed in table LIMINV to the posted LIM unit.

### Common procedures

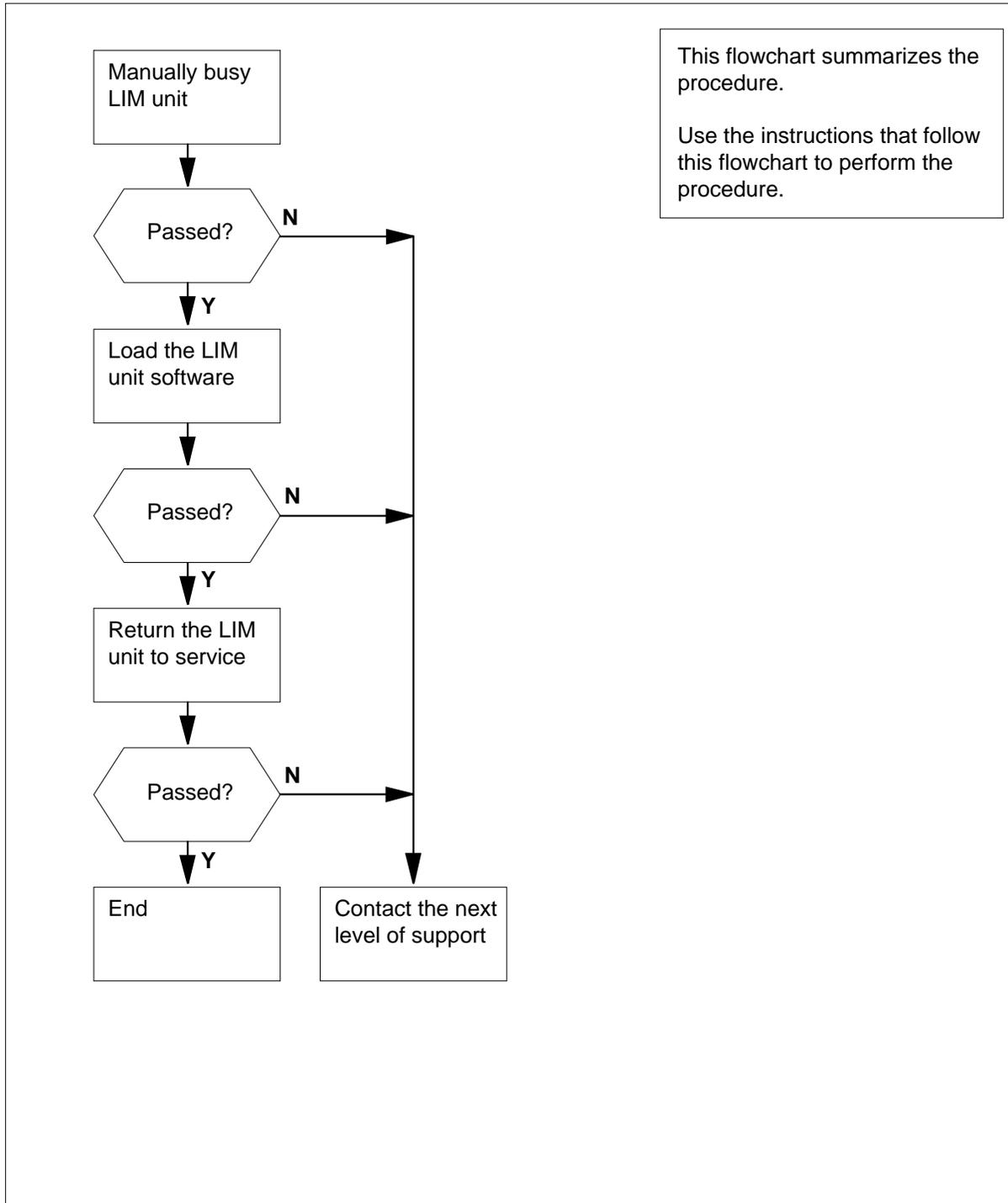
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Downloading software to an LIM unit (continued)

### Summary of Downloading software to an LIM unit



## Downloading software to an LIM unit (continued)

---

### Downloading software to an LIM unit

#### At the MAP terminal

1



#### CAUTION

##### Possible loss of service

Make sure that the mate LIM unit and associated F-bus taps are in service. If you do not make sure of service, a result can be nodes that you can not reach. The nodes are on link interface shelves one, two and three.

To access the PM level of the MAP display, type

```
>MAPCI;MTC;PM
```

and press the Enter key.

*Example of a MAP response:*

|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
|----|------|------|------|------|------|------|
| PM | 0    | 1    | 0    | 0    | 0    | 39   |

2

To post the LIM you want to load, type

```
>POST LIM lim_no
```

and press the Enter key.

*where*

#### **lim\_no**

is the number of the LIM (0 to 16)

*Example of a MAP response:*

```
LIM 0 ISTb
Links_OOS Taps_OOS
Unit0: Insv          2      .
Unit1: ISTb         2      .
```

3

To manually busy the LIM unit you want to load, type

```
>BSY UNIT unit_no
```

and press the Enter key.

*where*

#### **unit\_no**

is the number of the LIM unit (0 or 1)

*Example of a MAP response:*

Busy requires confirmation because the action may isolate other nodes. Please confirm ("YES", "Y", "NO", or "N")

---

## Downloading software to an LIM unit (end)

---

- 4** To confirm the command, type  
**>YES**  
 and press the Enter key.
- | If the BSY command | Do     |
|--------------------|--------|
| passes             | step 5 |
| fails              | step 7 |
- 
- 5** To load the LIM unit, type  
**>LOADPM UNIT unit\_no**  
 and press the Enter key.  
*where*  
     **unit\_no**  
     is the number of the LIM unit (0 or 1)
- | If the LOADPM command | Do     |
|-----------------------|--------|
| passes                | step 6 |
| fails                 | step 7 |
- 
- 6** To return the LIM unit to service, type  
**>RTS UNIT unit\_no**  
 and press the Enter key.  
*where*  
     **unit\_no**  
     is the number of the LIM unit (0 or 1)
- | If the RTS command | Do     |
|--------------------|--------|
| passes             | step 8 |
| fails              | step 7 |
- 
- 7** For additional help, contact the next level of support.
- 8** This procedure is complete.

## Downloading software to an LIU7, HLIU, or HSLR

---

### Application

Use this procedure to download software to a link interface unit (LIU7) or a dual link interface unit (DLIU). A DLIU is a virtual node that consists of a high-speed link interface unit (HLIU) and a high-speed link router (HSLR).

### Definition

This procedure downloads the software listed in table LIUINV to the posted LIU7, HLIU, or HSLR.

### Common procedures

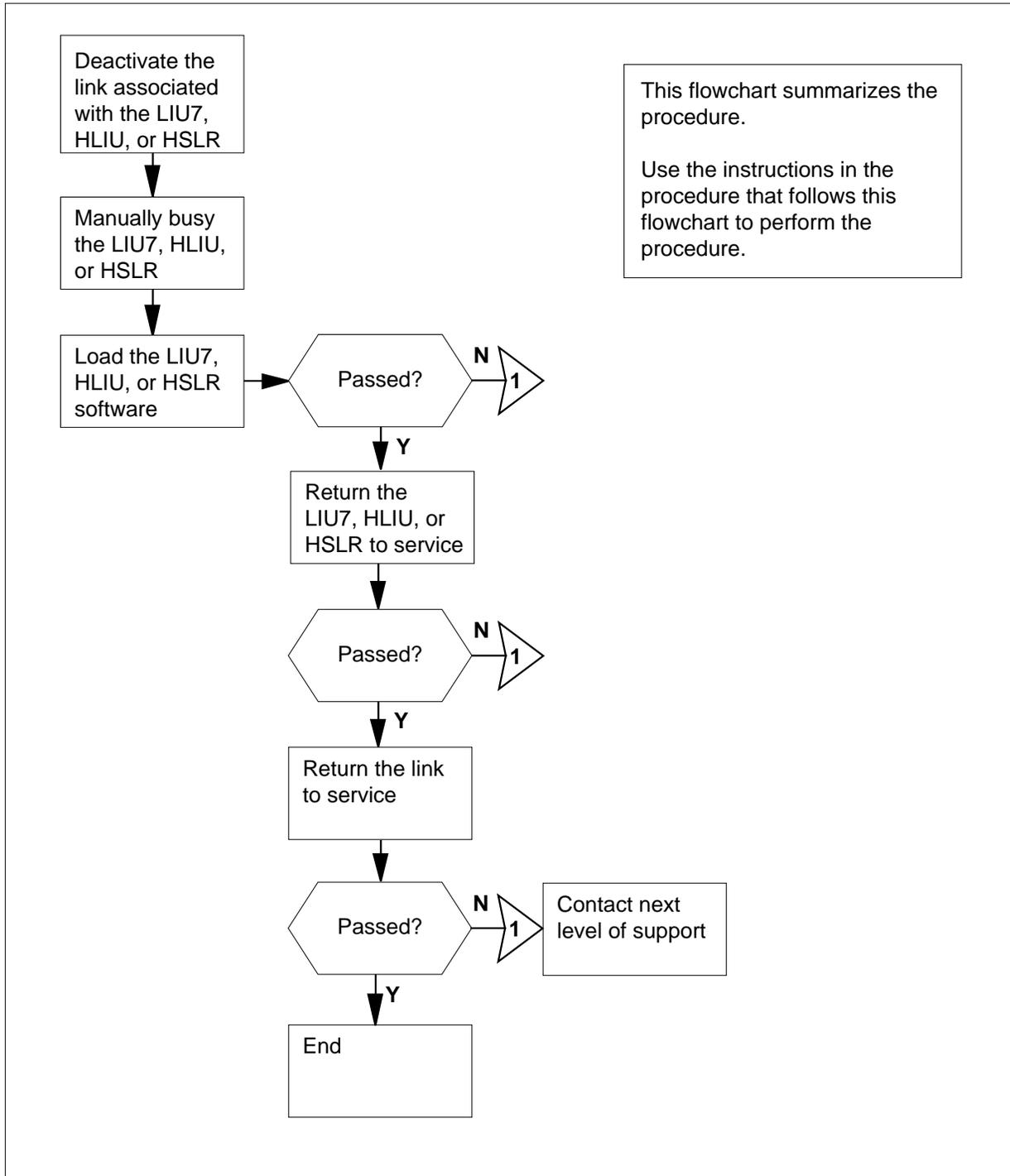
None

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart as an summary of the procedure. Follow the steps to perform the procedure.

## Downloading software to an LIU7, HLIU, or HSLR (continued)

### Summary of Downloading software to an LIU7, HLIU or HSLR



## Downloading software to an LIU7, HLIU, or HSLR (continued)

---

### Downloading software to an LIU7, HLIU, or HSLR

#### At the MAP terminal

- 1 Access the PM level of the MAP display by typing  
`>MAPCI ;MTC ;PM`  
and pressing the Enter key.
- 2 Post the LIU7, HLIU, or HSLR you want to load by typing  
`>POST pm_type liu_no`  
and pressing the Enter key.

where

**liu\_no**  
is the number of the LIU (0 to 215)

**pm\_type**  
is the type of PM (LIU7, HLIU, HSLR)

*Example of an HLIU MAP display:*

```
HLIU 121 SysB Rsvd
```

- 3 Record the name of the linkset associated with the LIU7, HLIU, or HSLR you want to load by typing  
`>QUERYPM`  
and pressing the Enter key.

**Note:** The linkset name appears after the Linkset header in the MAP response.

*Example of MAP response:*

```
PM type:HLIU PM No.:110 Status:ISTb
LIM:1 Shelf:2 Slot:12 LIU FTA:4249 1000
Default Load: LCC35BX
Running Load: LCC35BX
ISTB conditions:
  Msg Channel #0 NA
  TAP #0 OOS/NA
LMS States: ISTb ISTb
Auditing?: No Yes
Msg Channels: NA Acc
TAPs: M .
Reserved HLIU forms part of CCS7 Linkset: LSCAP1
SLC: 5 HLIU is allocated
```

- 4 Access the C7LKSET level of the MAP display by typing  
`>CCS ;CCS7 ;C7LKSET`  
and pressing the Enter key.

---

## Downloading software to an LIU7, HLIU, or HSLR (continued)

---

- 5 Post the linkset associated with the LIU7 or DLIU by typing

**>POST C linkset\_name**

and pressing the Enter key.

*where*

**linkset\_name**

is the name of the linkset you recorded in step 4

- 6 Inhibit the link associated with the LIU7 or DLIU by typing

**>INH link\_no**

*where*

**link\_no**

is the number of the link (0 to 15) you recorded in step 4

- 7 Manually busy the link associated with the LIU7 or DLIU by typing

**>BSY link\_no**

and pressing the Enter key.

*where*

**link\_no**

is the number of the link (0 to 15)

---

**If the response is**

**Do**

Link link\_no:Traffic  
is running on that  
linkPlease con-  
firm("YES", "Y", "NO",  
or "N"):

other

step 8  
  
  
  
  
  
  
  
step 20

- 8 Confirm the command by typing

**>YES**

and pressing the Enter key.

---

**If the BSY command**

**Do**

passed for an LIU7

step 9

passed for a DLIU

step 10

failed

step 20

- 9 Deactivate the link associated with the LIU7 by typing

**>DEACT link\_no**

and pressing the Enter key.

*where*

## Downloading software to an LIU7, HLIU, or HSLR (continued)

|                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |           |                                                                                                                           |         |        |         |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|
|                                                                                                                           | <b>link_no</b><br>is the number of the link (0 to 15)                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |           |                                                                                                                           |         |        |         |
|                                                                                                                           | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b>If the DEACT command</b></td> <td style="width: 50%;"><b>Do</b></td> </tr> <tr> <td>passed</td> <td>step 10</td> </tr> <tr> <td>failed</td> <td>step 20</td> </tr> </table>                                                                                                                                                                                                                               | <b>If the DEACT command</b> | <b>Do</b> | passed                                                                                                                    | step 10 | failed | step 20 |
| <b>If the DEACT command</b>                                                                                               | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |           |                                                                                                                           |         |        |         |
| passed                                                                                                                    | step 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| failed                                                                                                                    | step 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| <b>10</b>                                                                                                                 | <p>Return to the PM level of the MAP display and post the LIU7, HLIU, or HSLR by typing</p> <p><b>&gt;PM;POST pm_type liu_no</b></p> <p>and pressing the Enter key.</p> <p><i>where</i></p> <p style="padding-left: 40px;"><b>liu_no</b><br/>is the number of the LIU (0 to 215)</p> <p style="padding-left: 40px;"><b>pm_type</b><br/>is the type of PM (LIU7, HLIU, HSLR)</p>                                                                                                   |                             |           |                                                                                                                           |         |        |         |
| <b>11</b>                                                                                                                 | <p>Manually busy the LIU7, HLIU, or HSLR by typing</p> <p><b>&gt;BSY</b></p> <p>and pressing the Enter key.</p>                                                                                                                                                                                                                                                                                                                                                                   |                             |           |                                                                                                                           |         |        |         |
|                                                                                                                           | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b>If the response is</b></td> <td style="width: 50%;"><b>Do</b></td> </tr> <tr> <td>                     Busying &lt;LIU7,HLIU,HSLR&gt;<br/>                     liu_no will take a CCS7 resource<br/>                     out of servicePlease confirm<br/>                     ("YES","Y","NO", or "N"):                 </td> <td>step 12</td> </tr> <tr> <td>other</td> <td>step 20</td> </tr> </table> | <b>If the response is</b>   | <b>Do</b> | Busying <LIU7,HLIU,HSLR><br>liu_no will take a CCS7 resource<br>out of servicePlease confirm<br>("YES","Y","NO", or "N"): | step 12 | other  | step 20 |
| <b>If the response is</b>                                                                                                 | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |           |                                                                                                                           |         |        |         |
| Busying <LIU7,HLIU,HSLR><br>liu_no will take a CCS7 resource<br>out of servicePlease confirm<br>("YES","Y","NO", or "N"): | step 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| other                                                                                                                     | step 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| <b>12</b>                                                                                                                 | <p>Confirm the command by typing</p> <p><b>&gt;YES</b></p> <p>and pressing the Enter key.</p>                                                                                                                                                                                                                                                                                                                                                                                     |                             |           |                                                                                                                           |         |        |         |
|                                                                                                                           | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><b>If the BSY command</b></td> <td style="width: 50%;"><b>Do</b></td> </tr> <tr> <td>passed</td> <td>step 13</td> </tr> <tr> <td>failed</td> <td>step 20</td> </tr> </table>                                                                                                                                                                                                                                 | <b>If the BSY command</b>   | <b>Do</b> | passed                                                                                                                    | step 13 | failed | step 20 |
| <b>If the BSY command</b>                                                                                                 | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |           |                                                                                                                           |         |        |         |
| passed                                                                                                                    | step 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| failed                                                                                                                    | step 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |           |                                                                                                                           |         |        |         |
| <b>13</b>                                                                                                                 | <p>Load the software to the selected LIU7, HLIU, or HSLR by typing</p> <p><b>&gt;LOADPM</b></p> <p>and pressing the Enter key.</p> <p><i>Example of a MAP response:</i></p>                                                                                                                                                                                                                                                                                                       |                             |           |                                                                                                                           |         |        |         |

---

## Downloading software to an LIU7, HLIU, or HSLR (continued)

---

LIU7 101 LOADPM Passed

| If the LOADPM command | Do      |
|-----------------------|---------|
| passed                | step 14 |
| failed                | step 20 |

- 14** Return to service the LIU7, HLIU, or HSLR on which you are working by typing  
**>RTS**  
 and pressing the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 15 |
| failed             | step 20 |

- 15** Access the C7LKSET of the MAP display by typing  
**>CCS ;CCS7 ;C7LKSET**  
 and pressing the Enter key.

- 16** Post the linkset associated with the LIU7 or DLIU by typing  
**>POST C linkset\_name**  
 and pressing the Enter key.  
*where*

**linkset\_name**  
 is the name of the linkset

- 17** Return the link associated with the LIU7 or DLIU to service by typing  
**>RTS link\_no**  
 and pressing the Enter key.  
*where*

**link\_no**  
 is the number of the link (0 to 15)

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 2  |
| failed             | step 20 |

- 18** Activate the link associated with the LIU7 or DLIU by typing  
**>ACT link\_no**  
 and pressing the Enter key.  
*where*

## Downloading software to an LIU7, HLIU, or HSLR (end)

---

**link\_no**  
is the number of the link (0 to 15)

---

| <b>If the ACT command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed                    | step 19   |
| failed                    | step 20   |

---

- 19** Restore the traffic to the inhibited link associated with the LIU7 or DLIU by typing

**>UINH link\_no**

and pressing the Enter key.

*where*

**link\_no**  
is the number of the link (0 to 15)

---

| <b>If the UINH command</b> | <b>Do</b> |
|----------------------------|-----------|
| passed                     | step 21   |
| failed                     | step 20   |

---

- 20** For additional help, contact the personnel responsible for the next level of support.
- 21** You have completed this procedure.

## Downloading software to a VPU

---

### Application

Use this procedure to download software to a voice processor unit (VPU).

### Definition

This procedure downloads the software to the indicated VPU. Perform this procedure as required.

### Common procedures

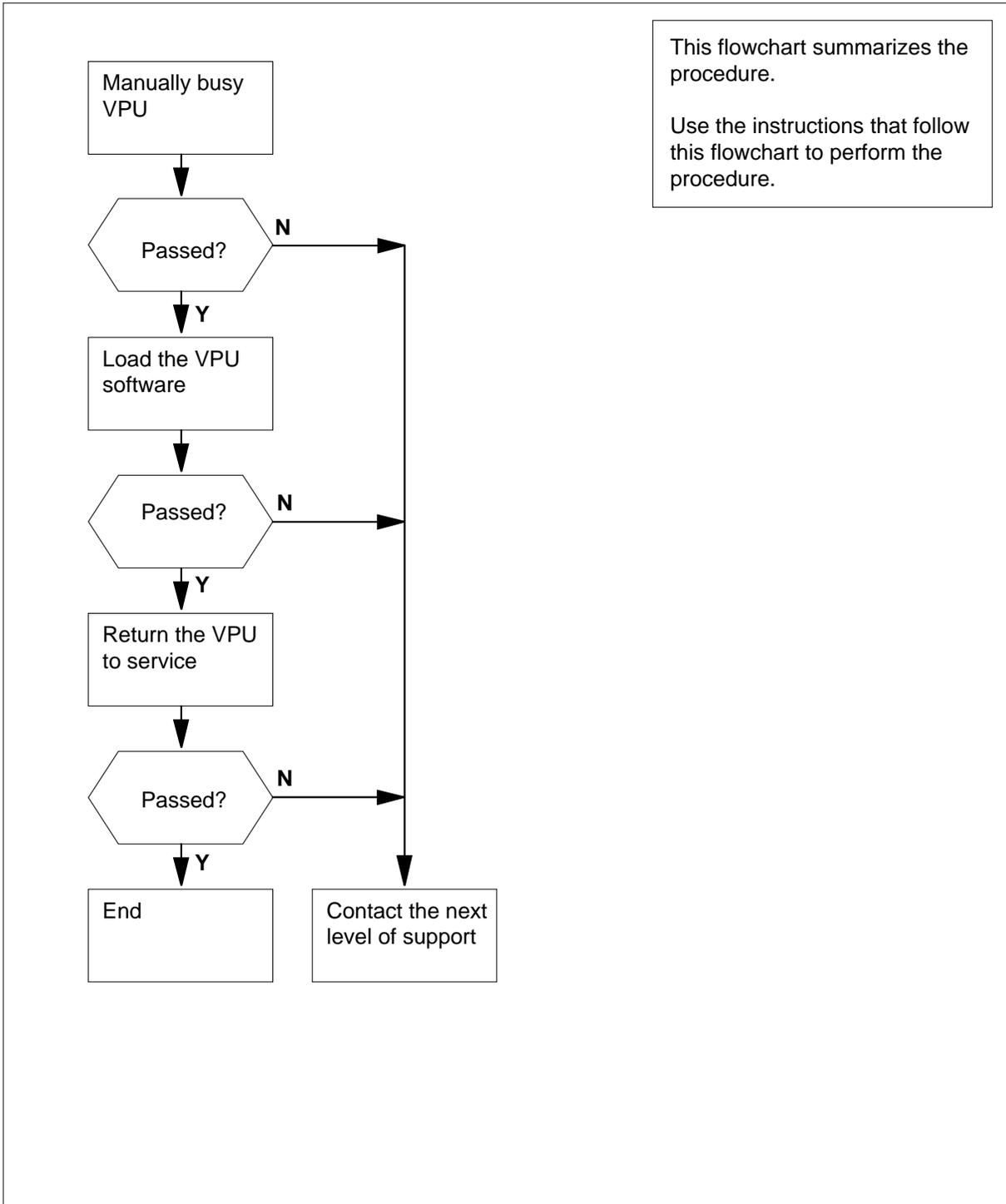
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Downloading software to a VPU (continued)

### Summary of Downloading software to a VPU



## Downloading software to a VPU (continued)

### Downloading software to a VPU

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type  
**>MAPCI ;MTC ;PM**  
 and press the Enter key.

*Example of a MAP:*

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
|    | SysB | ManB | OffL | CBSy | ISTb | InSv |
| PM | 1    | 10   | 12   | 0    | 6    | 49   |

- 2 To post the VPU you want to load, type  
**>POST VPU vpu\_no**  
 and press the Enter key.

*where*

**vpu\_no**  
 is the number of the VPU (0 to 179)

*Example of a MAP:*

|     |   |      |      |
|-----|---|------|------|
| VPU | 3 | InSv | Rsvd |
|-----|---|------|------|

- 3 Determine the state of the posted VPU.

| If the VPU | Do     |
|------------|--------|
| is InSv    | step 5 |
| is ISTb    | step 4 |

- 4



**CAUTION**  
**Loss of service**  
 Removal of a VPU from service reduces Automated Directory Assistance Service (ADAS) service capacity.

Perform the correct procedure to clear alarms in the *Alarm and Performance Monitoring Procedures*.

- 5 To manually busy the VPU you want to load, type  
**>BSY**

---

## Downloading software to a VPU (end)

---

and press the Enter key.

| If the <b>BSY</b> command                | Do     |
|------------------------------------------|--------|
| passes                                   | step 8 |
| fails                                    | step 6 |
| causes the system to prompt for approval | step 7 |

- 6** To force the VPU you want to load to busy, type  
**>BSY FORCE**  
 and press the Enter key.

| If the <b>BSY FORCE</b> command          | Do     |
|------------------------------------------|--------|
| passes                                   | step 8 |
| causes the system to prompt for approval | step 7 |

- 7** To confirm the command, type  
**>YES**  
 and press the Enter key.

- 8** To load the VPU, type  
**>LOADPM**  
 and press the Enter key.

| If the <b>LOADPM</b> command | Do      |
|------------------------------|---------|
| passes                       | step 9  |
| fails                        | step 10 |

- 9** To return the VPU to service, type  
**>RTS**  
 and press the Enter key.

| If the <b>RTS</b> command | Do      |
|---------------------------|---------|
| passes                    | step 11 |
| fails                     | step 10 |

- 10** For additional help, contact the next level of support.

- 11** This procedure is complete.

## Downloading software to an XLIU

---

### Application

Use this procedure to download software to an X.25/X.75/X.75' link interface unit (XLIU).

### Definition

This procedure downloads the software package in table LIUINV to the indicated XLIU.

### Common procedures

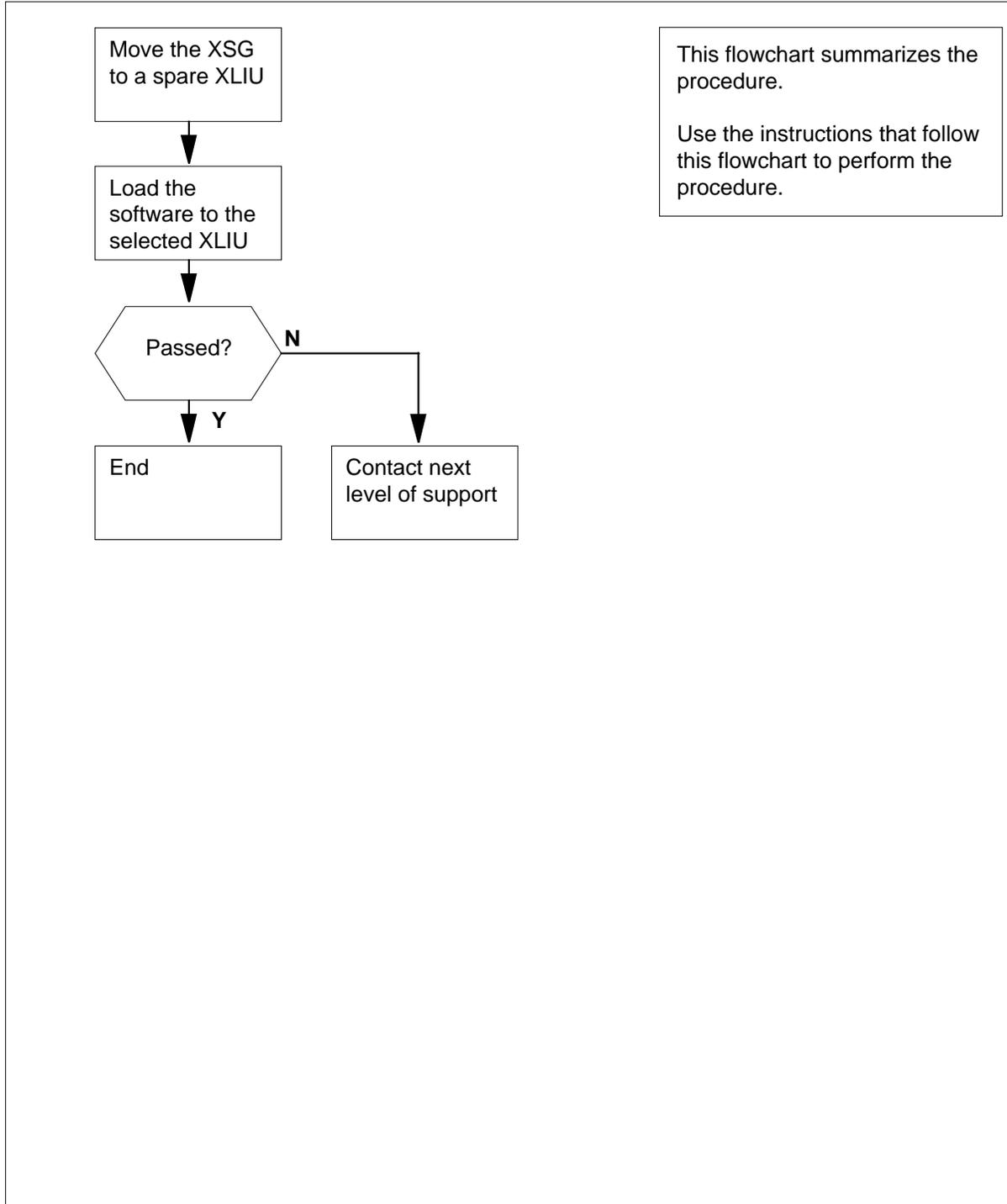
There are no common procedures.

### Action

This procedure contains a summary flowchart and list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Downloading software to an XLIU (continued)

### Summary of Downloading software to an XLIU



---

## Downloading software to an XLIU (continued)

---

### Downloading software to an XLIU

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type

**>MAPCI ;MTC ;PM**

and press the Enter.

*Example of a MAP display:*

|      | SysB | ManB | OffL | CBSy | ISTb | InSv |
|------|------|------|------|------|------|------|
| PM   | 7    | 26   | 34   | 0    | 10   | 27   |
| XLIU | 1    | 0    | 0    | 0    | 4    | 32   |

XLIU 131 InSv Rsvd

- 2 To post the XLIU, type

**>POST XLIU xliu\_no**

and press the Enter key.

*where*

**xliu\_no**

is the number of the XLIU to which software downloads

*Example of a MAP display:*

XLIU 132 InSv Spre

- 3 To query the posted XLIU, type

**>QUERY**

and press the Enter key.

*Example of a MAP response:*

```

PM type: XLIU PM No.: 132 Status: InSv
Node Number 85 spare
LIM: 0 Shelf: 3 Slot: 12 XLIU FTA: 4252 1000
Default load: XRX36CI
Running load: XRX36CI
Potential service affecting conditions:
    CBUS PORT for NIU Unit 0 is not inservice
    CBUS PORT for NIU Unit 1 is not inservice
        Unit 0          Unit 1
LMS States   : InSv      InSv
Auditing     : Yes       Yes
Msg Channels : Acc       Acc
TAP 17      : .         .
NIU 2       : ISTb      ISTb
    
```

**Downloading software to an XLIU** (continued)

**Note:** The number of the XSG associated with the XLIU appears on the right side of the xx header of the Node Number. If the XLIU is spare, the word spare appears. In the example, XLIU 132 is a spare.

|          | <b>If the posted XLIU</b>                                                                                                                                                                                                                                                                      | <b>Do</b> |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|          | works, and associates with an XSG                                                                                                                                                                                                                                                              | step 4    |
|          | is a spare                                                                                                                                                                                                                                                                                     | step 6    |
| <b>4</b> | Perform the procedure <i>Moving an XSG to a spare XLIU</i> in <i>Routine Procedures</i> . Complete the procedure and return to this point.                                                                                                                                                     |           |
| <b>5</b> | Go to step 9.                                                                                                                                                                                                                                                                                  |           |
| <b>6</b> | To manually busy the posted XLIU, type<br>> <b>BSY</b><br>and press the Enter key.                                                                                                                                                                                                             |           |
|          | <b>If the response is</b>                                                                                                                                                                                                                                                                      | <b>Do</b> |
|          | Warning: XLIU 132 is currently being imaged. The BSY command will be aborted unless the FORCE option is used.                                                                                                                                                                                  | step 7    |
|          | anything else, including above response with additional messages                                                                                                                                                                                                                               | step 11   |
| <b>7</b> | To manually force bsy the XLIU, type<br>> <b>BSY FORCE</b><br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>WARNING: XLIU 132 is currently being imaged.<br>Do you wish to abort imaging to proceed with the BSY request?<br>Please confirm ("YES", "Y", "NO", or "N"): |           |
|          | <b>IfTo</b>                                                                                                                                                                                                                                                                                    | <b>Do</b> |
|          | proceed with BSY FORCE request                                                                                                                                                                                                                                                                 | step 8    |
|          | abort BSY FORCE request                                                                                                                                                                                                                                                                        | step 12   |
| <b>8</b> | To force bsy the XLIU by type<br>> <b>YES</b>                                                                                                                                                                                                                                                  |           |

---

## Downloading software to an XLIU (end)

---

and press the Enter key.

*Example of a MAP response:*

Imaging will be aborted on XLIU 132.

- 9** To load the software to the selected XLIU, type  
**>LOADPM**  
 and press the Enter key.

| If the LOADPM command | Do      |
|-----------------------|---------|
| passed                | step 10 |
| failed                | step 11 |

- 10** To return the XLIU to service, type  
**>RTS**  
 and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 11 |

- 11** For additional help, contact the next level of support.

- 12** Abort BSY FORCE request by typing  
**>NO**  
 and pressing the Enter key.

*Example of a MAP response:*

BSY command aborted due to imaging in progress.

- 13** This procedure is complete.

## DSCWID/SCWID subscriber, no notification of waiting call

---

### Application

Use this procedure for subscribers with Spontaneous Call Waiting Identification (SCWID) or Spontaneous Call Waiting Identification with Disposition (DSCWID). Determine why the subscriber receives the wrong audible notification, no notification and display, or no display of waiting calls.

### Definition

A complaint indicates that subscribers with SCWID or DSCWID features did not receive one or more of the following

- calling party information (name or directory number) on the display set
- special audio tones that indicate another call is incoming

A DSCWID subscriber can report no softkeys, and no disposition or the disposition does not occur.

**Note 1:** The subscriber needs the CLASS modem resource (CMR) card for SCWID and DSCWID functionality. To display SCWID and DSCWID dispositions, the subscriber needs customer premises equipment (CPE) compatible with Analog Display Services Interface (ADSI).

**Note 2:** If the no tone or the no display is not continuous or happened one time, check if the subscriber canceled SCWID. A cancellation deactivates SCWID. A check of datafill is necessary if a call waiting tone (CWT) is present but no SCWID tone. Contact the next level of support or the Translations Group to verify datafill.

### Common procedures

There are no common procedures.

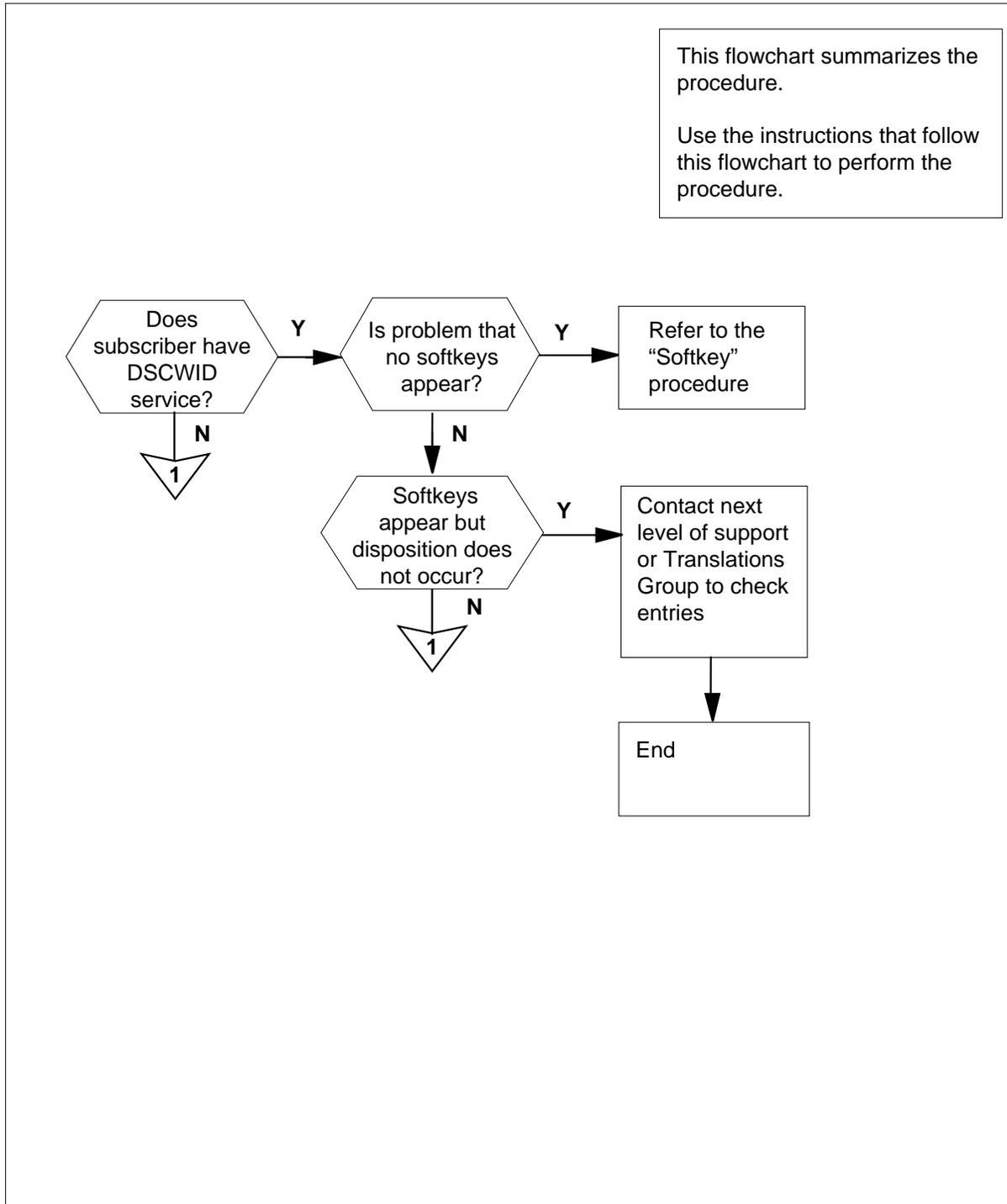
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Note:** The CMR card NT6X78 can go out of service in the active unit. The operating company personnel can busy, replace, load, and return the CMR card to service. The operating company personnel does not need to perform these operations on the whole unit.

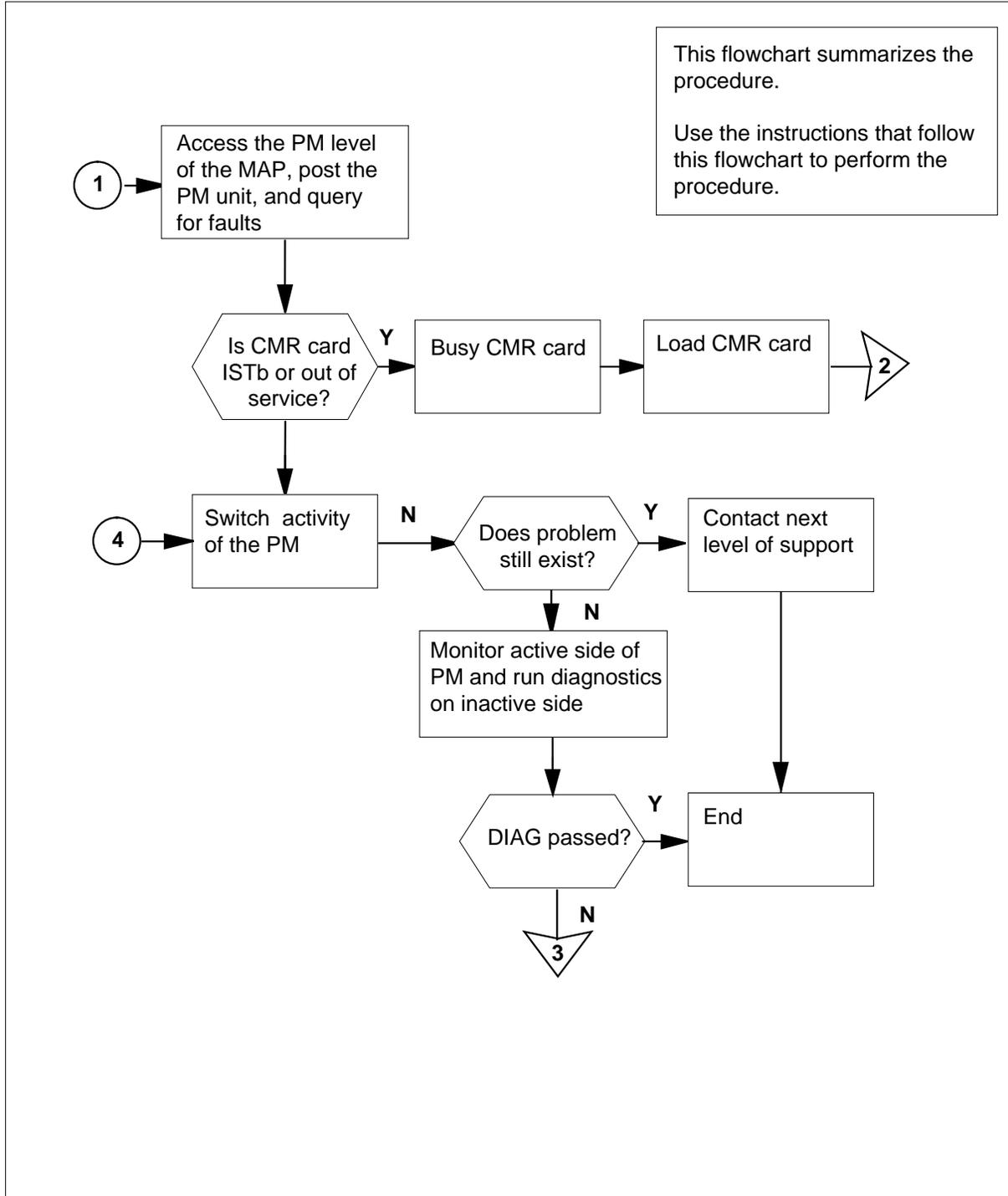
**DSCWID/SCWID subscriber, no notification of waiting call** (continued)

**Summary of DSCWID/SCWID subscriber, no notification of waiting call**



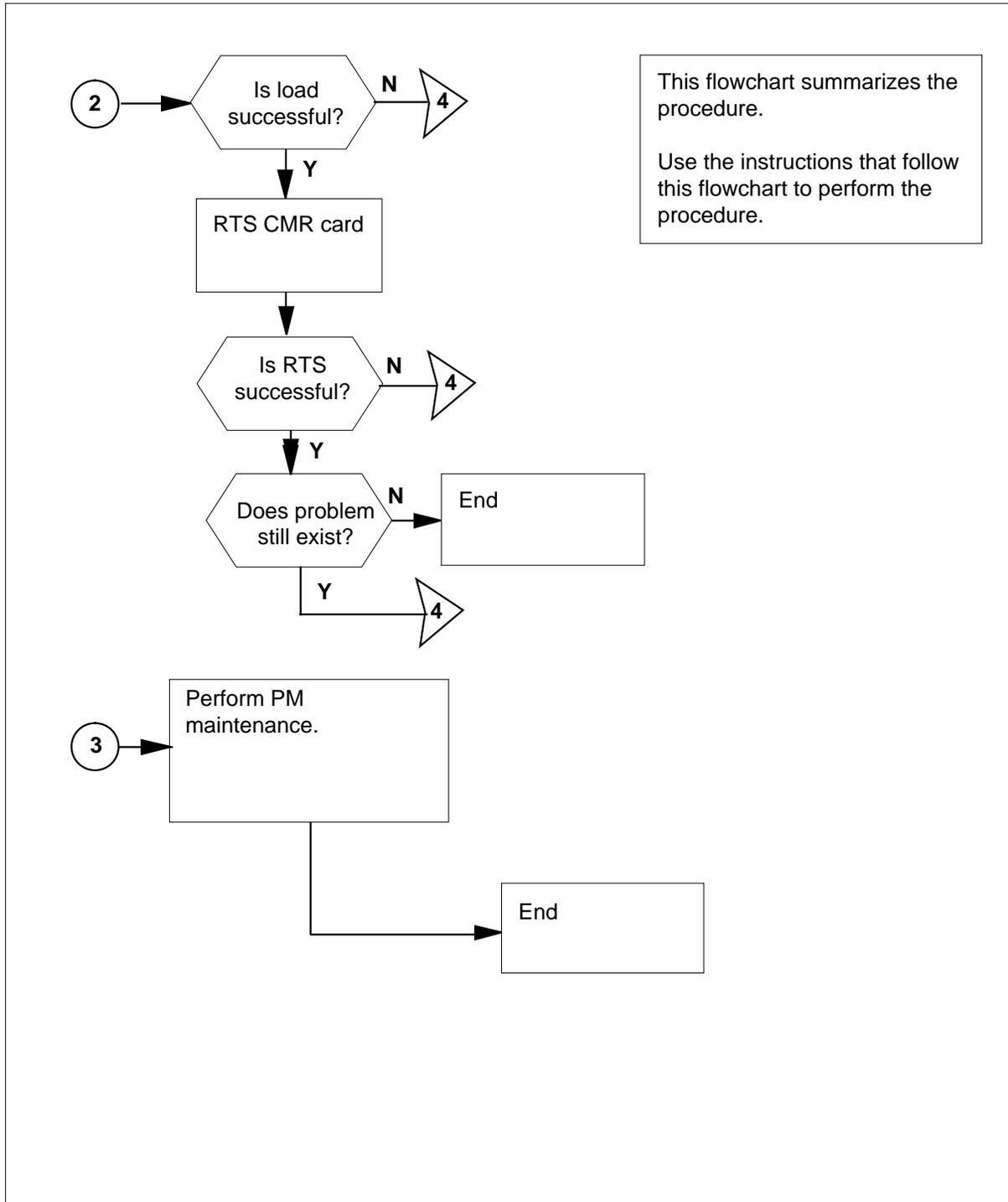
## DSCWID/SCWID subscriber, no notification of waiting call (continued)

### Summary of DSCWID/SCWID subscriber, no notification of waiting call (continued)



**DSCWID/SCWID subscriber, no notification of waiting call (continued)**

**Summary of DSCWID/SCWID subscriber, no notification of waiting call (continued)**



**DSCWID/SCWID subscriber, no notification of waiting call** (continued)

**DSCWID/SCWID subscriber, no notification of waiting call**

**At your current location**

1 Refer to the table to start this procedure.

| <b>If</b>                                                     | <b>Do</b> |
|---------------------------------------------------------------|-----------|
| DSCWID subscriber has no softkeys                             | step 2    |
| DSCWID subscriber has softkeys but disposition does not occur | step 3    |
| DSCWID or SCWID subscriber has tone, but no display           | step 5    |

2 Refer to the *Softkey information does not download to the ADSI set* procedure in this document.

3 Contact the next level of support or the Translations Group to check entries.

4 Go to step 20.

5 To access the PM level of the MAP display, type  
**>MAPCI ;MTC ;PM**  
 and press the Enter key.

6 To post the peripheral module (PM) unit, type  
**>POST pm\_type pm\_number**  
 and press the Enter key.  
*where*  
**pm\_type**  
 is the PM type (LGC, LTC, RCC, SMS, or SMU)  
**pm\_number**  
 is the number of the PM (0 through 127)

7 To check for fault indicators, type  
**>QUERYPM FLT**  
 and press the Enter key.

| <b>If CMR card</b>                             | <b>Do</b> |
|------------------------------------------------|-----------|
| is in-service trouble (ISTb) or out of service | step 9    |
| is not ISTb or out of service                  | step 8    |

8 To switch activity of the units to bring back service quickly, type  
**>SWACT**

**DSCWID/SCWID subscriber, no notification of waiting call** (continued)

and press the Enter key.

| <b>If problem</b> | <b>Do</b> |
|-------------------|-----------|
| continues         | step 19   |
| does not continue | step 18   |

9



**CAUTION**  
**Loss of service**  
 Do not busy the CMR card on the active unit of the PM. CLASS services can not function if the CMR card on the active unit of the PM is busy.

To busy the CMR card, type

**>BSY UNIT unit\_no CMR**

and press the Enter key.

where

**unit\_no**

is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means busy only the CMR card.

10

To load the CMR card, type

**>LOADPM UNIT unit\_no CC CMR**

and press the Enter key.

where

**unit\_no**

is the number of the PM unit (0 or 1)

**Note:** LOADPM does not need to involve the PM while it loads the CMR card.

| <b>If response</b>                                                                                           | <b>Do</b> |
|--------------------------------------------------------------------------------------------------------------|-----------|
| is the system completes the load                                                                             | step 14   |
| is CMR FAILED TO LOAD. TASK ABORTED WHILE LOADING CMR                                                        | step 11   |
| is CMR FILE CMR03A NOT FOUND ON DEVICE INDICATED IN TABLE PMLOADS<br><i>Note</i> CMR03A is the CMR load name | step 11   |
| is FAILED TO OPEN SUCCESSFULLY                                                                               | step 11   |

---

## DSCWID/SCWID subscriber, no notification of waiting call (continued)

---

- 11 Verify that you can load the CMR card. To use the QUERYPM command to determine the CMR load name, type

**>querypm CNTRS**

and press the Enter key.

*Example of a MAP response:*

```
Unsolicited MSG limit = 250, Unit 0 = 0, Unit 1 = 0.
Unit 0:
RAM Load: ECL05AY
EEPROM Version: AC01
EEPROM Load: Loadable: MX77NF02, Executable: MX77NF02
CMR LOAD: CMR03A
UP: MX77AA
Unit 1:
RAM Load: ECL05AY
EEPROM Version: AC01
EEPROM Load: Loadable: MX77nf02, Executable: MX77NF02
CMR LOAD: CMR03A
UP: MX77AA
```

**Note:** In this example, the CMR load name is CMR03A.

- 12 Ensure the CMR card load name in table PMLOADS matches the load name specified in table LTCINV or table RCCINV.

- 13 To load the CMR card again, type

**>LOADPM UNIT unit\_no CC CMR**

and press the Enter key.

*where*

**unit\_no**

is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means load only the CMR card.

---

| If load  | Do      |
|----------|---------|
| succeeds | step 14 |
| fails    | step 20 |

---

- 14 To return the CMR card to service, type

**>RTS UNIT unit\_no CMR**

and press the Enter key.

