

555-4031-544

Meridian SuperNode

Commercial Systems

Trouble Locating and Clearing Procedures

Volume 1 of 2

MSL10 Standard 08.01 April 1999

Meridian SuperNode

Commercial Systems

Trouble Locating and Clearing Procedures Volume 1 of 2

Publication number: 555-4031-544

Product release: MSL10

Document release: Standard 08.01

Date: April 1999

Copyright © 1995–1999 Northern Telecom, all rights reserved.

Printed in the United States of America

NORTHERN TELECOM CONFIDENTIAL: The information contained in this document is the property of Northern Telecom. Except as specifically authorized in writing by Northern Telecom, the holder of this document shall keep the information contained herein confidential and shall protect same in whole or in part from disclosure and dissemination to third parties and use same for evaluation, operation, and maintenance purposes only. Changes or modification to the Meridian SL-100 without the express consent of Northern Telecom, Inc. may void its warranty and void the user's authority to operate the equipment.

Information is subject to change without notice. Northern Telecom reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant.

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules, and the radio interference regulations of the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense. Allowing this equipment to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of FCC Rules, Docket No. 89-114, 55FR46066.

The MSL-100 system is certified by the Canadian Standards Association (CSA) with the Nationally Recognized Testing Laboratory (NRTL).

This equipment is capable of providing users with access to interstate providers of operator services through the use of equal access codes. Modifications by aggregators to alter these capabilities is a violation of the Telephone Operator Consumer Service Improvement Act of 1990 and Part 68 of the FCC Rules.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

YEAR 2000 READINESS DISCLOSURE

MERIDIAN, SL-100, DMS, SUPERNODE, MAP, NORTEL, NORTEL NETWORKS, NORTHERN TELECOM, and NT are trademarks of Northern Telecom.

Publication history

April 1999

Version 08.01, Standard. This document represents the standard release of this document for product release MSL10.

October 1998

Version 07.01, Standard. This document represents the standard release of this document for product release MSL09.

April 1998

Version 06.01, Standard. This document represents the standard release of this document for product release MSL08.

October 1997

Version 05.02, Standard. This document represents the standard release of this document for product release MSL07 and includes a revision due to additional MSL07 information.

June 1997

Version 05.01, Preliminary. This document represents the preliminary release of this document for product release MSL07.

November 1996

Version 04.03, Standard. This document represents the final release of this document for product release MSL06, and includes a revision due to additional MSL06 information.

November 1996

Version 04.02, Standard. This document represents the final release of this document for product release MSL06.

September 1996

Version 04.01, Preliminary. This document represents the preliminary release of this document for product release MSL06.

February 1996

Version 03.01, Preliminary. This document represents the preliminary release of this document for product release MSL05.

September 1995

Version 02.02, Standard. This document represents the final release of this document for product release MSL04.

July 1995

Version 02.01, Preliminary. This document represents the preliminary release of this document for product release MSL04.

February 1995

Version 01.01, Standard. This document represents the initial release of this document for product release MSL03.

Contents

Volume 1 of 2

About this document xi

When to use this document	xi
How to check the version and issue of this document	xi
References in this document	xi
What precautionary messages mean	xii
How commands, parameters, and responses are represented	xiii
Input prompt (>)	xiii
Commands and fixed parameters	xiii
Variables	xiii
Responses	xiii

Trouble locating and clearing procedures 1-1

Introduction	1-1
Application	1-1
Definition	1-1
Common procedures	1-1
Action	1-1
Step-action instructions	1-2
CMR data mismatch with CC	1-3
Activating a loopback on an HLIU	1-9
Activating a loopback on an LIU7	1-18
Activating a loopback on an NTEX26AA paddle board	1-26
Activating an offline linkset	1-34
Activating the throttling logs mechanism	1-44
Adding a LIM to an automatic REx test schedule	1-51
Adding an NIU to an automatic REx test schedule	1-54
Assembling 2x5 AMP connectors in SuperNode cabling	1-59
BCLID link failure	1-64
Cannot be called	1-75
Cannot call out	1-112
Changing table C7TIMER entries	1-159
Clearing problems on the SCAI link	1-168
Confirming a missing telephone	1-175
Correcting a call cut-off problem	1-179
Correcting a data error problem	1-186
Correcting a line flux cancellation error	1-197
Correcting a line loop detect error	1-204

Correcting a line loopback problem	1-210
Correcting a line noise problem	1-217
Correcting a line pad test problem	1-221
Correcting a line ringing failure	1-225
Correcting a line synchronization loss at a U-loop	1-229
Correcting a line that does not receive calls	1-234
Correcting a line that does not ring	1-241
Correcting a line transhybrid error	1-246
Correcting a line with free pay telephone service	1-251
Correcting a no ANI on coin line condition	1-256
Correcting a ringing pretrip problem	1-263
Correcting a stuck test access line relay	1-270
Correcting an attendant console problem	1-274
Correcting an automatic line test failure	1-278
Correcting digital test unit problems	1-282
Correcting DRAM announcement trouble	1-297
Correcting DRAM sit tone trouble	1-307
Correcting EDRAM voice file problems	1-315
Correcting enhanced network load entries	1-327
Correcting line test unit problems	1-340
Correcting locked-out trunks	1-350
Correcting metallic test access problems	1-355
Correcting metallic test unit problems	1-360
Correcting no response from a peripheral module	1-377
Correcting PCM level meter card problems	1-382
Correcting poor line transmission or reception	1-390
Correcting receive-level problems on T1 trunks	1-396
Correcting release mismatch problems	1-403
Correcting supervision trouble on intertoll T1 trunks	1-425
Correcting transmission test trunk trouble	1-430
Correcting transmission test unit trouble	1-437
Correcting transmission-level trouble on T1 trunks	1-443
Determining location of problems (ACDMIS, NACD, MACD)	1-448
Determining the D-channel state ISDN PRI primary and backup D-channels	1-458
Determining the D-channel state ISDN PRI single D-channel	1-463
Determining the line state	1-467
Determining the location of the problem	1-476
Determining the trunk state ISDN PRI trunk	1-485
Digital test access	1-490
DIRP 101 logs Reason 2	1-496
DIRP 101 logs Reason 26	1-502
DIRP 101 logs Reason 27	1-508
DIRP 101 logs Reason 46	1-513
DIRP 101 logs Reason 51	1-519
DIRP 101 logs Reason 56	1-523
DIRP 101 logs Reason 78	1-528
DIRP 101 logs Reason 100	1-533
DIRP 101 logs Reason 127	1-537
DIRP 101 logs Reason 129	1-542
DIRP 101 logs Reason 153	1-547