*where*

**unit\_no**

is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means return only the CMR card to service.

---

**DSCWID/SCWID subscriber, no notification of waiting call (end)**

---

The following card list is a normal message for a CMR card failure.

```

RTS Failed, TESTALL
    Diagnostic TESTALL failed.
    Fail message received from PM
    Replace the Cards in the Card List
    and applicable Paddleboards (i.e. 6X12) :
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 01 D02 LGE 00 18 LGC : 000 13 6X78
    
```

| <b>If RTS</b>                                  | <b>Do</b> |
|------------------------------------------------|-----------|
| passes and problem is no longer present        | step 20   |
| passes and problem continues to be present     | step 18   |
| fails but the CMR card is not on the card list | step 16   |
| fails and the CMR card is on the card list     | step 15   |

- 15** Refer to *Card Replacement Procedures*.
- 16** Perform PM maintenance on the PM posted.
- 17** Go to step 20.
- 18** Monitor the active side of the PM. Run diagnostics on the inactive side.

| <b>If DIAG</b> | <b>Do</b> |
|----------------|-----------|
| passes         | step 20   |
| fails          | step 19   |

- 19** For additional help, contact the next level of support.
- 20** The procedure is complete.

## **E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions**

---

### **Application**

Use this procedure to investigate and correct failures that occur at intervals. Persons at the data center for automatic location identification (ALI) or public safety answering point (PSAP) operators report failures.

### **Definition**

This complaint means some E911 functions do not work on some E911 calls. Not enough available feature data blocks (FDBs) is an example of a cause.

Some functions that are not available include:

- automatic location identification (ALI)
- automatic number identification (ANI)
- disconnect timing
- E911212 log reports
- ORIGHOLD
- remote call event records
- ring back
- selective transfer
- switch-hook status tone

### **Common procedures**

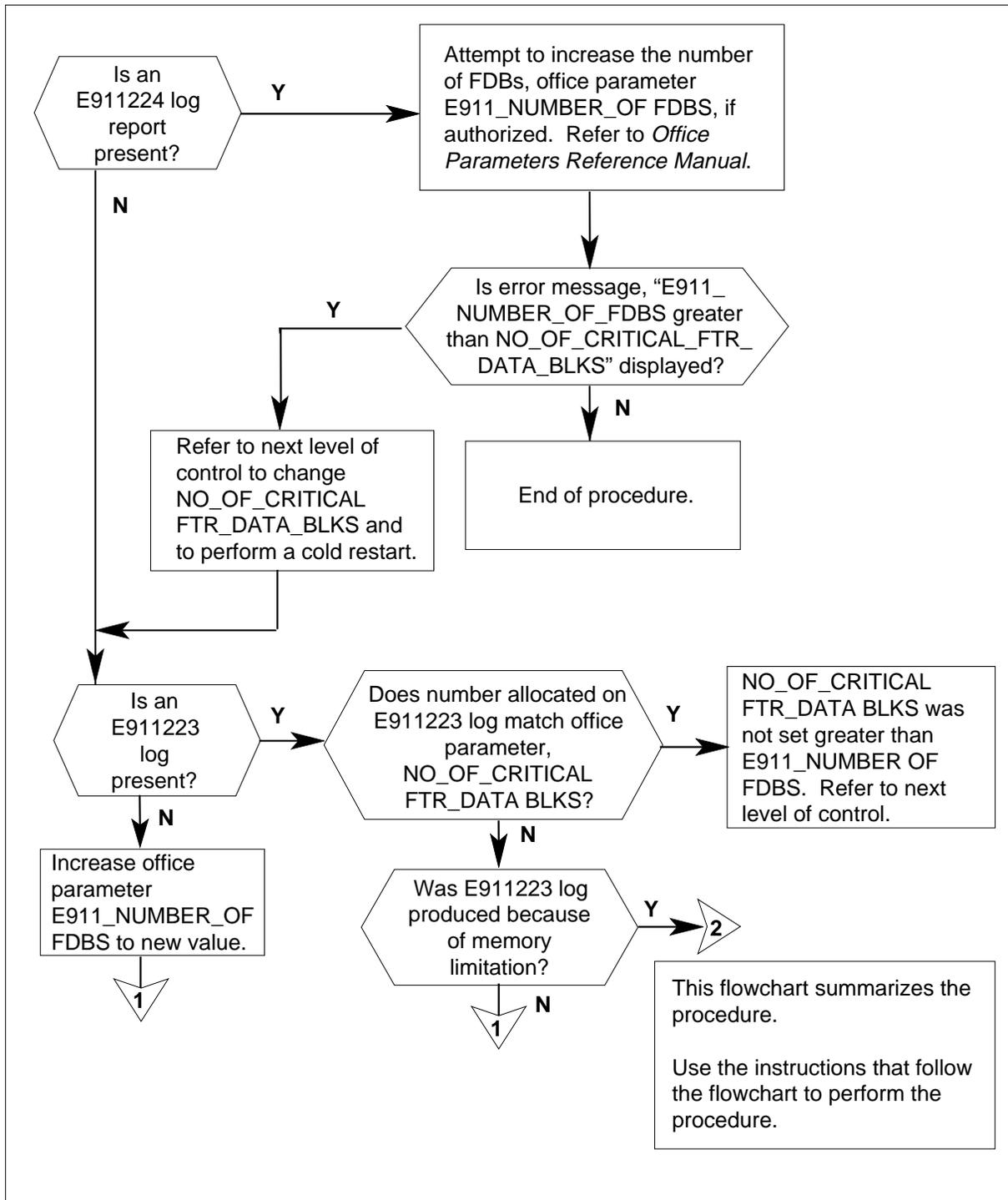
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

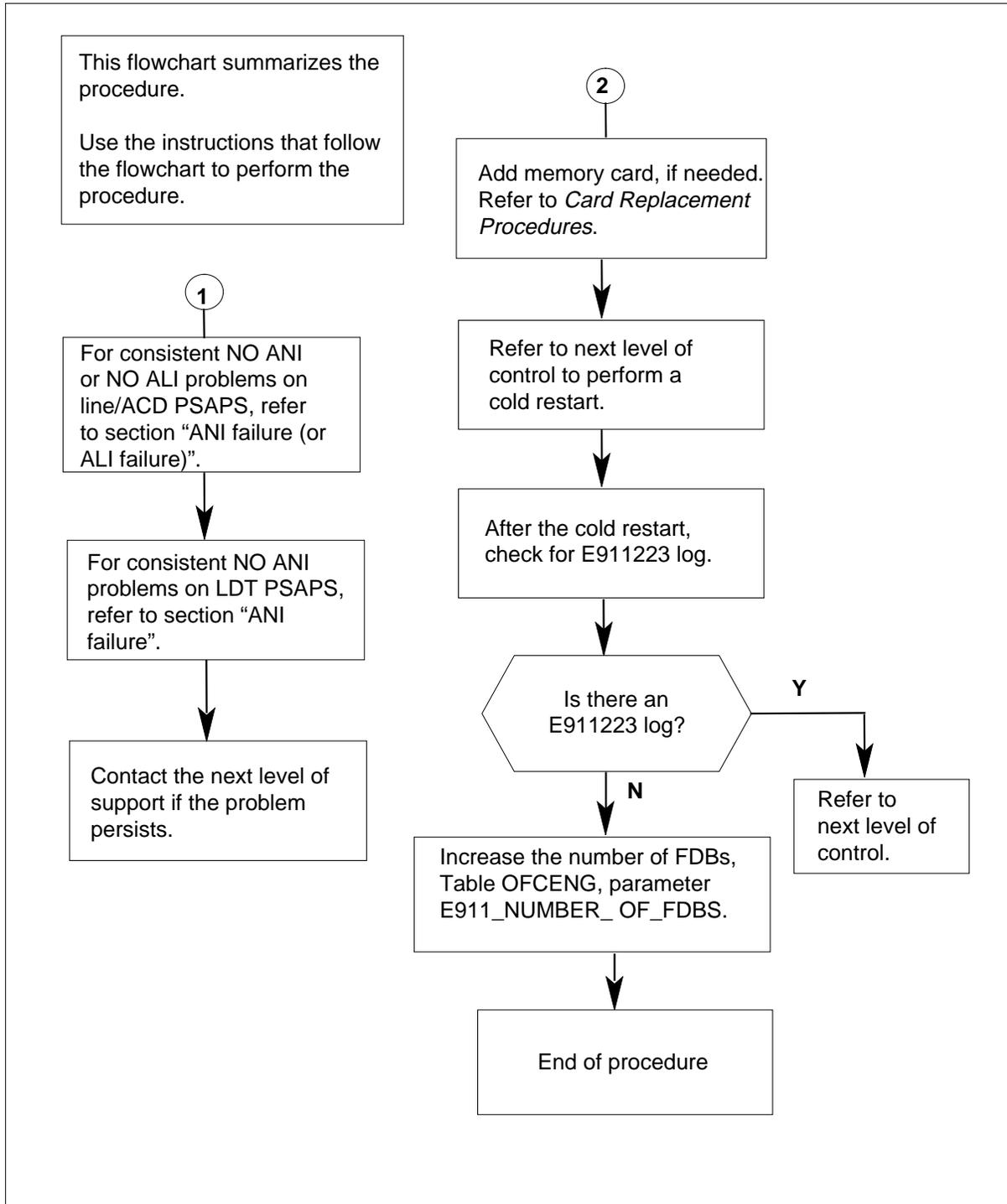
## E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

### Summary of LDT and Line/ACD PSAP complaint



## E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

### Summary of LDT and Line/ACD PSAP complaint (continued)



## E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

### LDT and Line/ACD PSAP complaint

**At your current location:**

- 1 To start the LOGUTIL log report system and view the E911223 and E911224 log reports, type

**>LOGUTIL**

and press the Enter key.

**Note:** A cold start generates an E911223 log report when the allocation of the number of FDBs can not occur. Office parameter E911\_NUMBER\_OF\_FDBS specifies the number of FDBs. The E911224 log report indicates a call cannot receive an FDB.

- 2 To view E911 log reports, type

**>OPEN E911**

and press the Enter key.

- 3 To display these log reports, type

**>BACK** and **press the Enter key.**

- 4 Repeat step 3 as many times as needed to make all the log reports appear.

*The following is a normal E911223 log report:*

```
E911223 MAR26 08:15:38 0101 INFO FAILURE TO ALLOCATE E911 FDBS
NUMBER REQUESTED =    400
NUMBER ALLOCATED =     50
```

*The following is a normal E911224 log report:*

```
E911224 MAR26 08:15:38 0101 NO E911 FDB AVAILABLE
```

| If log report  | Do            |
|----------------|---------------|
| is E911224     | Go to step 5. |
| is not E911224 | Go to step 9. |

- 5 Access table OFCENG to check the number requested for office parameters E911\_NUMBER\_OF\_FDBS and the NO\_OF\_CRITICAL\_FTR\_DATA\_BLKs selected. You need authorization to access table OFCENG. To access table OFCENG, type

**>TABLE OFCENG;**

and press the Enter key.

- 6 To position on office parameter E911\_NUMBER\_OF\_FDBS, type

**>POS E911\_NUMBER\_OF\_FDBS**

and press the Enter key.

- 7 Record the number in the far right column of office parameter E911\_NUMBER\_OF\_FDBS.

## E911 LDT and Line/ACD PSAP complaint

### Occasional failure of some E911 functions (continued)

- 8 To make the comparison with office parameter NO\_OF\_CRITICAL\_FTR\_DATA\_BLKs, type
- ```
>POS NO_OF_CRITICAL_FTR_DATA_BLKs
```
- and press the Enter key.
- Remember that the NO\_OF\_CRITICAL\_FTR\_DATA\_BLKs must be greater than the office parameter.

If office parameter E911_NUMBER_OF_FDBS	Do
must increase to a value greater than the office parameter NO_OF_CRITICAL_FTR_DATA_BLKs	Go to step 9.
must increase to a value less than the office parameter NO_OF_CRITICAL_FTR_DATA_BLKs	Go to step 12.

9



#### CAUTION

##### Possible service interruption.

A cold restart drops calls in the talking state. No record exists of billing data for the calls. The network connection MAP clears. All separate-call data starts again to the idle state. System switches the state of all lines and trunks to idle, except lines and trunks that are not equipped or offline. Peripheral modules perform their own initializations. The system logs out users. Users cannot log back in, except the user OPERATOR. Perform this command during periods of low traffic, or severe emergency conditions.

Refer increases in the parameter NO\_OF\_CRITICAL\_FTR\_DATA\_BLKs, to the next level of control. This change requires a cold restart.

- 10 Check LOGUTIL for E911223 log report(s). If necessary, refer to steps 1, 2, 3, and 4, on how to access E911223 log reports.

If E911223 log	Do
is generated	Go to step 11
is not generated	Go to step 12

- 11 You can add data store memory. To add a memory card, refer to *Card Replacement Procedures*.

- 12 To increase the tuple for the number of E911\_NUMBER\_OF\_FDBS in Table OFCENG, type

```
>POS E911_NUMBER_OF_FDBS
```

## E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

- and press the Enter key.
- 13** To increase this office parameter or supply it again, type  
**>CHANGE**  
 and press the Enter key.
- 14** Type the new number and press the Enter key.  
*The following is a normal response:*
- ```
"TUPLE TO BE CHANGED;
      E911_NUMBER_OF_FDDBS      600
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT."
```
- 15** To confirm the number you wish to assign to this parameter, type  
**>Y**  
 and press the Enter key.  
*The response says:*
- ```
"TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 234."
```
- 16** To exit Table OFCENG, type  
**>QUIT**  
 and press the Enter key.
- Note:** Only make changes in Table OFCENG if you have permission. If you do not have permission, refer to the next level of control.
- 17** To exit LOGUTIL, type  
**>QUIT**  
 and press the Enter key.
- 18** For repeated NO ANI or NO ALI problems on Line/ACD PSAPS, refer to section "ANI failure (or ALI failure)".
- 19** For repeated NO ANI problems on LDT PSAPS, refer to section "ANI failure".
- 20** Determine if E911223 and E911224 log reports are not output and other problems continue.
- | <b>If E911223 and E911224 log reports</b>     | <b>Do</b> |
|---|-----------|
| are not output and other problems continue    | step 21   |
| are not output and no other problem continues | step 22   |
- 21** Refer to the next level of control.

**E911 LDT and Line/ACD PSAP complaint**  
**Occasional failure of some E911 functions** (end)

---

22 The procedure is complete.

## **E911 LDT PSAP complaint ANI failure**

---

### **Application**

Use this procedure to correct an automatic number identification (ANI) failure. Use the procedure when the public-safety answering point (PSAP) operator reports no ANI.

### **Definition**

The PSAP position receives wrong ANI information. You cannot route emergency callers to a specified PSAP operator position or positions. You can route emergency callers to a default PSAP position.

The calling number does not appear on the PSAP display. Wrong ANI appears. Examples of wrong ANI are:

- the numbering plan area for three-digit service, or one numbering plan digit and 911-0\_\_\_. (The central office for the entered emergency service\* provides the last three numbers.)
- all 0's
- anonymous ANI (the digit for a service numbering plan or the area for a service numbering plan + 911-0000).

The system can enter ANI to appear at the PSAP like the examples. If information does not normally appear like the examples, problems exist.

The following is a list of the possible causes of this problem:

- DS-1 carrier failure on incoming E911 trunk
- PSAP customer premise equipment (CPE) failure
- Subscriber Carrier Module-100 urban failure
- network problem in the E911 tandem
- end office problem
- feature data blocks not available

\* The predominate NXX of the trunk or the virtual facility group from which the call originates.

### **Common procedures**

There are no common procedures.

**E911 LDT PSAP complaint**  
**ANI failure** (continued)

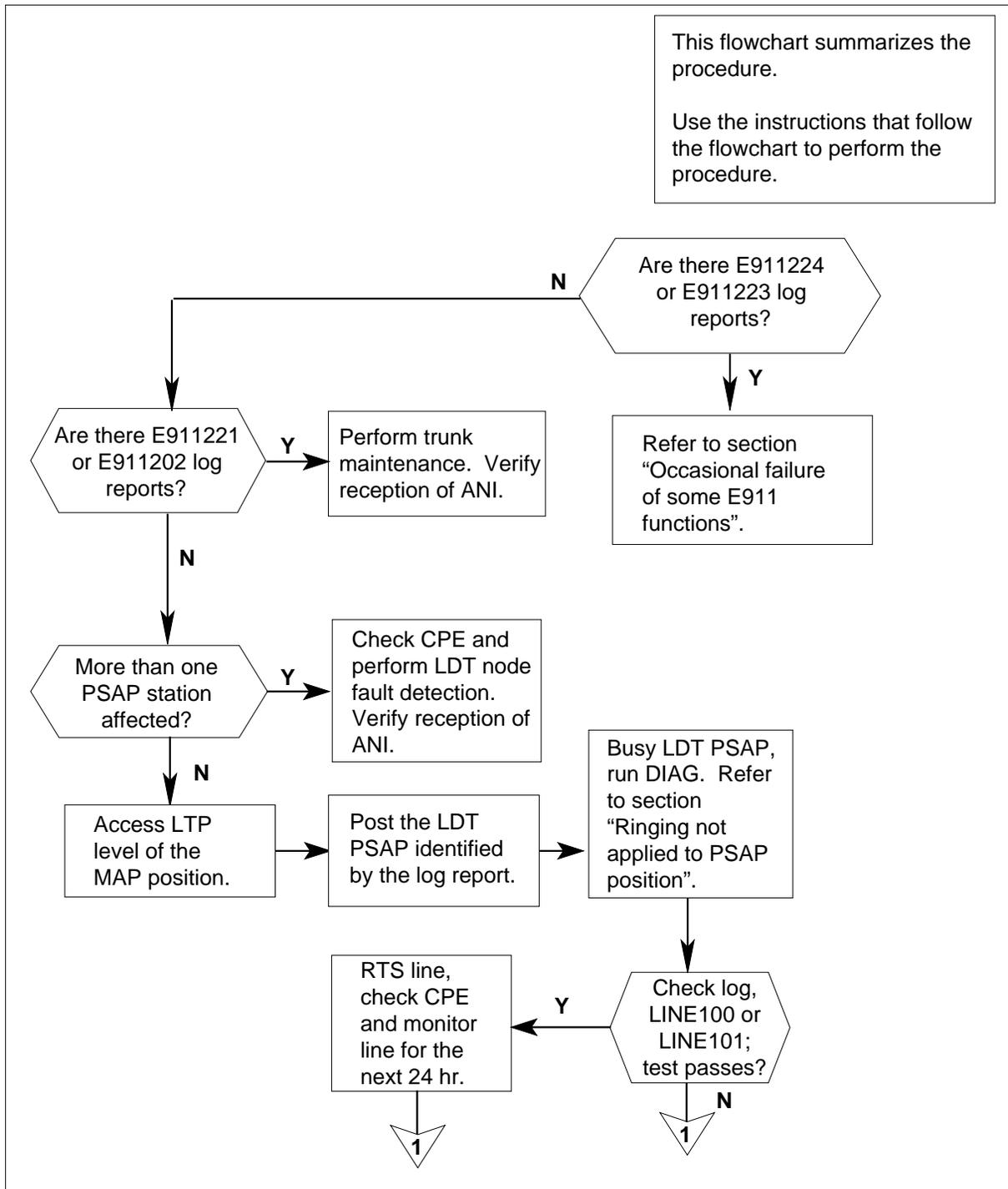
---

**Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

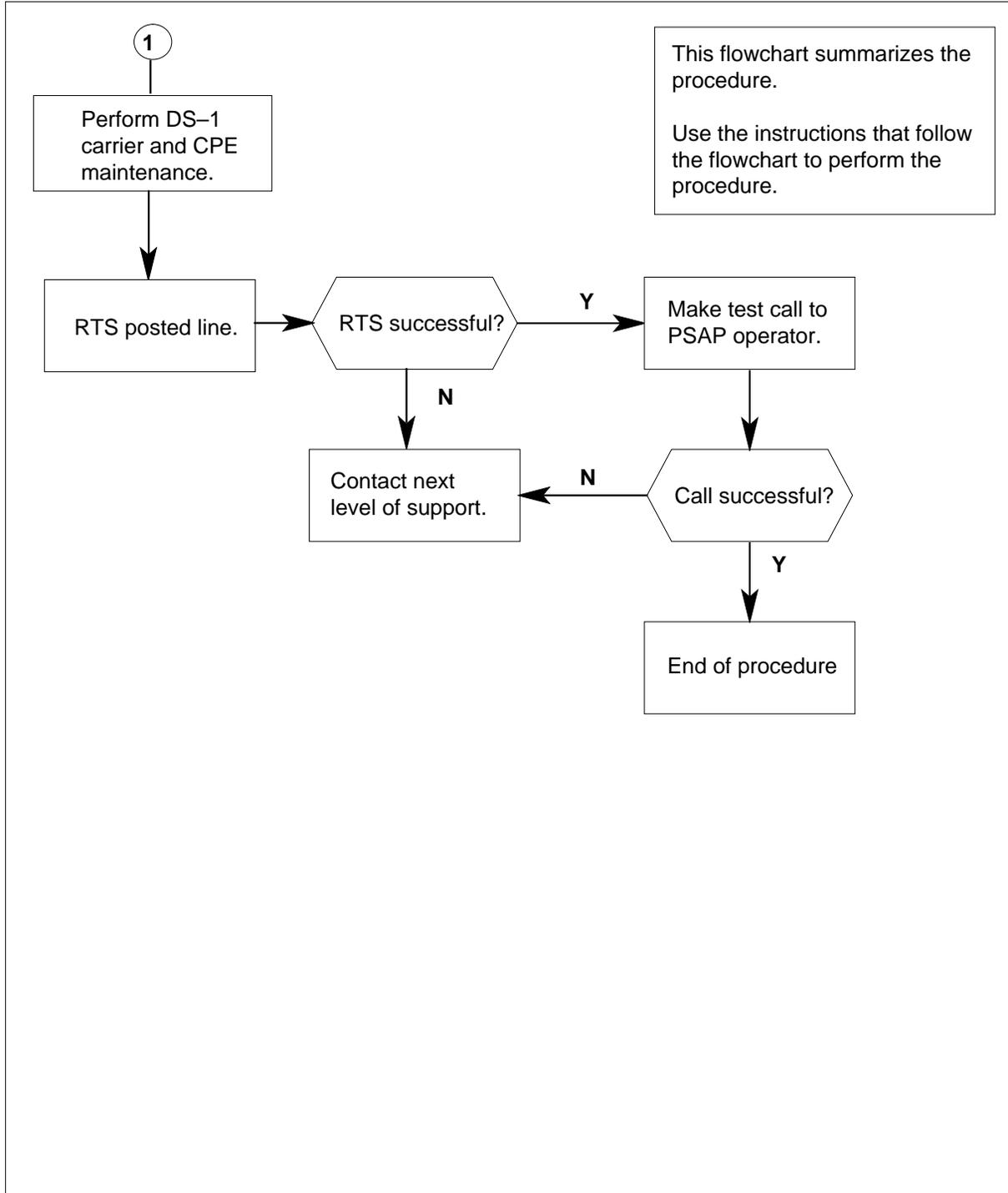
## E911 LDT PSAP complaint ANI failure (continued)

### Summary of LDT PSAP complaint



## E911 LDT PSAP complaint ANI failure (continued)

### Summary of LDT PSAP complaint (continued)



## E911 LDT PSAP complaint ANI failure (continued)

### LDT PSAP complaint

#### *At your current location*

- 1 To obtain LINE101, E911202, E911221, E911223 or E911224 logs, start the LOGUTIL log reporting system. Type

**>LOGUTIL**

and press the Enter key.

- 2 To view these log reports, type

**>OPEN log\_report\_type (for example, OPEN E911)**

and press the Enter key.

*where*

**log\_report\_type**

is the alphabetical string that identifies the class of log report to output

- 3 To display these log reports, type

**>BACK**

and press the Enter key as many times as needed to make the reports appear.

- 4 Repeat step 3 as many times as needed to make the reports appear.

*The following is a normal LINE100 log report:*

```
LINE100 DEC25 00:00:01 1234 PASS LN_DIAG
LEN HOST 55 1 1 2 DN 7229999
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE BX17AA
```

*The following is a normal LINE101 log report:*

```
LINE101 FEB21 15:05:39 5000 FAIL LN DIAG
LEN PSAP 00 0 00 00 DN 7371701
DIAGNOSTIC RESULT No Wink From PSAP
ACTION REQUIRED Chk PSAP/DS1
CARD TYPE PSAPWA
```

The line or trunk maintenance subsystems generate the E911221 or E911202 log reports. The subsystems generate the reports for problems with ANI information reception from a trunk or line.

*The following is a normal E911202 log report:*

```
E911202 MAR02 16:37:46 0101 INFO
ANI TROUBLE: CALL DEFAULT ROUTED
CKT CARYNCE911 6
ANI DIGITS = D2862389
```

---

## E911 LDT PSAP complaint ANI failure (continued)

---

The following is an example of an E911221 log report:

```
E911221    JAN13    13:45:22  0101  INFO E911  VFG ANI TROUBLE:
                                           CALL DEFAULT ROUTED
ANI DIGITS = 62150
```

**Note:** An E911221 log only generates if additional VFG software exists. The maintenance subsystems for the line or trunks generate the E911221 or E911202 log reports. The maintenance subsystems generate log reports for problems with ANI information reception from a trunk or line.

The following is a normal E911223 log report:

```
E911223    MAR26    08:15:38  0101  INFO FAILURE TO ALLOCATE E911 FDBS
NUMBER REQUESTED =          400
NUMBER ALLOCATED =           50
```

The following is a normal E911224 log report:

```
E911224    MAR26    08:15:38  0101  NO E911 FDB AVAILABLE
```

---

If log report	Do
is E911224 or E911223	Refer to section <i>Failure of some E911 functions</i> .
is other than listed here	Go to step 5.

---

- 5 To access the LTP level of the MAP position, type  
>MAPCI;MTC;LNS;LTP  
and press the Enter key.

---

If log report	Do
is E911202 or E911221 and problem indicated is ANI lost from the side that originates	Perform maintenance for trunks or lines Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> .
is E911202 or E911221 and problem indicated is only one operator position does not receive ANI	Go to step 6.
is E911202 or E911221 and problem indicated is more than one operator position at the LDT PSAP does not receive ANI	Go to step 10.

---

## E911 LDT PSAP complaint ANI failure (continued)

If log report	Do
is not output	Go to step 13.

**Note:** When you enter LOGUTIL, "quit" this utility before you enter another area or begin a new procedure.

**6** To post the line identified in the LINE101 log report, type

>POST L len #

and press the Enter key.

where

**LEN #**

is the line equipment number identified in the LINE113 or the E911222 log report.

*The following is a normal message displayed at the MAP terminal:*

```
LCC PTY RNG .....LEN.....DN          STA  F S LTA TE RESULT
IBN          PSAP 00 0 00 00  737 1701  IDL  D
```

**7** To manually busy the posted line, type

>BSY

and press the Enter key.

**8** To perform a diagnostic test on the posted line, type

>DIAG

and press the Enter key.

**Note:** This test is only for lines entered to support both wink signaling and ANISPILL (line card code PSAPWA). The maintenance trunk module must contain a transmission test unit to support a line test.

*The following is a normal message displayed at the MAP terminal if the test passes:*

```
LINE100 DEC25 00:00:01 1234 PASS LN_DIAG
LEN HOST 55 1 1 2      DN 7229999
DIAGNOSTIC RESULT Card Diagnostic OK
ACTION REQUIRED None
CARD TYPE BX17AA
```

*The following is a normal message displayed at the MAP terminal if the test fails:*

**E911 LDT PSAP complaint**  
**ANI failure** (continued)

```
LINE101 FEB21 15:05:39 5000 FAIL LN DIAG
LEN PSAP 00 0 00 00 DN 7371701
DIAGNOSTIC RESULT No Wink From PSAP
ACTION REQUIRED Chk PSAP/DS1
CARD TYPE PSAPWA
```

---

**If the posted line Do**  
**DIAG**

---

passes	Enter <RTS> command at the MAP position. There can be an intermittent failure. Monitor the line and make test calls for at least eight hours. Monitor the log report system for LINE101 and E911221 logs. If the problems recur, continue to step 9.
fails	Go to step 9.

**9** Examine the LINE101 log that associates with the test failure displayed at the MAP terminal.

---

**If the DIAGNOSTIC RESULT line Do**

---

indicates VFG ANI problem	Go to step 10.
indicates outcome other than listed here	Refer to <i>Log Report Reference Manual</i> for correct action to detect faults..

**10** Perform DS-1 carrier maintenance. Perform necessary maintenance procedures on the CPE PSAP controller device connected to the channel bank.

---

**If Do**

---

fault found and cleared	Make test calls to ensure the problem is now correct.
no fault found	Continue to step 11.
the problem persists	Perform LDT node maintenance. Use <i>Alarm Clearing and Performance Monitoring Procedures</i> to clear PM, CBSy, or SysB minor alarms.

**11** Complete all maintenance actions. To return the posted line to service, type >RTS

**E911 LDT PSAP complaint  
ANI failure (end)**

and press the Enter key.

	<b>If RTS</b>	<b>Do</b>
	succeeds	Go to step 12.
	fails	Go to step 13.
<b>12</b>	Call the PSAP operator to test ANI information reception.	
	<b>If the call</b>	<b>Do</b>
	goes through and the operator receives ANI	Go to step 14.
	goes through and the operator do not receive ANI	Go to step 13.
<b>13</b>	For additional help, contact the next level of support.	
<b>14</b>	The procedure is complete.	

## **E911 LDT PSAP Operator Complaint**

### **Ringling not being applied to PSAP position**

---

#### **Application**

Use this procedure when public safety answering point (PSAP) operators report ringing not applied to the PSAP position. This procedure corrects the problem. See the list of terms at the end of this document for an explanation of abbreviations.

#### **Definition**

Emergency callers not routed to a given PSAP operator position or positions. Callers go to a default PSAP position. The E911 tandem seizes a trunk to the Line Appearance on a Digital Trunk (LDT) PSAP. The E911 tandem waits for a wink signal from the PSAP. If the tandem does not receive a wink in the prescribed time, the call goes to the next idle position. The system also generates the LINE113 and E911222 log reports.

The following is a list of the possible causes of this problem:

- DS-1 carrier failure
- PSAP customer premise equipment (CPE) failure
- Subscriber Carrier Module-100 Urban (SMU) failure

#### **Common procedures**

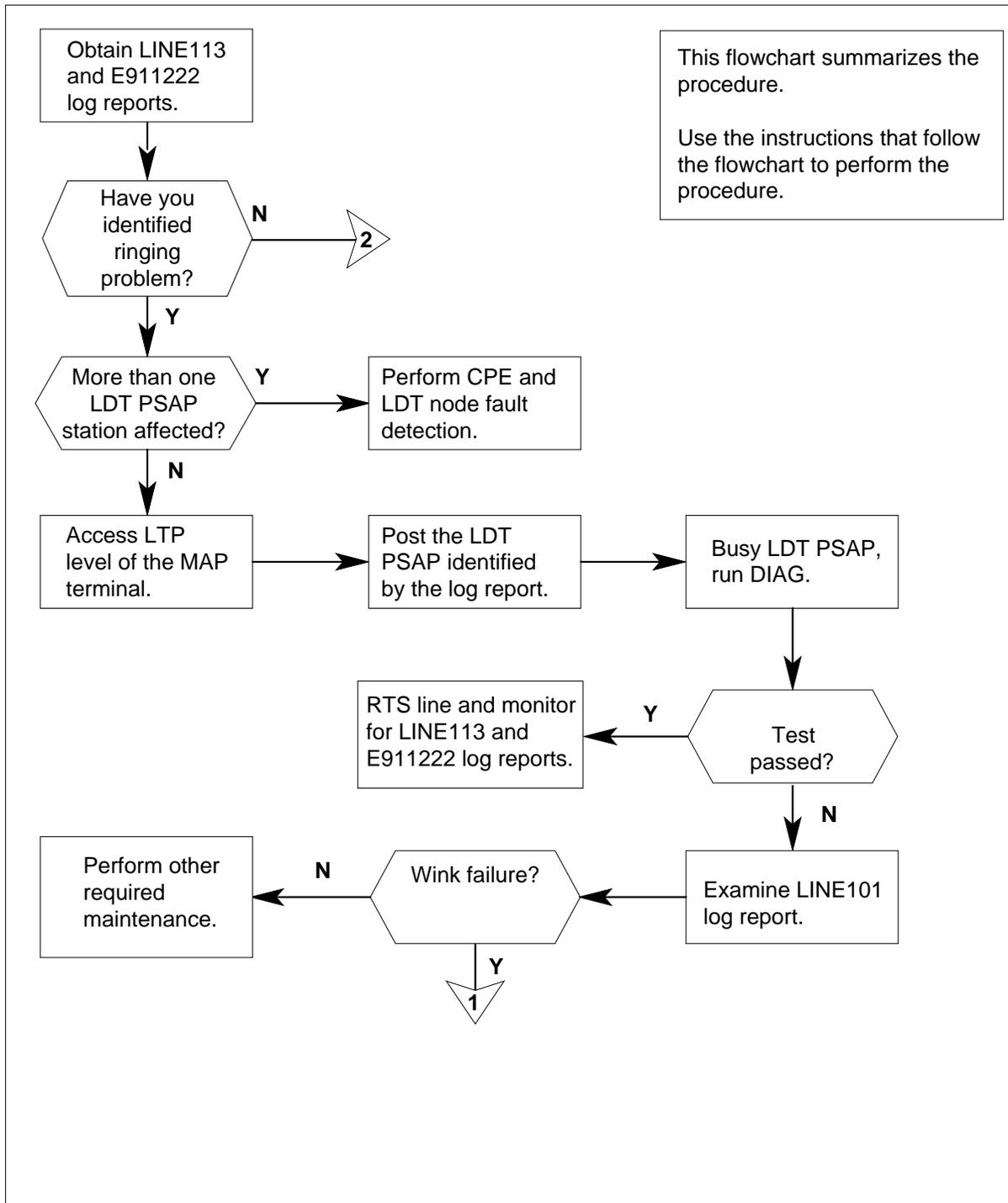
There are no common procedures.

#### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

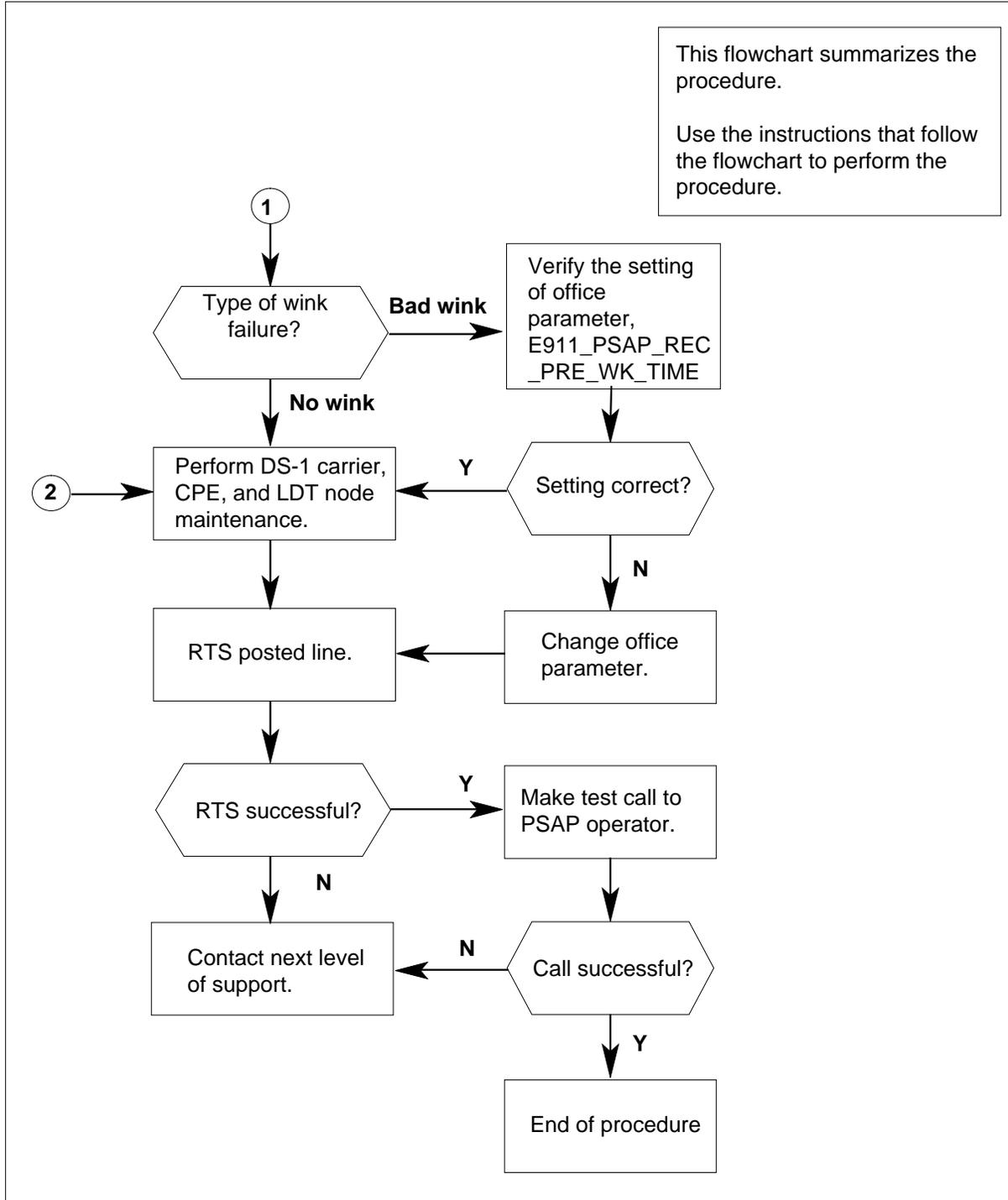
## E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position (continued)

### Summary of LDT PSAP Operator Complaint



## E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position (continued)

### Summary of LDT PSAP Operator Complaint (continued)



## E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position (continued)

### LDT PSAP Operator Complaint

#### *At your current location*

- 1 To start the LOGUTIL log report system for LINE113 and E911222 log reports, type

>LOGUTIL

and press the Enter key.

**Note:** This test is only for lines entered to support both wink signaling and ANISPILL (line card code PSAPWA). The maintenance test module must contain a transmission test unit to support a line test.

- 2 To view these log reports, type

>OPEN log\_report\_type

and press the Enter key.

where

**log\_report\_type**

is the alphabetical string that identifies the class of log report needed.

- 3 To display these log reports, type

>BACK

as many times as needed to make them appear and press the Enter key.

**Note:** The line maintenance subsystem generates the LINE113 and the E911222 log reports. The subsystem generates the reports when there are problems with the application of ringing to a line.

*The following is a normal LINE113 log report:*

```
LINE113 MAR02 16:37:46 5775 TBL
LEN PSAP 00 0 00 16 DN 7371701
TROUBLE CODE = PSAP WINK FAIL
RINGING TROUBLE = RINGING_TROUBLE
CALLID = 430991
```

*The following is an example of an E911222 log report:*

```
E911222 JAN13 13:45:22 0300 FLT
LEN PSAP 00 0 00 23 DN 6216023
PSAP NAME = BOGUEFIRE PSAP_WINK_FAIL
```

**If problem**

**Do**

is only one operator position does not receive ringing with one of the following messages:  
 NO WINK FROM PSAPText  
 PSAP WINK FAIL

Go to step 5

## E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position (continued)

	<b>If problem</b>	<b>Do</b>
	is more than one operator position at the LDT PSAP does not receive ringing	Refer to <i>Log Report Reference Manual</i> for maintenance information.
	is other than listed here	Go to step 11
<b>4</b>	To exit the LOGUTIL log report system, type <b>&gt;QUIT</b> and press the Enter key.	
<b>5</b>	To access the LTP level of the MAP terminal, type <b>&gt;MAPCI; MTC; LNS; LTP</b> and press the Enter key.	
<b>6</b>	To post the line identified in the LINE113 log report, type <b>&gt;POST L len #</b> and press the Enter key. <i>where</i> <b>len#</b> is the line equipment number identified in the LINE113 or the E911222 log report.  <i>The following is a normal message displayed at the MAP terminal:</i>	
	<pre>LCC PTY RNG .....LEN.....DN          STA  F S LTA TE RESULT IBN          PSAP 00 0 00 00  737 1701  IDL  D</pre>	
<b>7</b>	To manually busy the posted line, type <b>&gt;BSY</b> and press the Enter key.	
<b>8</b>	To perform a diagnostic test on the posted line, type <b>&gt;DIAG</b> and press the Enter key.  <b>Note:</b> This test is only for lines entered to support both wink signaling and ANI SPILL (line card code PSAPWA). The maintenance trunk module must contain a transmission test unit to support a line test.  <i>The following is a normal message displayed at the MAP terminal:</i>	

## E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position (continued)

```

LINE101 FEB21 15:05:39 5000 FAIL LN DIAG
LEN PSAP 00 0 00 00 DN 7371701
DIAGNOSTIC RESULT No Wink From PSAP
ACTION REQUIRED Chk PSAP/DS1
CARD TYPE PSAPWA
    
```

	<b>If posted line</b>	<b>Do</b>
	passes	Enter <RTS> and press the Enter key. Monitor the log report system for LINE113 and E911222 logs. A failure can occur at intervals.
	fails	Go to step 9
<b>9</b>	Examine the LINE101 log report for the test failure displayed at the MAP terminal.	
	<b>If the DIAGNOSTIC RESULT line of the log</b>	<b>Do</b>
	indicates no wink from PSAP	Go to step 11
	indicates bad wink from PSAP	Go to step 10
	indicates other results	Refer to <i>Log Report Reference Manual</i> for the correct action to detect faults.
<b>10</b>	Verify the setting of the office parameter E911_PSAP_REC_PRE_WK_TIME in table OFCSTD. The tandem seizes a trunk to the LDT PSAP. The tandem waits the number of seconds (4-20) this parameter indicates for a wink signal from the PSAP. If the tandem group does not receive a signal in time: <ul style="list-style-type: none"> <li>• the call goes to the next idle unit in the hunt group</li> <li>• A LINE113 log report generates</li> </ul> If you have to, you can increase the parameter for calls sent to the PSAP position.	
	<b>If parameter setting</b>	<b>Do</b>
	is cause of the bad wink signaling	Refer to the Translations Group or to your next level of control to change the office parameter. Go to step 14.

## E911 LDT PSAP Operator Complaint

### Ringling not being applied to PSAP position (end)

	If parameter setting	Do
	is correct	Go to step 11
11	Perform DS-1 carrier maintenance. Refer to <i>Subscriber Carrier Module-100 Urban Maintenance Manual</i> , 297-8241-550 for DS-1 carrier information.	
12	Perform necessary maintenance procedures on the CPE PSAP controller device connected to the channel bank. Refer to manuals or information furnished by the vendor that provides this equipment.	
13	If problems persist, perform LDT node maintenance. Use the PM CBsy or SysB procedure in <i>Alarm Clearing and Performance Monitoring Procedures</i> to clear the alarm. If no PM alarm exists, contact the next level of support.	
14	To return the posted line to service after you complete all maintenance actions, type >RTS and press the Enter key.	
	If RTS	Do
	succeeds	Call PSAP operator to test ringing. If ringing applies to position, the procedure is complete. If ringing does not apply to position, contact next level of support.
	fails	Contact next level of support.
15	The procedure is complete.	

## **E911 Line and ACD PSAP complaint ANI failure (or ALI failure)**

---

### **Application**

Use this procedure to correct the failure of an automatic number identification (ANI) or an automatic location identification (ALI). Use the procedure when ALI operating company personnel or the public-safety answering point (PSAP) operators report no ANI. Also use the procedure when PSAP operators report no ALI. Refer to the list at the end of this document for an explanation of the abbreviations used in this procedure.

### **Definition**

This complaint indicates a problem with the reception of information about emergency caller numbers. Line and Automatic Call Distribution (ACD) PSAP operators do not receive the information from the ALI database or end office.

Possible causes of ANI problems are:

- incoming trunk or line failure
- feature data blocks not available
- network problem in the E911 tandem
- PSAP customer premise equipment (CPE) failure
- end office problem

Possible causes of ALI problems are:

- CPE failure at the ALI data center
- feature data blocks not available
- damaged multiprotocol controller card
- damaged modem connected to the multiprotocol controller link to the ALI database
- multiprotocol controller datalink failure

### **Common procedures**

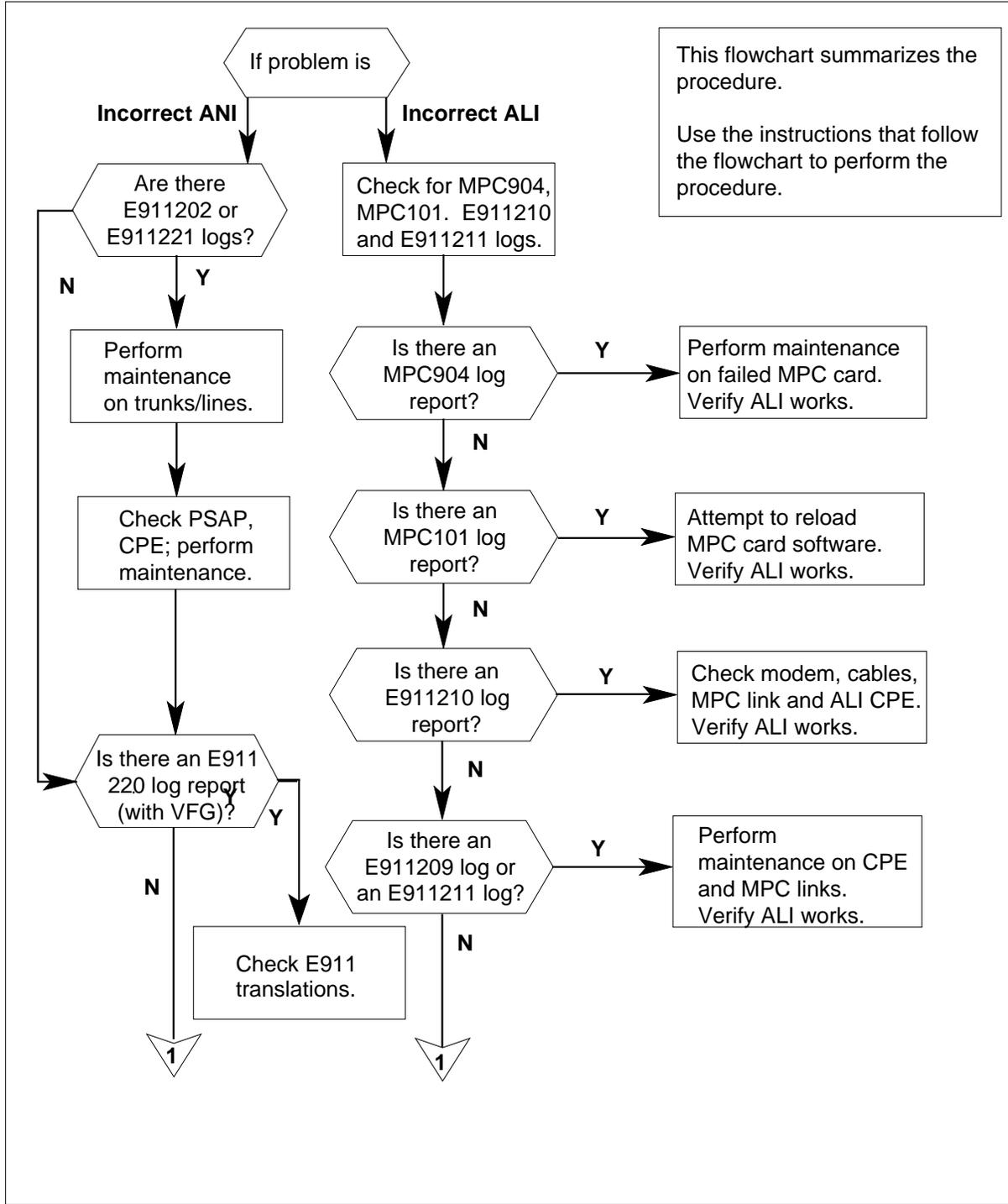
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

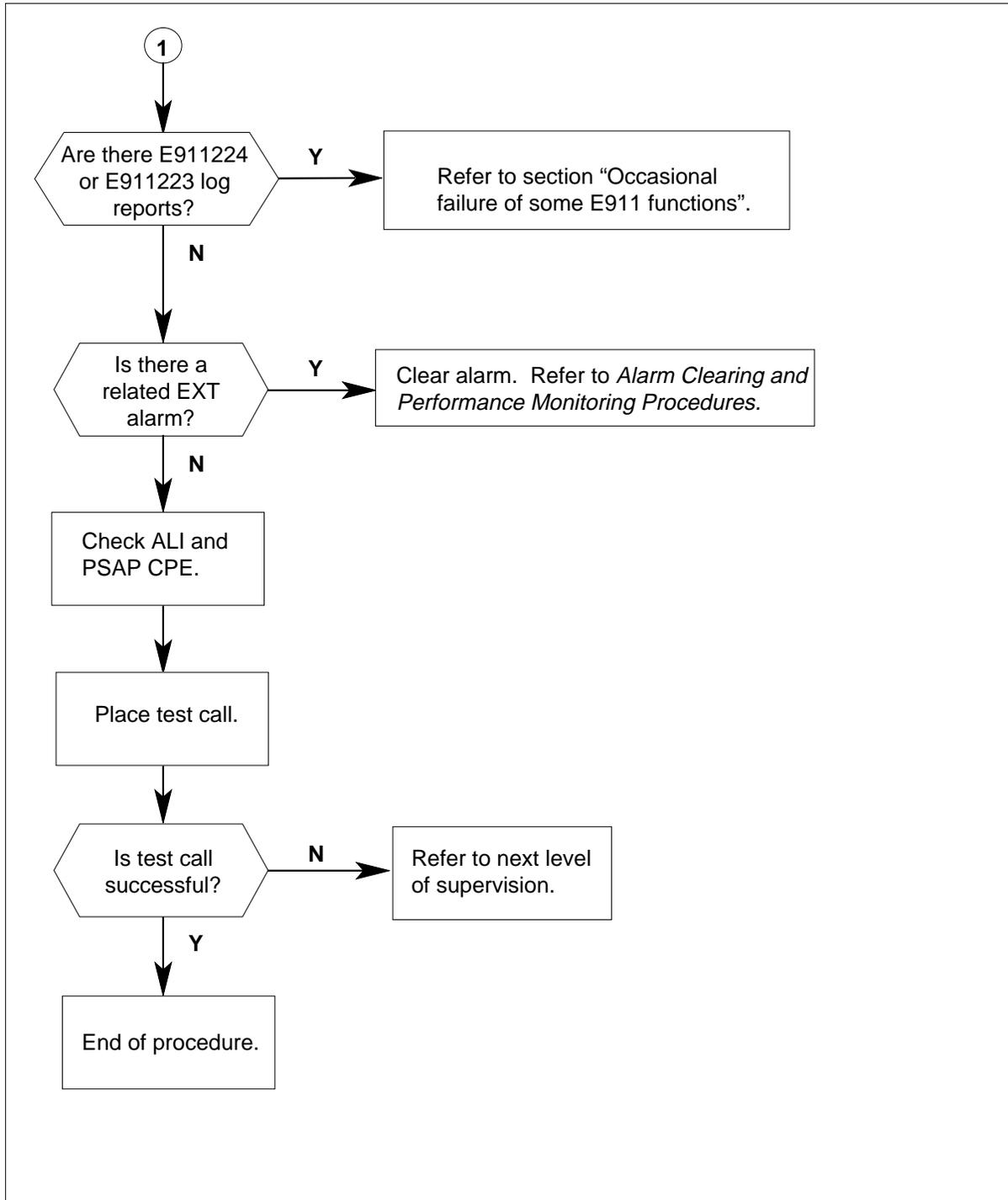
## E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

### Summary of Line and ACD PSAP complaint



## E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

### Summary of Line and ACD PSAP complaint (continued)



## E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

---

### Line and ACD PSAP complaint

#### *At your current location:*

- 1 Start the LOGUTIL log reporting system and view MPC101, MPC904, E911210, E911211, E911223 and E911224 or additional E911220 and E911221\* log reports. To start the LOGUTIL system, type

>LOGUTIL

and press the Enter key.

**Note:** The indicated conditions generate log reports as follows:

*E911202* Calls on E911 trunks that receive ANI failed to receive it or received it in corrupted form.

*E911209* Record transmission from the ALI controller to the tandem rejected.

*E911210* Record transmission from an ALI controller to the E911 tandem received no response within established time-out period.

*E911211* Two attempts to send an ALI record from the tandem to the ALI controller failed.

*E911220* On calls to virtual facility group (VFG), the plan area for call numbering is not in table E911NPD. Treat the call as an ANI failure. The additional feature for VFG support, if part of your software, can produce an E911221\* report. An ANI failure or a VFG failure generates a report. A VFG failure is a failure to get a correct serving numbering plan area and directory number of the calling party. The log contains any obtained digits.

*E911223* The office parameter E911\_NUMBER\_OF\_FDBS allocates a number of E911 feature data blocks (FDBs). The system cannot allocate.

*E911224* E911 calls cannot obtain a data block for an E911 feature during a call.

*MPC101* A software problem occurred that affects the performance of a multiprotocol controller card.

\* The E911220 and E911221 log reports can be available. The additional feature for VFG Support, NXP58AA, must be present in the software at your site.

- 2 To view the log reports of class E911, type

>OPEN log\_report\_type

and press the Enter key.

where

**log\_report\_type**

is the alphabetical string that identifies the class of logreport to generate.

In this occurrence, type the following:

>OPEN E911

and press the Enter key.

---

## E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

---

- 3 To display these log reports, type  
>BACK  
and press the Enter key.
- 4 Repeat step 3 as many times as needed to make all the log reports appear.
- 5 To view the log reports of class MPC, type  
>OPEN log\_report\_type  
and press the Enter key.  
*where*  
**log\_report\_type**  
is the alphabetical string that identifies the class of logreport to generate.  
In this occurrence, type the following:  
>OPEN MPC  
and press the Enter key.
- 6 To display these log reports, type  
>BACK  
and press the Enter key.
- 7 Repeat step 5 as many times as needed to make all the log reports appear.
- 8 To exit the LOGUTIL log reporting system, type  
>QUIT  
and press the Enter key.
- 9



### CAUTION

#### Possible interruption of service

When you take 911 trunks or lines out of service for maintenance, you may affect E911 service. Check the status of other 911 trunks and lines to ensure that callers to 911 can get through. Review the maintenance procedure to perform maintenance in the best possible method. Return the trunks or lines to service quickly.

**E911 Line and ACD PSAP complaint  
ANI failure (or ALI failure)** (continued)

Determine if log reports E911202 and E911221 are present.

If problem of wrong ANI and log report	Do
is E911202 or E911221	Perform maintenance on trunks or lines. Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> . Complete the procedure and proceed to step 10.
is not present	Go to step 11.
10	Check PSAP and CPE. To perform maintenance, refer to the support documentation that the vendor provides. Clear any problem found.
If problem is wrong ANI and log report	Do
is E911220 (with VFG support software)	Treat this call as an ANI fail case. Possible cause is that the NPA is not entered in table E911NPD. Refer to Translations Group to check entries.
is not present	Go to step 11.
is MPC904	Perform maintenance on MPC card and/or MPC link. Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> .
is MPC101	Reload the MPC card software.
is E911210	Check modem settings to ensure they match the settings defined for the link in Table MP-CLINK. Refer to <i>Translations Guide</i> for entry information. Perform maintenance on the modem, MPC link to the ALI data center, and ALI data CPE. <i>Alarm Clearing and Performance Monitoring Procedures</i> describes fault detection for the link. Support vendor documents describe modem and CPE maintenance.

**E911 Line and ACD PSAP complaint  
ANI failure (or ALI failure) (end)**

	<b>If problem is wrong ANI and log report</b>	<b>Do</b>
	is E911209 or an E911211	Detect faults in the MPC link to the ALI data center and ALI data center CPE. <i>Alarm Clearing and Performance Monitoring Procedures</i> describes fault detection for the link. Support vendor documents describe CPE maintenance.
<b>11</b>	To check for a related EXT alarm, type >MAPCI; MTC at the CI level of the MAP terminal and press the Enter key. An EXT main alarm appears in the MAP banner.	
	<b>If</b>	<b>Do</b>
	an EXT main alarm appears	Clear the alarm. Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> to clear this alarm.
	an EXT main alarm does not appear	Go to step 13.
	the switch generates log report E911223 or E911224	Refer to "Occasional failure of some E911 functions" in this document.
<b>12</b>	If the problem continues, contact the next level of support.	
<b>13</b>	The procedure is complete.	

## **Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels**

---

### **Application**

Use this procedure to establish a DS-1 carrier loopback at the host DMS-100 switch for a far-end office.

### **Definition**

A person at the far-end office asks you to set a DS-1 loopback at your DMS-100 switch.

### **Common procedures**

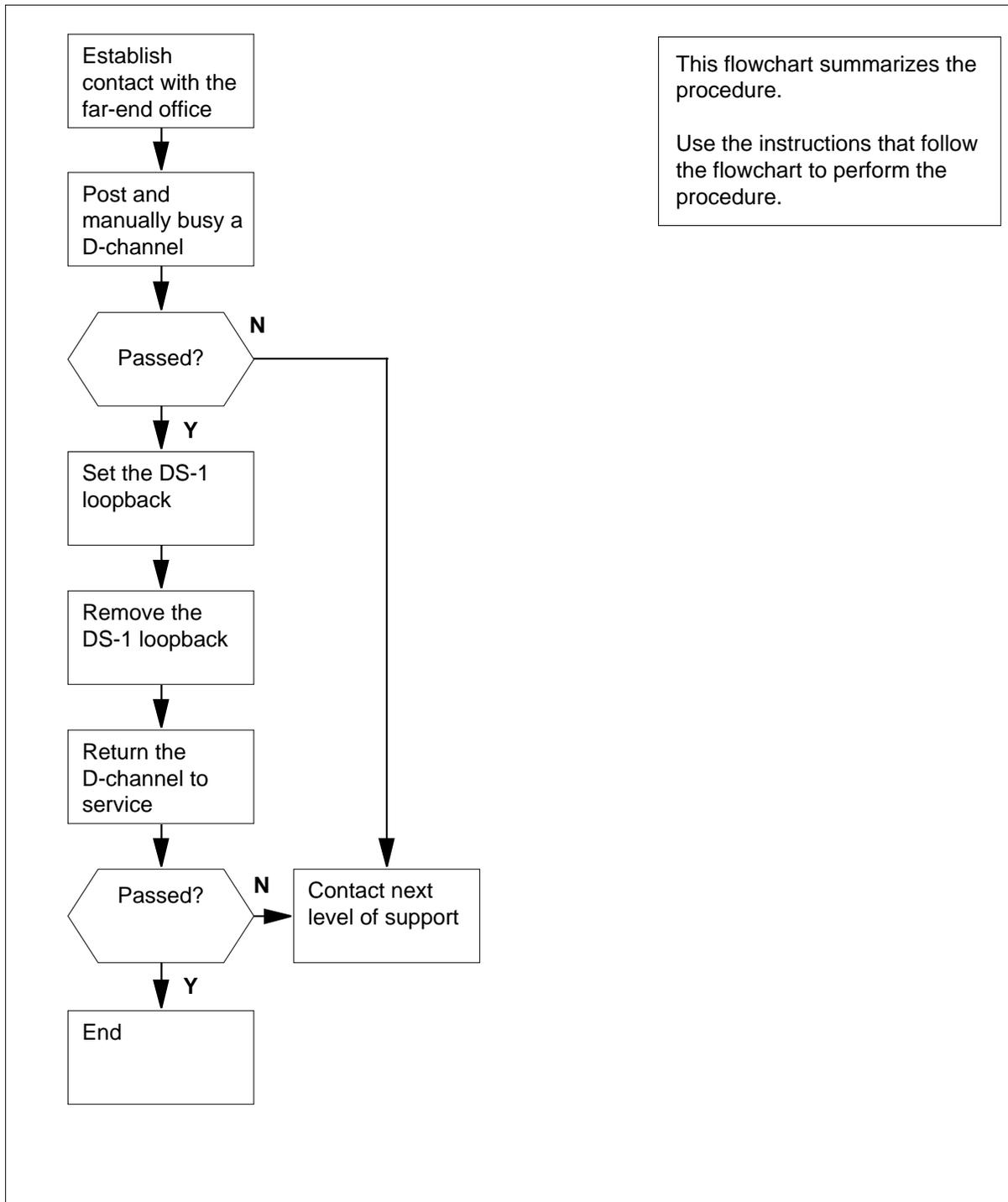
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (continued)

### Summary of Establishing a DS-1 loopback for a far-end office



## Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (continued)

---

### Establishing a DS-1 loopback for a far-end office

#### At the MAP terminal

- 1 Determine the name of the trunk group from office records or operating company personnel.
- 2 The persons at the far-end office ask you to set a DS-1 loopback. To access the PRADCH level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;PRADCH
```

and press the Enter key.

- 3 To post the D-channels, type

```
>POST GD group_name
```

and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

```
>POST GD F5678935PAV
```

Example of a MAP display:

```
POST      1  DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE   PM NO      COM LANG STA S R DOT TE RESULT
2W IS IS LTC 2 3 24 F5678935PAV D1 STB
          LTC 2 5 24 F5678935PAV D2 INS R
```

Example of MAP response:

```
SHORT CLLI IS: F56789
OK,CKT POSTED
```

- 4 Choose the D-channel for the loopback. The persons at the far-end office specify the D-channel for the loopback. Record its identifier (D1 or D2).

**Note 1:** The state of the D-channel is to the right side of the DCHL header on the MAP display. The identifier is under the LANG header on the MAP display.

**Note 2:** In-service (INS) is the normal state for the primary D-channel. Standby (STB) is the normal state for the backup D-channel. The STB state only happens for a backup D-channel when the primary D-channel is INS.

**Note 3:** You must use the same identifier (D1 or D2) for all steps used to establish the DS-1 loopback.

## Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (continued)

5



**CAUTION**

**PRI service interruption**

The following step takes an in-service D-channel out of service. When you take an in-service D-channel out of service, the backup D-channel switches into service automatically.

To manually busy the D-channel, type

**>BSY d\_channel**

and press the Enter key.

where

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

D1: STATE CHANGED

or

THIS WILL PUT LTC 2 5 24 D2 OUT-OF-SERVICE.

Active calls will be killed

Please confirm ("YES", "Y", "NO", or "N"):

6

To confirm the command, type

**>YES**

and press the Enter key.

**Note:** The D-channel state changes to manual busy.

If the BSY command	Do
passed	step 7
failed	step 11

7

To establish the DS-1 loopback, type

**>LOOPBK SET d\_channel**

and press the Enter key.

where

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

## Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (continued)

D2: LOOP POINT ESTABLISHED

If the LOOPBK SET command	Do
passed	step 8
failed	step 11

- 8** Notify the persons at the far-end office that you established the DS-1 loopback.
- 9** The persons at the far-end office will finish with the loopback and contact you. To remove the DS-1 loopback, type

```
>LOOPBK REMOVE d_channel1
```

and press the Enter key.

*where*

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

D2: LOOP POINT REMOVED

If the LOOPBK REMOVE command	Do
passed	step 10
failed	step 11

- 10** To return the D-channel to service, type
- ```
>RTS d_channel1
```
- and press the Enter key.

*where*

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

D2: STATE CHANGED

| If the RTS command        | Do      |
|---------------------------|---------|
| passed (INS or STB state) | step 12 |
| failed                    | step 11 |

- 11** For additional help, contact the next level of support.

**Establishing a DS-1 loopback for a far-end office  
ISDN PRI primary and backup D-channels (end)**

---

12 The procedure is complete.

## **Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel**

---

### **Application**

Use this procedure to establish a DS-1 carrier loopback at the host DMS-100 switch for a far-end office.

Use this procedure to establish a PCM30 carrier loopback at the host DMS-100 switch for a far-end office.

### **Definition**

A person at the far-end office asks you to establish a DS-1 loopback at your DMS-100 switch.

A person at the far-end office asks you to establish a PCM30 loopback at your DMS-100 switch.

### **Common procedures**

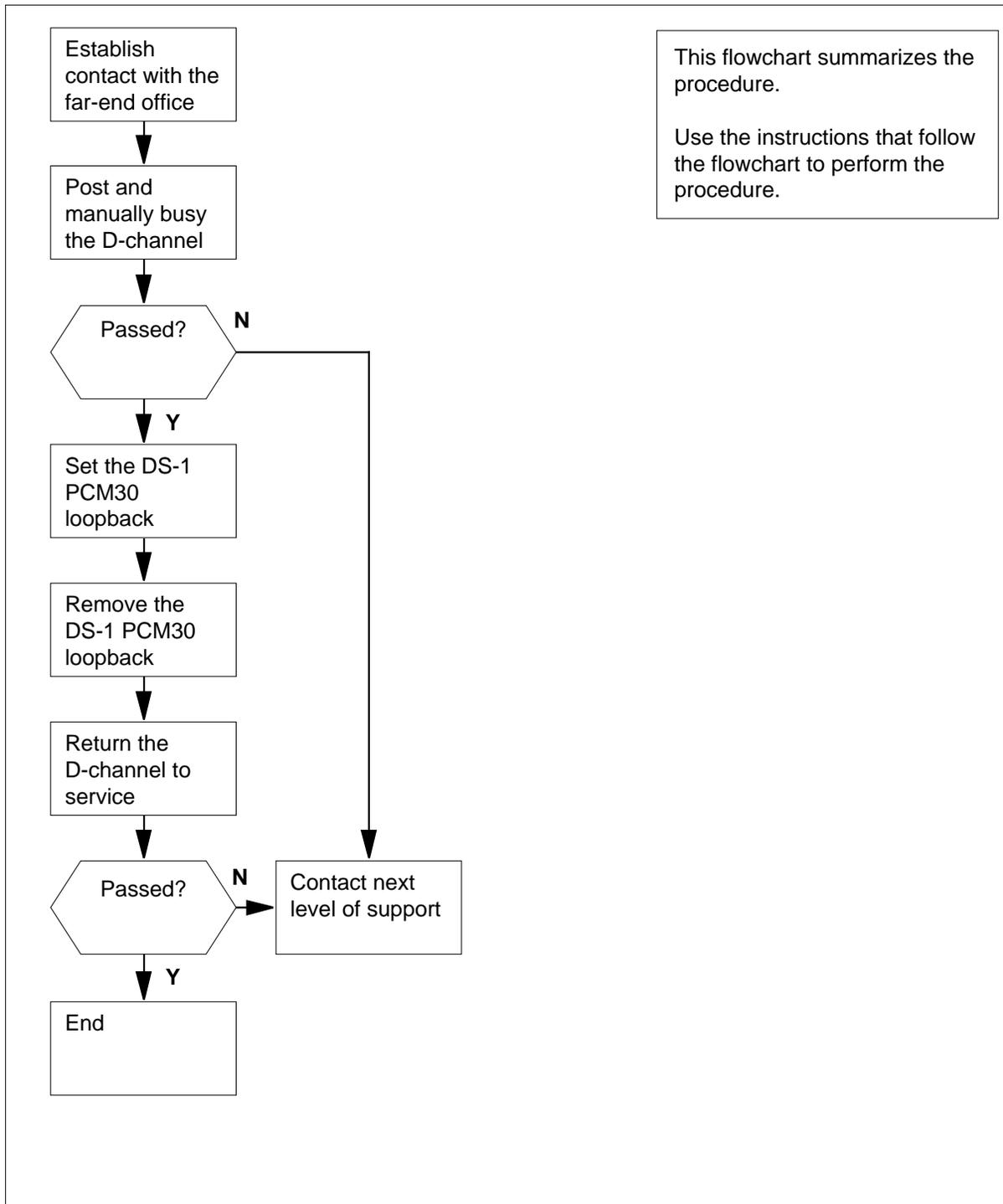
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (continued)

### Summary of Establishing a DS-1 PCM30 loopback for a far-end office



---

## Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (continued)

---

### Establishing a DS-1 PCM30 loopback for a far-end office

#### At the MAP terminal

1 Determine the name of the trunk group from office records or operating company personnel.

2 The persons at the far-end office ask you to establish a DS-1 PCM30 loopback. To access the PRADCH level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;PRADCH
```

and press the Enter key.

3 To post the D-channel, type

```
>POST GD group_name
```

and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

```
>POST GD F9876035PRAPRV
```

Example of a MAP display:

```
POST          DELQ          BUSYQ          DIG
TTP 6-005
CKT TYPE      PM NO          COM LANG          STA S R DOT TE RESULT
2W IS IS DTCI 2 3 24 F9876035PRAPRV DCHL      INS  R
```

Example of a MAP response:

```
LAST CKT 3 24
POSTED CKT IDLED
SHORT CLLI IS: F98760
OK,CKT POSTED
```

4



#### CAUTION

##### PRI service interruption

The following step takes an in-service D-channel out of service. When you take an in-service D-channel out of service, the backup D-channel switches into service automatically.

To manually busy the D-channel, type

```
>BSY
```

## Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (continued)

and press the Enter key.

*Example of a MAP response:*

STATE CHANGED

*or*

THIS WILL PUT PDTCDTCI 2 3 24 DCH OUT-OF-SERVICE.

Active calls will be killed

Please confirm ("YES", "Y", "NO", or "N"):

- 5** To confirm the command, type

**>YES**

and press the Enter key.

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 6  |
| failed             | step 10 |

- 6** To set the DS-1 PCM30 loopback, type

**>LOOPBK SET**

and press the Enter key.

*Example of a MAP response:*

LOOP POINT ESTABLISHED

| If the LOOPBK SET command | Do      |
|---------------------------|---------|
| passed                    | step 7  |
| failed                    | step 10 |

- 7** Notify persons at the far-end office that you established the DS-1 PCM30 loopback.

- 8** The persons at the far-end office will finish with the loopback and contact you. To remove the DS-1 PCM30 loopback, type

**>LOOPBK REMOVE**

and press the Enter key.

*Example of a MAP response:*

LOOP POINT REMOVED

| If the LOOPBK REMOVE command | Do     |
|------------------------------|--------|
| passed                       | step 9 |

## Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (end)

---

|           | <b>If the LOOPBK REMOVE command</b>                                                                                                                                                                                                               | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed                                                                                                                                                                                                                                            | step 10   |
| <b>9</b>  | To return the D-channel to service, type<br>>RTS<br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>STATE CHANGED<br><br><b>Note:</b> The state of the D-channel is to the right side of the DCHL header on the MAP display. |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                                                         | <b>Do</b> |
|           | passed (INS state)                                                                                                                                                                                                                                | step 11   |
|           | failed                                                                                                                                                                                                                                            | step 10   |
| <b>10</b> | For additional help, contact the next level of support.                                                                                                                                                                                           |           |
| <b>11</b> | The procedure is complete.                                                                                                                                                                                                                        |           |

## Estimating signaling link occupancy

---

### Application

Use this procedure to estimate the occupancy of CCS7 links during the last operational measurements (OM) collection period.

*Note:* The information that is available when you use this procedure provides an estimate. Data that is the base for the measured information can be up to 30 min old .

### Definition

This procedure provides information about a specified number of links in a linkset.

### Common procedures

There are no common procedures.

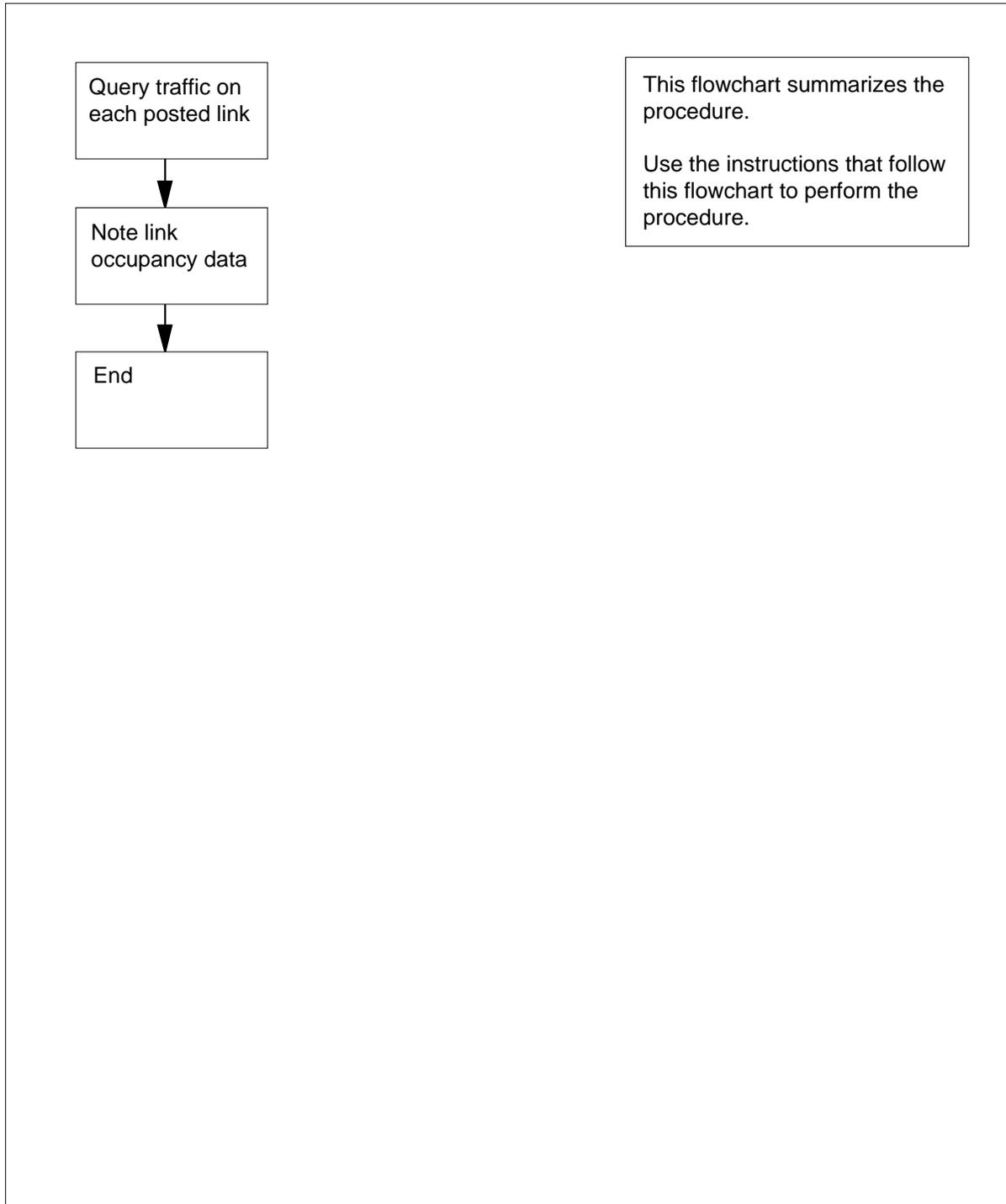
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Estimating signaling link occupancy (continued)

---

### Summary of Estimating signaling link occupancy



---

## Estimating signaling link occupancy (continued)

---

### Estimating signaling link occupancy

#### *At the MAP terminal*

- 1 To access the C7LKSET level of the MAP display, type  
`>MAPCI ;MTC ;CCS ;CCS7 ;C7LKSET`  
 and press the Enter key.
- 2 To post the linkset that contains the links to examine, type  
`>POST C linkset_name`  
 and press the Enter key.

*where*

**linkset\_name**

is the name of the linkset to post

*Example of a MAP response:*

```
Linkset TR000002 InSv
  Traf Sync
                                     Link
LK Stat Stat Resource Stat Physical Access Stat Action
 0 ManB Alnd LIU7 108 InSv      DS0A
 1 InSv Sync LIU7 287 InSv      DS0A
```

- 3 To query the flow of data on each posted link, type  
`>QUERYTRF link_no`  
 and press the Enter key.

*where*

**link\_no**

is the number of a link (0 to 15) in the posted linkset

*Example of a MAP response:*

```
QueryTrf: Link occupancy for 10:16:00 - 10:46:00
Link Speed Byte/Sec Erlang MSU len %RTx
 1 7168 2345 0.33 30 2
```

- 4 Record the link occupancy data for each link.  
 In the example shown in step 3, the link occupancy is as follows:
  - 10:16:00 is the start time of the period for which the system calculates traffic calculations.
  - 10:46:00 is the end time.
  - The link header shows the number of the link in the posted linkset.
  - The speed header shows the maximum traffic capacity of the link in bytes every second.
  - The Byte/Sec header shows the average number of message signal unit (MSU) bytes transmitted or received every second.

## **Estimating signaling link occupancy (end)**

---

- The Erlang header shows the equivalent link occupancy estimate in erlangs.
  - The MSU LEN header shows the average MSU length in bytes.
  - The %RTx header shows the percentage of link traffic that was retransmitted.
- 5 The procedure is complete.

## **Excluding an LIM from an automatic REx test schedule**

---

### **Application**

Use this procedure to exclude a link interface module (LIM) from the automatic routine exercise (REx) test schedule.

### **Definition**

The REx test schedule of software and hardware REx performs at normal intervals on the nodes.

### **Common procedures**

There are no common procedures.

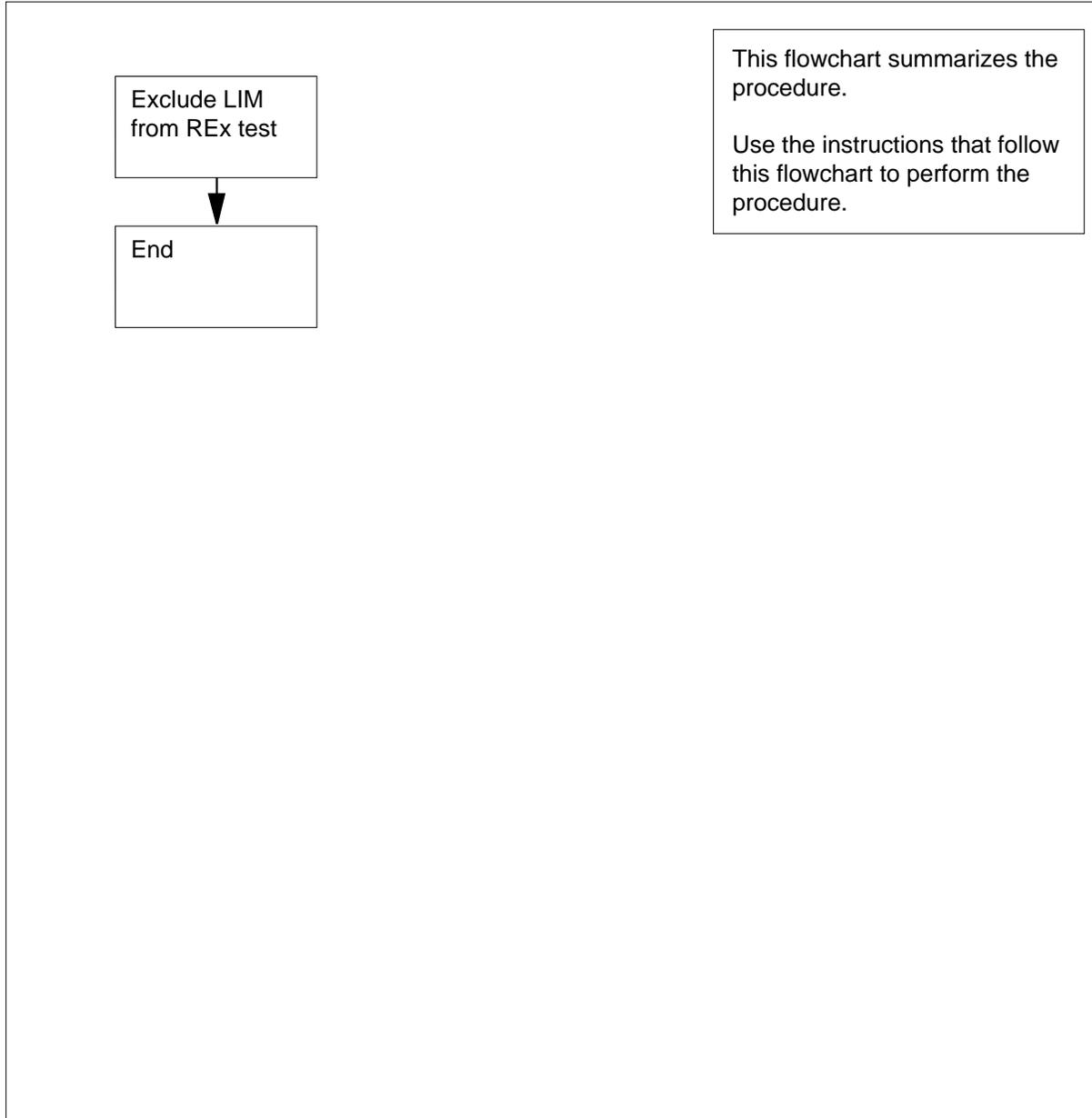
### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Excluding an LIM from an automatic REx test schedule (continued)

---

### Summary of Excluding an LIM from an automatic REx test schedule



### Excluding an LIM from an automatic REx test schedule

#### *At the MAP terminal*

- 1 To access the PM level of the MAP display, type  
`>MAPCI ;MTC ;PM`  
and press the Enter key.

---

## Excluding an LIM from an automatic REx test schedule (end)

---

- 2 To post the LIM that you want to exclude from the REx test, type  
`>POST LIM lim_no`  
 and press the Enter key.

*where*

**lim\_no**

is the number of the LIM (0 to 16)

- 3 To exclude the posted LIM from the REx test schedule, type

`>REX OFF`

and press the Enter key.

**Note:** In the following table, the variable x refers to a LIM number of 0 to 16. The variable y refers to a LIM unit number of 0 or 1.

| If the response                                          | Do     |
|----------------------------------------------------------|--------|
| is LIM x UNIT y has been excluded from the REX schedule. | step 6 |
| is LIM x UNIT y is not included in the REX schedule.     | step 4 |
| is other than listed here                                | step 5 |

- 4 The system is excluded already from the REx schedule. Go to step 6.  
 5 For additional help, contact the next level of support.  
 6 The procedure is complete.

## **Excluding an NIU from an automatic REx test schedule**

---

### **Application**

Use this procedure to exclude a network interface unit (NIU) from the automatic routine exercise (REx) test schedule.

### **Definition**

The REx test schedule of software and hardware that the system performs at normal intervals on the nodes.

### **Common procedures**

There are no common procedures.

### **Action**

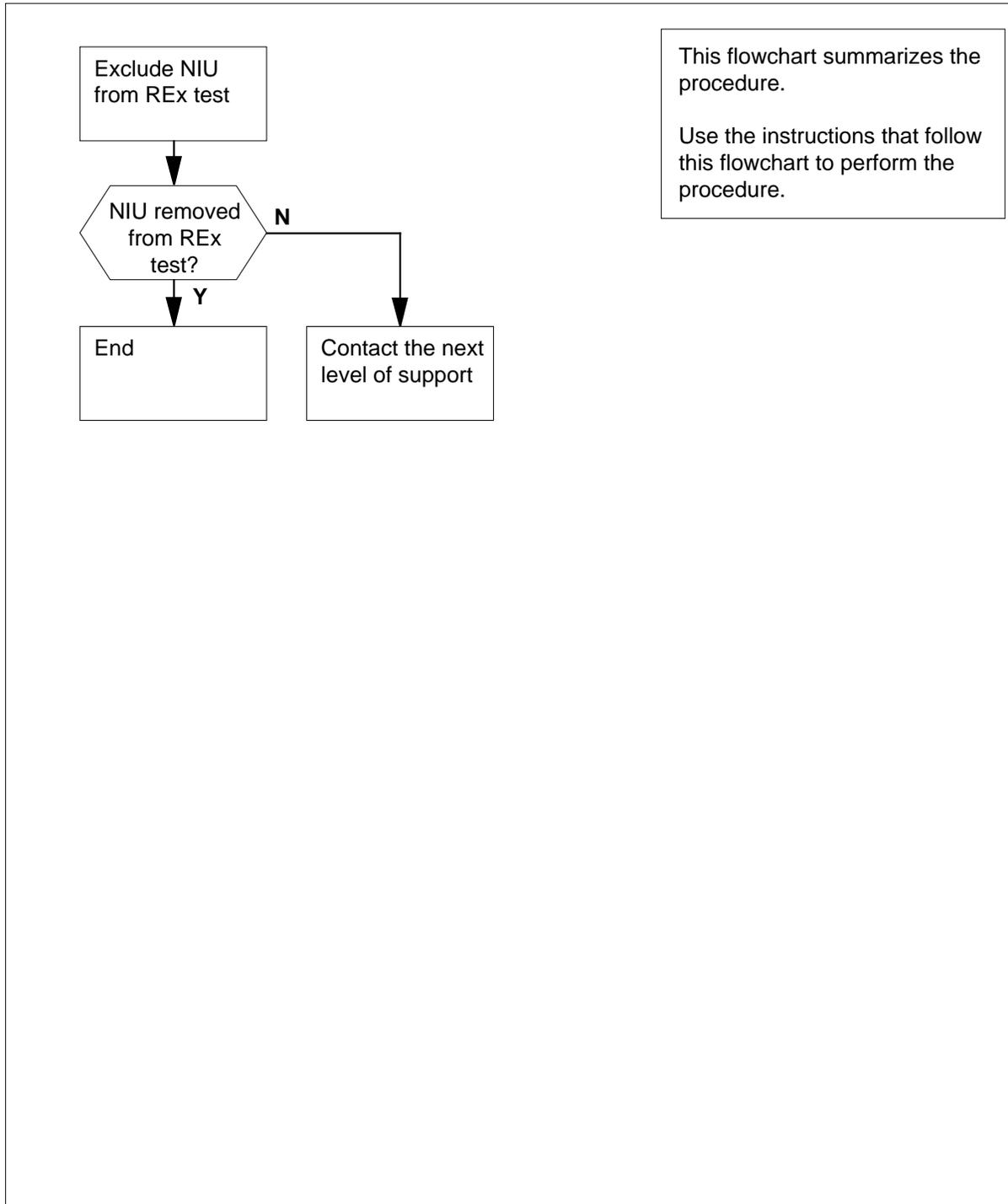
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

---

## Excluding an NIU from an automatic REx test schedule (continued)

---

### Summary of Excluding an NIU from an automatic REx test schedule



## Excluding an NIU from an automatic REx test schedule (continued)

### Excluding an NIU from an automatic REx test schedule

#### At the MAP terminal

- 1 To access the PM level of the MAP display, type  
`>MAPCI ;MTC ;PM`  
 and press the Enter key.

*Example of a MAP:*

|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
|----|------|------|------|------|------|------|
| PM | 0    | 0    | 0    | 0    | 0    | 39   |

- 2 To post the NIU that you want to exclude from the automatic REx test schedule, type

`>POST NIU niu_no`

and press the Enter key.

*where*

**niu\_no**

is the number of the NIU (0 to 29)

*Example of a MAP response:*

```

NIU 1:  InSv
Unit 0:  Act   InSv
Unit 1:  InAct InSv
    
```

- 3 To determine if the REx test schedule excludes the NIU, type

`>TST REX QUERY`

and press the Enter key.

**If the response**

**Do**

is NIU n is excluded from the REx schedule. step 10

is NIU n is not excluded from the REx schedule. step 4

- 4 To exclude the posted NIU from the REx test schedule, type

`>TST REX OFF`

and press the Enter key.

**If the response**

**Do**

is NIU n is now removed from the REx schedule. step 10

**Excluding an NIU from an automatic REx test schedule (end)**

|           | <b>If the response</b>                                                                                              | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------|-----------|
|           | is NIU n cannot be re-moved from the REx schedule.                                                                  | step 5    |
|           | is Command rejected.<br>The PM is offline.                                                                          | step 6    |
| <b>5</b>  | Determine if this time is the first or second time you are attempting to remove the NIU from the REx test schedule. |           |
|           | <b>If this</b>                                                                                                      | <b>Do</b> |
|           | is the first attempt                                                                                                | step 4    |
|           | is the second attempt                                                                                               | step 9    |
| <b>6</b>  | Determine from office records or from operating company personnel why the NIU is offline.                           |           |
|           | <b>If you</b>                                                                                                       | <b>Do</b> |
|           | are permitted to return the NIU to service                                                                          | step 7    |
|           | are not permitted to return the NIU to service                                                                      | step 10   |
| <b>7</b>  | To manually busy the posted NIU, type<br>>BSY PM<br>and press the Enter key.                                        |           |
| <b>8</b>  | To return the the posted NIU to service, type<br>>RTS PM<br>and press the Enter key.                                |           |
|           | <b>If the RTS command</b>                                                                                           | <b>Do</b> |
|           | passes                                                                                                              | step 4    |
|           | fails                                                                                                               | step 9    |
| <b>9</b>  | For additional help, contact the next level of support.                                                             |           |
| <b>10</b> | The procedure is complete.                                                                                          |           |

## **Incorrect DN in incoming callers list**

---

### **Application**

Use this procedure to determine if an error in entry causes a problem with the incoming callers list (ICL). Use this procedure to correct the error.

### **Definition**

A subscriber complaint indicates wrong directory number (DN) information in the ICL. To view the ICL, use softkeys on the Analog Display Services Interface (ADSI) set of the subscriber.

### **Common procedures**

There are no common procedures.

### **Action**

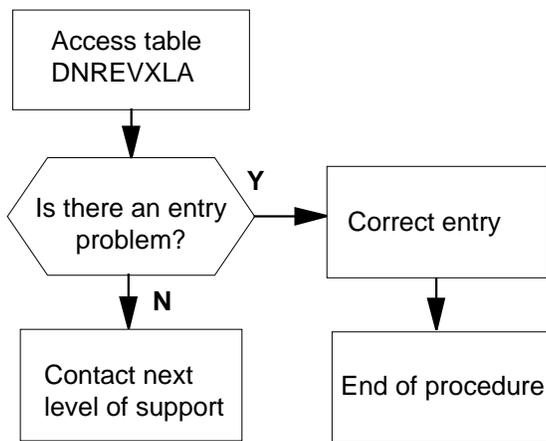
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Incorrect DN in incoming callers list (continued)**

**Summary of Incorrect DN in incoming callers list**

This flowchart summarizes the procedure.

Use the instructions that follow the flowchart to perform the procedure.



## **Incorrect DN in incoming callers list** (end)

---

### **Incorrect DN in Incoming Caller List**

***At your current location:***

- 1 Access table DNREVLXLA and check the entries.

---

| <b>If entries</b> | <b>Do</b> |
|-------------------|-----------|
|-------------------|-----------|

---

are correct

step 3

are wrong

step 2

---

- 2 Correct the table DNREVLXLA entries and go to step 4
- 3 For additional help, contact the next level of support.
- 4 This procedure is complete.

## Incorrect or no displayed calling party name or DN

---

### Application

Use this procedure to determine if a problem with the directory number (DN) results from any of the following:

- a software error
- a line-ended peripheral module (PM) failure
- a possible CLASS modem resource (CMR) card problem

### Definition

A subscriber complaint indicates a wrong or missing calling party name or DN information that enters on the line. The subscriber set displays the information.

### Common procedures

There are no common procedures.

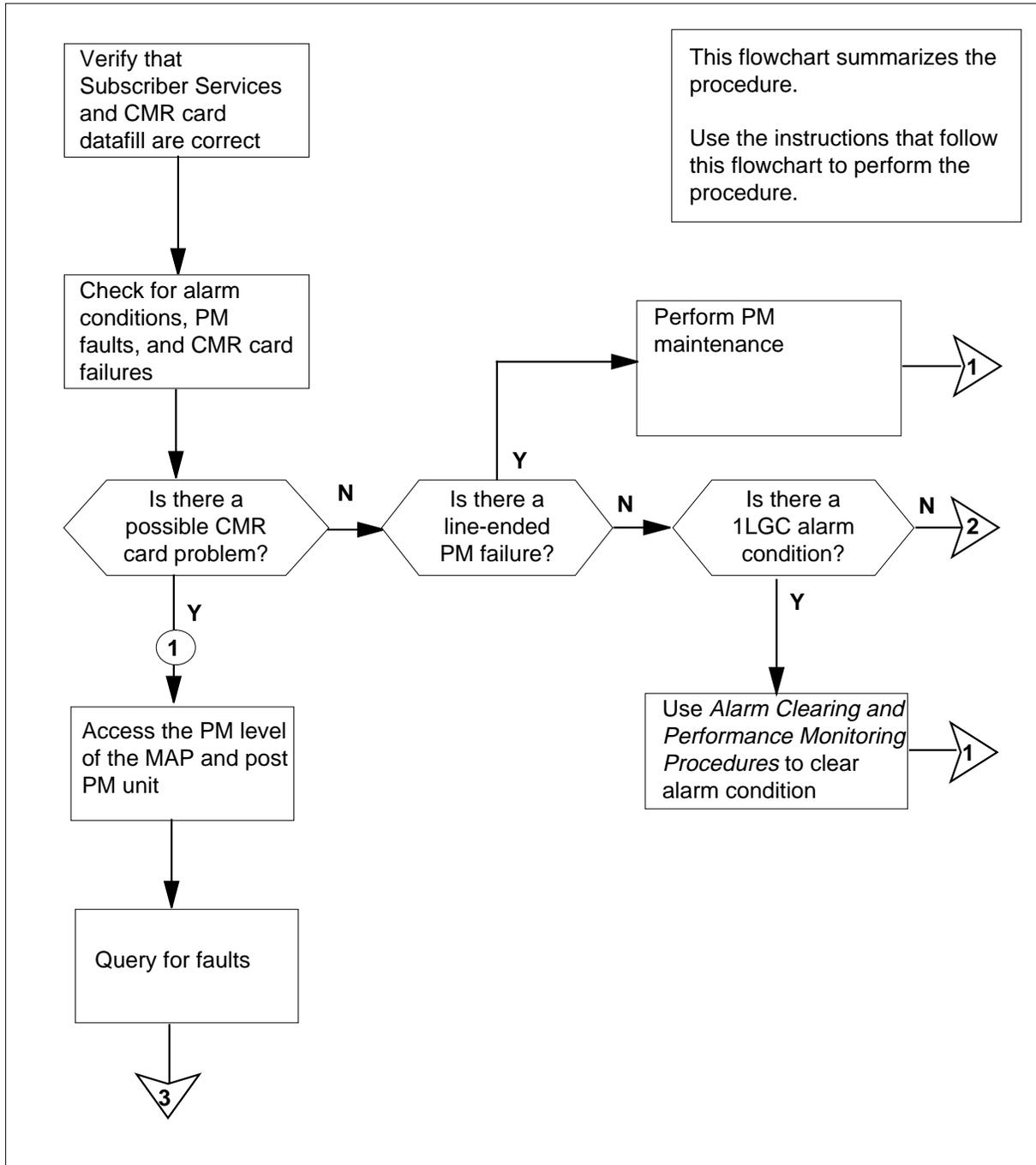
### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

**Note:** The CMR card NT6X78 can go out of service in the active unit. If the card goes out of service, the operating company personnel can busy, replace, load, and return the card to service. The operating company personnel do not need to perform these operations on the whole unit.