DIRP 101 logs Reason 154	1-552
DIRP 101 logs Reason 155	1-557
DIRP 101 logs Reason 223	1-562
DIRP 101 logs Reason 251	1-568
DIRP 101 logs Reason 266	1-574
DIRP 101 logs Reason 267	1-579
DIRP 101 logs Reason 279	1-584
DIRP 101 logs Reason 280	1-589
Downloading software to an APU	1-594
Downloading software to an EIU	1-599
Downloading software to a LIM unit	1-604
Downloading software to an LIU7, HLIU, or HSLR	1-609
Downloading software to a VPU	1-617
Downloading software to an XLIU	1-622
DSCWID/SCWID subscriber, no notification of waiting call	1-628
E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions	1-638
E911 LDT PSAP complaint ANI failure	1-646
E911 LDT PSAP Operator Complaint Ringing not being applied to PSAP position	1-656
E911 Line and ACD PSAP complaint ANI failure (or ALI failure)	1-665
Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels	1-673
Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel	1-679
Estimating signaling link occupancy	1-685
Excluding a LIM from an automatic REx test schedule	1-689
Excluding an NIU from an automatic REx test schedule	1-692
Incorrect DN in incoming callers list	1-697
Incorrect or no displayed calling party name or DN	1-700
Line state is Call processing busy (CPB)	1-712
Line state is Cut (CUT)	1-716
Line state is D-channel maintenance busy (DMB)	1-719
Line state is Idle (IDL)	1-726
Line state is Installation busy (INB)	1-737
Line state is Line module busy (LMB)	1-741
Line state is Lock out (LO)	1-747
Line state is Maintenance busy (MB)	1-757
Line state is Packet service unavailable	1-761
Manually switching to a backup D-channel ISDN PRI primary and backup D-channels	1-793
Monitoring call processing busy trunk circuits	1-797
Performing a manual REx test on an LIM	1-803
Performing a manual REx test on an NIU	1-808
Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels	1-815
Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel	1-821
Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels	1-826

Performing an internal continuity test on a DS30 link ISDN PRI single D-channel	
1-831	
Prioritizing CCS alarms	1-836
Recovering a stuck HLIU or HSLR	1-846
Recovering a stuck LIU7	1-856
Recovering a stuck two-slot LIU7	1-867
Repairing FAN faults on an LCEI frame; cooling unit replacement	1-875
Repairing an NTB63AA cooling unit on the bench top	1-887
Repair and replacing NT3X90AA cooling units	1-894
Repairing and replacing NT3X90AB cooling units	1-908
Repairing and replacing NT3X90AC cooling units	1-921
Replacing a 3.5 in. disk drive unit NTFX32BA	1-931
Replacing an 8-in. or a 5.25-in. disk drive unit	1-947
Replacing a 14-in. disk drive unit	1-969
Replacing a bulkhead gasket	1-993
Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323	1-996
Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984	1-1011
Replacing a cooling unit fan CPC A0345301	1-1025
Replacing a cooling unit fan CPC A0381714, A0382103, A0383325	1-1039
Replacing a CU voltage limiter and filter in a 28-in. cabinet	1-1052

Index**2-1**

Volume 2 of 2

Trouble locating and clearing procedures	1-1
Introduction	1-1
Application	1-1
Definition	1-1
Common procedures	1-1
Action	1-1
Step-action instructions	1-2
Replacing a digital audio tape (DAT) drive NTFX32CA	1-3
Replacing a door gasket	1-16
Replacing a fan in a 28-in. cabinet	1-19
Replacing a fan in a 28-in. frame	1-26
Replacing a fan in a 42-in. cabinet	1-33
Replacing a line card	1-46
Replacing a missing line card	1-54
Replacing a point-of-use power supply card	1-58
Replacing an NT9X95 card in a cooling unit	1-66
Replacing cooling unit NTRX91AA	1-80
Reseating a line card	1-83
Responding to TRMS301 logs	1-90
Restoring far-end service for a D-channel ISDN PRI single D-channel	1-93
Restoring far-end service for a D-channel ISDN PRI primary and backup D-channels	1-98
Returning a busy D-channel to service ISDN PRI primary and backup D-channels	

1-104	
Returning a busy D-channel to service ISDN PRI single D-channel	1-110
Returning a busy PRI trunk to service ISDN PRI trunk	1-114
Returning a card or assembly in Canada	1-119
Returning a card or assembly in Germany	1-123
Returning a card or assembly in Japan	1-127
Returning a card or assembly in the United States of America	1-131
Returning a LIM to service	1-135
Returning a LIM unit to service	1-139
Running a C7BERT	1-143
Running a C7BERT for high-speed links	1-184
Replacing an NTFX39 bulkhead splitter unit	1-213
Scheduling an automatic REx test	1-228
Scheduling ISUP trunk audits	1-233
Setting up an ISUP per-call continuity test	1-239
Setting up the signaling link marginal performance report	1-244
Softkey information does not download to the ADSI set	1-256
Test the DS-1 carrier states	1-266
Troubleshooting a customer-reported failure No FRIU alarms	1-270
Troubleshooting a customer-reported failure No PM alarms	1-276
VSLE session defaults to audio SLE	1-283

Index**2-1**

About this document

When to use this document

This publication contains procedures for locating and clearing faults. These procedures are used by switch maintenance personnel to troubleshoot and clear faults.

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 *Master Index of Publications*

This document is written for all MSL-100 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in *Master Index of Publications*.

References in this document

The following documents are referred to in this document:

- *Alarm Clearing Procedures*
- *Translation Guide*
- *Card Replacement Procedures*
- *Routine Maintenance Procedures*

- *Log Report Reference Manual*
- *Recovery Procedures*

What precautionary messages mean

The types of precautionary messages used in NT 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.

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.

The following excerpt from a procedure shows the command syntax used in this document:

- 1 Manually busy the CTRL on the inactive plane by typing

>BSY CTRL ctrl_no

and pressing the Enter key.

where

ctrl_no is the number of the CTRL (0 or 1)

Example of a MAP response:

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

FP 3 Busy CTRL 0: Command passed.

Trouble locating and clearing procedures

Introduction

This chapter contains procedures to locate and clear trouble in a Meridian SL-100 office. The procedures contain the following sections:

- Application
- Definition
- Common procedures
- Action
- Step-action instructions

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 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 (NTP). 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. The flowchart is a summary of the main actions, decision points, and paths you take. The purpose of the flowchart is to preview what you will be doing and to help prepare for it. For example, if the instructions involve another office, you

need to advise that office before you begin the step-action instructions. Do not use the summary flowchart to perform the procedure.

Step-action instructions

The step-action instructions tell you how to locate and clear a trouble. Always perform the steps in the order specified. The successful completion of a step is dependent on previous steps.