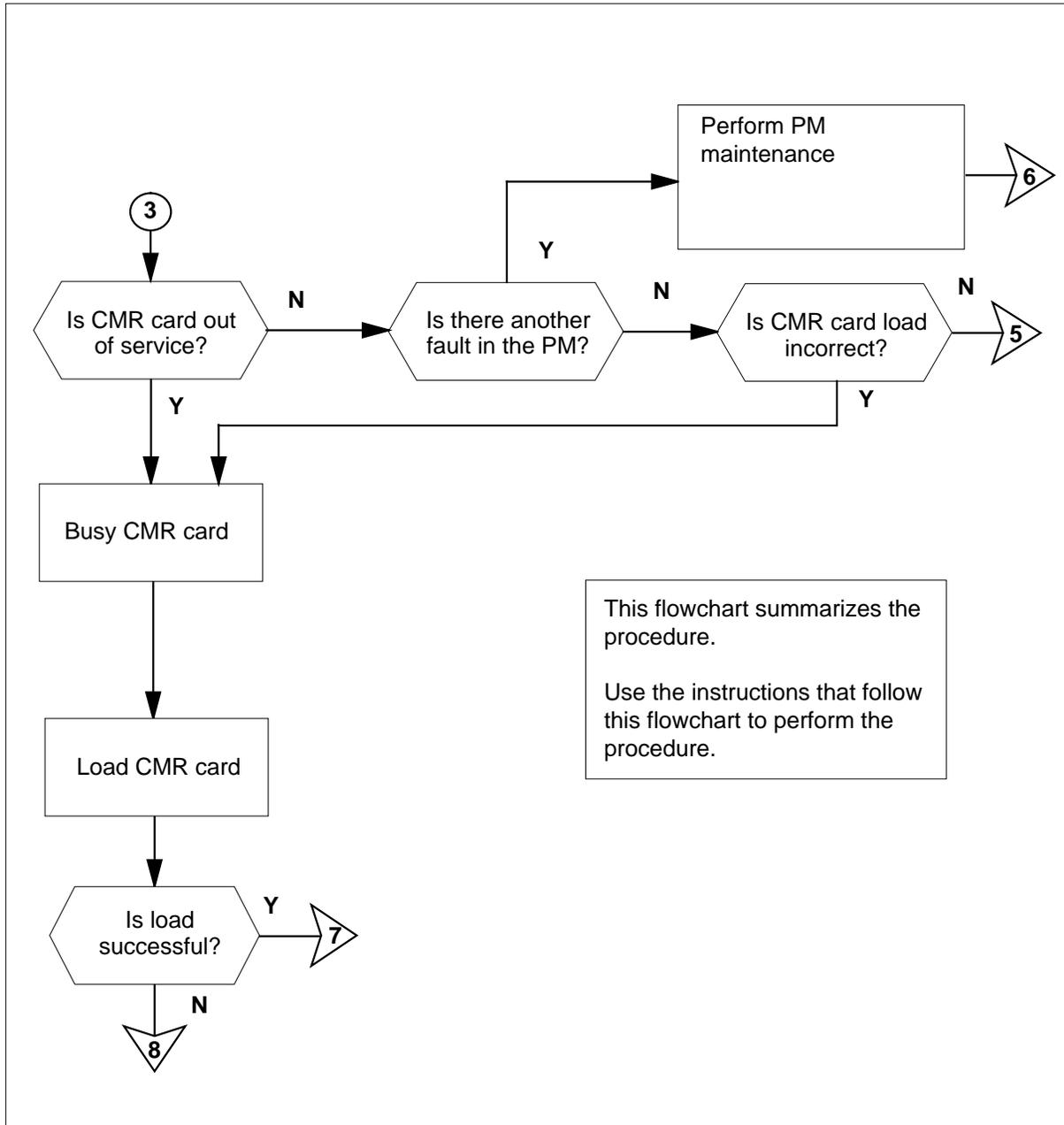
## Incorrect or no displayed calling party name or DN (continued)

### Summary of Incorrect or no displayed calling party name or DN



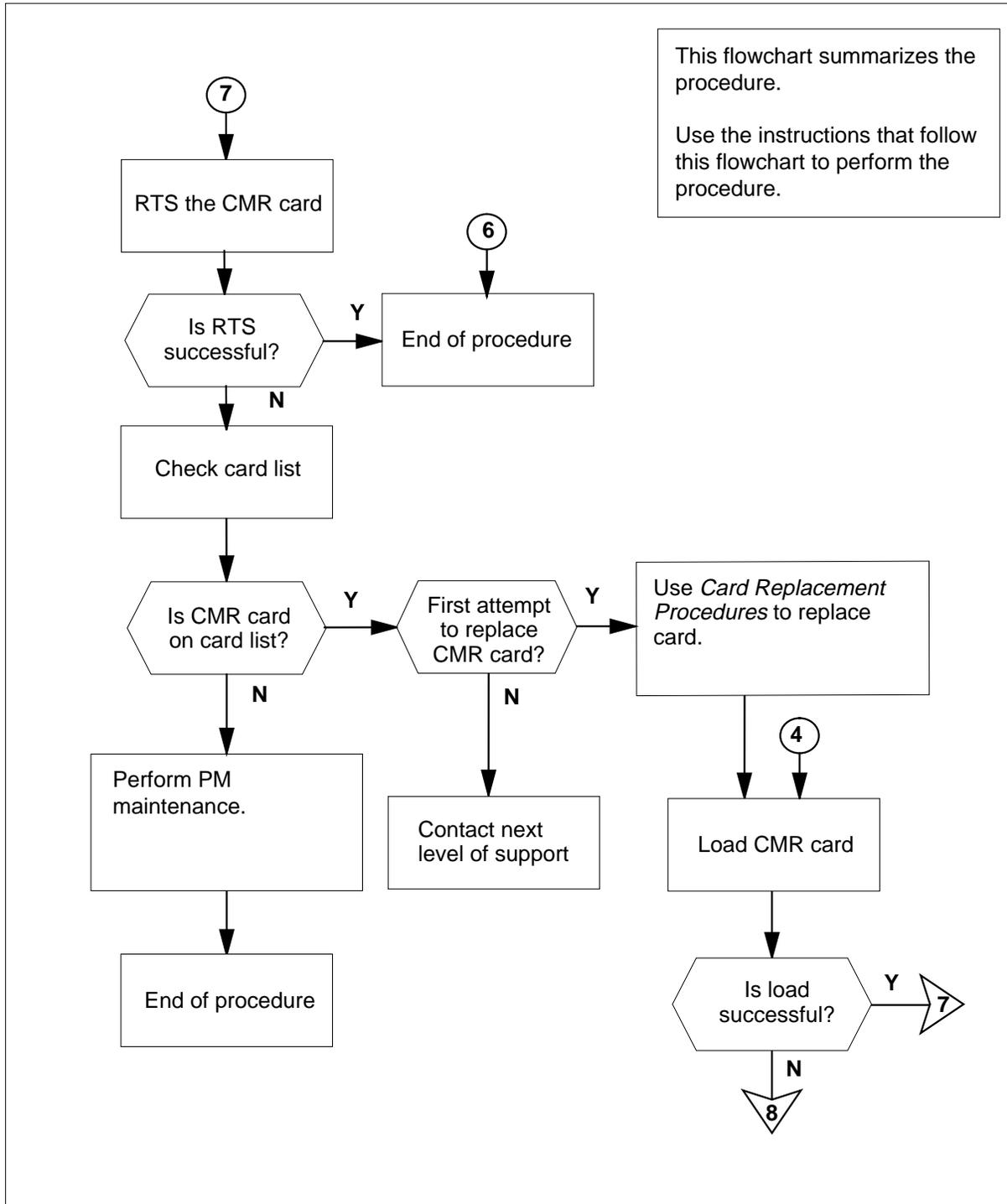
**Incorrect or no displayed calling party name or DN (continued)**

**Summary of Incorrect or no displayed calling party name or DN (continued)**



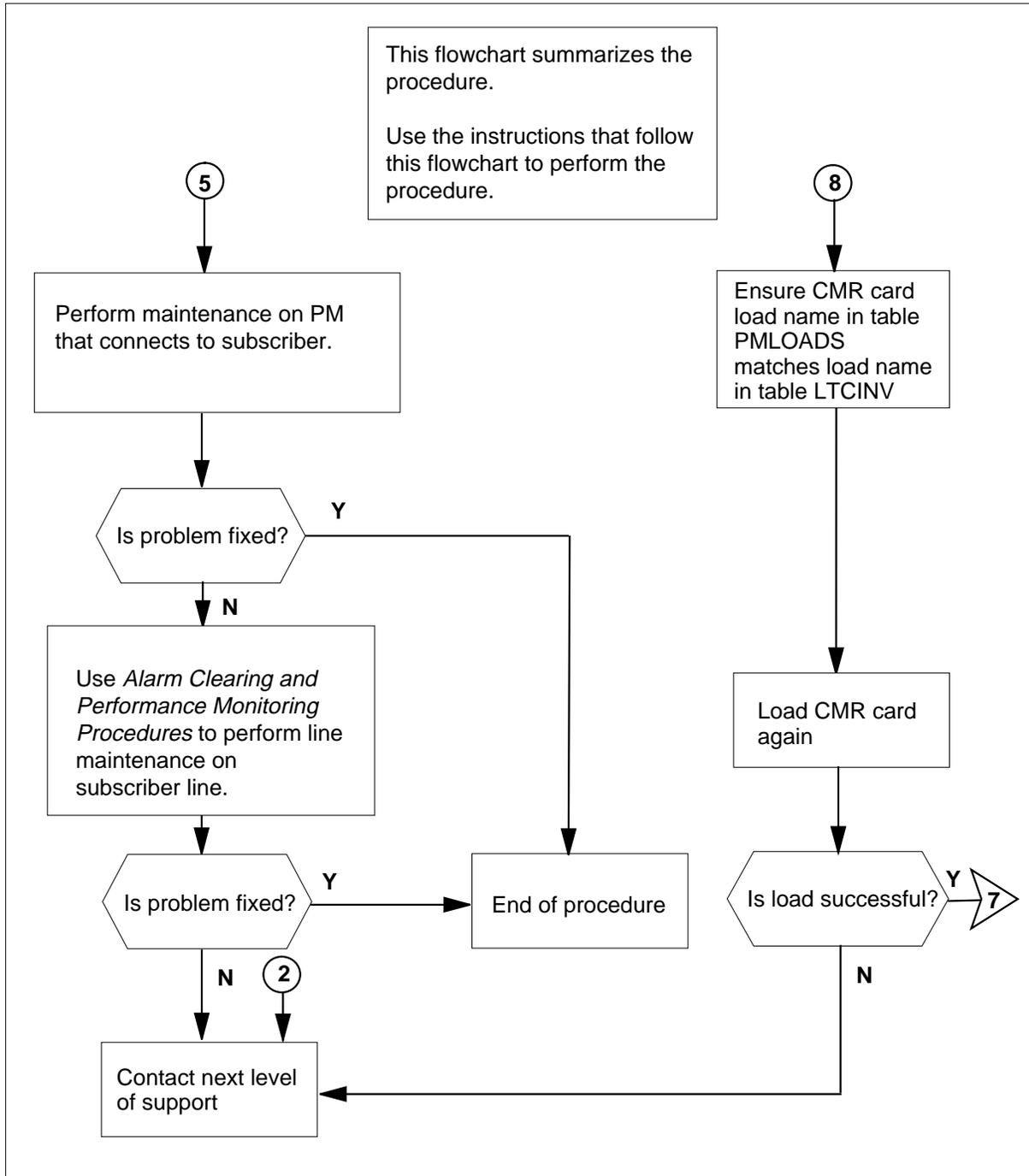
**Incorrect or no displayed calling party name or DN (continued)**

**Summary of Incorrect or no displayed calling party name or DN (continued)**



**Incorrect or no displayed calling party name or DN (continued)**

**Summary of Incorrect or no displayed calling party name or DN (continued)**



## Incorrect or no displayed calling party name or DN (continued)

### Incorrect or no displayed calling party name or DN

**At your current location:**

- 1 Verify that the CMR card and Subscriber Services entries are correct. Refer to *Translations Guide* and the documentation for the peripheral device entries, and return to this point.
- 2 Check for alarm conditions. To obtain alarm information, refer to *Alarm Clearing and Performance Monitoring Procedures*, and return to this point.

| If                                                                                                                                                                                                                   | Do      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| a 1LGC alarm condition at the MAPCI display occurs                                                                                                                                                                   | step 3  |
| a line-ended PM failure occurs                                                                                                                                                                                       | step 5  |
| a possible CMR card problem occurs in the line group controller (LGC), line trunk controller (LTC), remote cluster controller (RCC), Subscriber Carrier Module-100S (SMS), or Subscriber Carrier Module-Urban (SMU). | step 7  |
| no indication of a CMR card problem, a line-ended PM failure, or a line maintenance problem occurs                                                                                                                   | step 31 |

- 3 Go to the procedure to clear a peripheral module in-service trouble (PM ISTb) alarm in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.
- 4 Go to step 7.
- 5 Refer to the maintenance guide for the PM for information on line-ended PM failure, and return to this point.
- 6 Go to step 7.
- 7 To access the PM level of the MAP, type  
**>MAPCI ;MTC ;PM**  
 and press the Enter key.
- 8 To post the PM unit, type  
**>POST pm\_type pm\_number**  
 and press the Enter key.  
*where*  
**pm\_type**  
 is the PM type (LGC, LTC, RCC, SMS, or SMU)  
**pm\_number**  
 is the number of the PM (0 through 127)
- 9 To check for fault indicators, type  
**>QUERYPM FLT**

**Incorrect or no displayed calling party name or DN** (continued)

and press the Enter key.

|           | <b>If response</b>                                                                                                                                                                                                                  | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is CLASS MODEM RESOURCE CARD NT6X78<br>OUT OF SERVICE                                                                                                                                                                               | step 14   |
|           | is another message that associates with the CMR card                                                                                                                                                                                | step 17   |
|           | is CMR load mismatch withInventory table                                                                                                                                                                                            | step 17   |
|           | is another card in the PM has a fault                                                                                                                                                                                               | step 10   |
|           | is no fault                                                                                                                                                                                                                         | step 12   |
| <b>10</b> | Perform PM maintenance on the PM posted, and return to this point.                                                                                                                                                                  |           |
| <b>11</b> | Go to step 32.                                                                                                                                                                                                                      |           |
| <b>12</b> | Perform PM maintenance on the PM connected to the subscriber.                                                                                                                                                                       |           |
|           | <b>If problem</b>                                                                                                                                                                                                                   | <b>Do</b> |
|           | continues to be present                                                                                                                                                                                                             | step 13   |
|           | is not present                                                                                                                                                                                                                      | step 32   |
| <b>13</b> | Refer to <i>Alarm Clearing and Performance Monitoring Procedures</i> to perform line maintenance on subscriber line.                                                                                                                |           |
|           | <b>If problem</b>                                                                                                                                                                                                                   | <b>Do</b> |
|           | continues to be present                                                                                                                                                                                                             | step 31   |
|           | is not present                                                                                                                                                                                                                      | step 32   |
| <b>14</b> | Note the unit of the PM that has the out-of-service CMR card.                                                                                                                                                                       |           |
| <b>15</b> | Go to step 17.                                                                                                                                                                                                                      |           |
| <b>16</b> | Note the unit of the PM that has the suspect CMR card.                                                                                                                                                                              |           |
| <b>17</b> | To busy the CMR card, type<br>>BSY UNIT unit_no CMR<br>and press the Enter key.<br>where<br><b>unit_no</b><br>is the number of the PM unit (0 or 1)<br><b>Note:</b> CMR is an optional parameter that means busy only the CMR card. |           |
| <b>18</b> | To return the CMR card to service, type<br>>RTS UNIT unit_no CMR<br>and press the Enter key.                                                                                                                                        |           |

**Incorrect or no displayed calling party name or DN** (continued)

where

**unit\_no**  
is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means return only the CMR card to service.

| If RTS                                                    | Do      |
|-----------------------------------------------------------|---------|
| passes and data transmission problem is no longer present | step 32 |
| fails or passes and problem continues to be present       | step 19 |

**19** Examine the generated card list. The step you perform depends on the card list.

The following card list is a normal message for a CMR card failure.

```
RTS Failed, TESTALL
Diagnostic TESTALL failed.
Fail message received from PM
Replace the Cards in the Card List
and applicable Paddleboards (i.e. 6X12) :
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 01 D02 LGE 00 18 LGC : 000 13 6X78
```

| If CMR card             | Do      |
|-------------------------|---------|
| is on the card list     | step 22 |
| is not on the card list | step 20 |

**20** Perform PM maintenance on the posted PM and return to this point.

**21** Go to step 32.

**22** Refer to *Card Replacement Procedures* and return to this point.

**23** To load the CMR card, type

>LOADPM UNIT **unit\_no** CC **CMR**

and press the Enter key.

where

**unit\_no**  
is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means load only the CMR card.

| If response             | Do      |
|-------------------------|---------|
| is the loading succeeds | step 27 |

**Incorrect or no displayed calling party name or DN (continued)**

|           | <b>If response</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is CMR FAILED TO LOAD. TASKABORTED WHILE LOADING CMR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | step 24   |
|           | is CMR FILE CMRXXXXX NOT FOUND ONDE- VICE INDICATED IN TABLEPMLoadS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | step 24   |
|           | <i>Note:</i> CMRXXXXX is the CMR load name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
|           | is FAILED TO OPEN successfully                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | step 24   |
| <b>24</b> | Verify that you can load the CMR card. To use the QUERYPM command to determine the CMR load name, type<br><br>>QUERYPM CNTRS<br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>Unsolicited MSG limit = 250, Unit 0 = 0, Unit 1 = 0.<br>Unit 0:<br>RAM Load: NLG32BU<br>ROM Load: XPMRKA02<br>CMR LOAD: CMR33AI5<br>CMR DEFINERS: 12<br>MP: 6X45BA/BB<br>SP: 6X45BA/BB<br>Unit 1:<br>RAM Load: NLG32BU<br>ROM Load: XPMRKA03<br>CMR LOAD: CMR33AI5<br>CMR DEFINERS: 12<br>MP: 6X45BA/BB<br>SP: 6X45BA/BB<br><br><i>Note:</i> In this example, the CMR load name is CMR33AI5. |           |
| <b>25</b> | Make sure that the CMR card load name in table PMLOADS matches the load name specified in table LTCINV or table RCCINV.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| <b>26</b> | To load the CMR card again, type<br><br>>LOADPM UNIT unit_no CC CMR<br>and press the Enter key.<br><i>where</i><br><br><b>unit_no</b><br>is the number of the PM unit (0 or 1)                                                                                                                                                                                                                                                                                                                                                                                                                    |           |

**Incorrect or no displayed calling party name or DN** (continued)

**Note:** CMR is an optional parameter that means load only the CMR card.

| <b>If load</b> | <b>Do</b> |
|----------------|-----------|
| passes         | step 27   |
| fails          | step 31   |

**27** To return the CMR card to service, type

>RTS UNIT unit\_no CMR

and press the Enter key.

where

**unit\_no**

is the number of the PM unit (0 or 1)

**Note:** CMR is an optional parameter that means return only the CMR card to service.

The following card list is a normal message for a CMR card failure.

```
RTS Failed, TESTALL
      Diagnostic TESTALL failed.
      Fail message received from PM
      Replace the Cards in the Card List
      and applicable Paddleboards (i.e. 6X12) :
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 01 D02 LGE 00 18 LGC : 000 13 6X78
```

| <b>If RTS</b>                                  | <b>Do</b> |
|------------------------------------------------|-----------|
| passes and data transmission functions         | step 32   |
| fails but the CMR card is not on the card list | step 28   |
| fails and the CMR card is on the card list     | step 30   |

**28** Perform PM maintenance on the posted PM and return to this point.

**29** Go to step 32.

**30** Use the following information to determine the next step.

| <b>If the replacement of the CMR card</b> | <b>Do</b> |
|-------------------------------------------|-----------|
| is occurring for the first time           | step 22   |
| is complete                               | step 31   |

**Incorrect or no displayed calling party name or DN (end)**

---

- 31 For additional help, contact the next level of support.
- 32 The procedure is complete.

## Installing key and option definitions

---

### Application

Use this procedure to install the current key and option definitions. These definitions are saved on floppy diskette. Perform the procedures to install, reinstall or change TOPS MPX software first. Install the key and option definitions from a floppy diskette.

### Tools

To perform this procedure, use a floppy diskette that contains the current key and option definitions.

*Note:* The TOPS MPX release MPX00200 contains a large number of new terminal options. The DEFOPT utility is used to define these terminal options. The DAS.OPT file stores these options. The DAS.OPT file from versions that precede MPX00200 cannot propagate to MPX00200. The steps in this procedure do not apply to the DAS.OPT file. References to the DAS.OPT file remain.

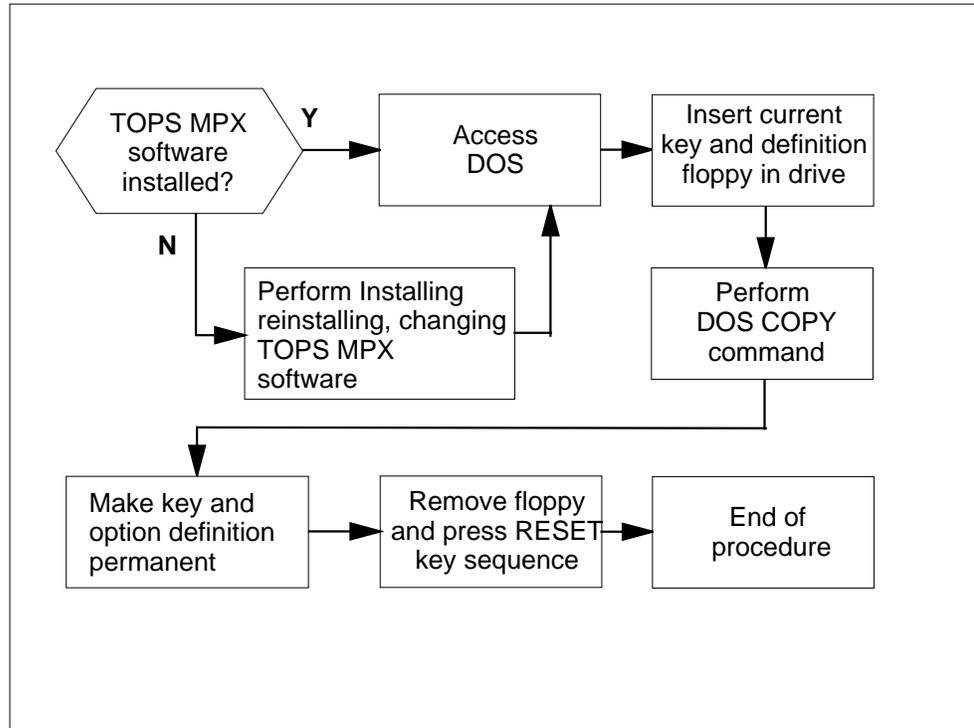
After you install the terminal with the MPX00200 software, activate the DEFOPT utility to generate a new DAS.OPT file. You can copy the new DAS.OPT file to a diskette, as this procedure describes. Use the procedure Installing key and option definitions to copy the diskette to other positions.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Installing key and option definitions (continued)

### Summary of installing key and option definitions



### Installing key and option definitions

#### At the TOPS MPX position

1



#### **DANGER**

**Loss of previous key, screen, status messages, command privileges or option definitions**

The first installation procedure destroys previous key, screen, status messages, command privileges and option definitions. Save defined keys and options on a floppy diskette before you perform the installation procedure.

Key and option definitions.

**If**

TOPS MPX software is installed

**Do**

Go to Installing, reinstalling, or changing TOPS MPX software

---

## Installing key and option definitions (continued)

---

|          | <b>If</b>                                                                                                                                                                                                                                                                                                                                                                      | <b>Do</b>                                                            |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|          | TOPS MPX software is installed and the current key and option definitions are not installed                                                                                                                                                                                                                                                                                    | Step 2                                                               |
| <b>2</b> | At the TOPS MPX access DOS at the C:\> prompt.                                                                                                                                                                                                                                                                                                                                 |                                                                      |
|          | <b>If</b>                                                                                                                                                                                                                                                                                                                                                                      | <b>Do</b>                                                            |
|          | TOPS MPX software runs                                                                                                                                                                                                                                                                                                                                                         | Turn TOPS MPX power off. Insert system disk. Turn TOPS MPX power on. |
|          | the A:\ prompt appears                                                                                                                                                                                                                                                                                                                                                         | Remove diskette in Drive A and type C:                               |
|          | the C:\ prompt appears                                                                                                                                                                                                                                                                                                                                                         | Go to Step 3                                                         |
| <b>3</b> | To access the root directory of the hard drive, type the following:<br>>CD\<br>and press the DOS-ENTER key.<br>The system displays the prompt:<br>>C:\>                                                                                                                                                                                                                        |                                                                      |
| <b>4</b> | Copy the keyboard layout file, the screen layout file, the options file, command privileges file and status message file from a diskette.<br>Insert operating company-defined TOPS MPX position application software diskette to Drive A:.<br>Type the following string:<br>>COPY A:DAS.*<br>and press the DOS-ENTER key.<br>The preceding command copies the following files. |                                                                      |
|          | <ul style="list-style-type: none"> <li>• DAS.KEY - keyboard layout file</li> <li>• DAS.SCR - screen layout file</li> <li>• DAS.OPT - options file</li> <li>• DAS.CMD - command privileges file</li> <li>• DAS.STA - status message file</li> </ul>                                                                                                                             |                                                                      |
|          | *To save all 20 (max.) screen files, type:<br>>COPY A:*.SCR<br>and press the DOS-ENTER key.                                                                                                                                                                                                                                                                                    |                                                                      |

## Installing key and option definitions (end)

To reboot the system, press the RESET key sequence.

**Note:** An initial installation destroys these definitions.

After you complete the copy process for all definition files, remove the diskette from Drive A and store for future use.

- 5 Make the keyboard layout file, the screen layout file and the options file permanent.

If you do not make these files permanent, the system erases the files when you use the CHANGE or UPDATE commands.

To copy the file to the hard drive, type the following string for each file:

The three filenames are as follows:

- DAS.KEY - keyboard layout file
- DAS.SCR - screen layout file
- DAS.OPT - options file

>copy das.opt dastops.opt

>copy das.scr dastops.scr

>copy das.key dastops.key

Press the DOS-ENTER key after each entry.

To reboot the system, press the RESET key sequence.

**Note:** An initial installation destroys these definitions.

After you complete the copy process for the three definition files, remove the diskette from Drive A and store for future use.

The following table provides equivalent TOPS MPX keys/sequences for IBM keys. The user can request these keys/sequences under the DOS application.

| KEYS/SEQUENCE      | IBM Keyboard                          | TOPS MPX Keyboard                                  |
|--------------------|---------------------------------------|----------------------------------------------------|
| DOS-ENTER KEY      | <--- Enter                            | Bus                                                |
| DAS CMD KEY        | F3                                    | DAS Cmd                                            |
| TOPS DAS-ENTER KEY | F4                                    | DAS Enter                                          |
| RESET KEY SEQUENCE | Press and hold Ctrl, Alt and Del keys | Press and hold <-- and Word <-- keys Press Clg key |
| ESC KEY            | Esc                                   | Clear Field                                        |

## Installing, reinstalling or changing TOPS MPX software TOPS MPX

---

### Application

Use this procedure to load, reinstall or change the TOPS MPX position software.

TOPS MPX software version MPX00200 includes DOS version 5.0. This upgrade does not affect the operation of the TOPS MPX position. Perform a full INSTALL on any position that does not contain DOS 5.0.

*Note:* Install the correct hardware before you install TOPS MPX software.

You must perform an initial installation procedure if the position is not installed or if the update spans many releases. Perform an initial installation procedure if you suspect a problem and want to install the software again.

Perform an initial installation procedure if changes are made to the type of position and the token ring address.

For other conditions, go to the procedure Updating TOPS MPX software.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

All TOPS MPX positions on a specified token ring must be at the same release level. Busy out all positions on the specified token ring, reload the positions and return them to service. The user can update separate token rings at different times.

The user can install the TOPS MPX position software either before or after the DMS CC load. To make sure all TOPS MPX positions are at the same release level, complete the following procedure:

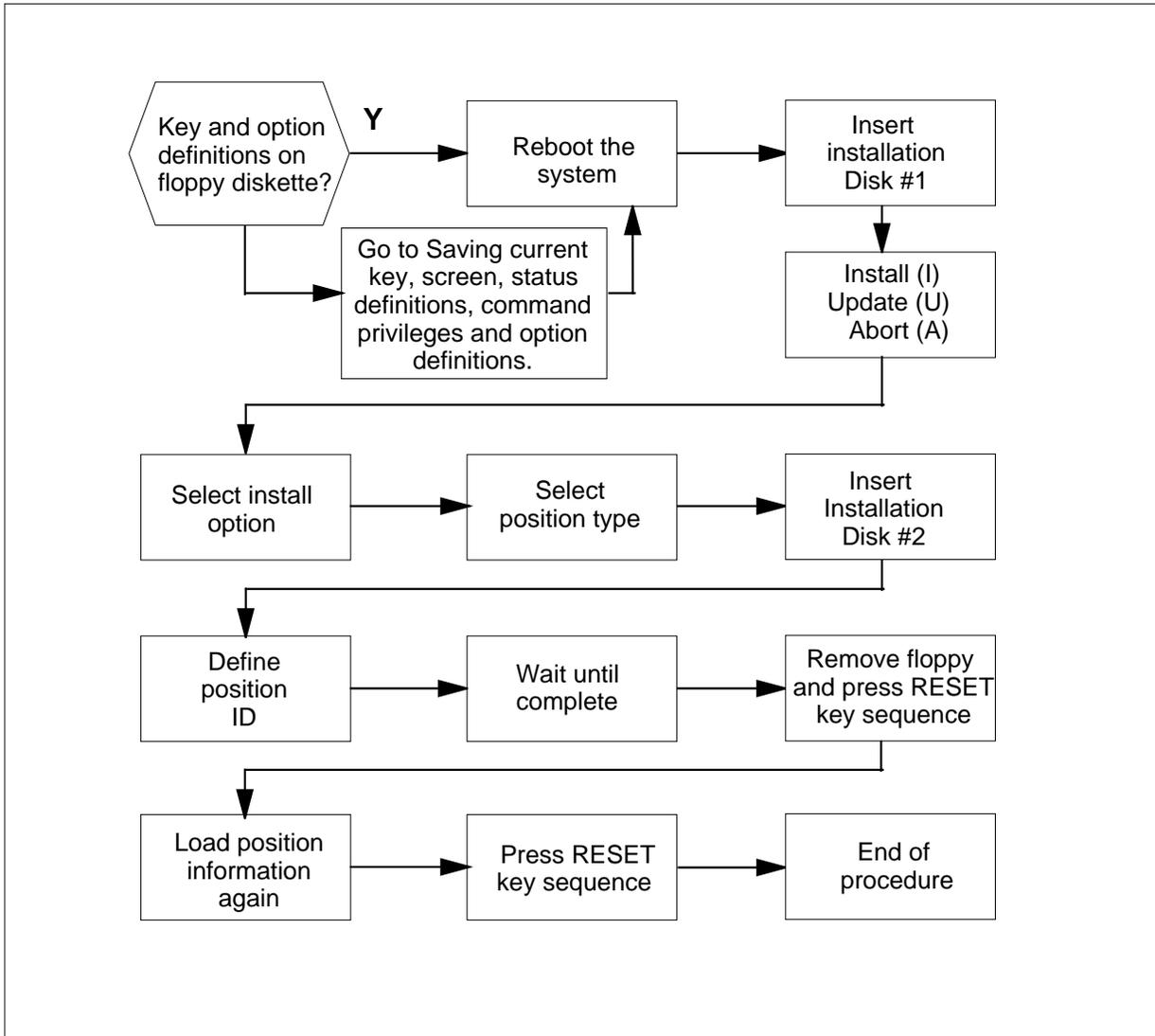
- busy out all positions on the specified token ring
- load the positions again
- return the positions to service

### Tools

The user requires installation disks #1 and #2 to install TOPS MPX software. These installation disks contain the latest version of the TOPS MPX software. The two disks install DOS version 5.0 to the hard drive.

## Installing, reinstalling or changing TOPS MPX software TOPS MPX (continued)

### Summary of installing, reinstalling or changing to TOPS MPX software



---

## Installing, reinstalling or changing TOPS MPX software

### TOPS MPX (continued)

---

#### Installing, reinstalling, or changing TOPS MPX software

##### At the TOPS MPX position

1



#### **DANGER**

##### **Loss of previous key or option definitions**

The initial installation procedure destroys any previous key, screen, status messages, command privileges and option definitions. You can save defined keys, screen, status messages, command privileges and options on a floppy diskette before you perform the installation procedure.

Key and option definitions.

---

**If**

**Do**

There are no saved keys, screen, status messages, command privileges or option definitions on a diskette.

Perform the procedure to save current keys, screen, status messages, command privileges and option definitions.

The TOPS MPX software is installed and the current keys, screen, status messages, command privileges and option definitions are not saved on diskette.

Perform the procedure to save current keys, screen status messages, command privileges, and option definitions.

The TOPS MPX software is installed and the current keys, screen status messages, command privileges and options definitions are saved on diskette.

Perform Step 2

---

2

Make sure that a copy of the position key, screen status messages, command privileges and options is available. Determine position type to install from the following four choices:

- Type I - Token-ring access point (Bisync or X.25)
- Type II - TOPS MPX virtual position controller
- Type III - TOPS MPX only without screen server
- Type III - TOPS MPX with screen server

## Installing, reinstalling or changing TOPS MPX software TOPS MPX (continued)

Record for later use.

**Note:** For an initial installation refer to office records to obtain the position type and the network ID of the position you want to install. Record the position type and network ID for later use and go to the next step.

The following table provides equivalent TOPS MPX keys/sequences for IBM keys. The user can request these keys/sequences under the DOS application.

| KEY/SEQUENCE       | IBM keyboard                            | TOPS MPX keyboard                                    |
|--------------------|-----------------------------------------|------------------------------------------------------|
| DOS-ENTER KEY      | <--- Enter                              | Bus.                                                 |
| DAS CMD KEY        | F3                                      | DAS Cmd.                                             |
| TOPS DAS-ENTER KEY | F4                                      | DAS Enter.                                           |
| RESET KEY SEQUENCE | Press and hold Ctrl, Alt, and Del keys. | Press and hold: <-- and Word <-- keys Press Clg key. |
| ESC KEY            | Esc                                     | Clear Field.                                         |

**3** Load Installation diskette #1 in Drive A.

| If TOPS MPX is | Do                                                                                                  |
|----------------|-----------------------------------------------------------------------------------------------------|
| not on         | Set the TOPS MPX to on state and go to Step 4.                                                      |
| on             | Set the TOPS MPX power to off state. Wait 5 seconds. Set the TOPS MPX to on state and go to Step 4. |

**4** Choose the installation option.

The system prompts the user for an install (I) or update (U) of the TOPS MPX. To select the install option, type the following:

>I

A prompt appears and requests the user to enter the position type that the user wants to install.

**5** Enter position type, as follows:

- For Type I, (Bisync Token ring access point) type T.
- For Type I, (X.25 Token ring access point) type C.
- For Type II, (to use this type as a VPC), type V.

---

## Installing, reinstalling or changing TOPS MPX software

### TOPS MPX (continued)

---

- For Type III (without screen server ), type M.
- For Type III (with screen server), type S.

**Note:** If the TOPS MPX position is installed you can install the same position type again. Press the DOS-ENTER key to perform this action.

- 6 When the system prompts the user to press <ENTER> to continue, or <ESC> to ABORT appears, press the DOS-ENTER key.

Several lines of information appear on the screen. The system prompts the user to insert installation disk #2.

In response to the prompt:

- a Remove installation disk #1 from the Drive A.
  - b Insert installation disk #2 into the Drive A.
  - c Press the DOS-ENTER key.
- 7 Run IBM DEFPOS and display the IBM logo screen. Several lines of information appear on the screen.

---

| If prompt reads                | Do                                                         |
|--------------------------------|------------------------------------------------------------|
| Press ENTER to continue...     | Press the space bar. DEFPOS runs and displays an IBM logo. |
| Press the ENTER to continue... | Press the DOS-ENTER key.                                   |

---

- 8 Enter the network identification information for the TOPS MPX station:  
Type the numbers in each of the three fields. After each field, press the DOS-ENTER key to advance to the next field.

When you complete this action, press the DOS-ENTER key.

- 9 The following text displays:

```
"To change the personality of this machine, use the command:  
CHANGE. MPX installation is complete. The system will now  
re-boot. Please remove the disk from drive A: and press  
<ENTER> when ready."
```

The installation procedure is complete.

Remove installation disk #2 from drive A: and press the DOS-ENTER key. The system reboots, and runs in MPX software.

To change the personality of this machine, use the CHANGE command.

**Note:** If you use the CHANGE command, IBM DEFPOS must run again to make sure the token ring addresses are correct. If any token-ring addressing changes, update the IBM gateway to match the IBM DEFPOS screen.

- 10 Reload the TOPS MPX position application software. The operating company defines this software. Perform the following procedure:

---

## Installing, reinstalling or changing TOPS MPX software

### TOPS MPX (end)

---

To exit the TOPS MPX software, power off the position. Insert the system disk and power on the position. Remove the system disk when booting is complete.

At the A:\ prompt type:

>C:

The following DOS prompt appears:

C:\> (root directory of the C drive)

Insert the TOPS MPX position application software diskette in the floppy drive. The operating company defines this diskette. Type the following:

>COPY A:\*. \*

and press the DOS ENTER key. The names of the files that you copy appear on the screen. Return to the DOS prompt.

Remove the diskette from the floppy drive. Perform the RESET key sequence to return to the TOPS MPX software.

| KEY/SEQUENCE       | IBM Keyboard                            | TOPS MPX Keyboard                                    |
|--------------------|-----------------------------------------|------------------------------------------------------|
| RESET KEY SEQUENCE | Press and hold Ctrl, Alt, and Del keys. | Press and hold <-- and Word <-- keys. Press Clg key. |

## **Line state is Call processing busy (CPB)**

---

### **Application**

Use this procedure to troubleshoot a line in the call processing busy (CPB) state.

### **Definition**

The CPB state indicates that integrated services digital network (ISDN) call processing is active. For the DMS packet handler (PH), the CPB state shows for active packet calls.

The BSY command cannot busy an ISDN line that has a permanent virtual circuit (PVC). Contact the next level of support to do a forced release that results in a service interruption. The forced release results in an MB line state. Use the BSY INB command after the line state changes to MB.

### **Common procedure**

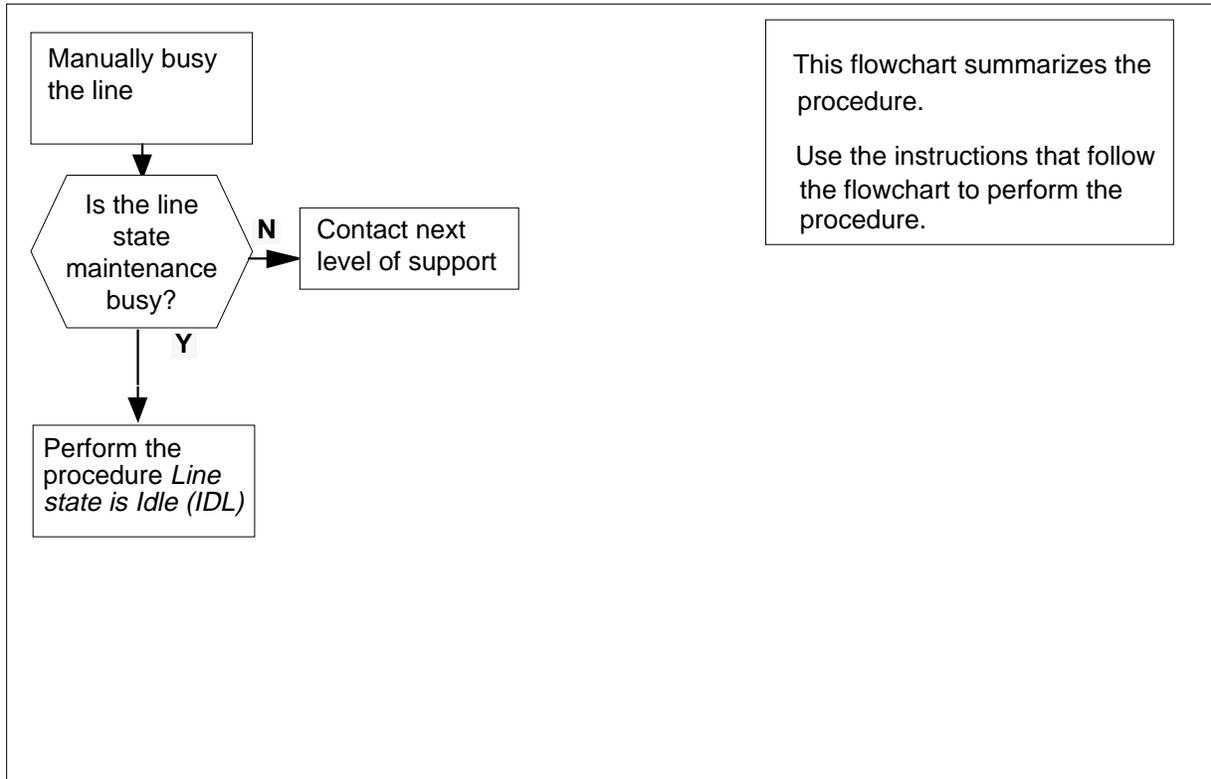
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Line state is Call processing busy (CPB) (continued)

### Summary of Line state is Call processing busy (CPB)



### Line state is Call processing busy (CPB)



**WARNING**  
**Possible equipment damage**  
 Proceed only if you have been directed to this procedure from a step in a maintenance procedure. Separate use of this procedure can cause equipment damage or loss of service.

#### **At the MAP**

- 1 To manually busy the line, type
  - >MAPCI ;MTC ;LNS ;LTP ;LTPISDN
  - >Post D or L <Dir No.> or <Len No.>
  - >BSY
 and press the Enter key.

**Line state is  
Call processing busy (CPB) (end)**

---

2 Determine the state of the line.

---

| <b>If the state of the line</b> | <b>Do</b> |
|---------------------------------|-----------|
| is MB (maintenance busy)        | step 5    |
| is CPD (call processing deload) | step 3    |
| is DEL (deloaded)               | step 3    |
| is other than listed here       | step 4    |

---

3 Wait 5 min. Determine the state of the line.

---

| <b>If the state of the line</b> | <b>Do</b> |
|---------------------------------|-----------|
| is MB                           | step 5    |
| is other than MB                | step 4    |

---

4 For additional help, contact the next level of support.

5 Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.

## Line state is Cut (CUT)

### Application

Use this procedure to clear a cut-off (CUT) line state.

### Definition

The cut-off relay in the line card for the integrated services digital network (ISDN) is in the operated state. This state disconnects the subscriber loop from the ISDN line card.

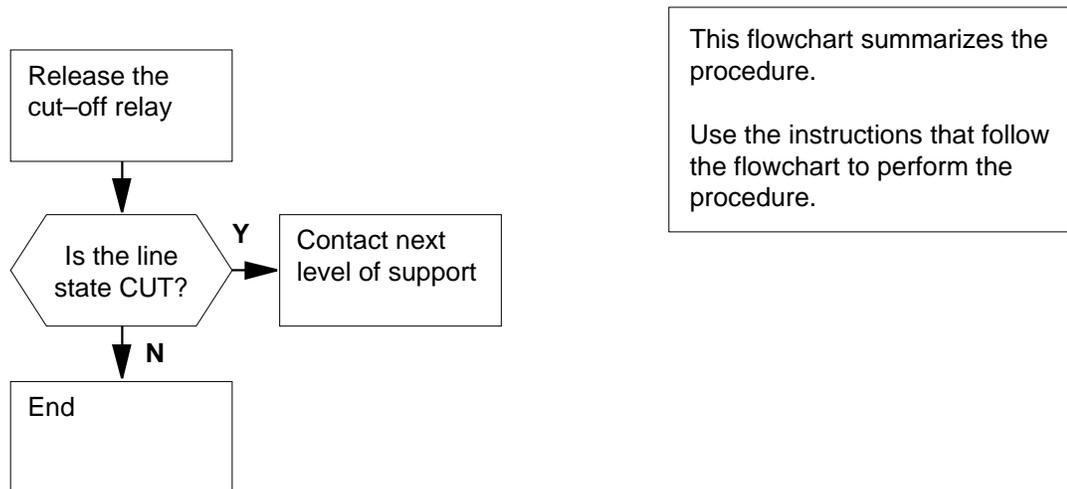
### Common procedures

There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

### Summary of Line state is Cut (CUT)



## Line state is Cut (CUT) (end)

---

### Line state is Cut (CUT)



**WARNING**

**Possible equipment damage**

Proceed only if you have been directed to this procedure from a step in a maintenance procedure. Separate use of this procedure can cause equipment damage or loss of service.

#### *At the MAP terminal*

- 1 To release the line card cutoff relay, type  
>MAPCI;MTC;LNS;LTP;LTPISDN  
>Post D or L <Dir No.> or <Len No.>  
>LCO R

and press the Enter key.

- 2 Determine the state of the line.

---

| <b>If the state of the line</b> | <b>Do</b> |
|---------------------------------|-----------|
| is CUT (Cutoff)                 | step 3    |
| is other than CUT               | step 4    |

---

- 3 For additional help, contact the next level of support.
- 4 The procedure is complete.

## **Line state is D-channel maintenance busy (DMB)**

---

### **Application**

Use this procedure to clear the line state that is D-channel maintenance busy (DMB).

### **Definition**

The D-channel does not connect to the integrated services digital network (ISDN) line for one of the following reasons:

- The D-channel handler (DCH) or enhanced D-channel handler (EDCH) is out of service.
- The connection between the DCH or EDCH and the ISDN line card (ISLC) does not work or is not active.
- The link for the ISDN enhanced line concentrating module (LCME) has faults.
- The DCH channel is out of service due to a layer 1 babler (DMB inverse video and I fail flag).
- The ISDN service group (ISG) channel is out of service.

### **Common procedures**

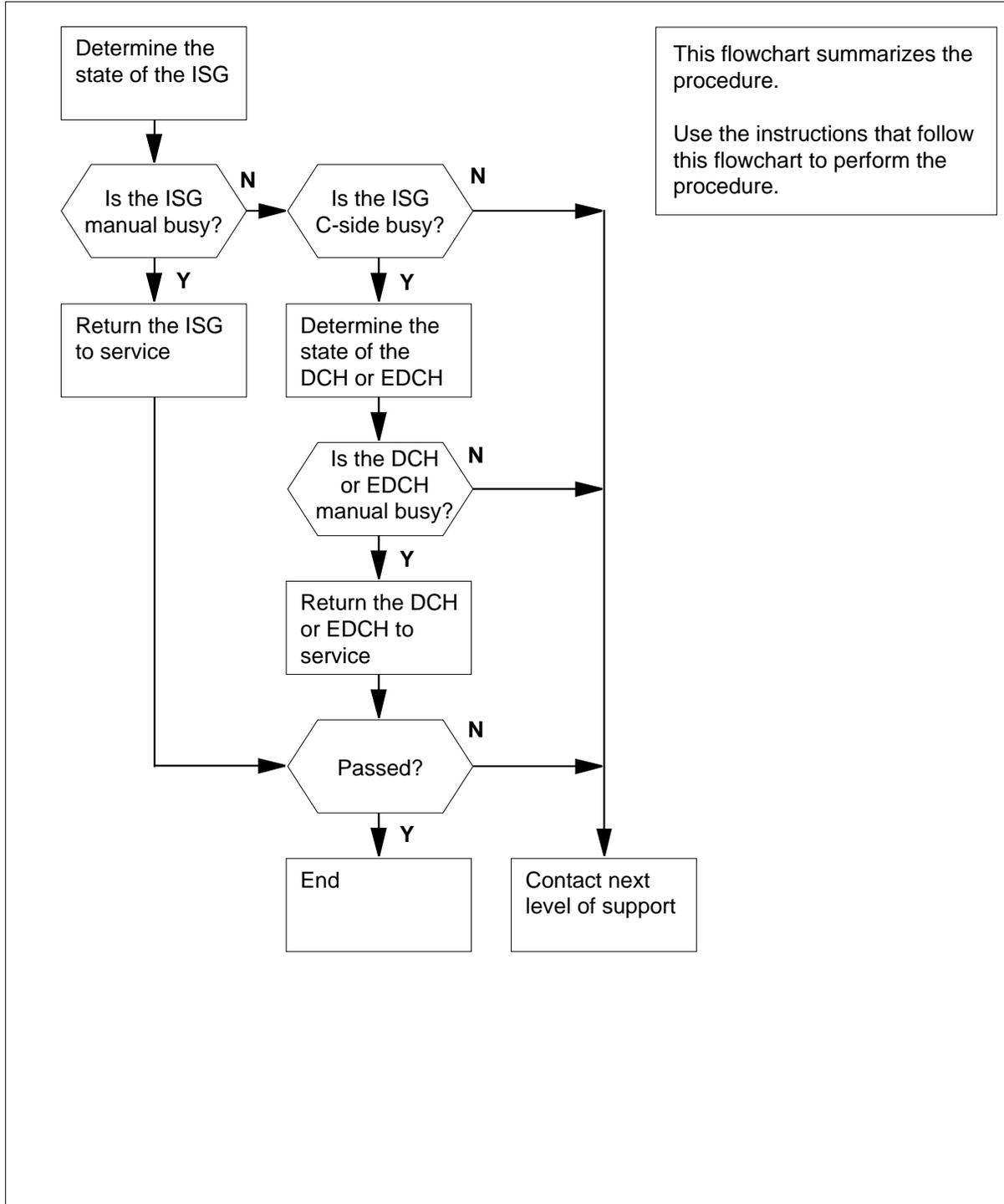
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

# Line state is D-channel maintenance busy (DMB) (continued)

## Summary of Line state is D-channel maintenance busy (DMB)



## Line state is D-channel maintenance busy (DMB) (continued)

### Line state is D-channel maintenance busy (DMB)



**WARNING**

**Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to proceed. Separate use of this procedure can cause equipment damage or loss of service.

**At the MAP terminal**

- 1** To determine the state of the ISG and the DCH or EDCH through the CKTLOC command on the posted line, type

```
>MAPCI;MTC;LNS;LTP;LTPISDN
>Post D or L <Dir No.> or <Len No.>
>CKTLOC
```

and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 00 G04 LCEI 07 18 LCME 07 0 05:07 BX27AA
```

```
LGC 4 Status: InSv PSLink: 10 Status: OK
LCME Status: InSv CSLink: 2
DCH 101 Status: ISTb ISG 100 CHNL 8 Status: ManB
      ConType: Con Status: Active TDM: 4
```

- 2** Record the following:
- The number of the ISDN line trunk controller (LTC) or the ISDN line group controller (LGC)
  - The number of the DCH or the EDCH
  - The number of the ISG
  - The number of the channel
- 3** From the CKTLOC information that appears in step 1, determine the state of the ISG.

| If the state of the ISG   | Do      |
|---------------------------|---------|
| is ManB (manual busy)     | step 4  |
| is CBsy (C-side busy)     | step 11 |
| is other than listed here | step 19 |

**Line state is  
D-channel maintenance busy (DMB)** (continued)

- 4 Determine from office records or operating company personnel if the ISG channels can return to service.

| If the ISG channels      | Do      |
|--------------------------|---------|
| can return to service    | step 5  |
| cannot return to service | step 19 |

- 5 To access the PM level of the MAP display and post the LTC or LGC recorded in step 2, type

>PM; POST pm\_type pm\_no

and press the Enter key.

where

**pm\_type**  
is either LTC or LGC

**pm\_no**  
is the number of the LTC or LGC

- 6 To access the ISG level of the MAP, type

>ISG

and press the Enter key.

- 7 To post the ISG, type

>POST isg\_no

and press the Enter key.

where

**isg\_no**  
is the number of the ISG recorded in step 2

*Example of a MAP response:*

```
ISG      1111111111 2222222222 33
123456789 0123456789 0123456789 01
.....M. ....
```

ISG 100 DCH 101 ISTb LTC 4 port 17 DCH Chnls BSY

**Note:** The example displays the posted ISG 100.

- 8 Determine the state of the ISG channels.

**Note:** The state of the ISG channel appears under the channel number. In the example in step 7, the M indicates that channel 8 is manual busy.

| If                         | Do      |
|----------------------------|---------|
| one channel is M           | step 9  |
| more than one channel is M | step 10 |

**Line state is**  
**D-channel maintenance busy (DMB)** (continued)

**9** To return the ISG channel to service, type

>RTS channel\_no

and press the Enter key.

where

**channel\_no**

is the number of the ISG channel recorded in step 2

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 20 |
| failed             | step 19 |

**10** To return the ISG to service, type

>RTS ALL

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 20 |
| failed             | step 19 |

**11** From the CKTLOC information that appears in step 1, determine the state of the DCH or EDCH.

| If the state of the DCH or EDCH | Do      |
|---------------------------------|---------|
| is ManB                         | step 12 |
| is other than listed here       | step 19 |

**12** Determine from office records or operating company personnel if you can return the DCHs or EDCHs to service.

| If the DCHs or EDCHs     | Do      |
|--------------------------|---------|
| can return to service    | step 13 |
| cannot return to service | step 19 |

**13** To access the PM level of the MAP display and post the LTC or LGC, type

>PM;POST pm\_type pm\_no

and press the Enter key.

where

**pm\_type**

is either LTC or LGC

**pm\_no**

is the number of the LTC or LGC recorded in step 2

## Line state is D-channel maintenance busy (DMB) (continued)

- 14** To access the DCH level of the MAP display, type  
>DCH  
and press the Enter key.

*Example of a MAP response:*

|     | SysB | ManB | OffL | CBsy | ISTb | InSv |
|-----|------|------|------|------|------|------|
| PM  | 0    | 0    | 0    | 0    | 0    | 117  |
| LTC | 0    | 0    | 0    | 0    | 0    | 3    |
|     | .    | .    | .    | .    | .    | .    |
|     | .    | .    | .    | .    | .    | .    |
| DCH | 0    | 2    | 0    | 0    | 0    | 3    |

**Note:** In the example, two DCHs are manually busy and three DCHs are in service.

- 15** Determine the state of the DCHs or EDCHs.

**Note:** The number that appears in the ManB column for DCH or EDCH indicates the number of manual-busy DCHs or EDCHs.

| If                                          | Do      |
|---------------------------------------------|---------|
| one or two DCHs or EDCHs are manual-busy    | step 16 |
| more than two DCHs or EDCHs are manual-busy | step 19 |

- 16** To post the manual busy DCHs or EDCHs, type  
>POST MANB  
and press the Enter key.

- 17** To test the DCHs or EDCHs, type  
>TST ALL  
and press the Enter key.

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 18 |
| failed             | step 19 |

- 18** To return the DCHs or EDCHs to service, type  
>RTS ALL  
and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 20 |

**Line state is  
D-channel maintenance busy (DMB) (end)**

---

|           | <b>If the RTS command</b>                               | <b>Do</b> |
|-----------|---------------------------------------------------------|-----------|
|           | failed                                                  | step 19   |
| <b>19</b> | For additional help, contact the next level of support. |           |
| <b>20</b> | The procedure is complete.                              |           |

## **Line state is Idle (IDL)**

---

### **Application**

Use this procedure to troubleshoot a line in the idle (IDL) state.

### **Definition**

The line for the integrated services digital network (ISDN) is idle and available.

### **Common procedures**

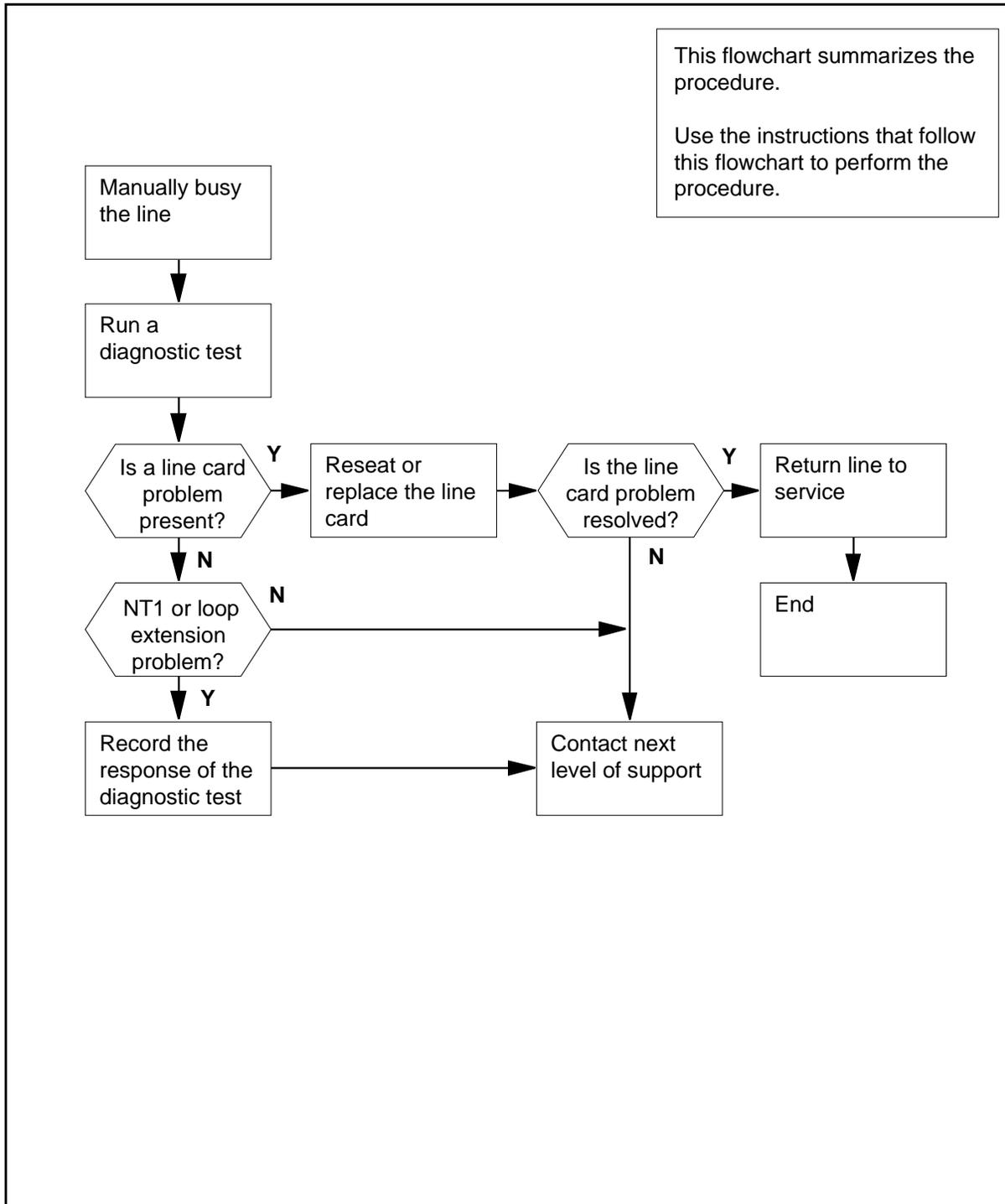
This procedure refers to *Reseating a line card*. This procedure also refers to *Replacing a line card*, and *Replacing a point-of-use power supply card*.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Line state is Idle (IDL) (continued)

### Summary of Line state is Idle (IDL)



## Line state is Idle (IDL) (continued)

---

### Line state is Idle (IDL)



#### **WARNING**

##### **Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to proceed. Separate use of this procedure can cause equipment damage or loss of service.

#### **At the MAP terminal**

- 1 Line extension devices (ISDN mp-eoc line units) are an example of a line configuration. To determine the line configuration, type

```
>MAPCI;MTC;LNS;LTP;LTPISDN
>Post D or L <Dir No.> or <Len No.>
>LTPDATA; SUSTATE
```

and press the Enter key.

*Example of a MAP response:*

```
Line Equipment Status
CO TA LC_Lpbk V_id
- - - 0D07

ES_NE/h ES_FE/h ES_NE/d ES_FE/d
      0      0      0      0

U_sync U_act T_Lpbk P_pwr S_pwr NTM
-      -      .      .      -      -

T_sync T_act
-      -

ISDN mp-eoc Status
Line Unit 1 2 3 4 NT1
Status . . . - -

ISDN TEI Status
TEI 1 2
Status - -
```

**Note:** A response that includes "ISDN mp-eoc Status" indicates the status and number of line units on the posted line.

- 2 Record the status for each line unit and NT1.

**Note:** The . (dot) in the status line indicates the line unit is active. The - (dash) indicates the line unit lost synchronization with the U-interface and is not active. You will use this information in step 25.

**Line state is  
Idle (IDL) (continued)**

**3** Determine the state of the line.

| If the state of the line  | Do     |
|---------------------------|--------|
| is MB (maintenance busy)  | step 6 |
| is other than listed here | step 4 |

**4** To manually busy the line, type  
>BSY  
and press the Enter key.

| If the state of the line        | Do      |
|---------------------------------|---------|
| is MB                           | step 6  |
| is CPD (call processing deload) | step 5  |
| is DEL (deloaded)               | step 5  |
| is other than listed here       | step 32 |

**5** Wait 5 min. Determine the state of the line.

| If the state of the line  | Do      |
|---------------------------|---------|
| is MB                     | step 6  |
| is other than listed here | step 32 |

**6** To identify the product engineering code (PEC) for the posted line, type  
>CKTLOC  
and press the Enter key.

*Example of a MAP response:*

```
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 00 G04 LCEI 07 18 LCME 07 0 05:07 BX27AA
```

```
LGC 4 Status: InSv PSLink: 10 Status: OK
LCME Status: InSv CSLink: 2
DCH 101 Status: ISTb ISG 100 CHNL 8 Status: ManB
      ConType: Con Status: Active TDM: 4
```

| If the PEC                | Do     |
|---------------------------|--------|
| is BX27AA                 | step 9 |
| is other than listed here | step 7 |

## Line state is Idle (IDL) (continued)

---

- 7** To run a diagnostic test on the posted line, type  
**>DIAG**  
 and press the Enter key.  
*Example of a MAP response:*  
 Warning - Action may affect Packet Data Service  
 Do you wish to continue?  
 Please confirm ("Yes", "Y", "NO", or "N"):
- 8** To confirm the command, type  
**>YES**  
 and press the Enter key.  
 Go to step 11.
- 9** Run the diagnostic test for the posted line. Use the enhanced display capability that provides in-depth debug information. To run the test, type  
**>DIAG DISP**  
 and press the Enter key.  
*Example of a MAP response:*  
 EXPECT EXTENSIVE MAP DISPLAY!!!  
 Warning - Action may affect Packet Data Service  
 Do you wish to continue?  
 Please confirm ("Yes", "Y", "NO", or "N"):
- 10** To confirm the command, type  
**>YES**  
 and press the Enter key.
- 11** Your next step depends on the results of the diagnostic test.

| <b>If the results</b>                                          | <b>Do</b> |
|----------------------------------------------------------------|-----------|
| display a line 100 log, indicated by <code>PASS LN_DIAG</code> | step 30   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code> | step 12   |
| display other than listed here                                 | step 12   |

- 12** Record the MAP response from the diagnostic test.
- | <b>If the response</b>           | <b>Do</b> |
|----------------------------------|-----------|
| is PUPS failure detected.        | step 21   |
| is FEBE detection test failed.   | step 29   |
| is Communications failed to NT1. | step 25   |

**Line state is  
Idle (IDL) (continued)**

| <b>If the response</b>                                                                                                                                                                                                                                                         | <b>Do</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| is NT1 not present.                                                                                                                                                                                                                                                            | step 25   |
| is LCD is overloaded.                                                                                                                                                                                                                                                          | step 25   |
| is LCD is in mateload.                                                                                                                                                                                                                                                         | step 25   |
| is NT1 B1 loopback did not release.                                                                                                                                                                                                                                            | step 25   |
| is NT1 B2 loopback did not release.                                                                                                                                                                                                                                            | step 25   |
| is NT1 2B+D loopback did not release.                                                                                                                                                                                                                                          | step 25   |
| is Customer-initiated maintenance.                                                                                                                                                                                                                                             | step 25   |
| is S/T interface not active.                                                                                                                                                                                                                                                   | step 25   |
| is other than listed here                                                                                                                                                                                                                                                      | step 13   |
| <b>13</b> Perform the procedure <i>Reseating a line card</i> . Complete the procedure and return to this point.                                                                                                                                                                |           |
| <b>14</b> To test the line card for the posted line, type<br><b>&gt;DIAG</b><br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>Warning - Action may affect Packet Data Service<br>Do you wish to continue?<br>Please confirm ("Yes", "Y", "NO", or "N"): |           |
| <b>15</b> To confirm the command, type<br><b>&gt;YES</b><br>and press the Enter key.                                                                                                                                                                                           |           |
| <b>16</b> Your next step depends on the results of the diagnostic test.                                                                                                                                                                                                        |           |
| <b>If the results display</b>                                                                                                                                                                                                                                                  | <b>Do</b> |
| display a line 100 log, indicated by <code>PASS LN_DIAG</code>                                                                                                                                                                                                                 | step 30   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code>                                                                                                                                                                                                                 | step 17   |
| display other than listed here                                                                                                                                                                                                                                                 | step 17   |
| <b>17</b> Perform the procedure <i>Replacing a line card</i> . Complete the procedure and return to this point.                                                                                                                                                                |           |
| <b>18</b> To test the line card for the posted line, type<br><b>&gt;DIAG</b><br>and press the Enter key.                                                                                                                                                                       |           |

**Line state is Idle (IDL)** (continued)

*Example of a MAP response:*

Warning - Action may affect Packet Data Service  
 Do you wish to continue?  
 Please confirm ("Yes", "Y", "NO", or "N"):

**19** To confirm the command, type

**>YES**

and press the Enter key.

**20** Your next step depends on the results of the diagnostic test.

| <b>If the results</b>                                          | <b>Do</b> |
|----------------------------------------------------------------|-----------|
| display a line 100 log, indicated by <code>PASS LN_DIAG</code> | step 30   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code> | step 32   |
| display other than listed here                                 | step 32   |

**21** Perform the procedure *Replacing a point-of-use power supply card*. Complete the procedure and return to this point.

**22** To test the line card for the posted line, type

**>DIAG**

and press the Enter key.

*Example of a MAP response:*

Warning - Action may affect Packet Data Service  
 Do you wish to continue?  
 Please confirm ("Yes", "Y", "NO", or "N"):

**23** To confirm the command, type

**>YES**

and press the Enter key.

**24** Your next step depends on the results of the diagnostic test.

| <b>If the results</b>                                          | <b>Do</b> |
|----------------------------------------------------------------|-----------|
| display a line 100 log, indicated by <code>PASS LN_DIAG</code> | step 30   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code> | step 32   |
| display other than listed here                                 | step 32   |

**25** Determine if an NT1 problem or line extension problem is present. Refer to the information recorded for ISDN mp-eoc units in step 1.

| <b>If the MAP response</b>     | <b>Do</b> |
|--------------------------------|-----------|
| included an ISDN mp-eoc status | step 26   |

**Line state is  
Idle (IDL) (continued)**

| <b>If the MAP response</b>                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Do</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| did not include an ISDN mp-eoc status                                                                                                                                                                                                                                                                                                                                                                                                                    | step 29   |
| <b>26</b> Determine the status of the ISDN mp-eoc units.                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| <b>If the ISDN mp-eoc status</b>                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Do</b> |
| is . (active) for the line units                                                                                                                                                                                                                                                                                                                                                                                                                         | step 29   |
| is - (inactive) for the line units                                                                                                                                                                                                                                                                                                                                                                                                                       | step 27   |
| <b>27</b> A - (dash) displayed under any line unit indicates that the line unit lost synchronization with the U-interface. A - (dash) also indicates that the line unit is not active. Restore the line units to service. Refer to local operating company procedures or the documentation of the original equipment manufacturer (OEM). Refer to this documentation for maintenance procedures. Return to this point.                                   |           |
| <b>28</b> To check the status of the line extension devices (for example, ISDN mp-eoc line units), type                                                                                                                                                                                                                                                                                                                                                  |           |
| <pre> &gt;LTPDATA;  SUSTATE and press the Enter key. Example of a MAP response:  Line Equipment Status CO TA LC_Lpbk V_id - - -          0D07  ES_NE/h ES_FE/h ES_NE/d ES_FE/d   0      0      0      0  U_sync U_act T_Lpbk P_pwr S_pwr NTM .      .      .      .      .      . T_sync T_act .      .  ISDN mp-eoc Status Line Unit  1  2  3  4  NT1 Status    .  .  .  .  .  ISDN TEI Status TEI       1  2 Status    -  -                     </pre> |           |
| <b>If the ISDN mp-eoc status</b>                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Do</b> |
| is . (active) for the line units and active for the NT1                                                                                                                                                                                                                                                                                                                                                                                                  | step 30   |
| is - (inactive) for the line units                                                                                                                                                                                                                                                                                                                                                                                                                       | step 31   |

**Line state is  
Idle (IDL) (end)**

---

|           | <b>If the ISDN mp-eoc status</b>                                                                                | <b>Do</b> |
|-----------|-----------------------------------------------------------------------------------------------------------------|-----------|
|           | is . (active) for the line units and - (inactive) for the NT1                                                   | step 29   |
| <b>29</b> | An NT1 problem exists. Refer to the MAP response recorded in step 12.<br>Go to step 32.                         |           |
| <b>30</b> | To return the line to service, type<br>>RTS<br>and press the Enter key.                                         |           |
|           | <b>If the RTS</b>                                                                                               | <b>Do</b> |
|           | failed                                                                                                          | step 32   |
|           | passed                                                                                                          | step 33   |
| <b>31</b> | For additional help, contact the operating company personnel responsible for the maintenance of the line units. |           |
| <b>32</b> | For additional help, contact the next level of support.                                                         |           |
| <b>33</b> | The procedure is complete.                                                                                      |           |

## **Line state is Installation busy (INB)**

---

### **Application**

Use this procedure to clear an installation busy (INB) line state.

### **Definition**

The ISDN line is not available for one of the following reasons:

- The system did not assign data.
- The system made a data change.
- A line test position operator performs maintenance on the ISDN line.

### **Common procedures**

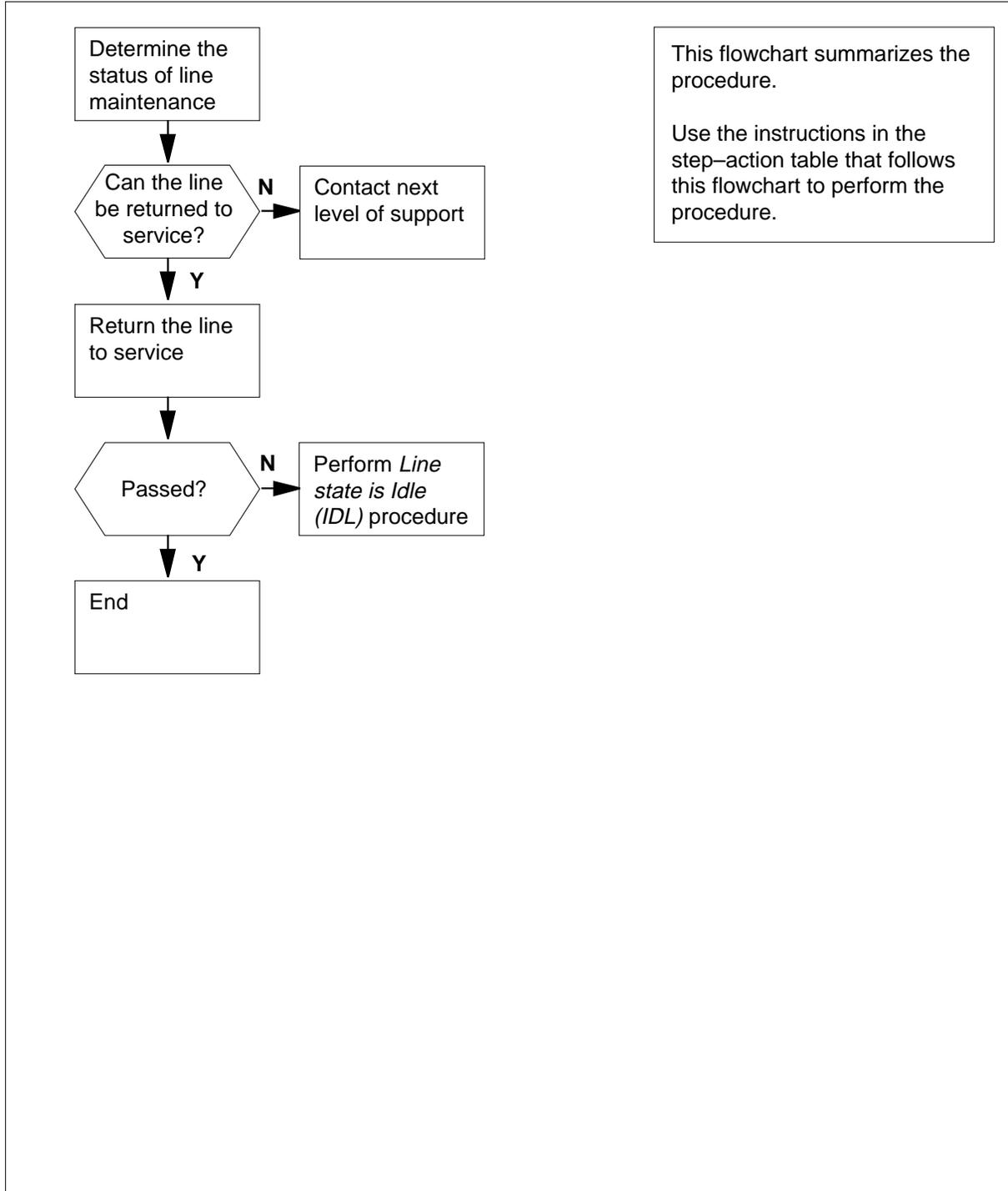
There are no common procedures.

### **Action**

The following flowchart is a summary of this procedure. Use the instructions in the step-action table that follows the flowchart to perform the procedure.

# Line state is Installation busy (INB) (continued)

## Summary of Line state is Installation busy (INB)



## Line state is Installation busy (INB) (end)

### Line state is Installation busy (INB)



**WARNING**

**Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to this procedure. Separate use of this procedure can cause equipment damage or loss of service.

**At the MAP terminal**

- 1 Determine from office records or operating company personnel if the line can return to service.

| If the line              | Do     |
|--------------------------|--------|
| can return to service    | step 2 |
| cannot return to service | step 5 |

- 2 To manually busy the line, type  
`>MAPCI ;MTC ;LNS ;LTP ;LTPISDN`  
`>Post D or L <Dir No.> or <Len No.>`  
`>BSY`  
 and press the Enter key.

| If the state of the line is | Do     |
|-----------------------------|--------|
| MO (maintenance busy        | step 3 |
| other than listed here      | step 5 |

- 3 To return the line back into service when the installation is complete, type  
`>RTS`  
 and press the Enter key.

| If the RTS command | Do     |
|--------------------|--------|
| failed             | step 4 |
| passed             | step 6 |

- 4 Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 5 For additional help, contact the next level of support.
- 6 The procedure is complete.

## **Line state is Line module busy (LMB)**

---

### **Application**

Use this procedure to clear a line module busy (LMB) line state.

### **Definition**

The ISDN enhanced line concentrating module (LCME), or the line drawer, is out of service.

### **Common procedures**

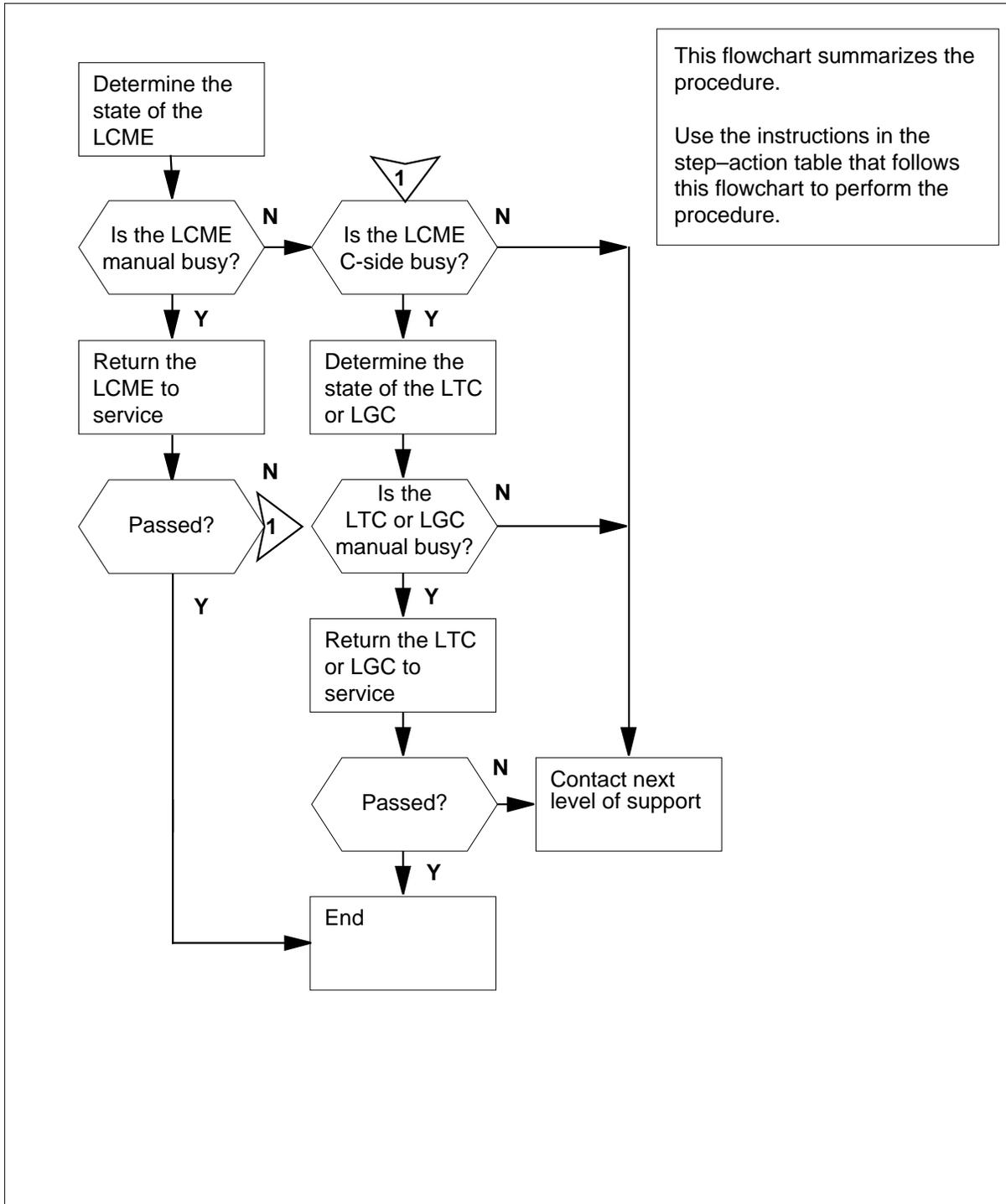
There are no common procedures.

### **Action**

The following flowchart is a summary of this procedure. Use the instructions in the step-action table after the flowchart to perform the procedure.

## Line state is Line module busy (LMB) (continued)

### Summary of Line state is Line module busy (LMB)



## Line state is Line module busy (LMB) (continued)

### Line state is Line module busy (LMB)



#### **WARNING**

##### **Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to this procedure. Separate use of this procedure can cause equipment damage or loss of service.

#### **At the MAP Terminal**

- 1 To determine the state of the LCME and the LTC or LGC, type  
>MAPCI;MTC;LNS;LTP;LTPISDN  
>Post D or L <Dir No.> or <Len No.>  
>CKTLOC  
and press the Enter key.

*Example of a MAP response:*

```
Site Flr Rpos Bay_id Shf Description Slot EqPEC  
HOST 00 G04 LCEI 07 18 LCMI 07 0 05:07 BX25AB
```

```
LGC 4 Status: ISTb PSLink: 10 Status: CORRECT  
LCME Status: ManB CSLink: 2  
DCH 101 Status: ISTb ISG 100 CHNL 8 Status: InSv  
ConType: Con Status: PMBusy TDM: 4
```

- 2 Record the number of the LCME and number of the LTC or LGC.
- 3 From the CKTLOC information displayed in step 1, determine the state of the LCME.

| <b>If the state of the LCME</b> | <b>Do</b> |
|---------------------------------|-----------|
| is ManB (manual busy)           | step 4    |
| is Cbsy (C-side busy)           | step 8    |
| is other than listed here       | step 13   |

- 4 Determine from office records or operating company personnel if you can turn the LCME back on.

| <b>If the LCME</b>       | <b>Do</b> |
|--------------------------|-----------|
| can return to service    | step 5    |
| cannot return to service | step 13   |

**Line state is  
Line module busy (LMB) (continued)**

5 To access the PM level of the MAP display, type

>PM

and press the Enter key.

6 To post the manual-busy LCME, type

>POST LCME pm\_no

and press the Enter key.

where

**pm\_no**

is the number of the LCME you recorded in step 2

*Example of a MAP response:*

LCME HOST 67 1 SysB Links OOS: Cside 0

Unit0: SysB

Unit1: SysB

11 11 11 RG: Uneq

Drwr: 01 23 45 67 89 01 23 45

.. .. .. .. .. .. .. ..

7 To return the manual busy LCME to service, type

>RTS PM

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 14 |
| failed             | step 8  |

8 From the CKTLOC information displayed in step 1, determine the state of the LTC or LGC.

| If the state of the LTC or LGC | Do      |
|--------------------------------|---------|
| is ManB                        | step 9  |
| is other than listed here      | step 13 |

9 Determine from office records or from office personnel if the LTC or LGC can return to service.

| If the LTC or LGC        | Do      |
|--------------------------|---------|
| can return to service    | step 10 |
| cannot return to service | step 13 |

10 To access the PM level of the MAP display, type

>PM

## Line state is Line module busy (LMB) (end)

---

- and press the Enter key.
- 11** To post the LTC or LGC, type  
>POST **pm\_type** **pm\_no**  
and press the Enter key.  
*where*  
**pm\_type**  
is either LTC or LGC  
**pm\_no**  
is the number you recorded at step 2  
*Example of a MAP response:*  
LTC 1 ISTb Links\_OOS: CSide 0 , PSide 3  
Unit0: Act ISTb  
Unit1: Inact ISTb
- 12** To return the manual busy LTC or LGC to service, type  
>RTS **PM**  
and press the Enter key.
- | If the RTS command | Do      |
|--------------------|---------|
| passed             | step 14 |
| failed             | step 13 |
- 13** For additional help, contact the next level of support.
- 14** The procedure is complete.

## Line state is Lock out (LO)

---

### Application

Use this procedure to clear a lock out (LO) line state.

### Definition

The ISDN line card (ISLC) and the network termination 1 (NT1) or mp-eoc line unit are not synchronized. The S/T ISDN line card (ISLC) does not experience this state.

### Common procedures

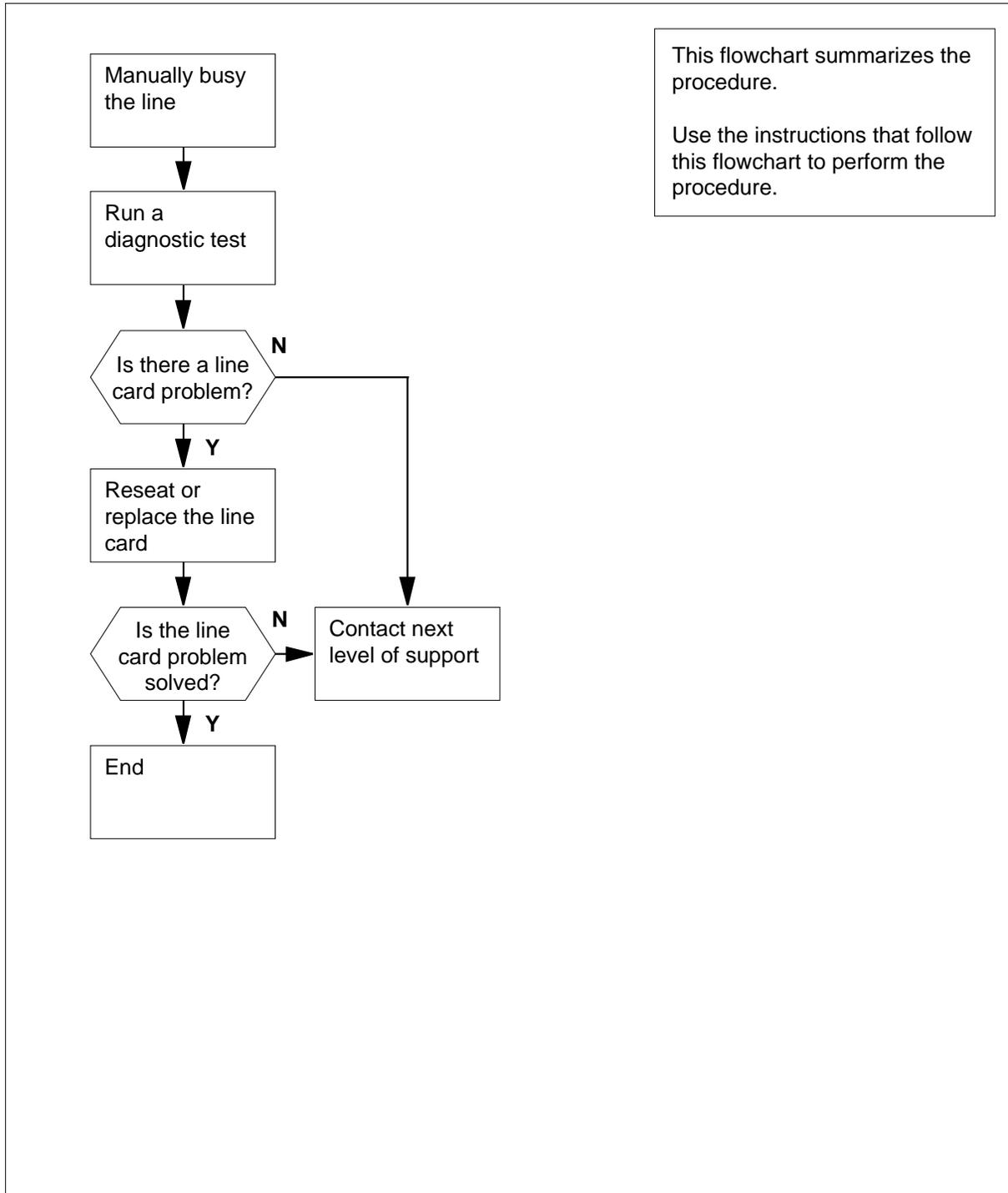
This procedure makes references to *Reseating a line card* and *Replacing a line card*.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Line state is Lock out (LO) (continued)

### Summary of Line state is Lock out (LO)



## Line state is Lock out (LO) (continued)

### Line state is Lock out (LO)



**WARNING**

**Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to this procedure. Separate use of this procedure can cause equipment damage or loss of service.

**At the MAP Terminal**

- 1 To determine the configuration of the line (for example: line extension devices [ISDN mp-eoc line units] are present), type

```
>MAPCI;MTC;LNS;LTP;LTPISDN
```

```
>Post D or L <Dir No.> or <Len No.>
```

```
>LTPDATA; SUSTATE
```

and press the Enter key.

*Example of a MAP response:*

Line Equipment Status

```
CO TA LC_Lpbk V_id
- - - 0D07
```

```
ES_NE/h ES_FE/h ES_NE/d ES_FE/d
0 0 0 0
```

```
U_sync U_act T_Lpbk P_pwr S_pwr NTM
- - . . - -
T_sync T_act
- -
```

ISDN mp-eoc Status

```
Line Unit 1 2 3 4 NT1
Status . . . - -
```

ISDN TEI Status

```
TEI 1 2
```

## Line state is Lock out (LO) (continued)

---

Status - -

**Note:** A response that includes "ISDN mp-eoc Status" indicates the status and number of line units on the posted line.

- 2 Record the status for each line unit and NT1.

**Note:** The . (dot) in the status line indicates the line unit is active. The - indicates the line unit lost synchronization with the U-interface and is inactive. Step 19 uses this information.

- 3 To manually busy the line, type

>BSY

and press the Enter key.

- 4 Determine the state of the line.

| If the state of the line  | Do      |
|---------------------------|---------|
| is MB (maintenance busy)  | step 5  |
| is other than listed here | step 26 |

- 5 To identify the product engineering code (PEC) for the posted line, type

>CKTLOC

and press the Enter key.

*Example of a MAP response:*

```
Site Flr Rpos Bay_id Shf Description Slot Eq  
PECHOST 00 G04 LCEI 07 18 LCME 07 0 05:07 BX27AA
```

```
LGC 4 Status: InSv PSLink: 10 Status: OK
```

```
LCME Status: InSv CSLink: 2
```

```
DCH 101 Status: ISTb ISG 100 CHNL 8 Status: ManB
```

```
ConType: Con Status: Active TDM: 4
```

| If the PEC                | Do     |
|---------------------------|--------|
| is BX27AA                 | step 8 |
| is other than listed here | step 6 |

- 6 To run a diagnostic test on the posted line, type

>DIAG

and press the Enter key.

*Example of a MAP response:*

**Line state is  
Lock out (LO) (continued)**

- Warning - Action may affect Packet Data Service  
Do you wish to continue?  
Confirm ("Yes", "Y", "NO", or "N"):
- 7** To confirm the command, type  
**>YES**  
and press the Enter key.  
Go to step 10.
- 8** Run the diagnostic test for the posted line. Use the enhanced display capability that provides in-depth debug information. To perform this procedure, type  
**>DIAG DISP**  
and press the Enter key. This procedure uses the enhanced display capability.  
*Example of a MAP response:*  
EXPECT EXTENSIVE MAP DISPLAY!!!  
Warning - Action may affect Packet Data Service  
Do you wish to continue?  
Please confirm ("Yes", "Y", "NO", or "N"):
- 9** To confirm the command, type  
**>YES**  
and press the Enter key.
- 10** Record the MAP response from the diagnostic test.
- | If the response                       | Do      |
|---------------------------------------|---------|
| is Loop termination missing.          | step 19 |
| is Communications failed to NT1.      | step 19 |
| is NT1 not present.                   | step 19 |
| is NT1 B1 loopback did not release.   | step 19 |
| is NT1 B2 loopback did not release.   | step 19 |
| is NT1 2B+D loopback did not release. | step 19 |
| is Customer-initiated maintenance.    | step 19 |
| is S/T interface not active.          | step 19 |
| is other than listed here             | step 11 |
- 11** Perform the procedure *Reseating a line card*. Complete the procedure and return to this point.

## Line state is Lock out (LO) (continued)

---

- 12** To test the line card for the posted line, type  
>**DIAG**  
and press the Enter key.

*Example of a MAP response:*

Warning - Action may affect Packet Data Service  
Do you wish to continue?  
Please confirm ("Yes", "Y", "NO", or "N"):

- 13** To confirm the command, type  
>**YES**  
and press the Enter key.

- 14** Your next step depends on the results of the diagnostic test.

---

| <b>If the results</b>                                          | <b>Do</b> |
|----------------------------------------------------------------|-----------|
| display a line 100 log, indicated by <code>PASS LN_DIAG</code> | step 24   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code> | step 15   |
| display other than listed here                                 | step 15   |

---

- 15** Perform the procedure *Replacing a line card*. Complete the procedure and return to this point.

- 16** To test the line card for the posted line, type  
>**DIAG**  
and press the Enter key.

*Example of a MAP response:*

Warning - Action may affect Packet Data Service  
Do you wish to continue?  
Please confirm ("Yes", "Y", "NO", or "N"):

- 17** To confirm the command, type  
>**YES**  
and press the Enter key.

- 18** Your next step depends on the results of the diagnostic test.

---

| <b>If the results</b>                                          | <b>Do</b> |
|----------------------------------------------------------------|-----------|
| display a line 100 log, indicated by <code>PASS LN_DIAG</code> | step 24   |
| display a line 101 log, indicated by <code>FAIL LN_DIAG</code> | step 26   |
| display other than listed here                                 | step 26   |

---

**Line state is  
Lock out (LO)** (continued)

- 19** Determine if an NT1 problem or a line extension problem exists. Refer to the information recorded for ISDN mp-eoc units in step 2.

| If the response                       | Do      |
|---------------------------------------|---------|
| included an ISDN mp-eoc status        | step 20 |
| did not include an ISDN mp-eoc status | step 23 |

- 20** Determine the status of the ISDN mp-eoc units.

| If the ISDN mp-eoc status          | Do      |
|------------------------------------|---------|
| is . (active) for the line units   | step 23 |
| is - (inactive) for the line units | step 21 |

- 21** A - displayed under any of the line units indicates loss of synchronization between the line unit and the U-interface. A - also indicates that the line unit is inactive. Restore the line units to service. Refer to local operating company procedures or the documentation of the original equipment manufacturer (OEM) for correct maintenance procedures. Return to this point.

- 22** To check the status of the line extension devices (for example, ISDN mp-eoc line units), type

**>LTPDATA; SUSTATE**

and press the Enter key.

*Example of a MAP response:*

```

Line Equipment Status
CO TA LC_Lpbk V_id
- - - 0D07

ES_NE/h ES_FE/h ES_NE/d ES_FE/d
    0      0      0      0

U_sync U_act T_Lpbk P_pwr S_pwr NTM
.      .      .      .      .      .
T_sync T_act
.      .

ISDN mp-eoc Status
Line Unit 1 2 3 4 NT1
Status . . . . .

ISDN TEI Status
TEI 1 2
    
```

## Line state is Lock out (LO) (end)

---

Status - -

|           | <b>If the ISDN mp-eoc status</b>                                                           | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------------------|-----------|
|           | is . (active) for the line units and active for the NT1                                    | step 24   |
|           | is - (inactive) for the line units                                                         | step 25   |
|           | is . (active) for the line units and - (inactive) for the NT1                              | step 23   |
| <b>23</b> | An NT1 problem exists. Refer to the MAP response recorded in step 10.<br>Go to step 26.    |           |
| <b>24</b> | To return the line to service, type<br>>RTS<br>and press the Enter key.                    |           |
|           | <b>If the RTS command</b>                                                                  | <b>Do</b> |
|           | passed                                                                                     | step 27   |
|           | failed                                                                                     | step 26   |
| <b>25</b> | For additional help, contact the person responsible for the maintenance of the line units. |           |
| <b>26</b> | For additional help, contact the next level of support.                                    |           |
| <b>27</b> | The procedure is complete.                                                                 |           |

## **Line state is Maintenance busy (MB)**

---

### **Application**

Use this procedure to clear a maintenance busy (MB) line state.

### **Definition**

Maintenance personnel or the DMS-100 switch removed the line from service.

### **Common procedures**

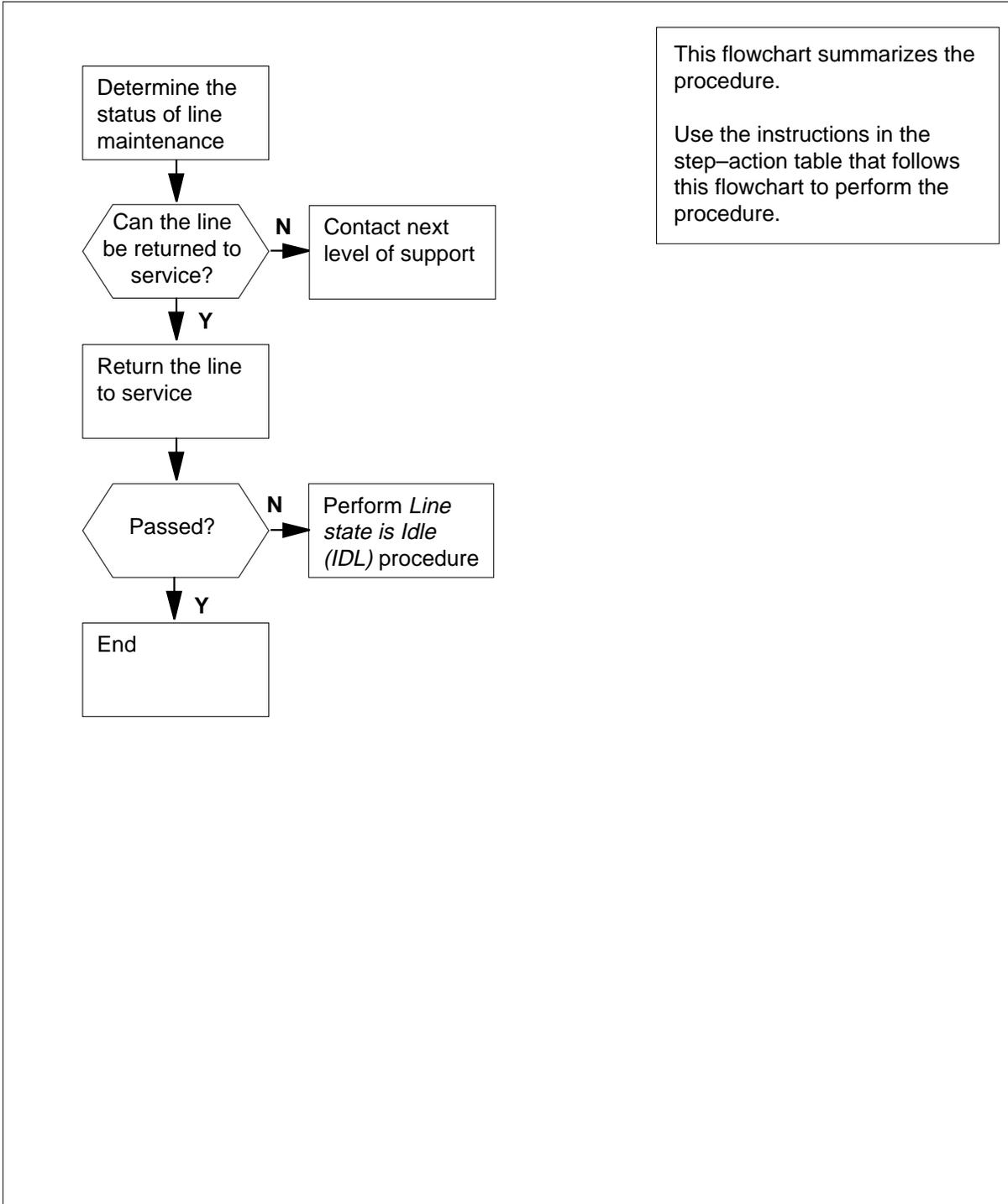
There are no common procedures.

### **Action**

The following flowchart is a summary of this procedure. Use the instructions in the step-action table that follows the flowchart to perform the procedure.

## Line state is Maintenance busy (MB) (continued)

### Summary of Line state is Maintenance busy (MB)



## Line state is Maintenance busy (MB) (end)

### Line state is Maintenance busy (MB)



**WARNING**

**Possible equipment damage**

Proceed only when a step in a maintenance procedure directs you to this procedure. Separate use of this procedure can cause equipment damage or loss of service.

**At the MAP Terminal**

- 1 Determine from office records or from operating company personnel if the line can return to service.

| If the line              | Do     |
|--------------------------|--------|
| can return to service    | step 2 |
| cannot return to service | step 4 |

- 2 To return the line to service when maintenance action is complete, type  
`>MAPCI ;MTC ;LNS ;LTP ;LTPISDN`  
`>Post D or L <Dir No.> or <Len No.>`  
`>RTS`  
 and press the Enter key.

| If the RTS command | Do     |
|--------------------|--------|
| passed             | step 5 |
| failed             | step 3 |

- 3 Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 4 For additional help, contact the next level of support.
- 5 The procedure is complete.

## **Line state is Packet service unavailable**

---

### **Application**

Use this procedure when the line state is packet service unavailable (PSU).

### **Definition**

D-channel or B-channel access to the DMS packet handler (PH) is not available. The PSU state appears under the STA header of the LTP or LTPISDN level of the MAP display. This state also appears in reverse video when you post an idle directory number on the same line equipment number (LEN).

The PSU state indicates a layer three fault. The PSU state does not indicate the state of layer one or layer two. Faults in layer one or layer two also indicate faults in layer three. The displayed state changes from PSU to IDL when you create layer three again. You can have more than one PM.

The most common reasons for layer three faults involve the customer premises equipment (CPE). For example, the CPE can power down or a connection does not exist for the CPE. Another example is the wrong installation or functioning of the CPE. Any of these conditions cause a PSU state.

Another explanation for the faults in layer three is the removal of a channel from service for maintenance activities. For example, removal of a complete X.25/X.75 link interface unit (XLIU) occurred. Another example is that a channel failure in the high-level data link control (HDLC) frame processor (HFP) occurred.

### **Limits**

This feature does not present limitations.

### **Common procedures**

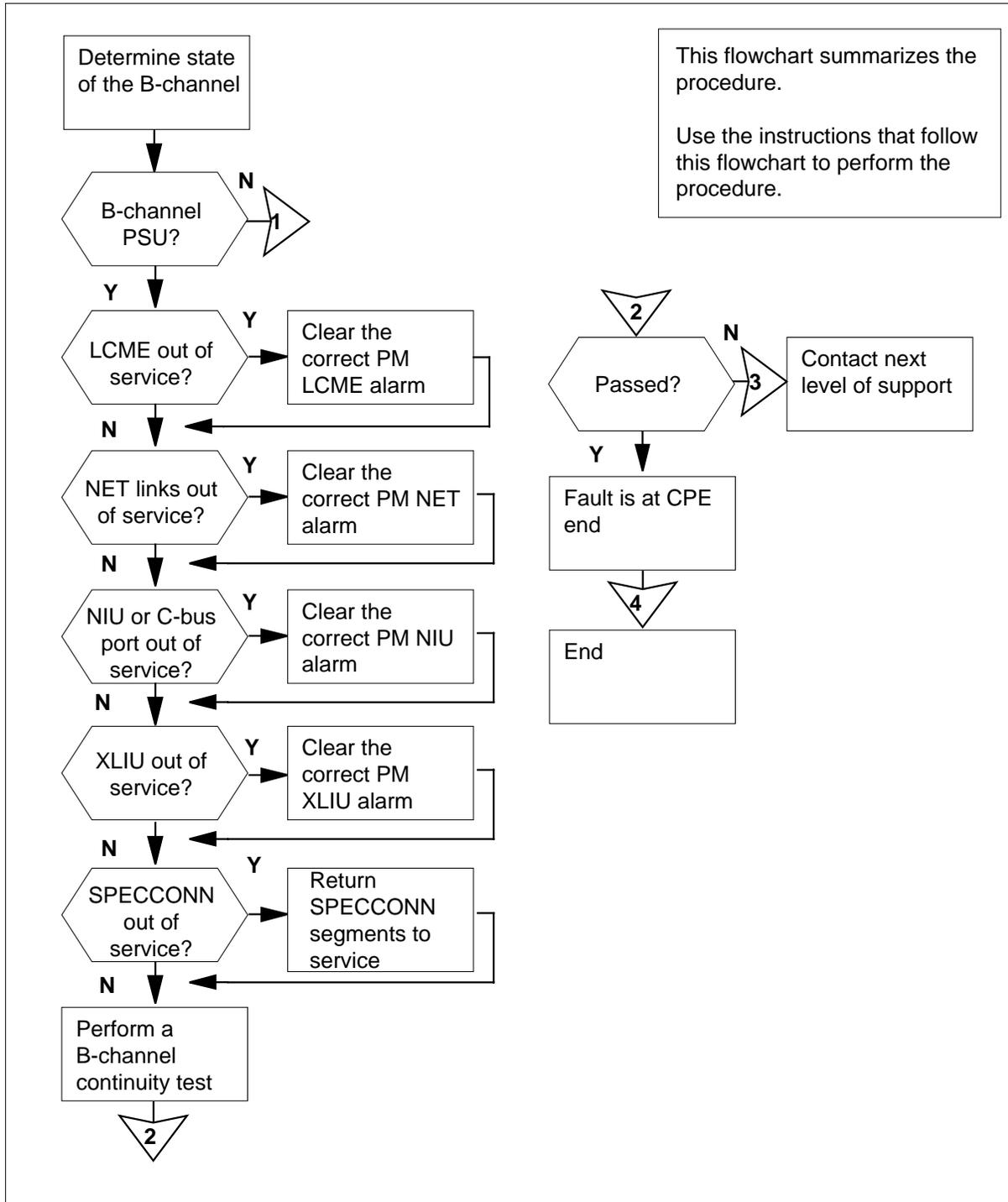
There are no common procedures.

### **Action**

The following flowchart is a summary of this procedure. Use the instructions in the step-action table that follows the flowchart to perform the procedure.

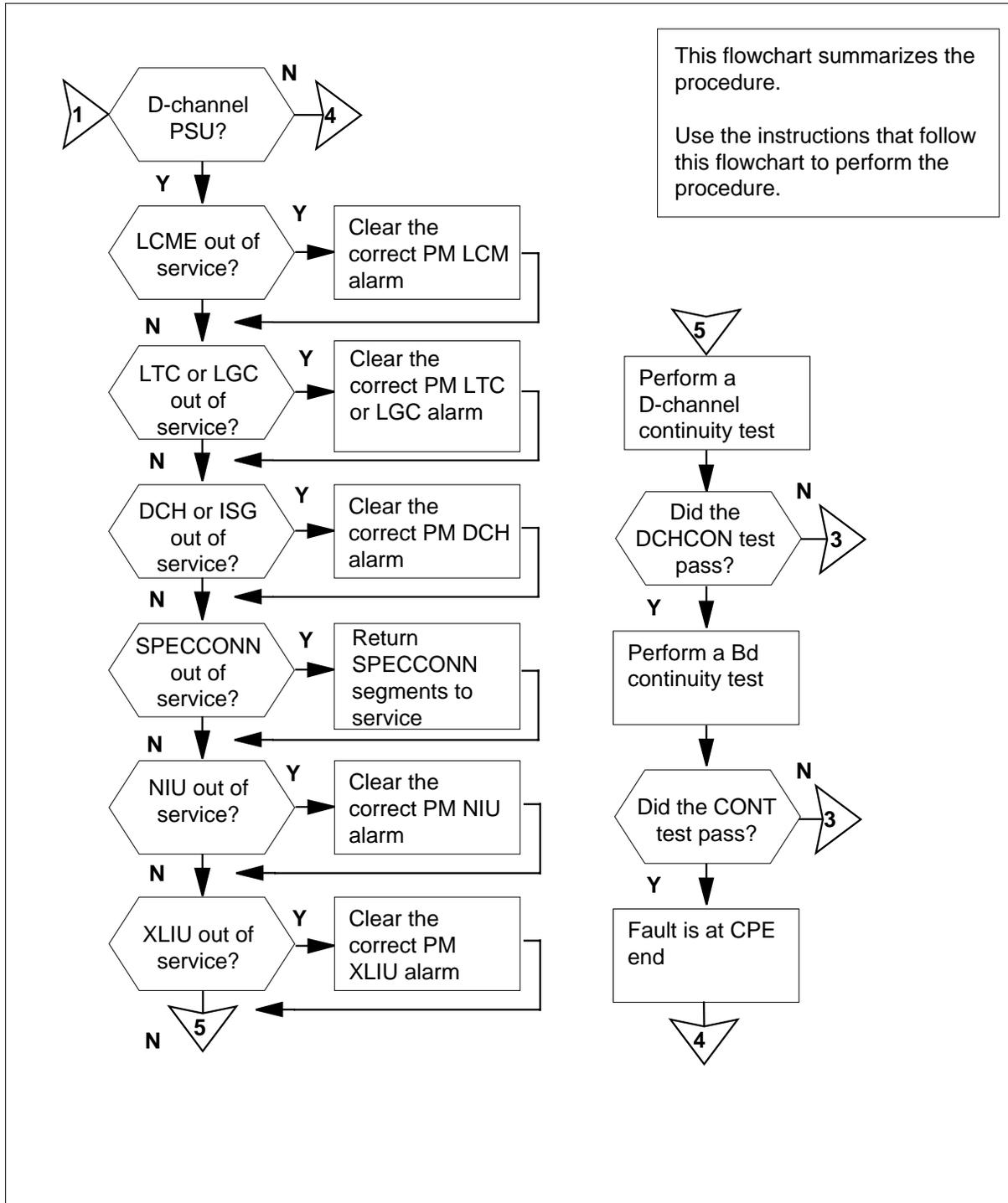
## Line state is Packet service unavailable (continued)

### Summary of Line state is Packet service unavailable (PSU)



**Line state is Packet service unavailable** (continued)

**Summary of Line state is Packet service unavailable (PSU) (continued)**



## Line state is Packet service unavailable (continued)

### Line state is Packet service unavailable (PSU)

#### At the MAP

1



**WARNING**

**Possible equipment damage**

Proceed only if a step in a maintenance procedure directs you to this procedure. Separate use of this procedure can cause equipment damage or loss of service.

To post the B-channels (B1 and B2) for the directory number (DN) that has faults, type