The step-action instructions provide the command syntax and machine output you use or see while performing this procedure.

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

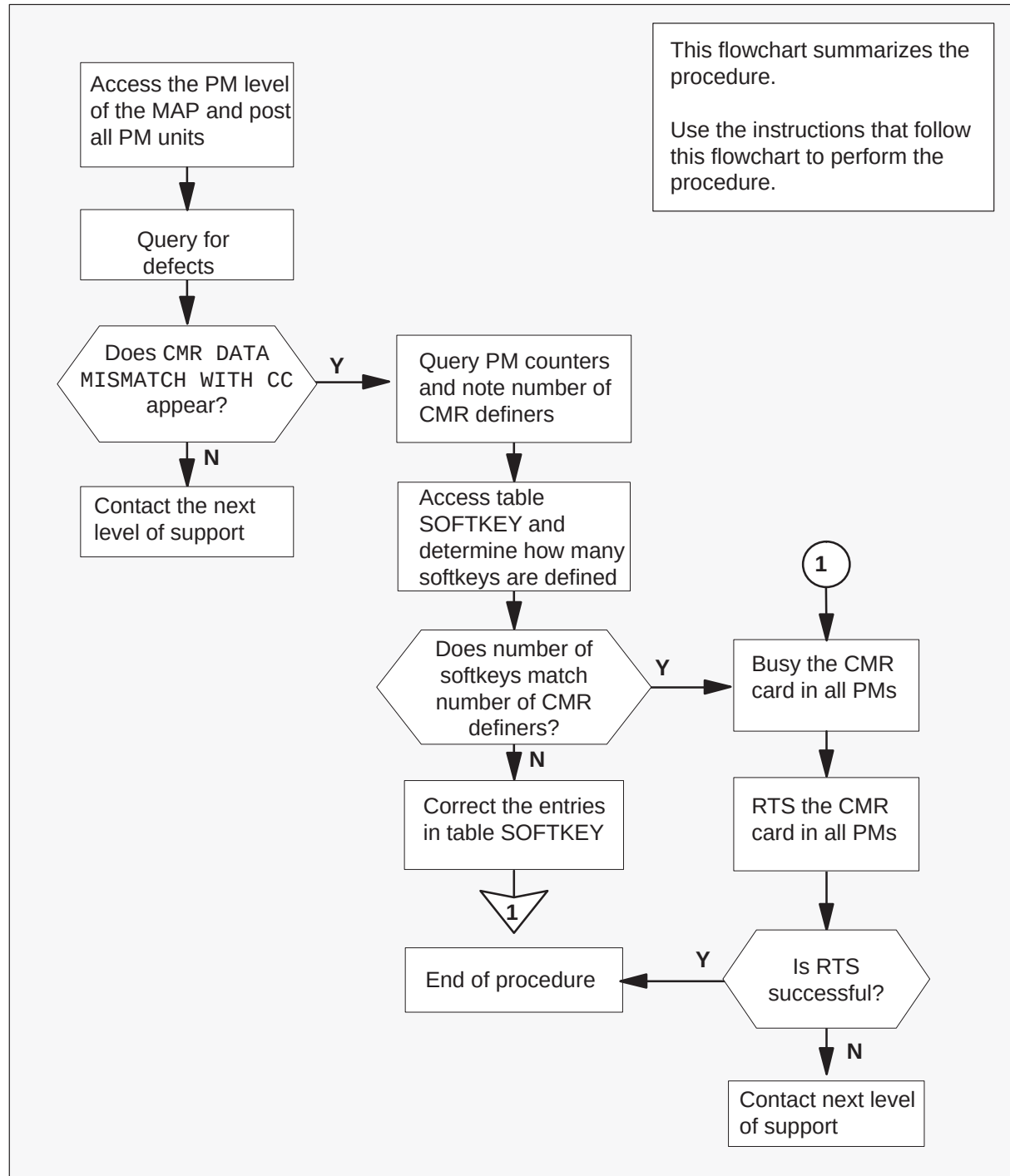
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

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.

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

CMR data mismatch with CC

(continued)