```
>MAPCI;MTC;LNS;LTP;LTPISDN
```

```
>Post D or L <Dir No.> or <Len No.>
```

```
>POST L frame_no unit_no drawer_no circuit_no bchnl
```

and press the Enter key.

where

**frame\_no**

is the frame number (0 to 511) for the B-channel

**unit\_no**

is the unit number (0 to 9) for the B-channel

**drawer\_no**

is the drawer number (0 to 99) for the B-channel

**circuit\_no**

is the circuit number (0 to 99) for the B-channel

**bchnl**

is the B-channel (B1 or B2)

Example input:

```
>POST L 7 1 15 10 B1
```

Example of a MAP:

```
LCC PTY RNG .....LEN..... DN STA F S LTA TE RESULT
ISDN B1 HOST 7 1 15 10 742 8102 PSU
```

**Note:** In the example above, the B-channel B1 is PSU.

| If                             | Do      |
|--------------------------------|---------|
| one or both B-channels are PSU | step 2  |
| no B-channel is PSU            | step 34 |

## Line state is Packet service unavailable (continued)

---

- 2 Determine the status of the enhanced line concentrating module (LCME), network links, and the network interface unit (NIU). Determine the status of the central bus (C-bus) port, XLIU, and SPECCONN connection for the B-channel that is PSU. To determine the status, type,

>CKTLOC

and press the Enter key.

*Example of a MAP response:*

```
XPM    Status: Unkn
LCME   Status: InSv
NET 3  --  51   7: OK
TO 1   --  58   5: OK
NIU 2  ISTb, CBus Port 2 InSv
SPEC Endpt XSG 2 Channel 7 XLIU 131 Status: SYSb
ConType: Con  Status: Active
```

**Note:** The SPECCONN status appears on the last line of the MAP response to the right of the Status field. In the example above, the SPECCONN status is Active.

- 3 Record the response information in step 2 for the connection.
- 4 Your next action depends on the status of the LCME, network links, NIU, C-bus port, and the XLIU. Your next action also depends on the status of the SPECCONN connection for the B-channel that is PSU.

---

| If                                 | Do      |
|------------------------------------|---------|
| the LCME is out of service         | step 13 |
| the NET links are out of service   | step 16 |
| the NIU is out of service          | step 19 |
| the C-bus port is out of service   | step 22 |
| the XLIU is out of service         | step 25 |
| the SPECCONN status is PMBusy      | step 5  |
| the SPECCONN status is Maintenance | step 6  |
| the SPECCONN status is NoInteg     | step 7  |
| the SPECCONN status is InActive    | step 7  |
| all of the above are in service    | step 28 |

---

## Line state is Packet service unavailable (continued)

- 5 One of the nodes in the connection is busy. Wait for the node to return to service.

**Note:** Wait approximately two minutes.

| If                                 | Do     |
|------------------------------------|--------|
| the SPECCONN status remains PMBusy | step 7 |
| the SPECCONN status changes        | step 2 |

- 6 The connection performs a maintenance action. Wait for the maintenance action to finish.

**Note:** Wait approximately five minutes.

| If                                      | Do     |
|-----------------------------------------|--------|
| the SPECCONN status remains Maintenance | step 7 |
| the SPECCONN status remains Maintenance | step 2 |

- 7 To determine the status of the SPECCONN segments, type  
>QSCONN SEG XSGCHNL xsg\_no chnl\_no  
and press the Enter key.

where

**xsg\_no**

is the XSG number (0 to 749) determined in step 2

**chnl\_no**

is the channel number (0 to 31) determined in step 2

Example input:

```
>QSCONN SEG XSGCHNL 2 7
```

Example of a MAP response:

| SEG | ENDPOINT1            | ENDPOINT2              | CONTYPE | STATUS |
|-----|----------------------|------------------------|---------|--------|
| 0   | XSGCHNL 2 7          | XPM_CSIDE NIU 2 2 2    | Con     | Inact  |
| 1   | JNET 1 58 5          | JNET 3 51 7            | Con     | Act    |
| 2   | XPM_CSIDE LTC 1 12 6 | XPM_PSIDE LTC 1 11 24  | Con     | Act    |
| 3   | LCM_CSIDE 10 24      | ISLC HOST 7 1 15 10 B1 | Con     | Act    |

- 8 Find the SPECCONN segment that has faults.

**Note:** For example, the response in step 7 indicates that all SPECCONN segments are in service, except the XSG to NIU segment. The XSG to

**Line state is  
Packet service unavailable** (continued)

NIU segment is inactive. The response indicates either a XLIU has faults or a NIU has faults.

| <b>If the bad segment</b> | <b>Do</b> |
|---------------------------|-----------|
| is with the LCME          | step 9    |
| is with the LGC           | step 9    |
| is with the LTC           | step 9    |
| is with the NET           | step 11   |
| is with the NIU           | step 9    |
| is with the XLIU          | step 9    |

**9** Perform the correct LCME, LGC, LTC, NIU, or XLIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**10** Go to step 12.

**11** Perform the correct NET alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**12** To determine the status of the SPECCONN segments, type  
`>QSCONN SEG XSGCHNL xsg_no chnl_no`  
 and press the Enter key.

where

**xsg\_no**

is the XSG number (0 to 749) determined in step 2

**chnl\_no**

is the channel number (0 to 31) determined in step 2

Example input:

`>QSCONN SEG XSGCHNL 2 7`

Example of a MAP response:

| SEG | ENDPOINT1            | ENDPOINT2              | CONTYPE | STATUS |
|-----|----------------------|------------------------|---------|--------|
| 0   | XSGCHNL 2 17         | XPM_CSIDE NIU 2 2 2    | Con     | Act    |
| 1   | JNET 1 58 5          | JNET 3 51 7            | Con     | Act    |
| 2   | XPM_CSIDE LTC 1 12 6 | XPM_PSIDE LTC 1 11 24  | Con     | Act    |
| 3   | LCM_CSIDE 10 24      | ISLC HOST 7 1 15 10 B1 | Con     | Act    |

| <b>If</b>                             | <b>Do</b> |
|---------------------------------------|-----------|
| status of the SPECCON segments is Act | step 2    |

**Line state is  
Packet service unavailable** (continued)

| <b>If</b> | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | status of the SPECCON segments is other than listed here                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           | step 78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>13</b> | <p>To post the LCME that has faults, type</p> <pre>&gt;MAPCI;MTC;PM;POST LCME frame_no unit_no</pre> <p>and press the Enter key.</p> <p>where</p> <p style="padding-left: 40px;"><b>frame_no</b><br/>is the frame number (0 to 511) used in step 1</p> <p style="padding-left: 40px;"><b>unit_no</b><br/>is the unit number (0 or 1) used in step 1</p> <p>Example input:</p> <pre>&gt;MAPCI;MTC;PM;POST LCME 7 1</pre> <p>Example of a MAP:</p> <pre>LCME HOST 7 1 SysB Links OOS: Cside 5 Unit0: SysB Unit1: SysB 11 11 11 RG: Uneq Drwr: 01 23 45 67 89 01 23 45 .. .. .. .. .. .. .. ..</pre> |
| <b>If</b> | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           | the LCME is out of service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|           | step 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|           | the LCME is in service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | step 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>14</b> | Perform the correct LCME alarm clearing procedure in <i>Alarm Clearing and Performance Monitoring Procedures</i> . Complete the procedure and return to this point.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>15</b> | Go to step 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>16</b> | <p>To post the NET links that have faults, type</p> <pre>&gt;MAPCI;MTC;NET;LINKS link_no</pre> <p>and press the Enter key.</p> <p>where</p> <p style="padding-left: 40px;"><b>link_no</b><br/>is the link number (0 to 31) determined in step 2 on the line of the response that follows NET</p>                                                                                                                                                                                                                                                                                                  |

**Line state is  
Packet service unavailable** (continued)

*Example of a MAP:*

```

Net          11111 11111 22222 22222 33
Plane 01234 56789 01234 56789 01234 56789 01
  0  .....
  1  .....
Net 3 Links          11 111111111 2222 2222 2233
Plane 0123 4567 8901 2345 6789 0123 4567 8901
  0  .....
  1  .....P .....
Links 3333 3333 4444 4444 4455 5555 5555 6666
Plane 2345 6789 0123 4567 8901 2345 6789 0123
  0  .....S .....
  1  .....S .....
    
```

| If                               | Do      |
|----------------------------------|---------|
| the NET links are out of service | step 17 |
| the NET links are in service     | step 2  |

**17** Perform the correct NET alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**18** Go to step 2.

**19** To post the NIU that has faults, type  
**>MAPCI;MTC;PM;POST NIU unit\_no**

and press the Enter key.

where

**unit\_no**

is the unit number (0 to 99) determined in step 2 on the line of the response that follows NIU

*Example of a MAP response:*

**Line state is  
Packet service unavailable** (continued)

NIU 1: ISTb  
Unit 0: InAct ISTb  
Unit 1: Act ISTb

| If                        | Do      |
|---------------------------|---------|
| the NIU is out of service | step 20 |
| the NIU is in service     | step 2  |

**20** Perform the correct NIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**21** Go to step 2.

**22** To access the NIU Devices (C-bus) level of the MAP, type  
>MAPCI;MTC;PM;POST NIU unit\_no;DEVICES  
and press the Enter key.

where

**unit\_no**

is the unit number (0 to 99) determined in step 2 on the line of the response that follows NIU

Example of a MAP response:

```
NIU 2: IstbUnit 0: Act IstbUnit 1: InAct Istb Net Links 0 1 2 3
CBUS ports OOSPB 0 .. S . 1PB 1 .. S . 1
```

| If                                 | Do      |
|------------------------------------|---------|
| the C-bus ports are out of service | step 23 |
| the C-bus ports are in service     | step 2  |

**23** A C-bus port fault produces an NIU alarm. Perform the correct NIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**24** Go to step 2.

**25** To post the XLIU that has faults, type  
>MAPCI;MTC;PM;POST XLIU unit\_no  
and press the Enter key.

where

**unit\_no**

is the unit number (0 to 999) determined in step 2 on the line of the response that follows XLIU

Example of a MAP response:

**Line state is  
Packet service unavailable** (continued)

XLIU 131 SysB

| If                         | Do      |
|----------------------------|---------|
| the XLIU is out of service | step 26 |
| the XLIU is in service     | step 2  |

**26** Perform the correct XLIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**27** Go to step 2.

**28** To perform a B-channel continuity test on the posted loop, type

**>MAPCI ;MTC ;LNS ;LTP ;LTPISDN ;BCHCON**

and press the Enter key.

*Example of a MAP response:*

WARNING - Action may affect Packet Data Service

Do you wish to continue ?

Please confirm ("YES", "Y", "NO", or "N"):

**29** To confirm the command, type

**>YES**

and press the Enter key.

*Example of a MAP response:*

B1 Bb cont failed, invalid XLIU stateB1 Bb chnl RTS failed, SPECCONN status not active

| If                     | Do      |
|------------------------|---------|
| the BCHCON test passed | step 30 |
| the BCHCON test failed | step 78 |

**30** To determine the state of the other B-channel, type

**>POST L frame\_no unit\_no drawer\_no circuit\_no bchnl**

and press the Enter key.

*where*

**frame\_no**

is the frame number (0 to 511) for the B-channel

**unit\_no**

is the unit number (0 to 9) for the B-channel

**drawer\_no**

is the drawer number (0 to 99) for the B-channel

**Line state is  
Packet service unavailable** (continued)

**circuit\_no**

is the circuit number (0 to 99) for the B-channel

**bchnl**

is the B-channel (B1 or B2)

*Example input:*

>POST L 7 1 15 10 B2

*Example of a MAP response:*

```
LCC PTY RNG .....LEN..... DN STA F S LTA TE RESULT
ISDN B2 HOST 7 1 15 10 742 8102 IDL
```

**Note:** In the example above, the B-channel B2 is idle.

| <b>If</b>                  | <b>Do</b> |
|----------------------------|-----------|
| the B-channel state is PSU | step 2    |
| the B-channel state is IDL | step 32   |
| other than listed here     | step 31   |

**31** Perform the correct trouble locating procedure in this book.

**32** To post the damaged directory number, type

>POST D dn

and press the Enter key.

*where*

**dn**

is the DN that has faults determined in step 30 on the response line under DN

*Example input:*

>POST D 7428118

*Example of a MAP:*

```
LCC PTY RNG .....LEN..... DN STA F S LTA TE RESULT
ISDN LOOP HOST 7 1 15 10 742 8118 PSU
```

**Note:** In the example above, the DN 742-8118 is PSU.

| <b>If</b>                              | <b>Do</b> |
|----------------------------------------|-----------|
| the DN state is PSU                    | step 34   |
| the DN state is IDL                    | step 79   |
| the DN state is other than listed here | step 33   |

**Line state is  
Packet service unavailable** (continued)

- 33 Perform the correct trouble locating procedure.
- 34 Determine the status of the LTC, LCME, DCH, ISG Bd channel, and SPECCONN connection for the D-channel. To determine the status, type **>CKTLOC** and press the Enter key.

*Example of a MAP response:*

```
LCC PTY RNG .....LEN..... DN STA F S LTA TE RESULT
ISDN LOOP HOST 7 1 15 10 742 8118 PSU
```

```
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 01 C07 LCEI 7 32 LCME 7 1 15:10 BX26AA
```

```
LTC 1 Status: ISTb PSLink: 11 Status: OK
LCME Status: ISTb CSLink: 1
DCH 51 Status: ISTb ISG 203 CHNL 7 Status: SYSB
ConType: Con Status: Active TDM: 2
```

**Note:** The SPECCONN status appears on the last line of the MAP to the right of the Status field. In the example above, the SPECCONN status is Active.

- 35 Record the PM names and numbers from the step 34 response for the connection. The information appears below the Site header and response line.
- 36 Your next action depends on the status of the LTC, LCME, DCH, ISG Bd channel, and SPECCONN connection for the D-channel.

| If                                 | Do      |
|------------------------------------|---------|
| the LTC or LGC is out of service   | step 47 |
| the LCME is out of service         | step 50 |
| the DCH is out of service          | step 53 |
| the ISG CHNL is out of service     | step 56 |
| the SPECCONN status is PM-Busy     | step 37 |
| the SPECCONN status is Maintenance | step 38 |
| the SPECCONN status is NoInteg     | step 39 |

**Line state is  
Packet service unavailable** (continued)

|           | <b>If</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Do</b>   |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|---------|---------|---------|---------|----------|-----------|---------|----------|---------|-----------|-----------|-----------|--|--|----------|-------------|-------------|--|--|---------|---------|---------|----------|---------|
|           | the SPECCONN status is In-Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | step 39     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | all of the above are in service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | step 59     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| <b>37</b> | One of the nodes in the connection is busy. Wait for the node to return to service.<br><b>Note:</b> Wait approximately two minutes.                                                                                                                                                                                                                                                                                                                                                                                                         |             |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | the SPECCON status remains PMBusy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | step 39     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | the SPECCON status changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | step 34     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| <b>38</b> | The connection performs a maintenance action. Wait for the maintenance action to finish.<br><b>Note:</b> Wait approximately two minutes.                                                                                                                                                                                                                                                                                                                                                                                                    |             |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | the SPECCONN status remains Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | step 39     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | the SPECCONN status changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | step 34     |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| <b>39</b> | To determine the XSG for the DN, type<br>>QPHF DN dn<br>and press the Enter key.<br>where<br>dn<br>is the directory number<br><i>Example input:</i><br>>QPHF DN 7428118<br><i>Example of a MAP response:</i>                                                                                                                                                                                                                                                                                                                                |             |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | DN INFORMATION (D Channel)<br>-----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
|           | <table style="width: 100%; border: none;"> <tr> <td>NUI: NO</td> <td>FSA: NO</td> <td>RCA: NO</td> <td>TCN: NO</td> <td>ICB: NO</td> </tr> <tr> <td>FCPN: NO</td> <td>RPOAB: NO</td> <td>LCP: NO</td> <td>CUGS: NO</td> <td>OCB: NO</td> </tr> <tr> <td>IMPS: 128</td> <td>OMPS: 128</td> <td>NDPS: YES</td> <td></td> <td></td> </tr> <tr> <td>DTCA: NO</td> <td>IDTCA: 9600</td> <td>ODTCA: 9600</td> <td></td> <td></td> </tr> <tr> <td>SLCN: 1</td> <td>NPVC: 0</td> <td>NOWI: 0</td> <td>NNRC: 10</td> <td>NOWO: 0</td> </tr> </table> |             | NUI: NO  | FSA: NO | RCA: NO | TCN: NO | ICB: NO | FCPN: NO | RPOAB: NO | LCP: NO | CUGS: NO | OCB: NO | IMPS: 128 | OMPS: 128 | NDPS: YES |  |  | DTCA: NO | IDTCA: 9600 | ODTCA: 9600 |  |  | SLCN: 1 | NPVC: 0 | NOWI: 0 | NNRC: 10 | NOWO: 0 |
| NUI: NO   | FSA: NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RCA: NO     | TCN: NO  | ICB: NO |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| FCPN: NO  | RPOAB: NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LCP: NO     | CUGS: NO | OCB: NO |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| IMPS: 128 | OMPS: 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NDPS: YES   |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| DTCA: NO  | IDTCA: 9600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ODTCA: 9600 |          |         |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |
| SLCN: 1   | NPVC: 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NOWI: 0     | NNRC: 10 | NOWO: 0 |         |         |         |          |           |         |          |         |           |           |           |  |  |          |             |             |  |  |         |         |         |          |         |

## Line state is Packet service unavailable (continued)

PLSQ: MOD8 IPLWS: 7 OPLWS: 7 NDWS: YES  
ICS: NO

MAPPING

-----

LTID: PKT 118  
CHANNEL: 5 X.25 Bd  
XSG: 4

- 40** Record the XSG and channel numbers for the DN.
- 41** To determine the status of the SPECCONN segments, type  
>QSCONN SEG XSGCHNL xsg\_no chnl\_no  
and press the Enter key.

where

**xsg\_no**  
is the XSG number (0 to 749) determined in step 39

**chnl\_no**  
is the channel number (0 to 31) determined in step 39

Example input:

```
>QSCONN SEG XSGCHNL 4 5
```

Example of a MAP response:

| SEG | ENDPOINT1            | ENDPOINT2            | CONTYPE | STATUS |
|-----|----------------------|----------------------|---------|--------|
| 0   | XSGCHNL 4 5          | XPM_CSIDE NIU 1 2 25 | Con     | Inact  |
| 1   | JNET 1 51 25         | JNET 3 51 4          | Con     | Act    |
| 2   | XPM_CSIDE LTC 1 12 4 | DCHCHNL 203 30       | Con     | Act    |

- 42** Find the SPECCONN segment that has faults.

**Note:** For example, the MAP response in step 41 indicates that all the SPECCONN segments are in service, except the XSG to NIU segment. The XSG to NIU segment is inactive. This response indicates either a XLIU that has faults or a NIU that has faults.

| If the damaged segment | Do      |
|------------------------|---------|
| is with the DCH        | step 43 |
| is with the LGC        | step 43 |
| is with the LTC        | step 43 |
| is with the NET        | step 45 |
| is with the NIU        | step 43 |
| is with the XLIU       | step 43 |

**Line state is  
Packet service unavailable** (continued)

**43** Perform the correct LCME, LGC, LTC, NIU, or XLIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**44** Go to step 46.

**45** Perform the correct NET alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**46** To determine the status of the SPECCONN segment, type

```
>QSCONN SEG XSGCHNL xsg_no chnl_no
```

and press the Enter key.

where

**xsg\_no**

is the XSG number (0 to 749) determined in step 39

**chnl\_no**

is the channel number (0 to 31) determined in step 39

Example input:

```
>QSCONN SEG XSGCHNL 4 5
```

Example of a MAP response:

| SEG | ENDPOINT1            | ENDPOINT2            | CONTYPE | STATUS |
|-----|----------------------|----------------------|---------|--------|
| 0   | XSGCHNL 4 5          | XPM_CSIDE NIU 1 2 25 | Con     | Act    |
| 1   | JNET 1 51 25         | JNET 3 51 4          | Con     | Act    |
| 2   | XPM_CSIDE LTC 1 12 4 | DCHCHNL 203 30       | Con     | Act    |

**If all SPECCONN segments**

**Do**

are Act

step 34

are other than listed here

step 78

**47** To post the LTC or LGC that have faults, type

```
>MAPCI;MTC;PM;POST pm unit_no
```

and press the Enter key.

where

**pm**

is the peripheral module (LTC or LGC) determined in step 34

**unit\_no**

is the unit number (0 to 99) determined in step 34

Example input:

```
>MAPCI;MTC;PM;POST LTC 1
```

**Line state is Packet service unavailable** (continued)

*Example of a MAP:*

LTC 1 ISTb Links\_OOS: CSide 0 , PSide 3  
 Unit0: Act ISTb  
 Unit1: Inact ISTb

| If                               | Do      |
|----------------------------------|---------|
| the LTC or LGC is out of service | step 48 |
| the LTC or LGC is in service     | step 34 |

**48** Perform the correct LTC or LGC alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**49** Go to step 34.

**50** To post the LCME that has faults, type

`>MAPCI;MTC;PM;POST LCME frame_no unit_no`

and press the Enter key.

where

**frame\_no**

is the frame number (0 to 511) used in step 1

**unit\_no**

is the unit number (0 or 1) used in step 1

*Example of a MAP:*

LCME HOST 67 1 SysB Links OOS: Cside 0  
 Unit0: SysB  
 Unit1: SysB 11 11 11 RG: Uneq  
 Drwr: 01 23 45 67 89 01 23 45  
 .. .. .. .. .. .. .. ..

| If                         | Do      |
|----------------------------|---------|
| the LCME is out of service | step 51 |
| the LCME is in service     | step 34 |

**51** Perform the correct LCME alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**52** Go to step 34.

**53** To post the DCH that has faults, type

`>MAPCI;MTC;PM;POST pm pm_unit_no;DCH;POST dch_unit_no`

and press the Enter key.

## Line state is Packet service unavailable (continued)

where

**pm**

is the peripheral module (LTC or LGC) recorded in step 35

**pm\_unit\_no**

is the peripheral module unit number (0 to 99) recorded in step 35

**dch\_unit\_no**

is the DCH unit number (0 to 99) recorded in step 35

Example input:

```
>MAPCI;MTC;PM;POST LTC 1;DCH;POST 51
```

Example of a MAP:

```
LTC 1 ISTb Links_OOS: CSide 0 , PSide 3
```

```
Unit0: Act ISTb
```

```
Unit1: Inact ISTB
```

```
DCH      0  0  0  3  0  0
```

```
DCH 51 ISG 203 ISTb LTC 1 port 15
```

| If                        | Do      |
|---------------------------|---------|
| the DCH is out of service | step 54 |
| the DCH is in service     | step 34 |

**54** Perform the correct DCH alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**55** Go to step 34.

**56** To post the ISG that has faults, type

```
>MAPCI;MTC;PM;POST pm pm_unit_no;ISG;POST isg_unit_no
```

and press the Enter key.

where

**pm**

is the peripheral module (LTC or LGC) recorded in step 35

**pm\_unit\_no**

is the peripheral module unit number (0 to 99) recorded in step 35

**isg\_unit\_no**

is the ISG unit number (0 to 255) recorded in step 35

Example input:

```
>MAPCI;MTC;PM;POST LTC 1;ISG;POST 203
```

Example of a MAP response:

**Line state is  
Packet service unavailable** (continued)

LTC 1 ISTb Links\_OOS: CSide 0 , PSide 3  
Unit0: Act ISTb  
Unit1: Inact ISTB

ISG 1111111111 2222222222 33  
123456789 0123456789 0123456789 01  
..... S.

ISG 203 DCH 51 ISTb LTC 1 port 15

| If                        | Do      |
|---------------------------|---------|
| the DCH is out of service | step 57 |
| the DCH is in service     | step 34 |

**57** ISG faults produce a DCH alarm. Perform the correct DCH alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

**58** Go to step 34.

**59** To determine the XSG for the DN, type

>QPHF DN dn  
and press the Enter key.

where

dn  
is the directory number

Example input:

>QPHF DN 7428118

Example of a MAP response:

DN INFORMATION (D Channel)

```

-----
NUI: NO FSA: NO RCA: NO TCN: NO ICB: NO
FCPN: NO RPOAB: NO LCP: NO CUGS: NO OCB: NO
IMPS: 128 OMPS: 128 NDPS: YES
DTCA: NO IDTCA: 9600 ODTCA: 9600
SLCN: 1 NPVC: 0 NOWI: 0 NNRC: 10 NOWO: 0
PLSQ: MOD8 IPLWS: 7 OPLWS: 7 NDWS: YES
ICS: NO

```

MAPPING

-----  
LTID: PKT 118  
CHANNEL: 5 X.25 Bd  
XSG: 4

**Line state is  
Packet service unavailable** (continued)

**60** Record the XSG and channel numbers from the response in step 59 for the DN.

**61** To determine the NIU for the DN, type  
`>QSCONN SEG XSGCHNL xsg_no chnl_no`  
 and press the Enter key.

where

**xsg\_no**  
 is the XSG number (0 to 749) recorded in step 60

**chnl\_no**  
 is the channel number (0 to 31) recorded in step 60

Example input:

`>QSCONN SEG XSGCHNL 4 5`

Example of a MAP response:

| SEG | ENDPOINT1            | ENDPOINT2            | CONTYPE | STATUS |
|-----|----------------------|----------------------|---------|--------|
| 0   | XSGCHNL 4 5          | XPM_CSIDE NIU 1 2 25 | Con     | PMB    |
| 1   | JNET 1 51 25         | JNET 3 51 4          | Con     | Act    |
| 2   | XPM_CSIDE LTC 1 12 4 | DCHCHNL 203 30       | Con     | Act    |

**Note:** In the example above, the NIU associated with the D-channel is NIU 1.

**62** Record the NIU unit number from the response in step 61 for the connection. This information appears below the ENDPOINT2 header and in the XSGCHNL response line.

**63** To determine the state of the NIU, type  
`>MAPCI;MTC;PM;POST NIU unit_no`  
 and press the Enter key.

where

**unit\_no**  
 is the unit number (0 to 99) recorded in step 62

Example of a MAP:

NIU 1: SYSb  
 Unit 0: InAct SYSb  
 Unit 1: Act SYSb

| If                        | Do      |
|---------------------------|---------|
| the NIU is in service     | step 65 |
| the NIU is not in service | step 64 |

## Line state is Packet service unavailable (continued)

---

**64** Perform the correct procedure in *Alarm Clearing and Performance Monitoring Procedures*. to clear NIU alarm. Complete the procedure and return to this point.

**65** To determine the XLIU for the XSG, type

```
>QPHF XSG xsg_no
```

and press the Enter key.

where

**xsg\_no**

is the XSG number (0 to 749) recorded in step 60

Example of a MAP response:

XSG INFORMATION

```
-----  
XSG EXT INDEX: 4    CURRENT NUMBER OF LINKS: 54  
XLIU INDEX: 124    MAXIMUM NUMBER OF CHANNELS:30
```

MAPPING

```
-----  
CHANNEL: 1 X.25 PB  
CHANNEL: 2 X.25 PB  
CHANNEL: 3 X.25 PB  
CHANNEL: 4 X.25 Bd  
CHANNEL: 5 X.25 Bd  
CHANNEL: 6 X.75 B  
CHANNEL: 7 X.75 B  
CHANNEL: 8 X.75 B  
CHANNEL: 9 X.75 B  
CHANNEL: 10 X.75 B  
CHANNEL: 11 X.75 B
```

**66** Record the XLIU unit number next to the XLIU INDEX header in the response in step 65.

**67** To post the XLIU, type

```
>MAPCI;MTC;PM;POST XLIU unit_no
```

and press the Enter key.

where

**unit\_no**

is the unit number (0 to 999) recorded in step 66

Example of a MAP:

```
XLIU 124 SysB
```

---

| If the XLIU   | Do      |
|---------------|---------|
| is in service | step 69 |

---

**Line state is  
Packet service unavailable** (continued)

| If the XLIU        | Do                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is out of service  | step 68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>68</b>          | Perform the correct XLIU alarm clearing procedure in <i>Alarm Clearing and Performance Monitoring Procedures</i> . Complete the procedure and return to this point.                                                                                                                                                                                                                                                                                                                                     |
| <b>69</b>          | To perform a D-channel continuity test between the DCH and the line card of the posted loop, type<br><pre>&gt;MAPCI ;MTC ;LNS ;LTP ;LTPISDN ;DCHCON</pre> and press the Enter key.<br><i>Example of a MAP response:</i><br>WARNING - Action may affect Packet Data Service<br>Do you wish to continue ?<br>Please confirm ("YES", "Y", "NO", or "N"):                                                                                                                                                   |
| <b>70</b>          | To confirm the response, type<br><pre>&gt;YES</pre> and press the Enter key.<br><i>Example of a MAP response:</i><br>DCH continuity test passed                                                                                                                                                                                                                                                                                                                                                         |
| If the DCHCON test | Do                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| passed             | step 71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| failed             | step 78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>71</b>          | To post the ISG recorded in step 35, type<br><pre>&gt;MAPCI ;MTC ;PM ;POST pm pm_unit_no ;ISG ;POST isg_unit_no</pre> and press the Enter key.<br><i>where</i><br><b>pm</b><br>is the peripheral module (LTC or LGC) recorded in step 35<br><b>pm_unit_no</b><br>is the peripheral module unit number (0 to 99) recorded in step 35<br><b>isg_unit_no</b><br>is the ISG unit number (0 to 255) recorded in step 35<br><i>Example input:</i><br><pre>&gt;MAPCI ;MTC ;PM ;POST LTC 1 ;ISG ;POST 203</pre> |

## Line state is Packet service unavailable (continued)

---

*Example of a MAP response:*

```
LTC 1 ISTb Links_OOS: CSide 0 , PSide 3
Unit0: Act ISTb
Unit1: Inact ISTb
```

```
ISG          1111111111 2222222222 33
123456789 0123456789 0123456789 01
..... S.
```

```
ISG 203 DCH 51 ISTb LTC 1 port 15 DCH Chnls BSY
```

72

To determine the Bd channel for the LEN, type

```
>QLEN frame_no unit_no drawer_no circuit_no
```

and press the Enter key.

*where*

**frame\_no**

is the frame number (0 to 511) for the B-channel used in step 1

**unit\_no**

is the unit number (0 to 9) for the B-channel used in step 1

**drawer\_no**

is the drawer number (0 to 99) for the B-channel used in step 1

**circuit\_no**

is the circuit number (0 to 99) for the B-channel used in step 1

*Example of a MAP response:*

```
LEN:  HOST 7 1 15 10
ISG: 203 DCH: 51 ISG BRA CHANNEL: 7
CARD CODE: BX26AA  PADGRP: NPDGP
PM NODE NUMBER : 131
PM TERMINAL NUMBER : 487
LEN HAS ONE NAILEDUP B-CHANNEL
```

| TEI | LTID    | CS | PS | BCH/ISG Bd |
|-----|---------|----|----|------------|
| --- | -----   | -- | -- | -----      |
| 1   | PKT 118 | N  | D  | ISG Bd: 30 |
| 2   | PKT 119 | N  | D  | ISG Bd: 30 |
| 3   | PKT 120 | N  | D  | ISG Bd: 30 |
| 4   | PKT 121 | N  | D  | ISG Bd: 30 |
| 5   | PKT 122 | N  | D  | ISG Bd: 30 |
| 6   | PKT 123 | N  | D  | ISG Bd: 30 |
| 7   | PKT 124 | N  | D  | ISG Bd: 30 |
| -   | PKT 102 | N  | B  | B1         |

**Note:** In the example above, the Bd channel is 30.

**Line state is  
Packet service unavailable (end)**

**73** Record the Bd channel number below the BCH/ISG Bd header in the response in step 72.

**74** To manually busy the Bd channel between the DCH (ISG) and the XLIU (XSG), type

>BSY bd \_chnl\_no

and press the Enter key.

where

**bd\_chnl\_no**

is the Bd channel number (30 or 31) recorded in step 73

*Example of a MAP response:*

27 associated LTIDs will be affected  
Please confirm ("YES", "Y", "NO", or "N"):

**75** To confirm the command, type

>YES

and press the Enter key.

*Example of a MAP response:*

ISG 203 channel 30 BD Bsy Passed

**76** To perform a continuity test on the Bd channel, type

>CONT bd \_chnl\_no

and press the Enter key.

where

**bd\_chnl\_no**

is the Bd channel number (30 or 31) recorded in step 73

*Example of a MAP response:*

XSG loop point set passed  
Loop point removed  
Internal continuity test passed

| If the CONT test | Do      |
|------------------|---------|
| passed           | step 77 |
| failed           | step 78 |

**77** Terminals at the customer premises end have possible design and connection problems. Terminals with these problems will not allow layer two and layer three to appear. As a result, PSU appears. Direct the customer or the service representative to troubleshoot the customer premises end.

**78** For additional help, contact the next level of support.

**79** The procedure is complete.

## **Manually switching to a backup D-channel ISDN PRI primary and backup D-channels**

---

### **Application**

Use this procedure to switch manually from a primary D-channel to a backup D-channel.

### **Definition**

The primary D-channel is in the in-service (INS) state and the backup D-channel is in the standby (STB) state. The switch can generate log reports ISDN110 or ISDN113.

In a problem condition, the system automatically switches the activities on the D-channels. For example, an automatic switch occurs when

- a carrier or trunk at the far end office fails
- when hardware problems occur at the DMS-100 switch

When you busy an in-service D-channel, a switch of activities to the standby D-channel occurs automatically.

### **Common procedures**

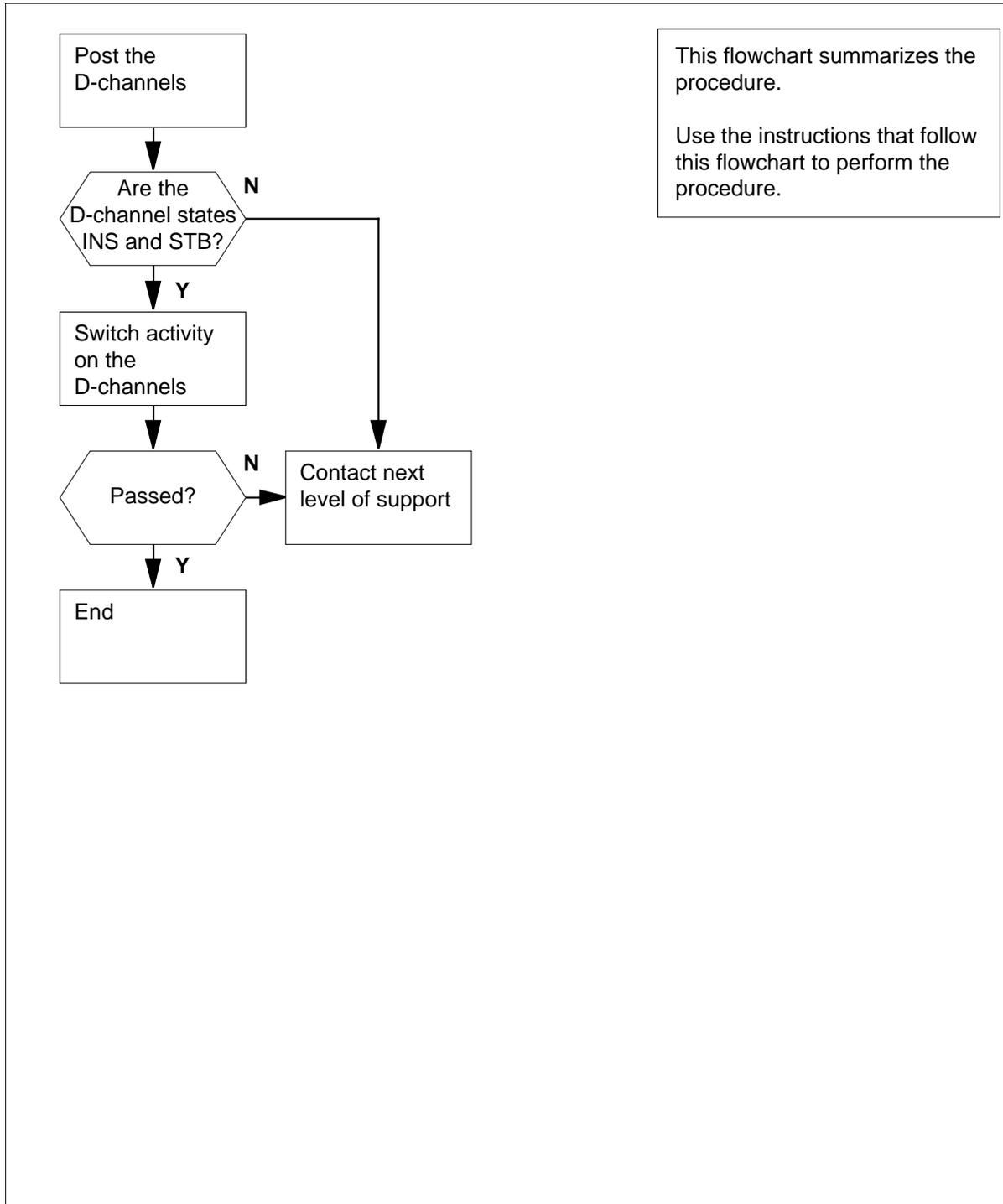
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Manually switching to a backup D-channel ISDN PRI primary and backup D-channels (continued)

### Summary of Manually switching to a backup D-channel



---

## Manually switching to a backup D-channel ISDN PRI primary and backup D-channels (continued)

---

### Manually switching to a backup D-channel

#### At the MAP display

- 1 From office records or operating company personnel, determine the name of the trunk group.
- 2 To access the TTP level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH**  
and press the Enter key.
- 3 To post the D-channels, type  
**>POST GD group\_name**  
and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

**>POST GD F5678935PAV**

Example of a MAP response:

```
POST      1      DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE  PM NO      COM LANG STA S R DOT TE RESULT
2W IS IS LTC 2 3 24 F5678935PAV D1 INS
          LTC 2 5 24 F5678935PAV D2 STB R
```

```
SHORT CLLI IS: F56789
```

```
OK,CKT POSTED
```

- 4 Determine the states of the D-channels.  
**Note:** The MAP lists the state of the D-channel on the right side of the DCHL header.

---

| <b>If</b>                                     | <b>Do</b> |
|-----------------------------------------------|-----------|
| one D-channel is INS and the other is STB     | step 5    |
| one D-channel is INS and the other is not STB | step 7    |
| neither D-channel is INS                      | step 7    |

---

---

## Manually switching to a backup D-channel ISDN PRI primary and backup D-channels (end)

---

5



**CAUTION**

**PRI service interruption**

The following step affects PRI service when the switch of activities occurs. Perform this procedure during periods of low traffic.

To switch activity on the D-channels, type

**>SWACT**

and press the Enter key.

*Example of a MAP response:*

```
WARNING: THIS WILL CAUSE D-CHANNEL SWACT
          AND AFFECT THE SERVICE.
```

Please confirm ("YES", "Y", "NO" or "N"):

6

To confirm the command, type

**>YES**

and press the Enter key.

| If the SWACT command | Do     |
|----------------------|--------|
| passed               | step 8 |
| failed               | step 7 |

7

For additional help, contact the next level of support.

8

The procedure is complete.

## **Modifying provisioned data for resource modules DMS-Spectrum Peripheral Module**

---

### **Application**

Use this procedure to modify the provisioned datafill for DMS-Spectrum Peripheral Modules (SPM) resource modules (RM), such as digital signal processors (DSP) and voice signal processors (VSP). Provisioned configuration data is changed in table MNCKTPAK.

Sparing actions between multiple RMs may have occurred since the original data download from the computing module (CM) to the common equipment module (CEM). Also, the services being provided by the RM may or may not be the same as the provisioned services for that RM.

### **Definition**

Perform the specific steps of the procedure to modify provisioned datafill for an RM.

### **Common procedures**

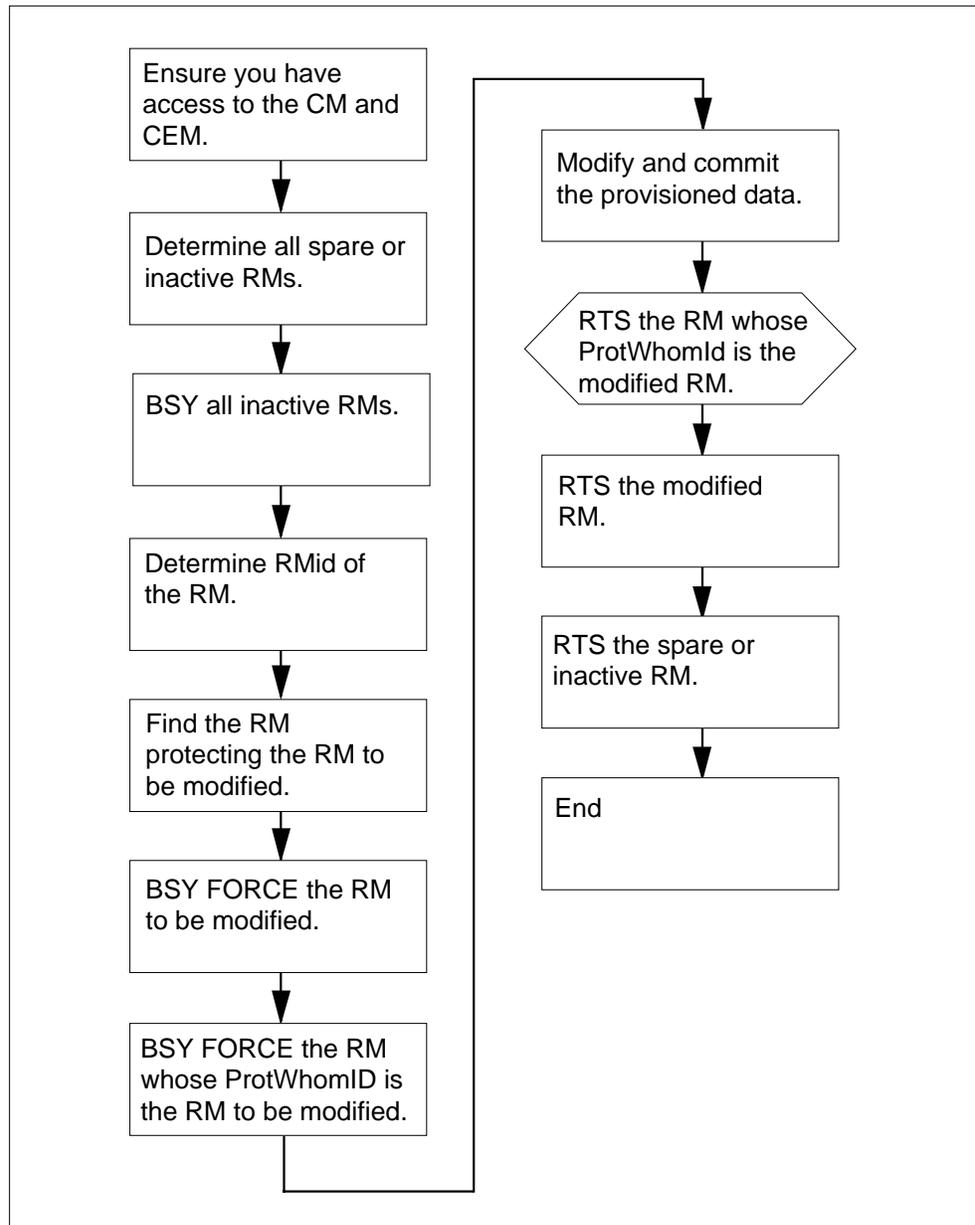
None

### **Action**

This procedure contains a summary flowchart and a list of specific steps. Use the flowchart as an overview of the procedure. Follow the specific steps to perform the procedure.

### **Overview of the procedure**

## Modifying provisioned data for resource modules DMS-Spectrum Peripheral Module (continued)



**Note:** For detailed information and definitions, refer to “Supplementary information,” “table MNCKTPAK,” in the appropriate Data Schema Reference Manual.

## Modifying provisioned data for resource modules DMS-Spectrum Peripheral Module (continued)

---

### Modifying provisioned data for resource modules

#### At the MAP terminal

- 1 Ensure you have access to both the CM and the CEM.
- 2 Determine all spare or inactive RMs in the same protection group as the RM to be modified by entering the following:

```
CI>table mncktpak
TABLE: MNCKTPAK
>lis all
```

**Note:** The RM whose datafill is to be changed belongs to a particular protection group. To prevent sparing actions from taking place while the datafill procedures are being executed, all inactive RMs in the same protection group as the RM to be modified must be busied. Use table MNCKTPAK to determine all inactive RMs that are in the same protection group and on the same SPM as the RM to be modified.

- 3 BSY all inactive RMs by entering the following:  

```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
```
- 4 Determine RMid of the RM to be modified.  
The RM whose provisioned data is to be modified must be a working RM. The RMid of this RM is determined by a combination of its shelf and slot numbers.  
RMid = (shelf number x 14) + slot number.
- 5 Find the RM that is protecting the services of the to-be-modified RM by entering the following:

```
CI> remlogin spm <<#> <<1|0>
```

You are now logged into the SPM debug shell.

Type `help' to see the available shell commands.

```
dSH> cd resman
```

```
dSH> configdata all verbose
```

#### Example:

In the following example, X is the ProtWhomId of RMid Y. This means that Y is currently configured with the provisioned data of X.

Service Configuration data for rmlD Y

Desired configuration

| COT | ECAN | DTMF | FTR | TONESYN | ABBIT | MF |
|-----|------|------|-----|---------|-------|----|
| 0   | 210  | 0    | 0   | 0       | 0     | 0  |

Actual configuration

| COT | ECAN | DTMF | FTR | TONESYN | ABBIT | MF |
|-----|------|------|-----|---------|-------|----|
| 0   | 210  | 0    | 0   | 0       | 0     | 0  |

This RM is currently protecting the services provisioned on RM X

## Modifying provisioned data for resource modules DMS-Spectrum Peripheral Module (end)

- 6** BSY FORCE the RM whose datafill is to be modified by entering the following:
- ```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
force
```
- To change datafill, the RM must be in the state MANB. Since the spare or inactive RM has already been busied, the BSY FORCE command may need to be used to change the state of this RM.
- 7** BSY FORCE the RM whose ProtWhomId is the RM to be modified by entering the following:
- ```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
force
```
- 8** Modify and commit the provisioned data for the RM in table MNCKTPAK for RM by entering the following:
- ```
CI>table mncktpak
TABLE: MNCKTPAK
>pos spm <<#> <<shelf#> <slot#>
> cha
> ...
```
- 9** RTS the RM whose ProtWhomId is the modified RM by entering the following:
- ```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
rts
```
- When the RM whose ProtWhomId is the modified RM is returned to service, it resumes protecting the services of the modified RM. Therefore, the RM will be configured with the new provisioned data of the modified RM.
- If the RM described in step 9 is the RM that was modified, go to step 11.
- 10** RTS the modified RM by entering the following:
- ```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
rts
```
- 11** RTS the spare or inactive RMs that were busied in Step 3 by entering the following:
- ```
CI> mapci;mtc;pm;post spm <<#>;select [DSP|VSP] <<#>;bsy
rts
```
- 12** The modification to the provisioned data is complete.

## Monitoring call processing busy trunk circuits

---

### Application

Use this procedure to monitor trunk circuits that are call processing busy (CPB). Monitor CPB trunk circuits for conditions like noise, transmit (TX) level problems, and receive (RX) level problems.

### Definition

This procedure monitors CPB trunk circuits. To monitor these circuits, the procedure establishes a three-party conference circuit. The conference circuit operates between the circuit in the control position, the circuit linked to it, and the headset circuit.

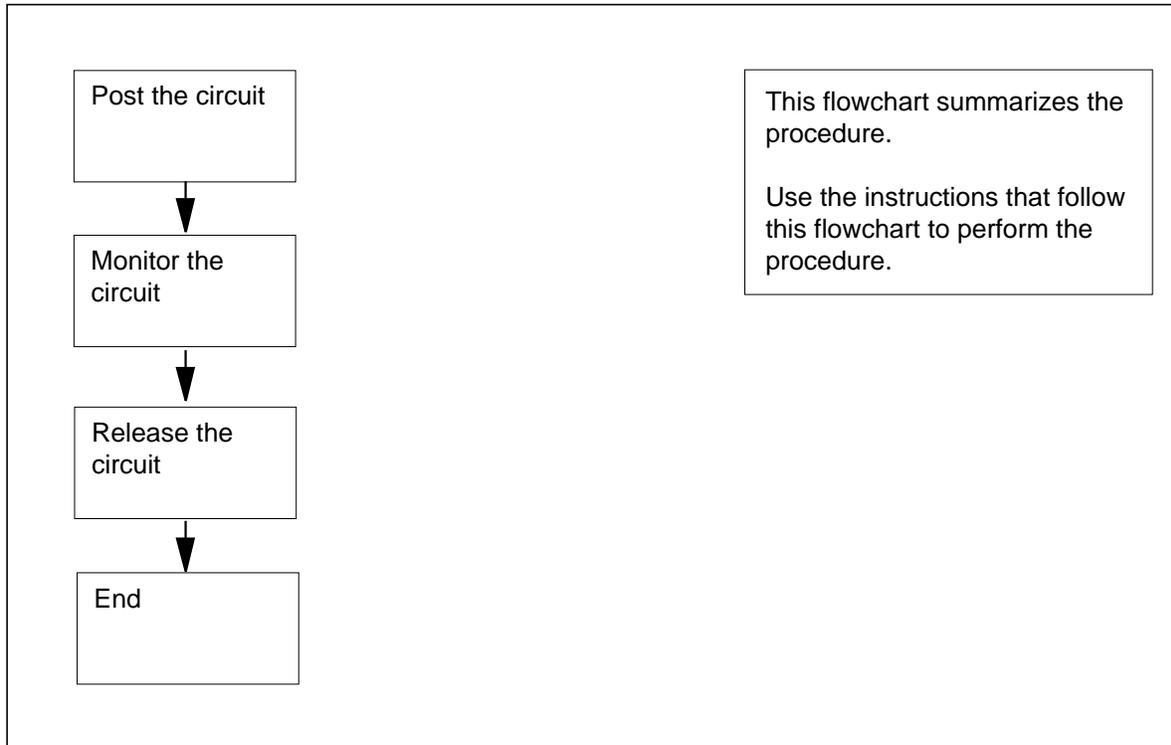
### Common procedures

There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

#### Summary of Monitoring call processing busy trunk circuits



---

## Monitoring call processing busy trunk circuits (continued)

---

### Monitoring call processing busy trunk circuits

#### *At the MAP terminal*

1 To access the MONITOR level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;MONITOR**  
 and press the Enter key.

2 Determine if you require a list of the different methods to post a trunk circuit.

| If you                | Do     |
|-----------------------|--------|
| require a list        | step 3 |
| do not require a list | step 5 |

3 To list the first circuit posting parameters, type  
**>POST**  
 and press the Enter key.

*Example of a MAP response:*

```

INVALID PARM 1, IT IS
{A,B,D,E,G,P,S,T,TB,TM,CPTERMERR,
BC,WB}
A - POST ALL CKT BY STATE IND. B - POST
BSYQ CKT OR LEAVE
OUT OFF SERVICE CKT IN POST SET.D -
POST DIGITAL CKT ON DEQ.
E - POST ECHO SUPR CKT ON DES. G - POST
A GRP OF CKT BY CLLI
P/TM - POST CKT ON PERIPHERAL MODULE. S
- SELECT CKT BY STATE
INDICATED FROM POST SET. T - POST
INDIVIDUAL CKT BY CLLI NAME.
TB - BY TROUBLE BUFFER. CPTERMERR -
POST CPTERMERR QUE
UE
BC - POST THE TRK CIRCUITS INVOLVED IN
A BROADCAST CALL
WB - POST THE TRK CIRCUITS INVOLVED IN
A WIDEBAND CALL
    
```

4 To list the second circuit posting parameters, type  
**>POST parm\_1**  
 and press the Enter key.

*where*

**parm\_1**  
 is the first circuit posting parameter

## Monitoring call processing busy trunk circuits (continued)

---

*Example input:*

>POST D

*Example of a MAP response:*

Next par is:  
<DEQNM> {DCM,

LTC,  
DTC,  
DCA,  
DCT,  
IDTC,  
ILTC,  
RCC,  
PDTC,  
TDTC,  
TLTC,  
TRCC,  
IAC,  
RCCI,  
DTCI,  
ICP,  
TMS,  
RCC2,  
SRCC}

Enter: <DEQNM>  
<DEQ\_NO>  
[ <CARR\_NO> ]  
[ <TS\_NO> ] [ <TO> ]  
<TS\_NO>

- 5** To post the circuits that you want to monitor, type

>POST parm\_1 parm\_2

and press the Enter key.

*where*

**parm\_1**  
is the first circuit posting parameter

**parm\_2**  
is the second circuit posting parameter

*Example input:*

>POST G MAIDBNR

*Example of a MAP response:*

---

## Monitoring call processing busy trunk circuits (end)

---

```

CKT TYPE      PM NO.      COM LANG
  STA S R DOT TE  RESULT
 2W S7 S7 DTC   0 3 1 MAIDBNR
 1  IDL
    
```

- 6** Wait for the circuit state (STA) to change to CPB.
- 7** To connect the headset trunk to the CPB circuit, type

**>MONTALK mode conn\_length**

and press the Enter key.

*where*

**mode**

is the monitoring mode, either talk (T) or listen (L)

**conn\_length**

is the connection length in minutes (1 to 36)

*Example input:*

**>MONTALK L 5**

*Example of a MAP response:*

```
OK, MONITOR TALK CONNECTION SET
```

- 8** Monitor the circuit.
- 9** To release the circuit, type

**>RLS**

and press the Enter key.

**Note:** If the circuit state (STA) changes, the monitor connection automatically releases.

---

| If the RLS command | Do      |
|--------------------|---------|
| passed             | step 11 |
| failed             | step 10 |

---

- 10** For additional help, contact the next level of support.
- 11** The procedure is complete.

## **Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels**

---

### **Application**

Use this procedure to perform an external continuity test on a DS-1 link.

### **Definition**

The external continuity test requires operating company personnel at the far-end office to create a DS-1 carrier loopback for you.

### **Common procedures**

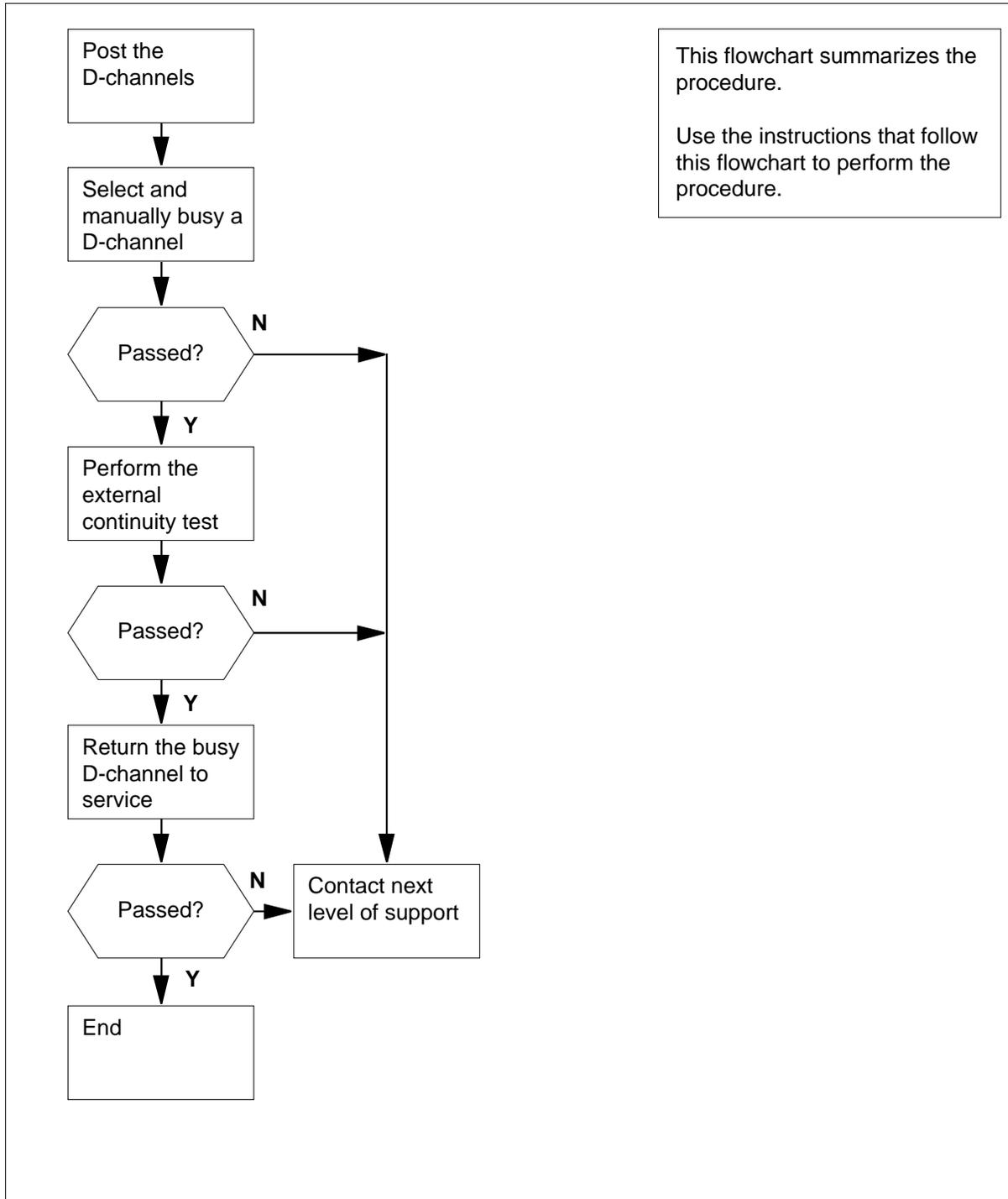
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels (continued)

### Summary of Performing an external continuity test on a DS-1 link



## Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels (continued)

---

### Performing an external continuity test on a DS-1 link.

#### At the MAP Terminal

- 1 From office records or operating company personnel, determine the name of the trunk group.
- 2 To access the PRADCH level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH**  
and press the Enter key.
- 3 To post the D-channels, type  
**>POST GD group\_name**  
and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

**>POST GD F5678935PAV**

Example of a MAP display:

```
POST      1      DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE   PM NO          COM LANG STA S R DOT TE RESULT
2W IS IS LTC 2 3 24 F5678935PAV D1 STB
          LTC 2 5 24 F5678935PAV D2 INS  R
```

Example of a MAP response:

```
SHORT CLLI IS: F56789
OK,CKT POSTED
```

- 4 Choose the D-channel for the external continuity test. Write down its identifier (D1 or D2).

**Note 1:** The MAP display lists the state of the D-channel on the right side of the DCHL header. The MAP display lists the identifier under the LANG header.

**Note 2:** In-service (INS) is the normal operation state for the primary D-channels. Standby (STB) is the normal operation state for the backup D-channels. The STB state occurs for a backup D-channel when the primary D-channel is INS.

**Note 3:** You must use the same identifier (D1 or D2) for all steps used in the external continuity test.

## Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels (continued)

5



**CAUTION**

**PRI service interruption**

The following step takes an in-service D-channel out of service. When you take an in service D-channel out of service, the backup D-channel automatically switches into service.

To manually busy the D-channel, type

**>BSY d\_channel**

and press the Enter key.

where

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

D1: STATE CHANGED

or

THIS WILL PUT DTCI 2 5 24 D2 OUT-OF-SERVICE.

Active calls will be killed

Please confirm ("YES", "Y", "NO" or "N"):

6

To confirm the command, type

**>YES**

and press the Enter key.

**Note:** The D-channel state changes to manual busy.

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 7  |
| failed             | step 12 |

7

Ask the operating company personnel at the far-end office to create a DS-1 loopback.

8

Operating company personnel at the far-end office will notify you when they establish a loopback. To perform an external continuity test after the operating company personnel notifies you, type

**>CONT EXT d\_channel**

and press the Enter key.

where

## Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels (end)

---

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

```
EXTERNAL CONTINUITY TEST STARTED  
D2: EXTERNAL CONTINUITY TEST PASSED
```

---

| <b>If the external continuity test</b> | <b>Do</b> |
|----------------------------------------|-----------|
| passed                                 | step 9    |
| failed                                 | step 11   |

---

**9** Ask the operating company personnel at the far-end office to remove the DS-1 loopback.

**10** To return the D-channel to service, type

```
>RTS d_channel
```

and press the Enter key.

*where*

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

```
D2: STATE CHANGED
```

---

| <b>If the RTS command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed (INS or STB state) | step 13   |
| failed                    | step 12   |

---

**11** Ask the persons at the far-end office to remove the DS-1 loopback.

**12** For additional help, contact the next level of support.

**13** The procedure is complete.

## **Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel**

---

### **Application**

Use this procedure to perform an external continuity test on a DS-1 or a PCM30 link.

### **Definition**

The external continuity test requires operating company personnel at the far-end office to create a DS-1 or a PCM30 carrier loopback for you.

### **Common procedures**

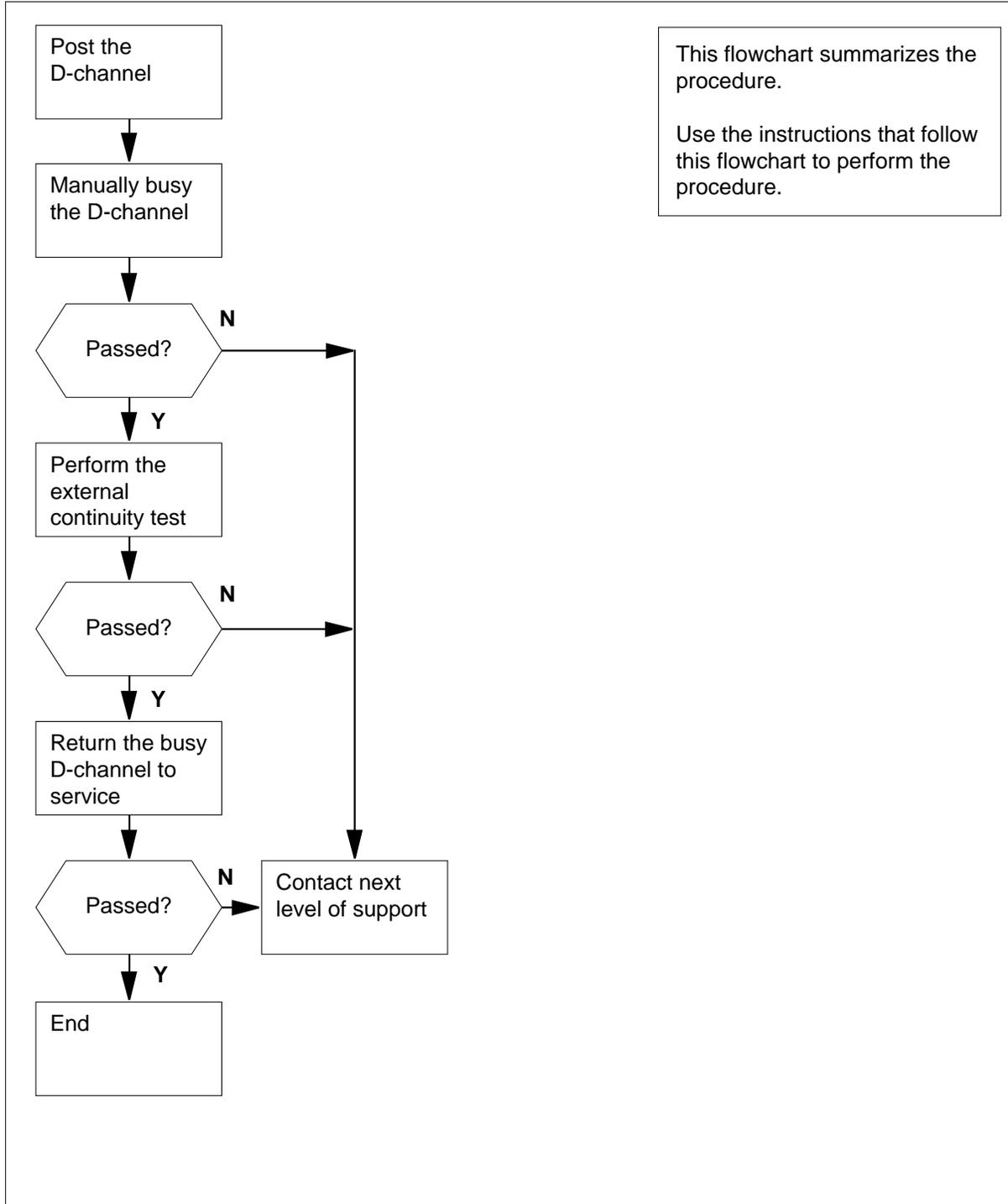
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel (continued)

### Summary of Performing an external continuity test on a DS-1 or PCM30 link



## Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel (continued)

### Performing an external continuity test on a DS-1 or PCM30 link

#### At the MAP Terminal

1 From office records or operating company personnel, determine the name of the trunk group.

2 To access the PRADCH level of the MAP display, type

```
>MAPCI ;MTC ;TRKS ;TTP ;PRADCH
```

and press the Enter key.

3 To post the D-channel, type

```
>POST GD group_name
```

and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

```
>POST GD F9876035PRAPRV
```

Example of a MAP display:

```
POST      1   DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE   PM NO      COM LANG STA S R DOT TE RESULT
2W IS IS DTCIPDTC 2 3 24 F9876035PRAPRV DCHL INS
  R
```

Example of a MAP response:

```
LAST CKT 3 24
POSTED CKT IDLED
SHORT CLLI IS: F98760
OK,CKT POSTED
```

4



#### CAUTION

##### PRI service interruption

The following step takes an in-service D-channel out of service. When you take an in-service D-channel out of service, the backup D-channel automatically switches into service.

To busy the D-channel manually, type

```
>BSY
```

---

## Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel (continued)

---

and press the Enter key.

*Example of a MAP response:*

STATE CHANGED

*or*

THIS WILL PUT DTCIPDTC 2 3 24 DCH OUT-OF-SERVICE.

Active calls will be killed

Please confirm ("YES", "Y", "NO", or "N"):

- 5 To confirm the command, type

>YES

and press the Enter key.

**Note:** The D-channel state changes to manual busy (MB).

---

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 6  |
| failed             | step 11 |

---

- 6 Ask operating company personnel at the far-end office to create a DS-1 or PCM30 loopback.

- 7 Operating Company Personnel at the far-end office will notify you about the created loopback. To start the external continuity test after the operating company personnel notifies you, type

>CONT EXT

and press the Enter key.

*Example of a MAP response:*

EXTERNAL CONTINUITY TEST STARTED

EXTERNAL CONTINUITY TEST PASSED

---

| If the external continuity test | Do      |
|---------------------------------|---------|
| passed                          | step 8  |
| failed                          | step 10 |

---

- 8 Ask operating company personnel at the far-end office to remove the DS-1 or PCM30 loopback.

- 9 To return the busy D-channel to service, type

>RTS

and press the Enter key.

*Example of a MAP response:*

---

**Performing an external continuity test on a DS-1 or PCM30 link  
ISDN PRI single D-channel (end)**

---

STATE CHANGED

| <b>If the RTS command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed (INS state)        | step 12   |
| failed                    | step 11   |

- 10** Ask the operating company personnel at the far-end office to remove the DS-1 or PCM30 loopback.
- 11** For additional help, contact the next level of support.
- 12** The procedure is complete.

## **Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels**

---

### **Application**

Use this procedure to perform an internal continuity test on a DS30 link or DS30A link.

### **Definition**

The test checks the internal link between the DS30 or DS30A and the ISDN digital trunk controller (DTCI).

### **Common procedures**

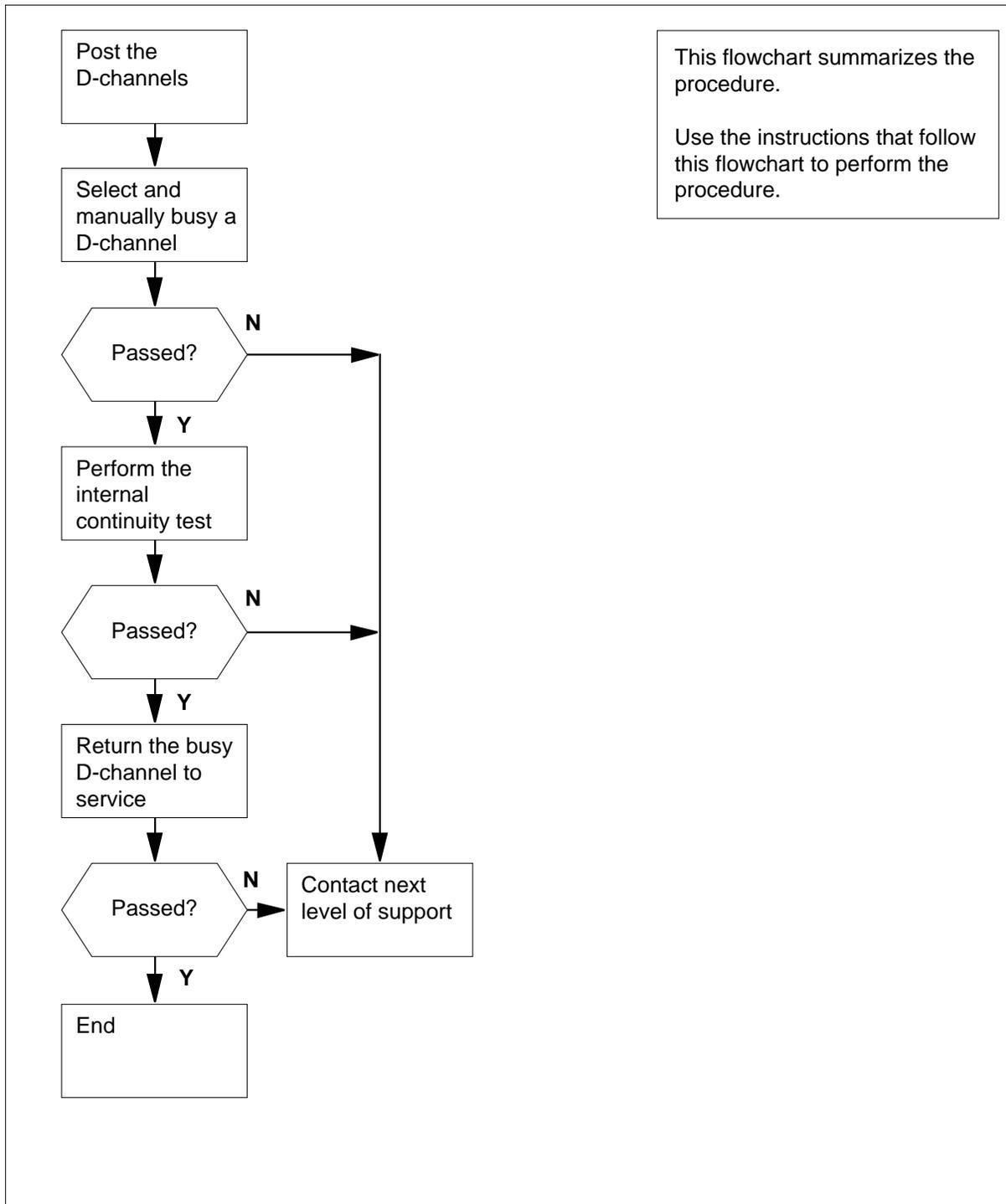
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels (continued)

### Summary of Performing an internal continuity test on a DS30 link



## Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels (continued)

---

### Performing an internal continuity test on a DS30 link

#### At the MAP terminal

- 1 From office records or operating company personnel, determine the name of the trunk group.
- 2 To access the PRADCH level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH**  
and press the Enter key.
- 3 To post the D-channels, type  
**>POST GD group\_name**  
and press the Enter key.

where

**group\_name**

is the name of the trunk group

Example input:

```
>POST GD F5678935PAV
```

Example of a MAP display:

```
POST      1  DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE  PM NO      COM LANG STA S R DOT TE RESULT
2W IS IS LTC 2 3 24 F5678935PAV D1 STB
          LTC 2 5 24 F5678935PAV D2 INS R
```

Example of a MAP response:

```
SHORT CLLI IS: F56789
OK,CKT POSTED
```

- 4 Choose the D-channel for the internal continuity test. Write down its identifier (D1 or D2).

**Note 1:** The MAP display lists the state of the D-channel on the right side of the DCHL header. The MAP display lists the identifier under the LANG header.

**Note 2:** In-service (INS) is the normal operation state for the primary D-channels. Standby (STB) is the normal operation state for the backup D-channels. The STB state occurs for a backup D-channel when the primary D-channel is INS.

**Note 3:** You must use the same identifier (D1 or D2) for all steps used in the internal continuity test.

## Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels (continued)

5



**CAUTION**

**PRI service interruption**

The following step takes an in-service D-channel out of service. When you take an in-service D-channel out of service, the backup D-channel automatically switches into service.

To manually busy the D-channel, type

**>BSY d\_channel**

and press the Enter key.

where

**d\_channel**

is the D-channel identifier (D1 or D2)

Example of a MAP response:

D1: STATE CHANGED

or

THIS WILL PUT DTCI 2 5 24 D2 OUT-OF-SERVICE.

Active calls will be killed

Please confirm ("YES", "Y", "NO" or "N"):

6

To confirm the command, type

**>YES**

and press the Enter key.

**Note:** The D-channel state changes to manual busy.

| If the BSY command | Do     |
|--------------------|--------|
| passed             | step 7 |
| failed             | step 9 |

7

To perform an internal continuity test, type

**>CONT INT d\_channel**

and press the Enter key.

where

**d\_channel**

is the D-channel identifier (D1 or D2)

Example of a MAP response:

## Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels (end)

---

```
INTERNAL CONTINUITY TEST STARTED  
D2: INTERNAL CONTINUITY TEST PASSED
```

---

| If the internal continuity test | Do     |
|---------------------------------|--------|
| passed                          | step 8 |
| failed                          | step 9 |

---

- 8** To return the D-channel to service, type

```
>RTS d_channel1
```

and press the Enter key.

*where*

**d\_channel**

is the D-channel identifier (D1 or D2)

*Example of a MAP response:*

```
D2: STATE CHANGED
```

---

| If the RTS command        | Do      |
|---------------------------|---------|
| passed (INS or STB state) | step 10 |
| failed                    | step 9  |

---

- 9** For additional help, contact the next level of support.
- 10** The procedure is complete.

## **Performing an internal continuity test on a DS30 link ISDN PRI single D-channel**

---

### **Application**

Use this procedure to perform an internal continuity test on a DS30 link or DS30A link.

### **Definition**

The test checks the internal link between the DS30 or DS30A and the ISDN digital trunk controller offshore (DTCO).

### **Common procedures**

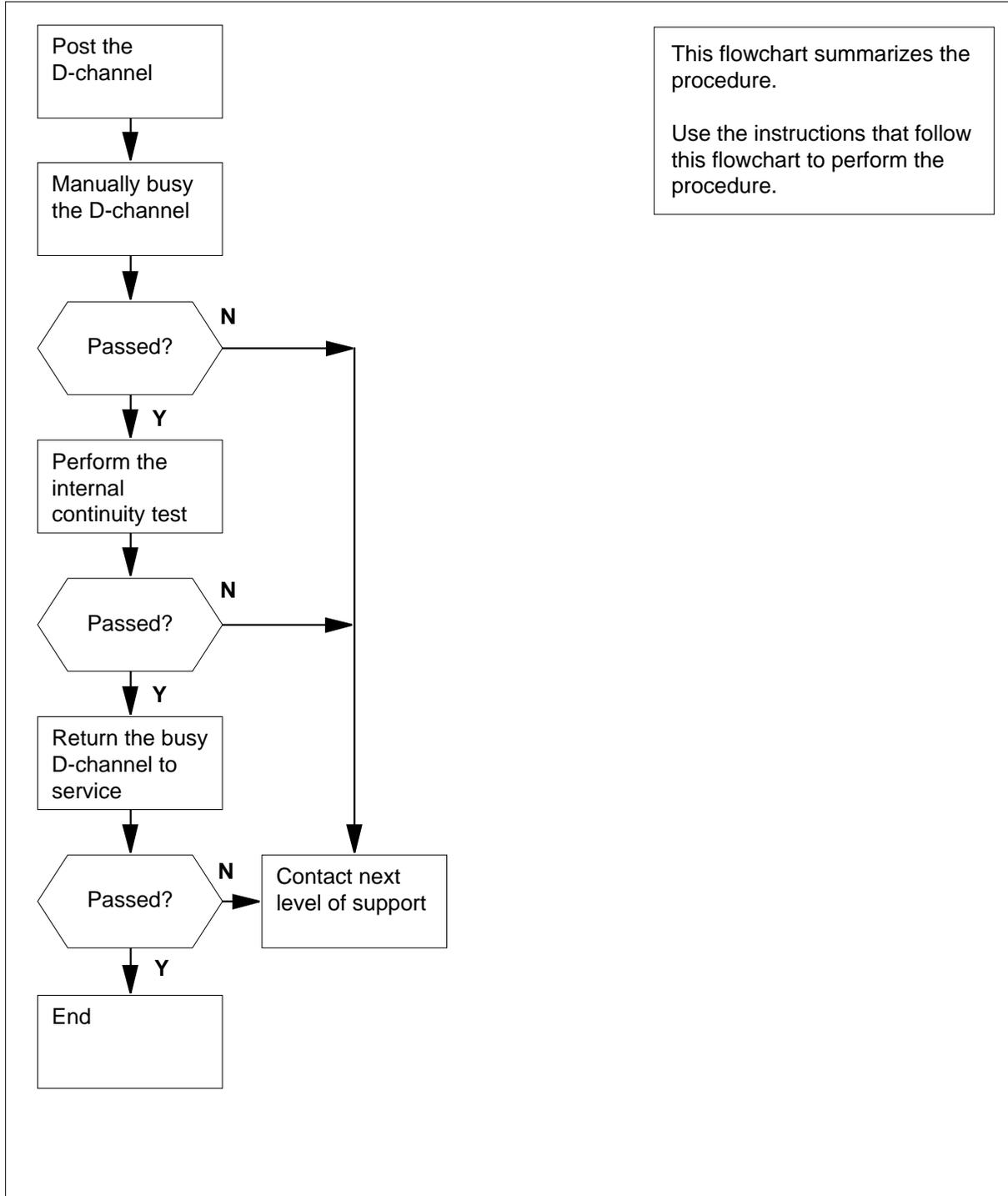
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing an internal continuity test on a DS30 link ISDN PRI single D-channel (continued)

### Summary of Performing an internal continuity test on a DS30 link



## Performing an internal continuity test on a DS30 link ISDN PRI single D-channel (continued)

### Performing an internal continuity test on a DS30 link

#### *At the MAP terminal*

- 1 From office records or operating company personnel, determine the name of the trunk group.
- 2 To access the PRADCH level of the MAP display, type  
**>MAPCI ;MTC ;TRKS ;TTP ;PRADCH**  
 and press the Enter key.
- 3 To post the D-channel, type  
**>POST GD group\_name**  
 and press the Enter key.

*where*

**group\_name**

is the name of the trunk group

*Example input:*

**>POST GD F9876035PRAPRV**

*Example of a MAP Display:*

```

POST      1   DELQ      BUSYQ      DIG
TTP      6-005
CKT TYPE   PM NO      COM LANG STA S R DOT TE RESULT
2W IS IS DTCIPCM30 2 3 24 F9876035PRAPRV DCHL INS
  R
    
```

*Example of a MAP response:*

```

LAST CKT 3 24
POSTED CKT IDLED
SHORT CLLI IS: F98760
OK,CKT POSTED
    
```

4



#### **CAUTION**

##### **PRI service interruption**

The following step takes an in-service D-channel out of service. When you take an in-service D-channel out of service, the backup D-channel automatically switches into service.

To manually busy the D-channel, type

**>BSY**

---

## Performing an internal continuity test on a DS30 link ISDN PRI single D-channel (continued)

---

and press the Enter key.

*Example of a MAP response:*

```
STATE CHANGED
```

*or*

```
THIS WILL PUT DTCIPDTC 2 3 24 DCH OUT-OF-SERVICE.
```

```
Active calls will be killed
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

- 5** To confirm the command, type

```
>YES
```

and press the Enter key.

**Note:** The D-channel state changes to manual busy (MB).

---

| If the BSY command | Do     |
|--------------------|--------|
| passed             | step 6 |
| failed             | step 8 |

---

- 6** To perform an internal continuity test, type

```
>CONT INT
```

and press the Enter key.

*Example of a MAP response:*

```
INTERNAL CONTINUITY TEST STARTED
```

```
INTERNAL CONTINUITY TEST PASSED
```

---

| If the internal continuity test | Do     |
|---------------------------------|--------|
| passed                          | step 7 |
| failed                          | step 8 |

---

- 7** To return the D-channel to service, type

```
>RTS
```

and press the Enter key.

*Example of a MAP response:*

```
STATE CHANGED
```

---

| If the RTS command | Do     |
|--------------------|--------|
| passed (INS state) | step 9 |
| failed             | step 8 |

---

**Performing an internal continuity test on a DS30 link  
ISDN PRI single D-channel (end)**

---

- 8 For additional help, contact the next level of support.
- 9 The procedure is complete.

## Performing a manual MTCTST test on a CM

---

### Application

Use this procedure to perform a manual maintenance test (MTCTST) on a computing module (CM).

### Definition

The MTCTST test executes CPU and memory class tests on an inactive CPU on the CM. Perform a manual maintenance test (MTCTST) to detect faults on new hardware installations or hardware that may have faults.

### Common procedures

This procedure refers to card replacement procedures.

### Next level of maintenance

Repeat this procedure if it is not successful when you first perform the procedure.

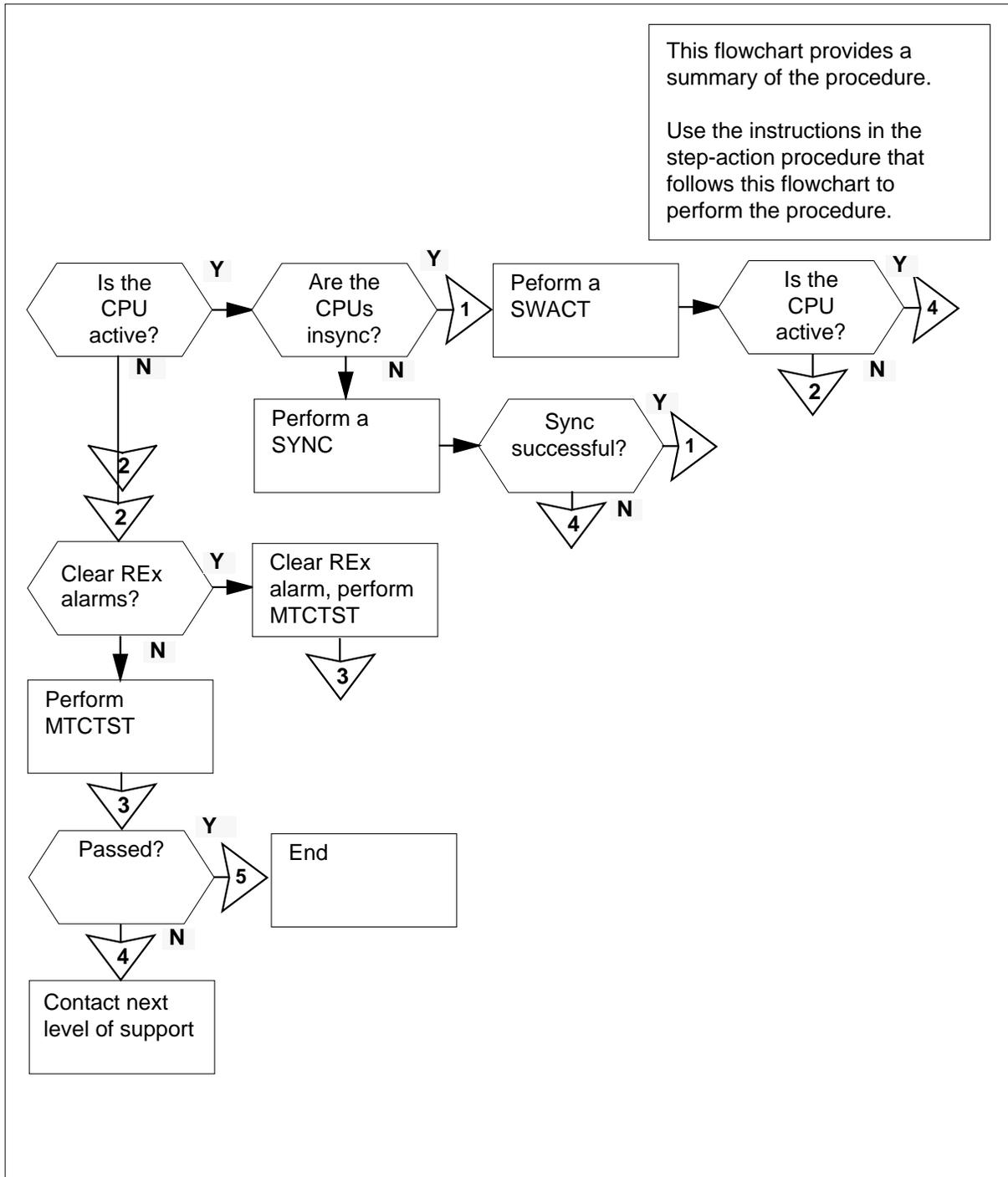
A problem can occur that requires the help of the local maintenance personnel. Gather all important logs, reports, and system information (that is, product type and current software load) for analysis. The related logs, maintenance notes, and system information help make sure that the next level of maintenance and support can find the problem. More detail about logs appears in the *Log Report Reference Manual*.

### Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the procedure.

## Performing a manual MTCTST test on a CM (continued)

### Summary of Performing a manual MTCTST test on a CM



## Performing a manual MTCTST test on a CM (continued)

### Performing a manual MTCTST on a CM

#### At the MAP terminal

- 1 To access the CM level of the MAP display, type:

>MAPCI ;MTC ;CM

and press the Enter key.

Example of a MAP display:

```

      CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
CM Flt      .      .      .      .      .      .      .      .      .
M          .      .      .      .      .      .      .      .      .
CM          CM      Sync      Act      CPU0      CPU1      Jam      Memory      CMMnt      MC      PMC
0 Quit      0      no      cpu 0      .      flt          flt      SLMLIM      cbsy      tbl
2 CMMnt
3 Memory      MAPCI ;
4 MC          MTC ;
5 PMC          CM ;
6 Tst
7
8
9
10
11
12 MtcTst
13 SwAct
14 Sync
15 DpSync
16
17
18 Locate_

```

- 2 Determine which CPU to test.
- 3 Confirm that the CPU to be tested is not active.

**Note:** An active CPU cannot be tested.

| If the CPU to be tested | Do |
|-------------------------|----|
| is active               | 4  |
| is not active           | 9  |

**Performing a manual MTCTST test on a CM (continued)**

| <b>4</b>                                            | Determine the next action.                                                                                                                                                                                                                                                                                                                                                                                              |                                |           |                                                     |        |                                  |         |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|-----------------------------------------------------|--------|----------------------------------|---------|
|                                                     | <table border="1"> <thead> <tr> <th style="text-align: left;"><b>If Are the CPUs</b></th> <th style="text-align: left;"><b>Do</b></th> </tr> </thead> <tbody> <tr> <td>insync</td> <td>6</td> </tr> <tr> <td>out of sync</td> <td>5</td> </tr> </tbody> </table>                                                                                                                                                        | <b>If Are the CPUs</b>         | <b>Do</b> | insync                                              | 6      | out of sync                      | 5       |
| <b>If Are the CPUs</b>                              | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                               |                                |           |                                                     |        |                                  |         |
| insync                                              | 6                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |           |                                                     |        |                                  |         |
| out of sync                                         | 5                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |           |                                                     |        |                                  |         |
| <b>5</b>                                            | <p>To synchronize the CM, type<br/>&gt;<b>SYNC</b><br/>and press the Enter key.</p> <table border="1"> <thead> <tr> <th style="text-align: left;"><b>If the response</b></th> <th style="text-align: left;"><b>Do</b></th> </tr> </thead> <tbody> <tr> <td>indicates the SYNC command was successful</td> <td>step 6</td> </tr> <tr> <td>indicates other than listed here</td> <td>step 19</td> </tr> </tbody> </table> | <b>If the response</b>         | <b>Do</b> | indicates the SYNC command was successful           | step 6 | indicates other than listed here | step 19 |
| <b>If the response</b>                              | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                               |                                |           |                                                     |        |                                  |         |
| indicates the SYNC command was successful           | step 6                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |           |                                                     |        |                                  |         |
| indicates other than listed here                    | step 19                                                                                                                                                                                                                                                                                                                                                                                                                 |                                |           |                                                     |        |                                  |         |
| <b>6</b>                                            | <p>To perform a switch of activity, type<br/>&gt;<b>SWACT</b><br/>and press the Enter key.<br/>Example of a MAP display:</p> <p style="margin-left: 40px;">Switch of activity will cause the CM to be running on the inactive CPU's processor clock. System will drop SYNC and then re-SYNC in order to switch to the active CPU's clock. Do you wish to continue? Please confirm ("YES", "Y", "NO", or "N"):</p>       |                                |           |                                                     |        |                                  |         |
| <b>7</b>                                            | <p>To confirm the command, type<br/>&gt;<b>YES</b><br/>and press the Enter key.</p>                                                                                                                                                                                                                                                                                                                                     |                                |           |                                                     |        |                                  |         |
| <b>8</b>                                            | <p>Determine the next action.</p> <table border="1"> <thead> <tr> <th style="text-align: left;"><b>If the CPU to be tested</b></th> <th style="text-align: left;"><b>Do</b></th> </tr> </thead> <tbody> <tr> <td>is active</td> <td>19</td> </tr> <tr> <td>is not active</td> <td>9</td> </tr> </tbody> </table>                                                                                                        | <b>If the CPU to be tested</b> | <b>Do</b> | is active                                           | 19     | is not active                    | 9       |
| <b>If the CPU to be tested</b>                      | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                               |                                |           |                                                     |        |                                  |         |
| is active                                           | 19                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |           |                                                     |        |                                  |         |
| is not active                                       | 9                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |           |                                                     |        |                                  |         |
| <b>9</b>                                            | <p>Determine the next action.</p> <table border="1"> <thead> <tr> <th style="text-align: left;"><b>If REx alarms</b></th> <th style="text-align: left;"><b>Do</b></th> </tr> </thead> <tbody> <tr> <td>that are raised by memory or CPU faults are present</td> <td>10</td> </tr> </tbody> </table>                                                                                                                     | <b>If REx alarms</b>           | <b>Do</b> | that are raised by memory or CPU faults are present | 10     |                                  |         |
| <b>If REx alarms</b>                                | <b>Do</b>                                                                                                                                                                                                                                                                                                                                                                                                               |                                |           |                                                     |        |                                  |         |
| that are raised by memory or CPU faults are present | 10                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |           |                                                     |        |                                  |         |

**Performing a manual MTCTST test on a CM** (continued)

|           | <b>If REX alarms</b>                                                                                                                                                                                                                                                                                                                   | <b>Do</b> |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | that are raised by memory or CPU faults are not present                                                                                                                                                                                                                                                                                | 15        |
| <b>10</b> | Do you want to clear the REX alarms raised by MEM or CPU faults on the inactive CPU?                                                                                                                                                                                                                                                   |           |
|           | <b>If to</b>                                                                                                                                                                                                                                                                                                                           | <b>Do</b> |
|           | clear Mem REX fault alarms                                                                                                                                                                                                                                                                                                             | 11        |
|           | clear CPU REX fault alarms                                                                                                                                                                                                                                                                                                             | 12        |
|           | not clear the REX alarms and continue with this procedure                                                                                                                                                                                                                                                                              | 15        |
| <b>11</b> | To clear a REX alarm raised by memory faults on the inactive CPU and run the MTCTST, type<br><b>&gt;MTCTST MEM CLRREXALARM</b><br>and press the Enter key.<br>Example of a MAP display:<br><br>Caution: CM will drop sync when MTCTST is running. Please confirm ("YES", "Y", "NO", or "N"):<br><br>Go to step 13.                     |           |
| <b>12</b> | To clear a REX alarm raised by CPU faults on the inactive CPU and run the MTCTST, type<br><b>&gt;MTCTST CLRREXALARM</b><br>and press the Enter key.<br><b>Note:</b> The default class option is CPU.<br>Example of a MAP display:<br><br>Caution: CM will drop sync when MTCTST is running. Please confirm ("YES", "Y", "NO", or "N"): |           |
| <b>13</b> | To confirm the command, type<br><b>&gt;YES</b><br>and press the Enter key.                                                                                                                                                                                                                                                             |           |
|           | <b>If the reponse</b>                                                                                                                                                                                                                                                                                                                  | <b>Do</b> |
|           | is maintenance action submitted ..<br>..mtctst passed                                                                                                                                                                                                                                                                                  | 20        |
|           | lists instructions to clear the REX alarm                                                                                                                                                                                                                                                                                              | 14        |

---

## Performing a manual MTCTST test on a CM (end)

---

**14** Perform the instructions described in the map response and return to step 9.

**15** To perform a MTCTST test on the CM, type

`>MTCTST`

and press the Enter key.

Example of a MAP display:

Caution: CM will drop sync when MTCTST is running.  
Please confirm ("YES", "Y", "NO", or "N"):

**16** To confirm the command, type

`>YES`

and press the Enter key.

Example of a MAP display:

Maintenace action submitted.

**17** Determine the next action.

| If the reponse                                                                                                                        | Do |
|---------------------------------------------------------------------------------------------------------------------------------------|----|
| is MTCTST aborted. Detected a mismatch or SWACT during CM MTCTST. Please check logs.                                                  | 18 |
| is MTCTST: Inactive FOOTPRINT transfer in progress ..MTCTST: Inactive FOOTPRINT transfer passed.MTCTST Failed. Test name: <test name> | 19 |
| is Termination timed out                                                                                                              | 19 |
| is Maintenance action not performed, resources in use                                                                                 | 19 |
| is MTCTST passed                                                                                                                      | 20 |
| is not listed here and the map response does not indicate the next action                                                             | 19 |

**18** Check logs and record reason for failure. Contact the next level of support.

**19** Contact the next level of support.

**20** The procedure is complete.

## **Performing a manual REx test on an LIM**

---

### **Application**

Use this procedure to perform a manual routine exercise (REx) test on a link interface module (LIM).

### **Definition**

The manual REx test is a test of software and hardware that you perform as required.