- 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

```
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

CMR data mismatch with CC (continued)

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.



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.

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.

If the RTS command	Do
passes	step 11
fails	step 10

CMR data mismatch with CC

(end)

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

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.

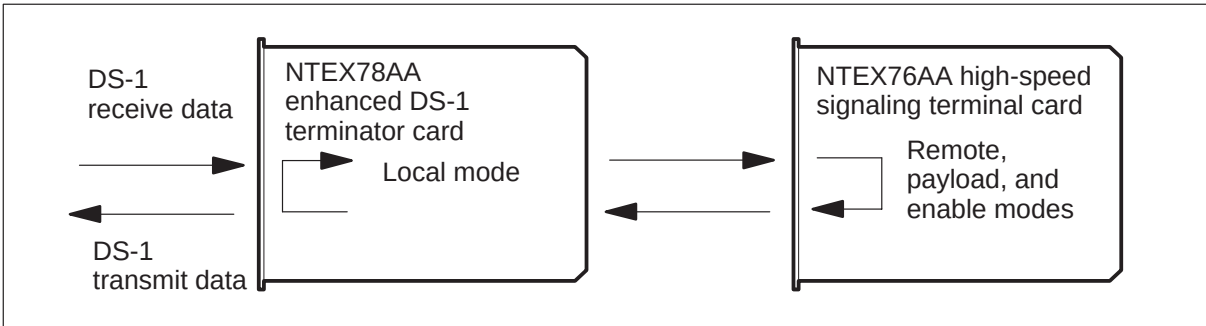
Note: Only one loopback mode can be active at one time.

Note: 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.

Activating a loopback on an HLIU

(continued)

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



Common procedures

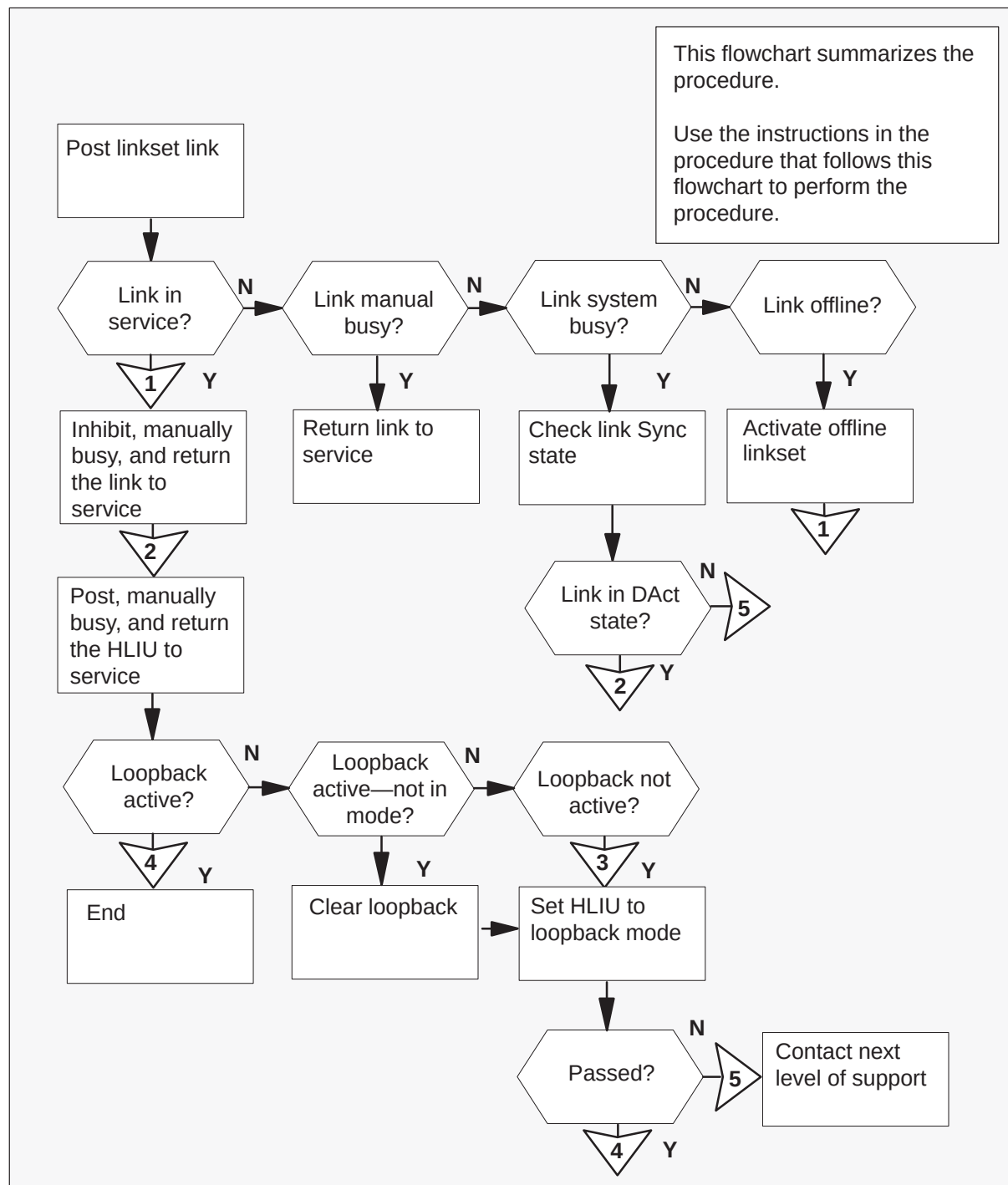
None

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

Activating a loopback on an HLIU (continued)

- 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
LK Stat Stat Resource Stat Physical Access Stat  Link
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
Offl	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.

Activate an offline linkset by performing procedure *Activating an offline linkset for an HLIU* 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

Activating a loopback on an HLIU (continued)

- 9 Post the HLIU to test the card by typing

>POST HLIU hliu_no
and pressing the Enter key.

where

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

Activating a loopback on an HLIU

(continued)

- 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

- 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.

Activating a loopback on an HLIU (end)

- 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:

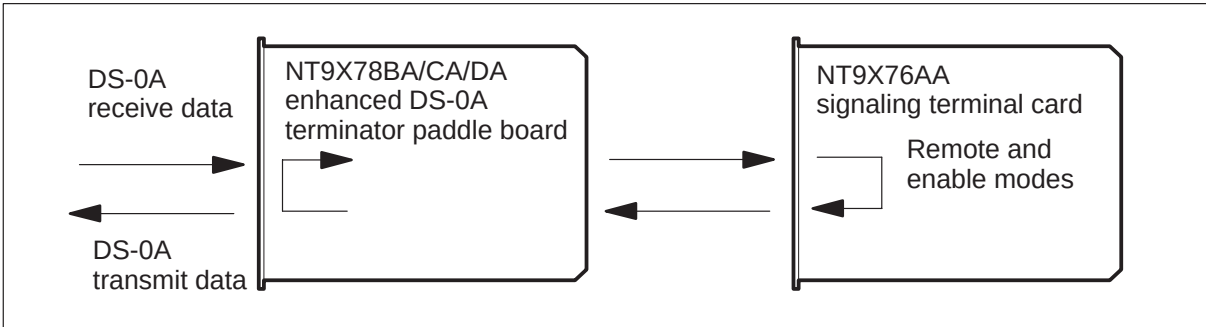