### **Common procedures**

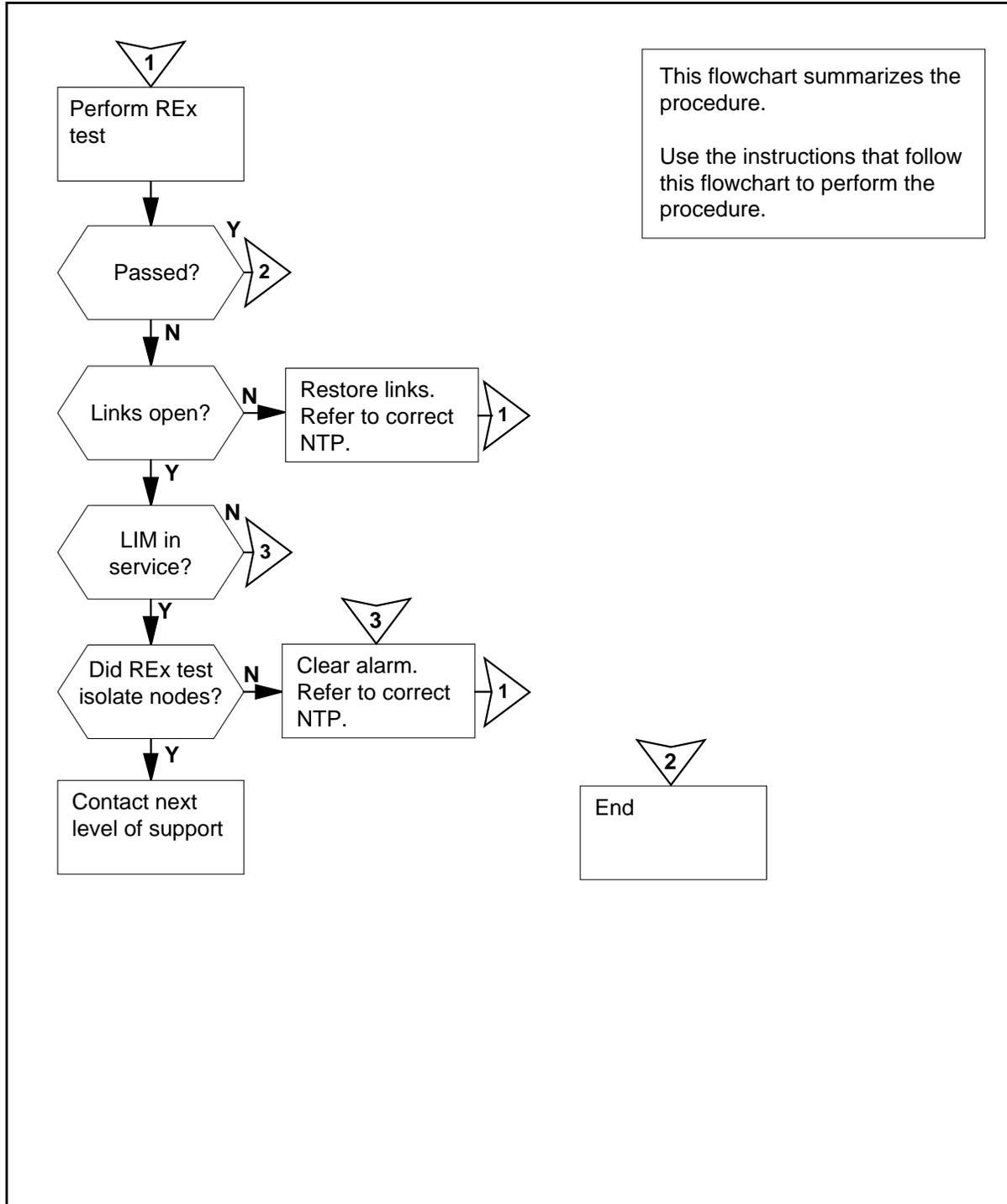
There are no common procedures.

### **Action**

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing a manual REx test on an LIM (continued)

### Summary of Performing a manual REx test on an LIM



## Performing a manual REx test on an LIM (continued)

### Performing a manual REx test on an LIM

#### At the MAP terminal

1



#### CAUTION

##### Possible performance degradation

Perform this procedure during a period of low traffic. If you perform a REx test during a period of high traffic, system performance degrades.

To access the PM level of the MAP display, type

```
>MAPCI ;MTC ;PM
```

and press the Enter key.

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
| PM | 0    | 0    | 0    | 0    | 0    | 39   |

2 To post the LIM that you want to perform the REx test on, type

```
>POST LIM lim_no
```

and press the Enter key.

where

**lim\_no**

is the number of the LIM (0 to 16)

Example of a MAP display:

```
LIM 0 OffL
Unit0: OffL      Links_OOS Taps_OOS
              6          3
Unit1: OffL      6          3
```

3 To perform a manual REx test on the posted LIM, type

```
>REX PM
```

and press the Enter key.

**Note:** In the following table, the variable x refers to a LIM number of 0 to 16, and the variables y and z refer to LIM unit numbers.

| If the response is                                                                                  | Do     |
|-----------------------------------------------------------------------------------------------------|--------|
| LIM x UNIT y routine exercise cannot be performed because not all of the links on the LIM are open. | step 4 |

**Performing a manual REx test on an LIM (continued)**

| If the response is                                                                                                       | Do      |
|--------------------------------------------------------------------------------------------------------------------------|---------|
| LIM x UNIT y routine exercise cannot be performed because it would isolate other nodes.                                  | step 6  |
| LIM x UNIT y routine exercise cannot be performed unless it is InSv.                                                     | step 8  |
| LIM x UNIT y routine exercise failed due to outstanding faults.                                                          | step 14 |
| Imaging is currently in progress on LIM x UNIT y. At this time a Routine Exercise is not allowed on this LIM.            | step 10 |
| Imaging is currently in progress on LIM x UNIT y and UNIT z. At this time a Routine Exercise is not allowed on this LIM. | step 12 |
| LIM x UNIT y ROUTINE EXERCISE PASSED.                                                                                    | step 14 |

- 4 A problem with the links of the LIM unit is present. Perform the procedure *Restoring LIM unit cross-links in Alarm and Performance Monitoring Procedures*. When the procedure is complete, return to this point.
- 5 Go to step 1.
- 6



**CAUTION**  
**Possible loss of service**  
 Isolating LIM nodes on the F-bus of the LIM you are testing removes them from service.

- 7 There is a problem with the taps on the F-bus. Perform the procedure *Testing F-bus taps* in the *Routine Maintenance Procedures*. When you have completed the procedure, return to this point.
- 7 Go to step 1.
- 8 A failed REx test on one or both LIM units will produce a LIM alarm. Perform the correct procedure in *Alarm and Performance Monitoring Procedures*. to clear the alarm. Complete this procedure and return to this point.
- 9 Go to step 1.
- 10 Imaging is being performed on one of the units of the LIM you want to REx test. The command is aborted. Wait until imaging is completed and then return to this point.

## Performing a manual REx test on an LIM (end)

---

- 11 Go to step 1.
- 12 Imaging is being performed on both units of the LIM you want to REx test. The command is aborted. Wait until imaging is completed and then return to this point.
- 13 Go to step 1.
- 14 For additional help, contact the next level of support.
- 15 The procedure is complete.

## Performing a manual REx test on an NIU

---

### Application

Use this procedure to perform a manual routine exercise (REx) test on a network interface unit (NIU) that is in service.

### Definition

A REx test is a series of software and hardware integrity tests.

### Common procedures

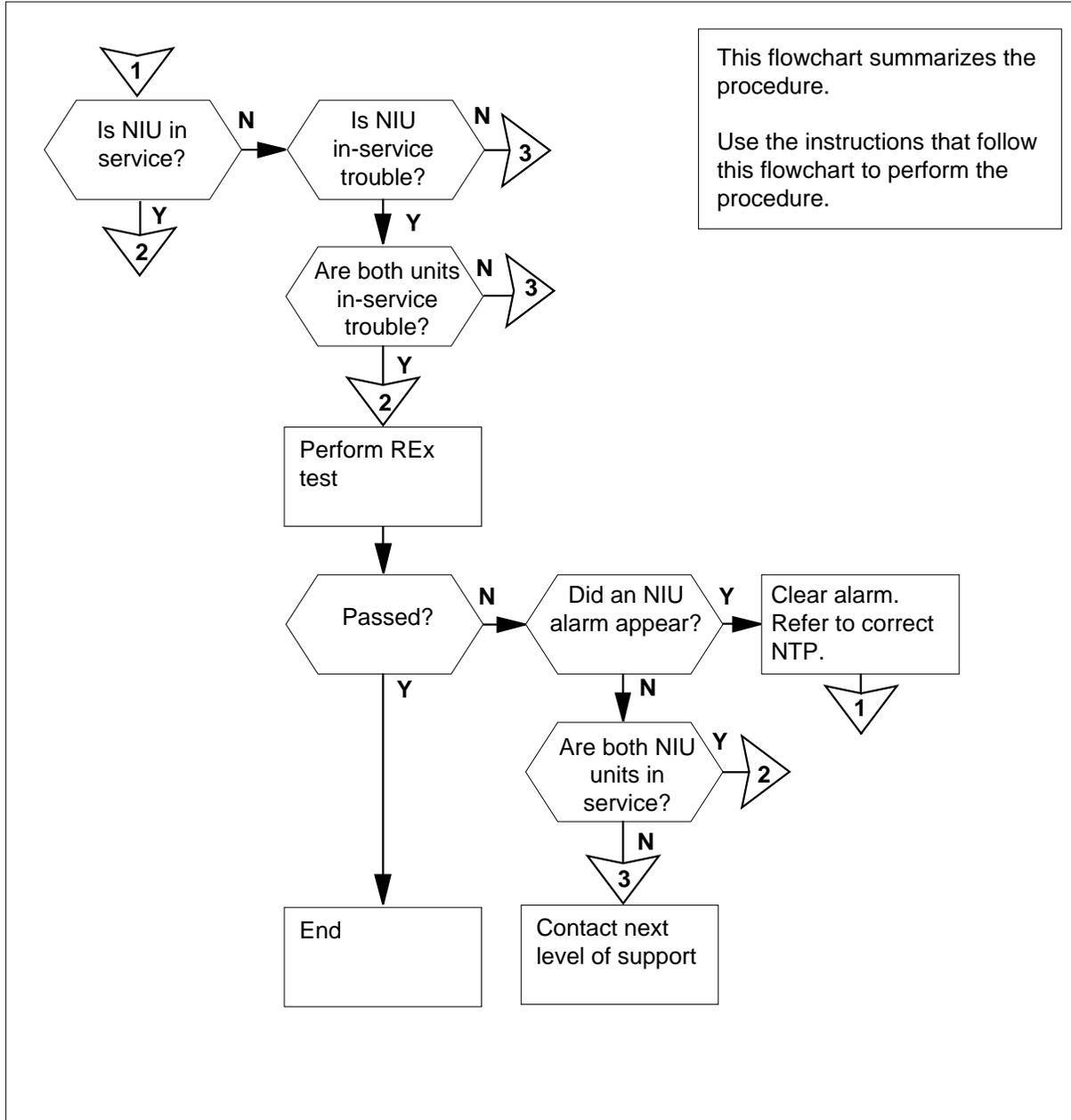
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Performing a manual REx test on an NIU (continued)

### Summary of Performing a manual REx test on an NIU



## Performing a manual REx test on an NIU (continued)

### Performing a manual REx test on an NIU

#### At the MAP terminal

1



#### CAUTION

##### Possible performance degradation

Perform this procedure during a period of low traffic. If you perform a REx test during a period of high traffic, you will degrade system performance.

To access the PM level of the MAP display, type

```
>MAPCI ;MTC ;PM
```

and press the Enter key.

*Example of a MAP:*

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
| PM | 0    | 0    | 0    | 0    | 0    | 39   |

2

To post the NIU that you want to perform the REx test on, type

```
>POST NIU niu_no
```

and press the Enter key.

*where*

**niu\_no**

is the number of the NIU (0 to 29)

**Note:** In the example, NIU 3 is posted. The state of NIU 3 is INSV. Unit 0 of NIU 3 is the active unit. The state of unit 0 is INSV. Unit 1 of NIU 3 is the inactive unit. The state of unit 1 is INSV.

*Example of a MAP display:*

```
NIU 3: InSv
Unit 0: Act InSv
Unit 1: InAct InSv
```

3

Determine the state of the NIU.

| If the state of the NIU   | Do     |
|---------------------------|--------|
| is InSv                   | step 7 |
| is ISTb                   | step 4 |
| is other than listed here | step 5 |

**Performing a manual REX test on an NIU** (continued)

| 4                                                                                                                                                                                              | Determine the state of the units of the ISTb NIU.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------|---------|
|                                                                                                                                                                                                | <table border="1"> <thead> <tr> <th style="text-align: left;">If both units</th> <th style="text-align: left;">Do</th> </tr> </thead> <tbody> <tr> <td>are ISTb</td> <td>step 7</td> </tr> <tr> <td>are other than listed here</td> <td>step 5</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | If both units      | Do | are ISTb                                                                                                                                                                                       | step 7  | are other than listed here                                            | step 5  |
| If both units                                                                                                                                                                                  | Do                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| are ISTb                                                                                                                                                                                       | step 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| are other than listed here                                                                                                                                                                     | step 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 5                                                                                                                                                                                              | At least one of the NIU units has faults. A REX test cannot be performed on NIU units that are out of service. Perform the procedure <i>Clearing a PM NIU minor alarm</i> in the <i>Alarm and Performance Monitoring Procedures</i> . When you have completed the procedure, return to this point.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 6                                                                                                                                                                                              | Go to step 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 7                                                                                                                                                                                              | <p>To perform a REX test on the posted NIU, type</p> <pre>&gt;TST REX NOW</pre> <p>and press the Enter key.</p> <p><i>Example of a MAP response:</i></p> <p>Warning: Unit states will change and a SwAct will be performed during REX test. Please confirm ("YES", "Y", "NO", or "N"):</p> <table border="1"> <thead> <tr> <th style="text-align: left;">If the response is</th> <th style="text-align: left;">Do</th> </tr> </thead> <tbody> <tr> <td>Imaging is in progress on NIU x UNIT y currently. Routine Exercise will cause imaging on this NIU to be aborted.WARNING Unit states will change and a SwAct will be performed during REX test.</td> <td>step 8</td> </tr> <tr> <td>anything else</td> <td>step 10</td> </tr> </tbody> </table> | If the response is | Do | Imaging is in progress on NIU x UNIT y currently. Routine Exercise will cause imaging on this NIU to be aborted.WARNING Unit states will change and a SwAct will be performed during REX test. | step 8  | anything else                                                         | step 10 |
| If the response is                                                                                                                                                                             | Do                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| Imaging is in progress on NIU x UNIT y currently. Routine Exercise will cause imaging on this NIU to be aborted.WARNING Unit states will change and a SwAct will be performed during REX test. | step 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| anything else                                                                                                                                                                                  | step 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 8                                                                                                                                                                                              | Imaging is being performed on one of the units of the NIU you want to REX test. Wait until imaging is completed and then return to this point.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 9                                                                                                                                                                                              | Go to step 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 10                                                                                                                                                                                             | <p>To confirm the command, type</p> <pre>&gt;YES</pre> <p>and press the Enter key.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| 11                                                                                                                                                                                             | <p>Determine the required action.</p> <table border="1"> <thead> <tr> <th style="text-align: left;">If the response</th> <th style="text-align: left;">Do</th> </tr> </thead> <tbody> <tr> <td>is Command passed.</td> <td>step 19</td> </tr> <tr> <td>is Command rejected. Permission to run REX was not given by the node.</td> <td>step 12</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                            | If the response    | Do | is Command passed.                                                                                                                                                                             | step 19 | is Command rejected. Permission to run REX was not given by the node. | step 12 |
| If the response                                                                                                                                                                                | Do                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| is Command passed.                                                                                                                                                                             | step 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |    |                                                                                                                                                                                                |         |                                                                       |         |
| is Command rejected. Permission to run REX was not given by the node.                                                                                                                          | step 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |    |                                                                                                                                                                                                |         |                                                                       |         |

**Performing a manual REx test on an NIU** (continued)

|           | <b>If the response</b>                                                                                                                                       | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is Command rejected. Permission to run REx was not given by the System REx Controller.                                                                       | step 14   |
|           | is Command failed.                                                                                                                                           | step 16   |
|           | is Command rejected. Incorrect unit states for the test command.                                                                                             | step 16   |
|           | is Command failed. Rex failed due to a SwAct failure.                                                                                                        | step 17   |
|           | is Command rejected. Test failed due to a communication problem with the mate unit.                                                                          | step 17   |
| <b>12</b> | Perform the procedure <i>Clearing a PM NIU minor alarm in Alarm and Performance Monitoring Procedures</i> . Complete the procedure and return to this point. |           |
| <b>13</b> | Go to step 3.                                                                                                                                                |           |
| <b>14</b> | Determine if the manual REx test on the NIU is on the first or second attempt.                                                                               |           |
|           | <b>If the REx test</b>                                                                                                                                       | <b>Do</b> |
|           | is the first attempt                                                                                                                                         | step 15   |
|           | is the second or subsequent attempt                                                                                                                          | step 18   |
| <b>15</b> | Wait 10 min before you use the TST REX command.<br>Go to step 7.                                                                                             |           |
| <b>16</b> | Determine if both units of the NIU are in service.                                                                                                           |           |
|           | <b>If the two NIU units</b>                                                                                                                                  | <b>Do</b> |
|           | are InSv or ISTb                                                                                                                                             | step 17   |
|           | are not InSv and not ISTb                                                                                                                                    | step 18   |
| <b>17</b> | Determine if the manual REx test on the NIU is on the first or second attempt.                                                                               |           |
|           | <b>If the REx test</b>                                                                                                                                       | <b>Do</b> |
|           | is the first attempt                                                                                                                                         | step 7    |
|           | is the second or subsequent attempt                                                                                                                          | step 18   |

**Performing a manual REx test on an NIU (end)**

---

- 18 For additional help, contact the next level of support.
- 19 The procedure is complete.

## **Placing an MP position in service (integrated)**

---

### **Application**

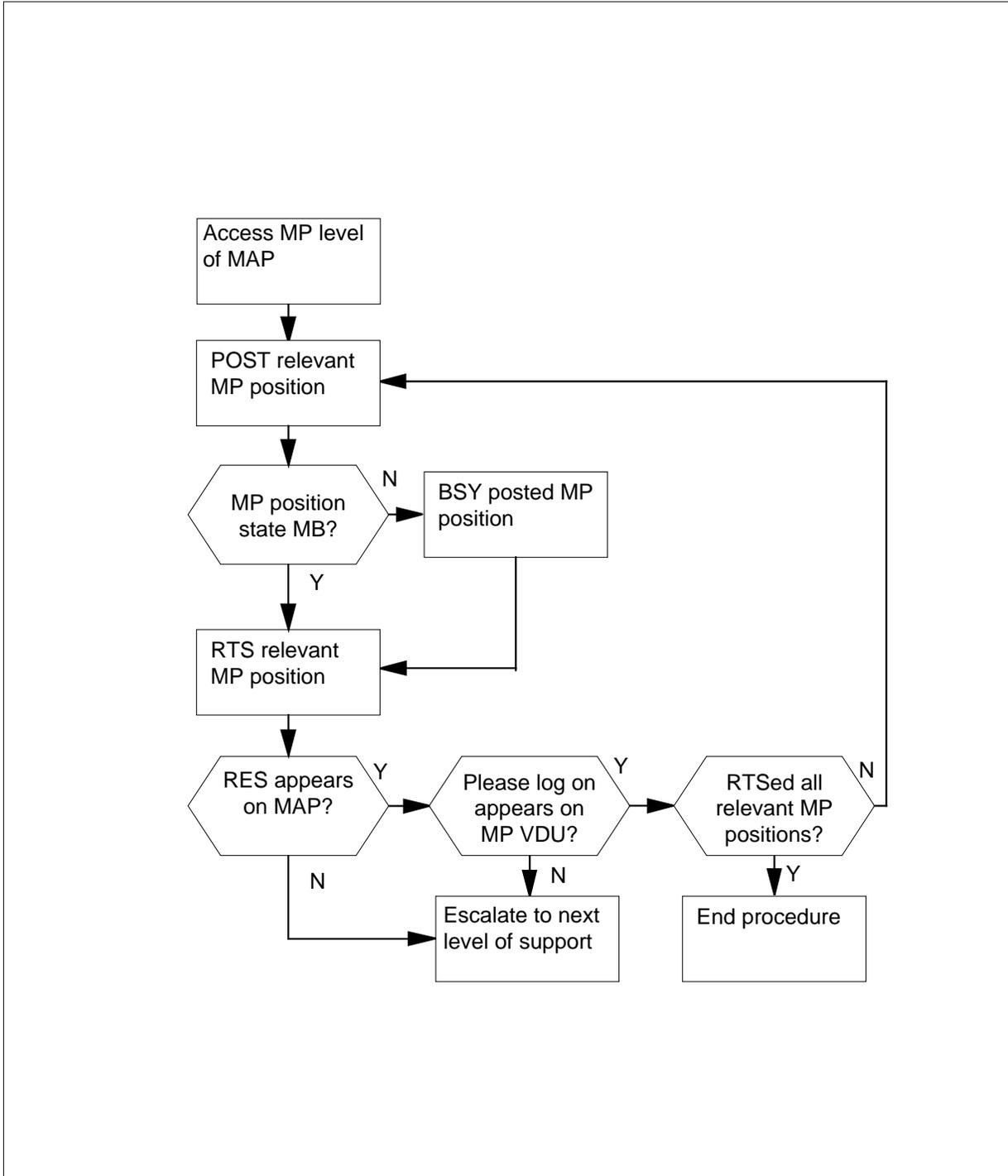
Use this procedure to return integrated Traffic Operator Position System (TOPS) Multipurpose (MP) positions to service.

### **Action**

This procedure contains a flowchart and a list of steps. The flowchart provides an overview of the procedure. Follow the list of steps to perform this procedure.

## Placing an MP position in service (integrated) (continued)

### Summary of placing an MP position in service (integrated)



## Placing an MP position in service (integrated) (continued)

### Placing an MP position in service (integrated)

#### ATTENTION

Continue if a step in a maintenance procedure directs you to this procedure. If you use this procedure without direction from a maintenance procedure, equipment damage or service interruption can occur.

#### At the MAP

- 1 To access the MP level, enter:

```
>MAPCI ;MTC ;PM
```

and press the Enter key.

```
>POST TPC x;MP
```

and press the Enter key.

where

**x**

is the TPC number.

- 2

#### Example of a MAP response

| CM | MS      | IOD | Net               | PM     | CCS     | LNS    | Trks   | Ext      | EIO  |
|----|---------|-----|-------------------|--------|---------|--------|--------|----------|------|
| MP | .       | .   | .                 | .      | .       | .      | .      | .        | .    |
| 0  | Quit    | PM  | SysB 0            | ManB 0 | OffL 10 | CBSy 0 | ISTb 0 | InSv 130 |      |
| 2  | Post    | TPC | 0                 | 0      | 0       | 0      | 0      | 4        |      |
| 3  |         |     |                   |        |         |        |        |          |      |
| 4  |         |     | TPC 0             | InSv   |         |        |        |          |      |
| 5  | Trnsl   |     |                   |        |         |        |        |          |      |
| 6  | Tst     |     | Status            | VTB    | SB      | MB     | PMB    | RES      | RTRN |
| 7  | Bsy     |     | MP                | 0      | 0       | 1      | 0      | 5        | 0    |
| 8  | RTS     |     |                   |        |         |        |        |          | 2    |
| 9  |         |     | POS 201           | TPC 0  | MP 1    | MB     |        |          |      |
| 10 |         |     | Size of Post set: |        | 1       |        |        |          |      |
| 11 | Disp_   |     |                   |        |         |        |        |          |      |
| 12 | Next    |     |                   |        |         |        |        |          |      |
| 13 | FRls    |     |                   |        |         |        |        |          |      |
| 14 | QueryMP |     |                   |        |         |        |        |          |      |
| 15 |         |     |                   |        |         |        |        |          |      |
| 16 |         |     |                   |        |         |        |        |          |      |
| 17 |         |     |                   |        |         |        |        |          |      |
| 18 |         |     |                   |        |         |        |        |          |      |

**MP position number and state**

To post the relevant MP position, enter:

```
>POST P n
```

**Placing an MP position in service (integrated)** (continued)

and press the Enter key.

where

**n** is the MP position number (0, 1, 2, or 3).

| If MP position state is | Do     |
|-------------------------|--------|
| MB                      | step 4 |
| SB                      | step 3 |

**3** To busy the MP position, enter:

>BSY

and press the Enter key.

**4** To return the MP position to service, enter:

>RTS

and press the Enter key.

**Example of a MAP response**

```

CM      MS      IOD      Net      PM      CCS      LNS      Trks      Ext      EIO
.       .       .       .       .       .       .       .       .       .
MP      0      Quit      PM       0       0       10      0       0       130
2      Post      TPC       0       0       0       0       0       4
3
4
5      Trnsl
6      Tst
7      Bsy
8      RTS
9
10     POS      201      TPC       0       MP       1       RES
11     Size of Post set:
12
13     FRls
14     QueryMP
15
16
17
18
    
```

**MP position number and state**

**5** Determine if the MP position returns to service.

| If MP position                                     | Do     |
|----------------------------------------------------|--------|
| returns to service and RES appears on MAP display. | step 7 |
| fails to return to service                         | step 6 |

---

**Placing an MP position in service (integrated) (end)**

---

6 For additional help, contact the next level of support.

***At the affected position***

7 Examine the MP VDU.

| <b>If</b>                 | <b>Do</b> |
|---------------------------|-----------|
| Please log on appears     | step 8    |
| Any other message appears | step 6    |

8 Determine if all relevant MP positions return to service.

| <b>If all relevant MP positions</b> | <b>Do</b> |
|-------------------------------------|-----------|
| return to service                   | step 9    |
| do not return to service            | step 2    |

9 The procedure is complete. Return to the main procedure that referred you to this procedure and continue.

## **Placing MP position in service (standalone)**

---

### **Application**

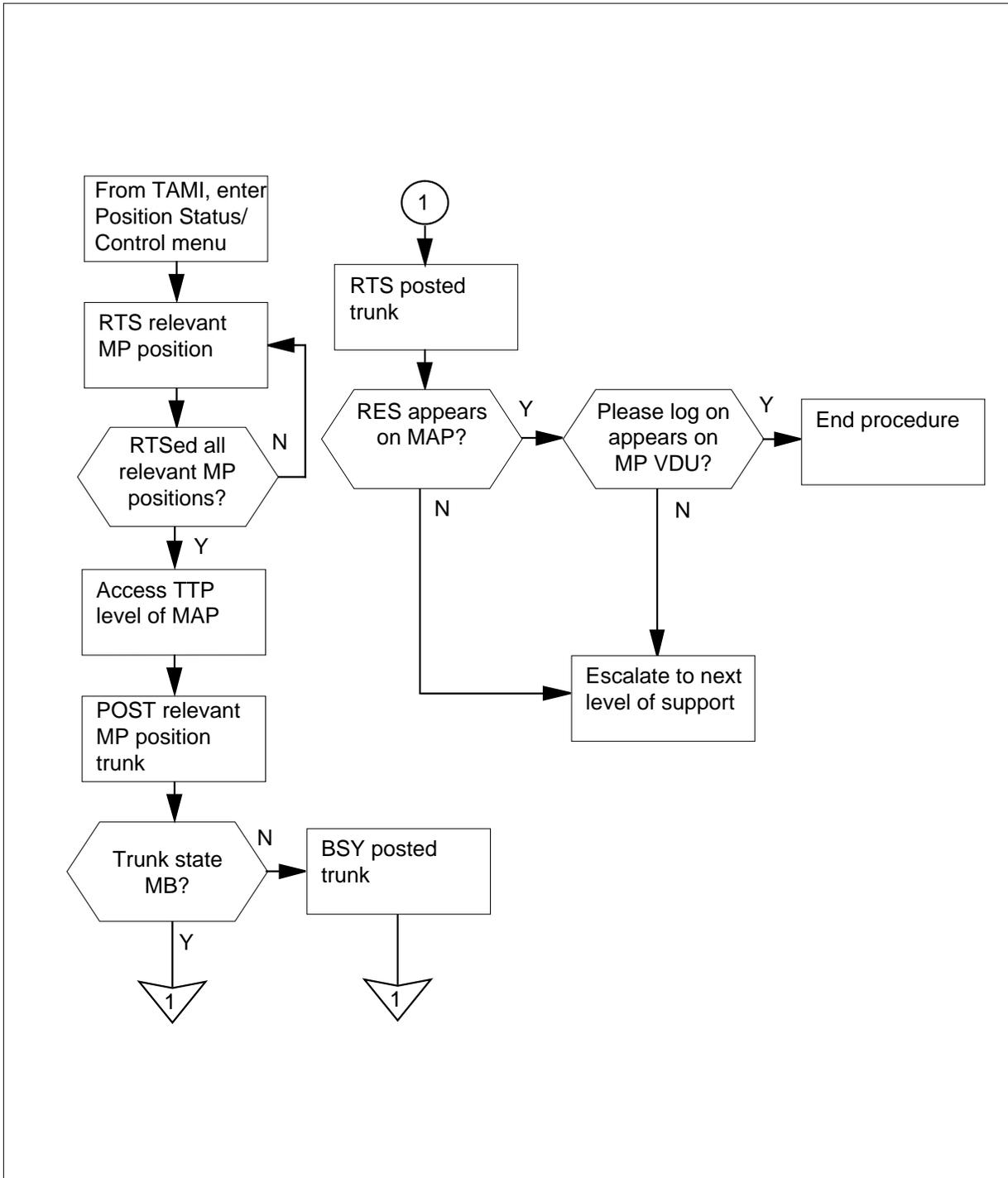
Use this procedure to place a standalone Traffic Operator Position System (TOPS) Multipurpose (MP) in service.

### **Action**

This procedure contains a flowchart and a list of steps. The flowchart provides an overview of the procedure. Follow the list of steps to perform this procedure.

## Placing MP position in service (standalone) (continued)

### Summary of placing an MP position in service (standalone)



## Placing MP position in service (standalone) (continued)

---

### Placing an MP position in service (standalone)

#### At your current location

- 1 Proceed if a step in a maintenance procedure directs you to this procedure. If you omit the directions of a previous step, equipment damage or service interruption can result when you use this procedure.

#### At the TAMI

- 2 To access the Position Status/Control menu from the TAMI main menu, enter:  
>3  
and press the Enter key.fs

#### Example of a TAMI response

```

                                POSITION STATUS/CONTROL
1.  Bsy
2.  RTS
3.  OffL
4.  RTS ALL POSITIONS

POSITION NUMBER          STATUS          CARD
PRESENT
0.                        InSv          YES
1.                        InSv          YES
2.                        InSv          YES
3.                        ManB          YES
MAKE CHOICE:
```

- 3 To return the relevant MP position to service, enter:  
>2  
and press the Enter key.  
>n  
and press the Enter key.  
where

**n**  
is the MP position number (0, 1, 2, or 3)

**Note:** Repeat this step until all relevant positions return to service.

**Placing MP position in service (standalone)** (continued)

**At the MAP**

4 To access the TTP level, enter:

>MAPCI ;MTC ;TRKS ;TTP

and press the Enter key.

5 To post the relevant MP position trunk, enter:

>POST T TOPSPOS n

and press the Enter key.

where

n

is the MP position number (0, 1, 2, or 3)

6 Note the state of the trunk circuits.

| If the trunk state is | Do     |
|-----------------------|--------|
| MB                    | step 8 |
| SB                    | step 7 |

7 To busy the posted trunk, enter:

>BSY

and press the Enter key.

8



**CAUTION**  
**Trunk goes system busy**  
 Do not RTS the TOPSPOS trunk until the system fully downloads the MP position. When the download is complete, Link problems encountered appears in the VDU. The trunk goes system busy if you RTS the trunk before Link problems encountered appears on the VDU.

To return the posted trunk to service, enter:

>RTS

and press the Enter key.

**Note:** Repeat steps 5 through 8 until all relevant positions return to service.

9 Determine if trunk returns to service.

| If trunk                                          | Do      |
|---------------------------------------------------|---------|
| Returns to service and RES appears on MAP display | step 11 |

**Placing MP position in service (standalone) (end)**

---

|                                        | <b>If trunk</b>                                                                                            | <b>Do</b> |
|----------------------------------------|------------------------------------------------------------------------------------------------------------|-----------|
|                                        | Does not return to service                                                                                 | step 10   |
| <b>10</b>                              | For additional help, contact the next level of support.                                                    |           |
| <b><i>At the affected position</i></b> |                                                                                                            |           |
| <b>11</b>                              | Examine the MP VDU.                                                                                        |           |
|                                        | <b>If</b>                                                                                                  | <b>Do</b> |
|                                        | Please log on appears                                                                                      | step 12   |
|                                        | Any other message appears                                                                                  | step 10   |
| <b>12</b>                              | This procedure is complete. Return to the main procedure that referred you to this procedure and continue. |           |

## Placing a TOPS MPX terminal in service TOPS MPX

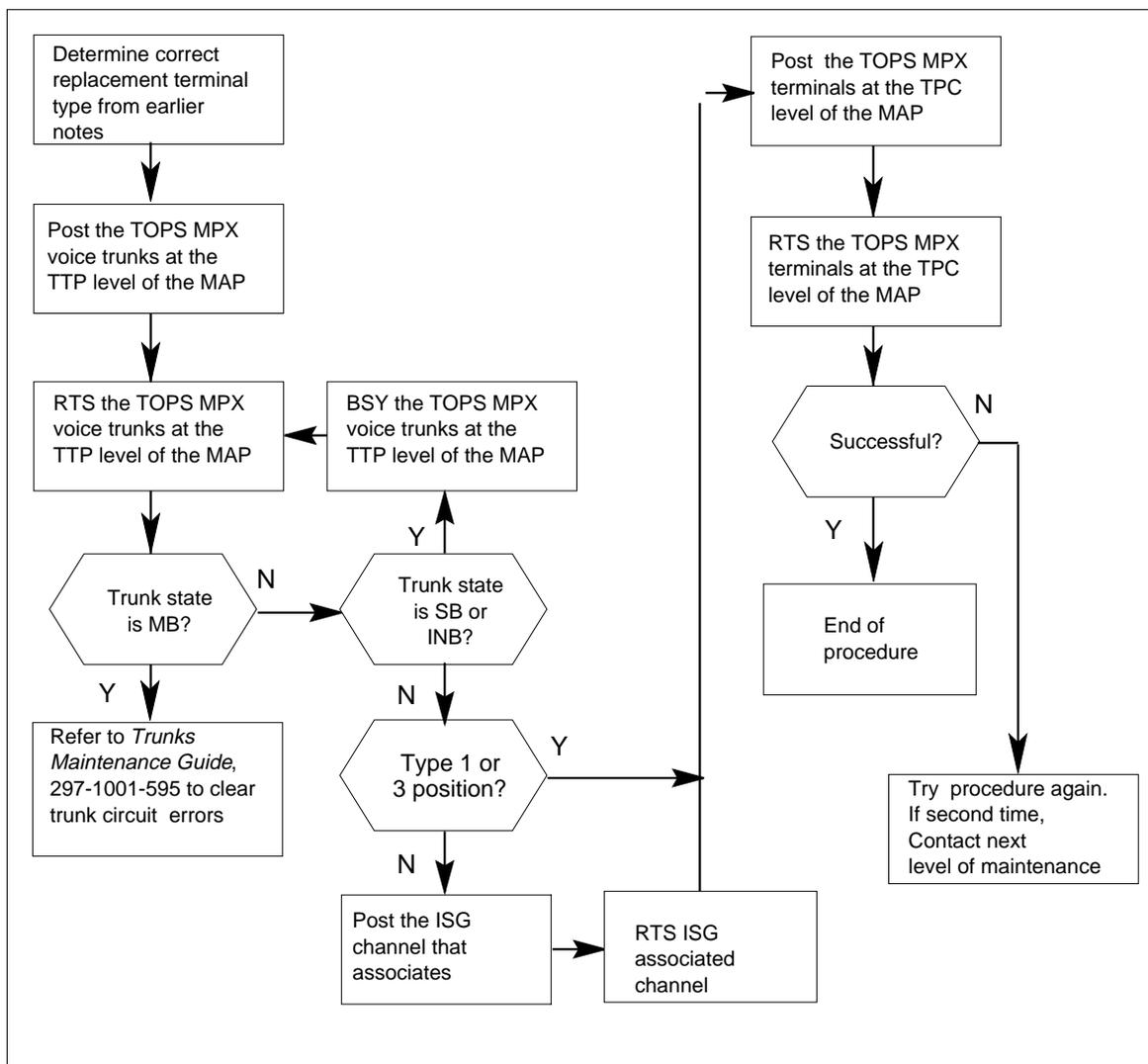
### Application

Use this procedure to place a TOPS MPX terminal in service.

### Action

The following flowchart is a summary of the procedure. To perform this procedure, use the instructions that follow the flowchart.

#### Summary of placing a TOPS MPX terminal in service



## Placing a TOPS MPX terminal in service

### TOPS MPX (continued)

#### Placing a TOPS MPX terminal in service

##### *At your current location*

1 To make sure the type of position you place in service is the same as the type you removed from service, check previous notes.

2 To access TTP level of the MAP, type the following string:

**MAPCI ;MTC ;TRKS ;TTP**

and press the Enter key.

3 To post the TOPS MPX digital voice trunk from the MAP type the following string:

**>POST T TOPSPOS n**

*where*

**n**

is the position number

and press the Enter key.

*Example of a MAP display:*

```

TTP
POST          DELQ          BUSYQ          DIG
TTP 6-007
CKT TYPE PM NO  COM LANG STA S R_DOT  TE RESULT
DESK  TMS  0  0  1  TOPSPOS 6  MB

```

↑

POST TOPSPOS 6                      Note the state of  
 POSTED CKT IDLED                    the posted TOPS  
 SHORT CLLI IS: TOPV                MPX position.  
 OK, CKT POSTED

**If position is**

**Do**

ManB

step 4.

Not ManB

Type the following:  
**BSY**  
 and press the Enter key. Go to  
 step 4.

4 To return the voice trunk to service, type the following:

**>RTS**

## Placing a TOPS MPX terminal in service TOPS MPX (continued)

and press the Enter key.

| If trunk state is              | Do     |
|--------------------------------|--------|
| MB                             | step 6 |
| SB                             | step 5 |
| INB                            | step 5 |
| RES and a VPC position         | step 7 |
| RES and a type 1 of 3 position | step 9 |

- 5** To busy the posted trunk, type the following string:  
**>BSY**  
 and press the Enter key.
- 6** Refer to Trunks Maintenance Guide, 297-1001-595 to clear trunk circuit errors.
- 7** To view the state of the ISG channel, type the following string:  
**>PM; POST TMS n; ISG; POST x**  
*where*  
     **n**  
         equals TMS #  
     **x**  
         equals ISG #  
 and press the Enter key
- 8** To return the posted ISG channel to service, type the following:  
**>RTS y**  
*where*  
     **y**  
         equals ISG channel #  
 and press the Enter key  
     **Note:** The ISG channel # must be in the MB state to return to service.
- 9** To post the associated TPC, type the following string:  
**>PM; POST TPC n**  
*where*  
     **n**  
         equals the TPC# recorded earlier  
 and press the Enter key
- 10** To go to the MP level of the MAP, type the following:  
**>MP**

## Placing a TOPS MPX terminal in service

### TOPS MPX (end)

---

- and press the Enter key
- 11 To post the associated TOPS MPX position, type the following string:  
>POST P n  
where  
    n  
        equals the TOPS MPX position #
- and press the Enter key
- 12 To return the posted TOPS MPX position to service, type the following:  
>RTS
- Note:** If you return a VPC that is not redundant to service, RTS all the other busied positions. To perform this action at this time, go to step 11.
- and press the Enter key

---

| If RTS is      | Do                                                                                                                                                 |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Successful     | step 13                                                                                                                                            |
| Not successful | Attempt this procedure again. Perform step 1 first. If this attempt is the second attempt of the procedure, contact the next level of maintenance. |

---

- 13 The procedure is complete. If other alarms occur, refer the correct alarm clearing procedures.

---

## Prioritizing CCS alarms

---

### Application

Use this procedure to redefine the order of importance of the CCS alarms that relate to the message transfer part (MTP). You can add, modify, or delete tuples from table CCSALARM.

### Definition

Table CCSALARM redefines the priority of CCS alarms within a given alarm class. Table CCSALARM redefines the priority when the alarm class is critical, major, or minor.

The default order of selection of CCS alarms is as follows:

- 1 RSC (routeset critical)
- 2 LSSC (local subsystem critical)
- 3 PCC (point code critical)
- 4 RSSC (remote subsystem critical)
- 5 LKM (linkset major)
- 6 RSM (routeset major)
- 7 LSSM (local subsystem major)
- 8 RSSM (remote subsystem major)
- 9 LK (linkset minor)
- 10 PC (point code minor)

Do not change the order of alarm classes. Critical has the highest value, and minor has the lowest value.

### Common procedures

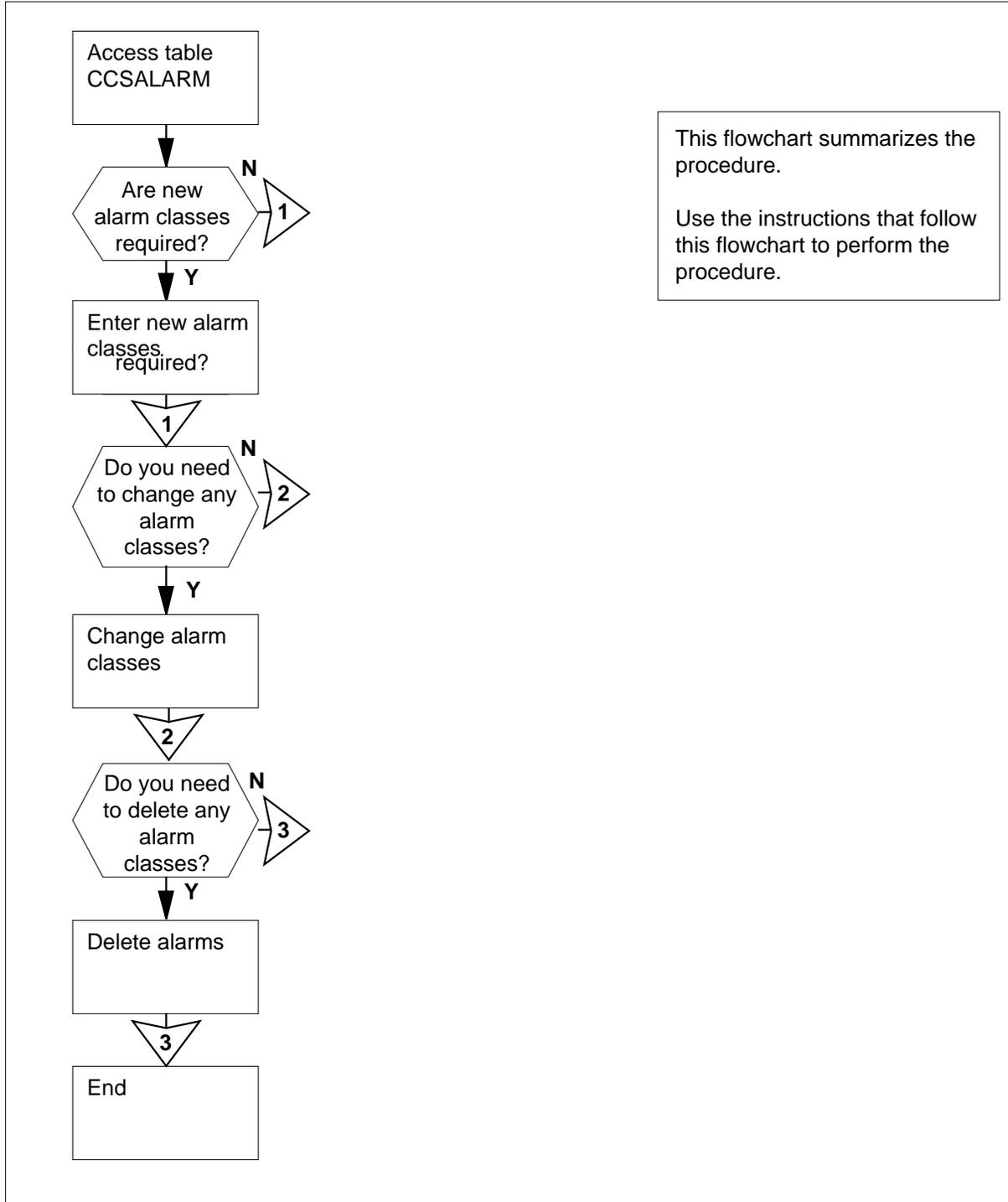
There are no common procedures.

### Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

## Prioritizing CCS alarms (continued)

### Summary of Prioritizing CCS alarms



## Prioritizing CCS alarms (continued)

### Prioritizing CCS alarms

#### At the CI level of the MAP terminal

- 1 To access table CCSALARM, type

```
>TABLE CCSALARM
```

and press the Enter key.

MAP response:

```
TABLE: CCSALARM
```

- 2 To display the contents of table CCSALARM, type

```
>LIST ALL
```

and press the Enter key.

Example of a MAP response:

```
TOP
ALARMKEY                                     ALARMS
-----
      0          CCS7 CRITICAL (RTESET) (  LSS) (  PC) (  RSS)$
BOTTOM
```

| If you                                                                    | Do      |
|---------------------------------------------------------------------------|---------|
| want to add tuples                                                        | step 3  |
| want to modify tuples                                                     | step 11 |
| want to delete tuples                                                     | step 19 |
| want to quit table CCSALARM<br>(work with CCS alarm priority is complete) | step 23 |

- 3 Record the number of the last alarm key in the table.

**Note:** In the example in step 2, the last alarm key is the last number in the column ALARMKEY.

- 4 To specify that you want to add tuples, type

```
>ADD
```

and press the Enter key.

MAP response:

```
ALARMKEY:
```

- 5 To enter an alarm key, type

```
>alarm_key
```

and press the Enter key.

## Prioritizing CCS alarms (continued)

---

where

**alarm\_key**

is one higher than the number recorded at step three

**Note:** Enter alarm keys in ascending order; for example, alarm key 0 comes before alarm key 1. If the response at step 2 is EMPTY TABLE, use 0 as the alarm key value.

MAP response:

CCSTYPE :

- 6 To specify that the alarm is a CCS7 alarm, type

>CCS7

and press the Enter key.

MAP response:

SEVERITY :

- 7 To specify the alarm class, type

>alarm\_class

and press the Enter key.

where

**alarm\_class**

is either CRITICAL, MAJOR, or MINOR

MAP response:

ALARMSET :

- 8



**CAUTION**

**Possible loss of service**

Enter the correct number and names of alarm types for the alarm class that you identified. Failure to enter the correct number and names can result in loss of service.

To specify an alarm type for the alarm class that you defined in step 7, type,

>alarm\_type

and press the Enter key.

where

**alarm\_type**

for a CRITICAL alarm class is either RTESET (routeset), LSS (local subsystem), PC (point code), or RSS (remote subsystem),

---

## Prioritizing CCS alarms (continued)

---

for a MAJOR alarm class is RTESET (routeset), LKSET (linkset), or LSS (local subsystem),

for a MINOR alarm class is RTESET (routeset), LKSET (linkset), PC (point code), LM (link minor), or

*MAP response:*

ALARMSET :

- 9** Repeat step 8 until you define all alarm types for the alarm class.

**Note:** When you define all alarm types for minor alarm classes, enter \$ to indicate the end.

*Example of a MAP response:*

```
TUPLE TO BE ADDED:
o   CCS7 CRITICAL ( LSS) (RTESET) ( RSS) ( PC)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 10** After you entered the final alarm type for the alarm class, confirm the added tuple. Type

>Y

and press the Enter key.

*MAP response:*

TUPLE ADDED

Go to step 2.

- 11** From the list displayed in step 2, choose the alarm key for the tuple you want to change.

- 12** To position on the tuple you want to change, type

>POSITION **alarm\_key**

and press the Enter key.

where

**alarm\_key**

is the alarm key chosen in step 11

*Example of a MAP response:*

```
1           CCS7 MAJOR ( LKSET) (RTESET) ( LSS)$
```

- 13** To initiate the change routine, type

>CHANGE

and press the Enter key.

*Example of a MAP response:*

CCSTYPE: CCS7

## Prioritizing CCS alarms (continued)

---

**Note:** The current value of each field appears on the right side of the CCSTYPE header in the MAP response.

- 14 To enter a new value for the alarm type for CCS7, type  
>CCS7  
and press the Enter key.

*Example of a MAP response:*

SEVERITY: MAJOR

**Note:** When you change a tuple, the current value of the tuple appears in the MAP response. The current value appears on the right side of the SEVERITY header in the MAP response. To keep the current value (without change to the entry) for a tuple, press the Enter key.

- 15 To enter a new value for the alarm severity, type  
>alarm\_class  
and press the Enter key.

*where*

**alarm\_class**  
is CRITICAL, MAJOR, or MINOR

*Example of a MAP response:*

ALARMSET: RTESET

- 16



### CAUTION

#### Possible loss of service

Enter the correct number and names of alarm types for the alarm class that you identified. Failure to enter the correct number and names can result in loss of service.

To enter a new value for the alarm type, type

>alarm\_type

and press the Enter key.

*where*

#### alarm\_type

for a CRITICAL alarm class is either RTESET (routeset), LSS (local subsystem), PC (point code), or RSS(remote subsystem),

for a MAJOR alarm class is RTESET (routeset), LKSET(linkset), or LSS (local subsystem),

for a MINOR alarm class is RTESET (routeset), LKSET(linkset), or PC (point code),

---

## Prioritizing CCS alarms (continued)

---

**Note:** The highest priority for the alarm type appears on the right side of the ALARMSET header in the MAP response.

*Example of a MAP display:*

ALARMSET: LKSET

- 17** Repeat step 16 until you define all the alarm types again for the alarm class.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
1      CCS7   MAJOR ( LKSET) ( RTESET) ( LSS)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 18** After you defined the final alarm type again for the alarm class, confirm the changed tuple. Type,

>Y

and press the Enter key.

*MAP response:*

TUPLE CHANGED

Go to step 2.

- 19** From the list in step 2, choose the alarm key for the tuple you want to delete.

- 20** To position on the tuple you want to delete, type

>POSITION **alarm\_key**

and press the Enter key.

where

**alarm\_key**

is the alarm key chosen in step 19

*Example of a MAP response:*

```
1      CCS7   MAJOR ( LKSET) ( RTESET) ( LSS)$
```

- 21** To delete the tuple, type

>DELETE

and press the Enter key.

*Example of a MAP display:*

```
TUPLE TO BE DELETED:
1      CCS7   MAJOR ( LKSET) ( RTESET) ( LSS)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 22** To confirm the command, type

>Y

and press the Enter key.

*MAP response:*

## **Prioritizing CCS alarms (end)**

---

TUPLE DELETED

Go to step 2.

- 23** To quit the table level, type  
>**QUIT**  
and press the Enter key.
- 24** The procedure is complete.

---

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DMS-100 Family

## **North American DMS-100**

Trouble Locating and Clearing Procedures

Volume 1 of 2

Product Documentation - Dept. 3423

Nortel Networks

P.O. Box 13010

RTP, NC 27709-3010

Telephone: 1-877-662-5669

email: [cits@nortelnetworks.com](mailto:cits@nortelnetworks.com)

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