- Remote mode loops the data received from a DS-0A or V.35 signaling link. The data goes from the link through the NT9X78BA, NT9X78CA, NT9X78DA, or the NT9X77AA card, and the NT9X76AA signaling terminal card. The data goes back through the NT9X78BA, NT9X78CA, NT9X78DA, or the NT9X77AA card. The data 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.

Activating a loopback on an LIU7 (continued)

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



Common procedures

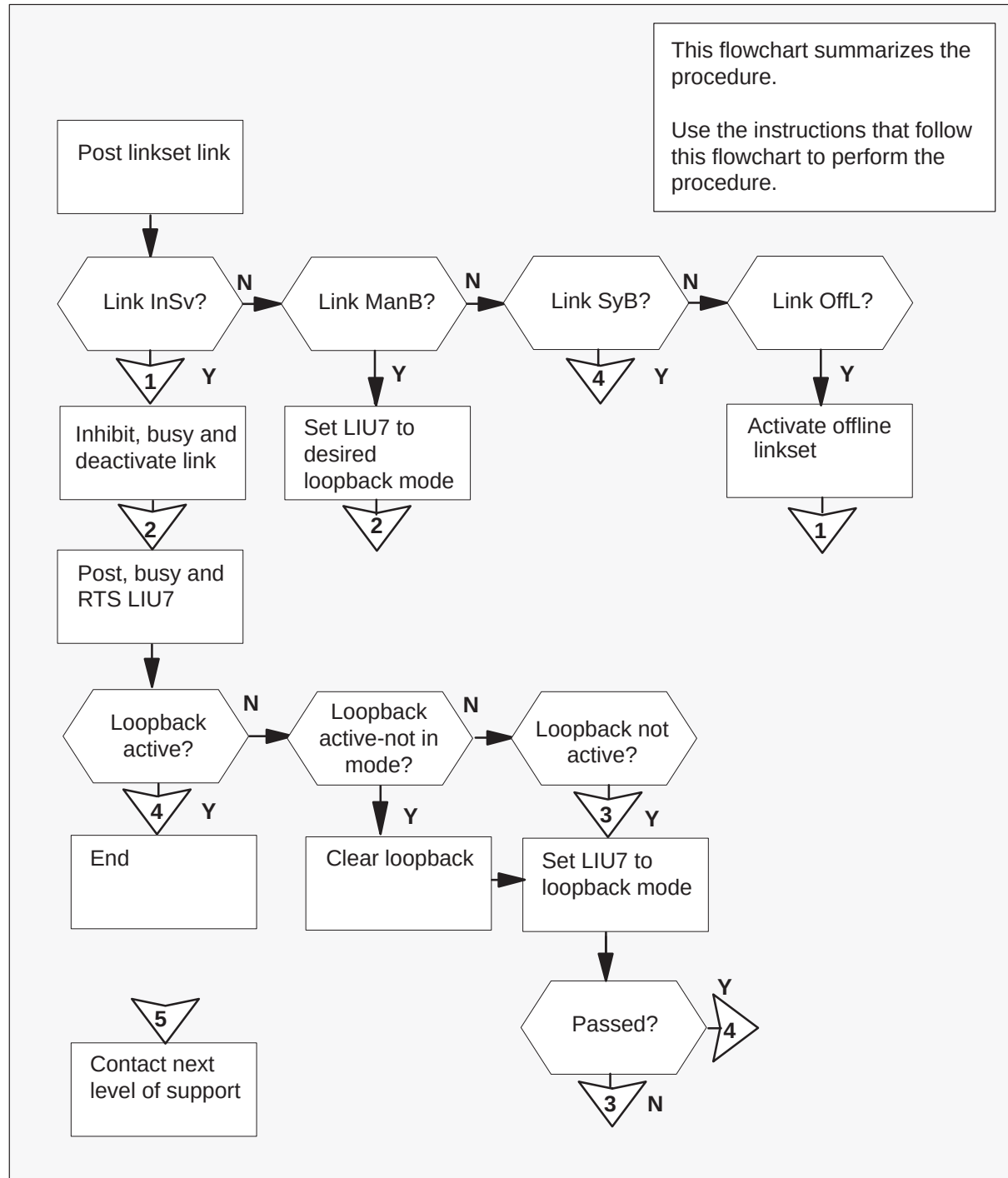
There are no common procedures.

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 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		Resource	Stat	Physical	Access	Stat	Link
LK	Stat	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						Link
	Traf	Sync		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 OFFL	step 4

Activating a loopback on an LIU7

(continued)

- 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

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

Activating a loopback on an LIU7 (continued)

- 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:

LIU7 100 InSv Rsvd
POST:

- 8 To manually busy the LIU7, type

>BSY

and press the Enter key.

If the BSY command	Do
passes	step 9
fails	step 16

- 9 To return the LIU7 to service, type

>RTS

and press the Enter key.

If the RTS command	Do
passes	step 10
fails	step 16

Activating a loopback on an LIU7
(continued)

- 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).

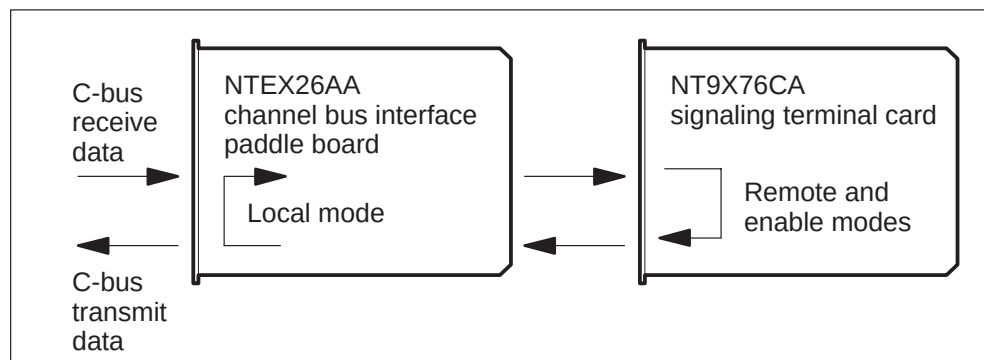
Definition

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.

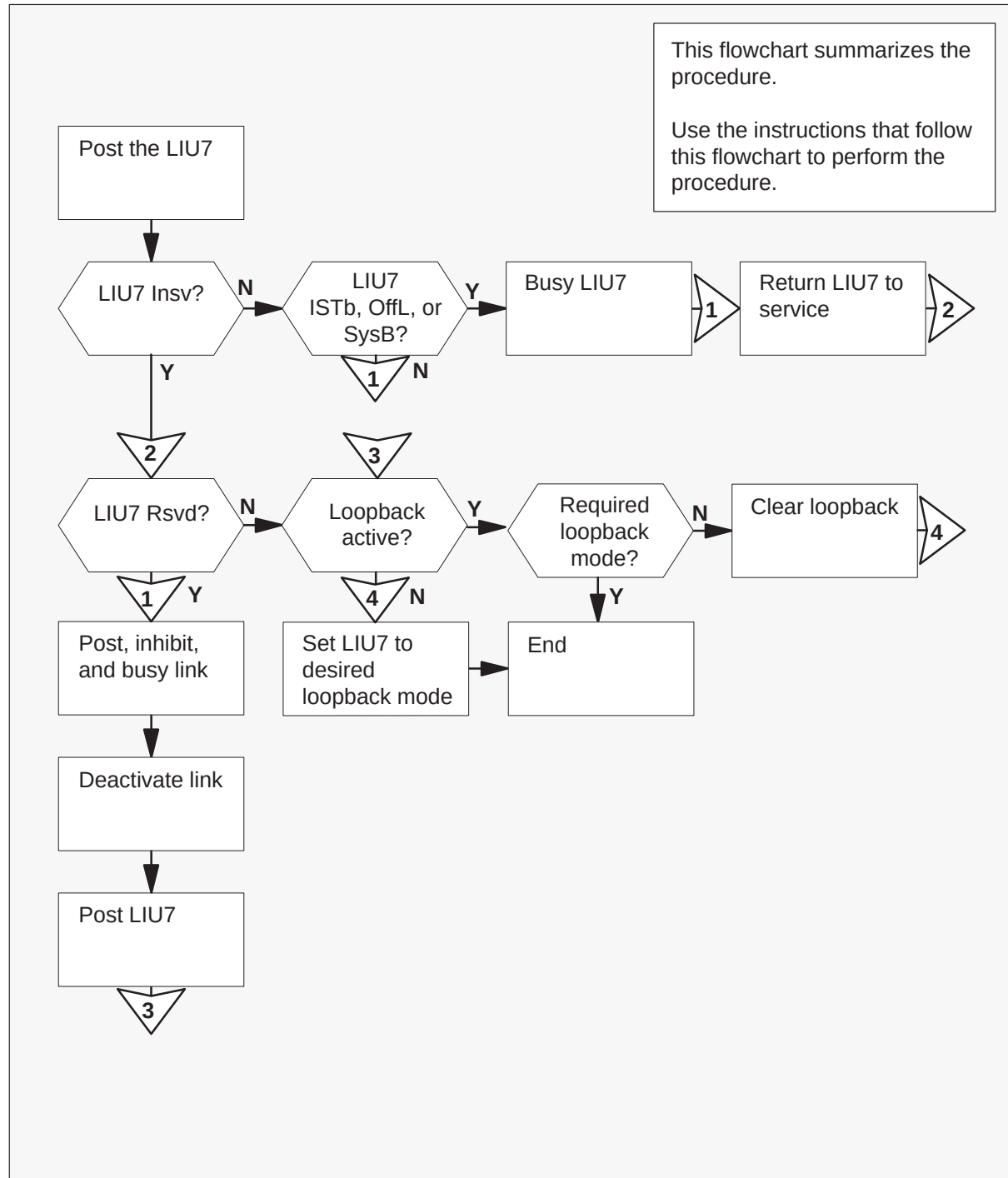
Action

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 21

Activating a loopback on an NTEX26AA paddle board

(continued)

- 5 To return the LIU7 to service, type

>RTS

and press the Enter key.

If the RTS command	Do
passes	step 6
fails	step 21

- 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 16
is Rsvd	step 7
is other than listed here	step 21

- 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
```

Activating a loopback on an NTEX26AA paddle board

(continued)

- 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

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 InSv, ISTb, SysB, or OffL	step 13
is ManB	step 14

Activating a loopback on an NTEX26AA paddle board

(continued)

- 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 13
indicates the system performed the INH command	step 13
indicates the system cannot inhibit the link. The link is the only available link in the linkset	step 21
is other than listed here	step 21

- 13 To manually busy the link, type

>BSY link_no

and press the Enter key.

where

link_no is the number of the link (0 to 15)

If the BSY command	Do
passes	step 14
fails	step 21

Activating a loopback on an NTEX26AA paddle board (continued)

- 14 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 become temporarily system busy. Wait for the LIU7 to return to service before you continue this procedure.

If the DEACT command	Do
passes	step 15
fails	step 21

- 15 To post the LIU7, type

>PM;POST LIU7 liu7_no
and press the Enter key.

where

liu7_no is the number of the LIU7 (0 to 255)

- 16 To determine if the loopback mode is active, type

>LOOPBK S
and press the Enter key.

If the state and mode of the loopback	Do
is ACTIVE, and in the mode you want	step 22
is ACTIVE, and not in the mode you want	step 17
is NOT ACTIVE	step 18

- 17 To clear the current loopback mode of the posted LIU7, type

>LOOPBK C
and press the Enter key.

Activating a loopback on an NTEX26AA paddle board

(end)

- 18** 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)

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

If the response	Do
is LIU7 liu_no LOOPBK PASSED.,	step 22
is LOOPBK FAILED - BERT ACTIVE.	step 20
is LIU7 liu_no LOOPBK REJECTED.	step 21
is LIU7 liu_no: WARNING. An external V.35 clock must be present for local loopback when V.35 is configured as DTE.	step 21
is other than listed here	step 21

- 20** 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 18.

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

- 22** 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) 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

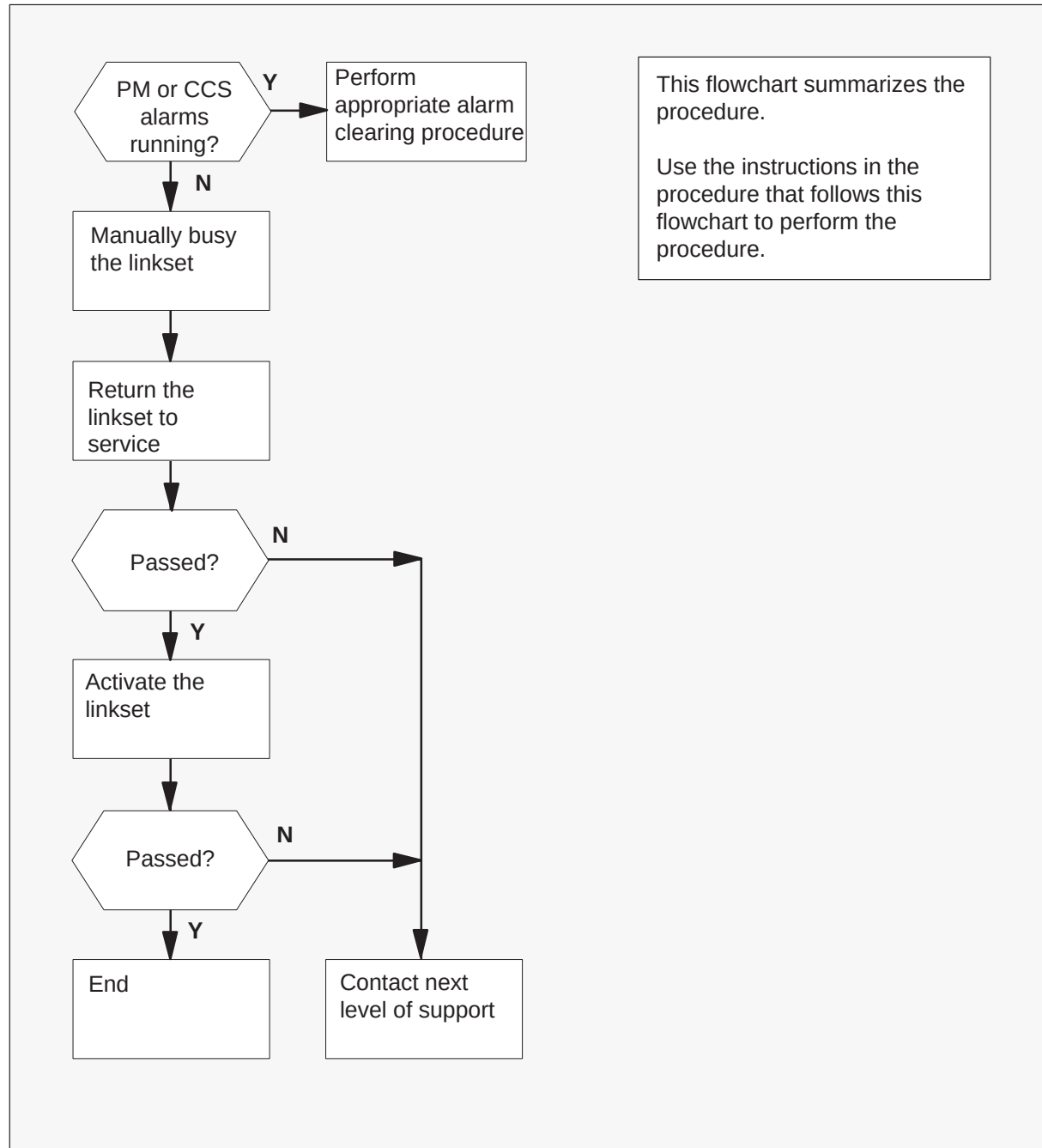
None

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.

Activating an offline linkset (continued)

- 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:

```
Linkset LS_TRAFF_1A Offl
  Traf Sync
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:

```
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 or DLIU is	Do
InSv	step 9
anything else	step 5

Activating an offline linkset

(continued)

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

>PM;POST pm_type liu_no

and pressing the Enter key.

where

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

pm_type is the type of PM (LIU7 or HLIU)

Example of a MAP response:

LIU7 200 InSv Rsvd

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

If the state of the LIU7, HLIU or HSLR is	Do
Offl, SysB, or Istb	step 7
ManB	step 8

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

>BSY

and pressing the Enter key.

If the BSY command	Do
passed	step 8
failed	step 22

- 8 Return the LIU7, HLIU, or HSLR to service by typing

>RTS

and pressing the Enter key.

If the RTS command	Do
passed	step 9
failed	step 22

Activating an offline linkset (continued)

- 9 Manually busy the links in the posted linkset by typing

>CCS;CCS7;C7LKSET;BSY ALL

and pressing the Enter key.

Note: Manually busied links continue to transmit maintenance and test messages. The far end continues to use the links normally, which includes the sending of messages of all types.

If the BSY command	Do
passed for LIU7 links	step 11
passed for DLIU links	step 10

- 10 Return the links in the posted linkset to service by typing

>RTS ALL

and pressing the Enter key.

If the RTS command	Do
passed for LIU7 links	step 21
passed for DLIU links	step 12
failed for LIU7 or DLIU links	step 22

Note: The ACT command initiates automatically when a linkset that contains DLIUs is returned to service.

- 11 Activate the links in the posted linkset by typing

>ACT ALL

and pressing the Enter key.

- 12 Determine the size of the posted linkset.

If the MAP display indicates the size of the posted linkset is	Do
greater than 4	step 13
4 or fewer	step 14

Activating an offline linkset(continued)

- 13 Display the rest of the links in the linkset by typing

>NEXT

and pressing the Enter key.

- 14 Determine the synchronization states of the links.

Note: The synchronization states are listed under the Sync Stat header of the MAP display.

Example of a MAP display for LIU7:

```
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
```

Example of a MAP display for DLIU:

```
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
```

If all the links that you activated	Do
have a synchronization state of Sync	step 23
do not have a synchronization state of Sync	step 15

Activating an offline linkset (continued)

- 15** Wait 8 min to see if the links activate. Determine the synchronization states of the links.

If the synchronization state of the links is	Do
Sync or Alnd	step 23
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 22

- 16** Determine from office records which far-end office is connected to the posted linkset.

- 17** Contact the far-end office. Tell personnel at that location that

- you are going to busy, deactivate, return to service, and activate the link in order to realign it, and that
- the link must be activated from both ends once you have busied it, deactivated it, and returned it to service

Coordinate your activities for realigning the link with those of the far-end office.

Activating an offline linkset

(continued)

- 18 Manually busy the links that you have been trying to activate by typing

>BSY ALL

and pressing the Enter key.

Note: A manually busied link continues to transmit maintenance and test messages. The far end continues to use the link normally, which includes the sending of messages of all types.

If the BSY command	Do
passed	step 20
failed	step 19
failed	step 22

- 19 Force the links to busy by typing

>BSY FORCE

and pressing the Enter key.

- 20 Return the links in the posted linkset to service by typing

>RTS ALL

and pressing the Enter key.

If the RTS command	Do
passed for LIU7 links	step 21
passed for DLIU links	step 23
failed	step 22

passed	step 21

- 21 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.

Activating an offline linkset (end)

- 22** For further assistance, contact the personnel responsible for the next level of support.
- 23** 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

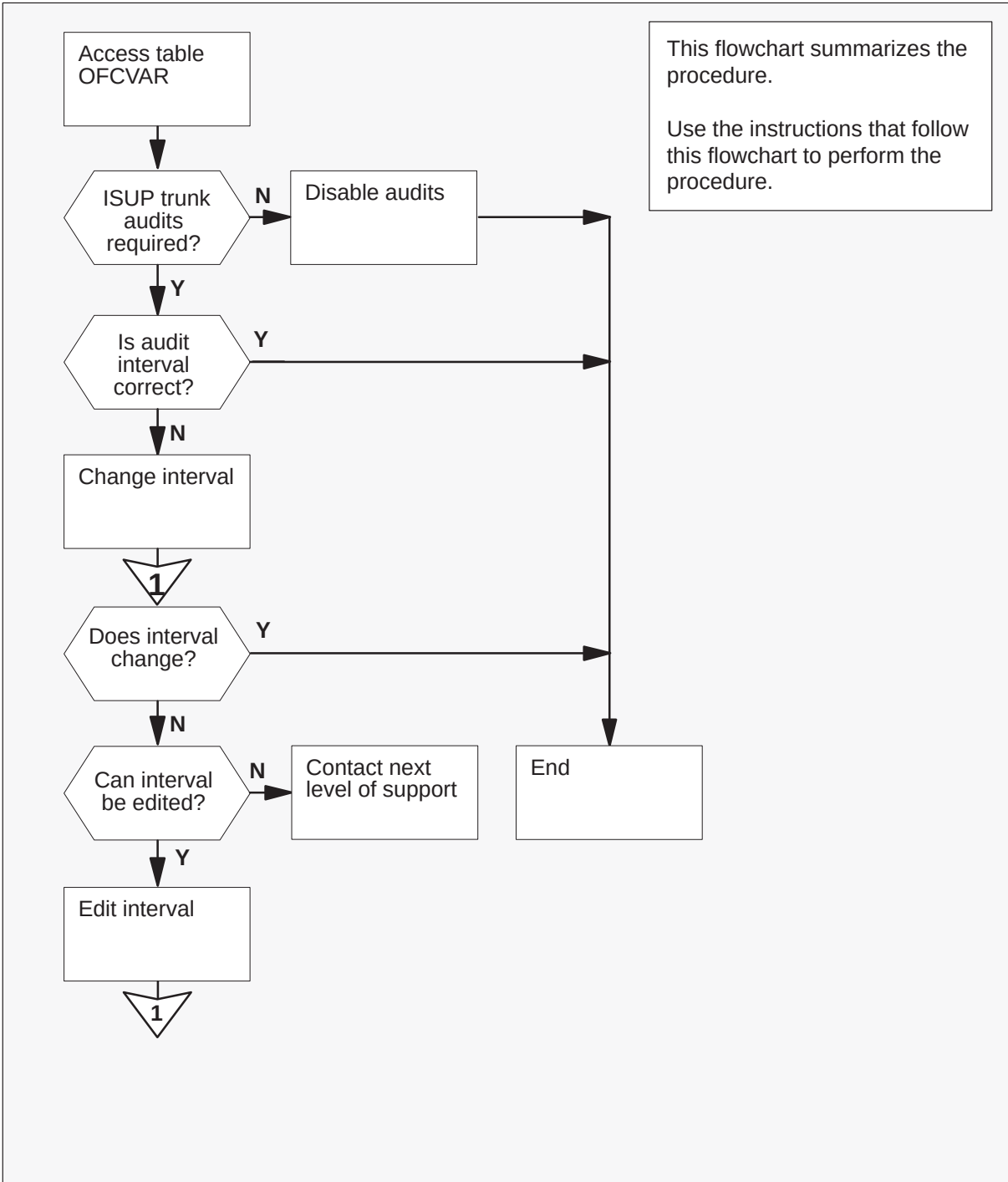
There are no common procedures.

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:

<u>PARMNAME</u>	<u>PARMVAL</u>
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

Activating the throttling logs mechanism (continued)

- 4 To disable the ISUP trunk audit, type

>CHANGE 2 0

and press the Enter key.

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.

Activating the throttling logs mechanism

(continued)

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

If the response	Do
is VALUE ACCEPTED TUPLE CHANGED	step 11
is ERROR: INVALID INTERVAL SPECIFIED. 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	step 8
is ERROR: INVALID INTERVAL SPECIFIED. 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	step 8
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	step 8
is other than listed here	step 12

Activating the throttling logs mechanism (continued)

- 8 To indicate that you want to change the value entered, type

>E

and press the Enter key.

Example of a MAP response:

PARMVAL : 15

Note: The parmval can be a value of 0, or a value between 10 and 60.

- 9 To enter a correct ISUP trunk audit interval, type

>valid_value

and press the Enter key.

where

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.

Activating the throttling logs mechanism

(end)

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

Adding a 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.

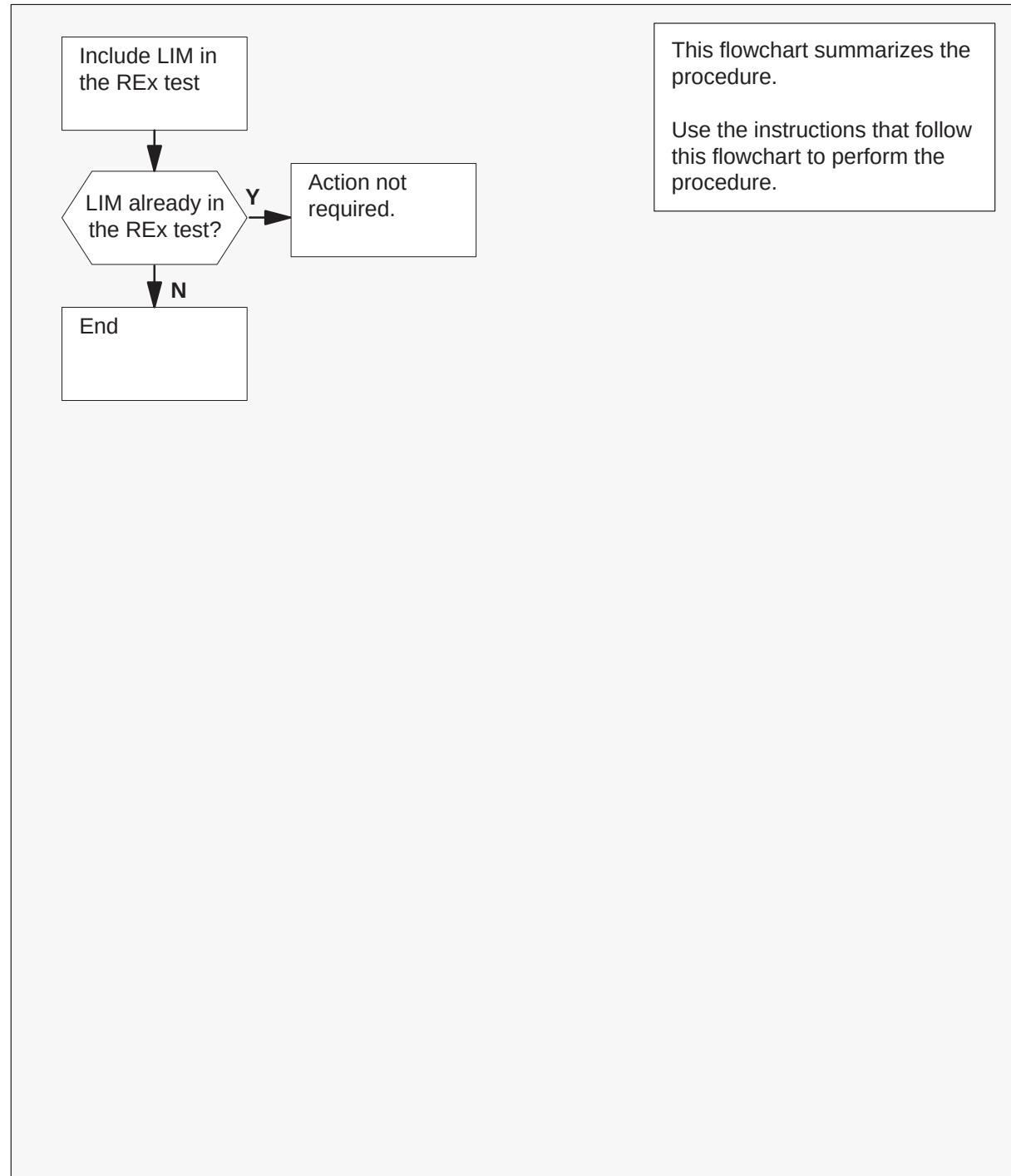
Action

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 a LIM to an automatic REx test schedule

(continued)

Summary of Adding a LIM to an automatic REx test schedule



Adding a LIM to an automatic REx test schedule

(end)

Adding a 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.

If the response	Do
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

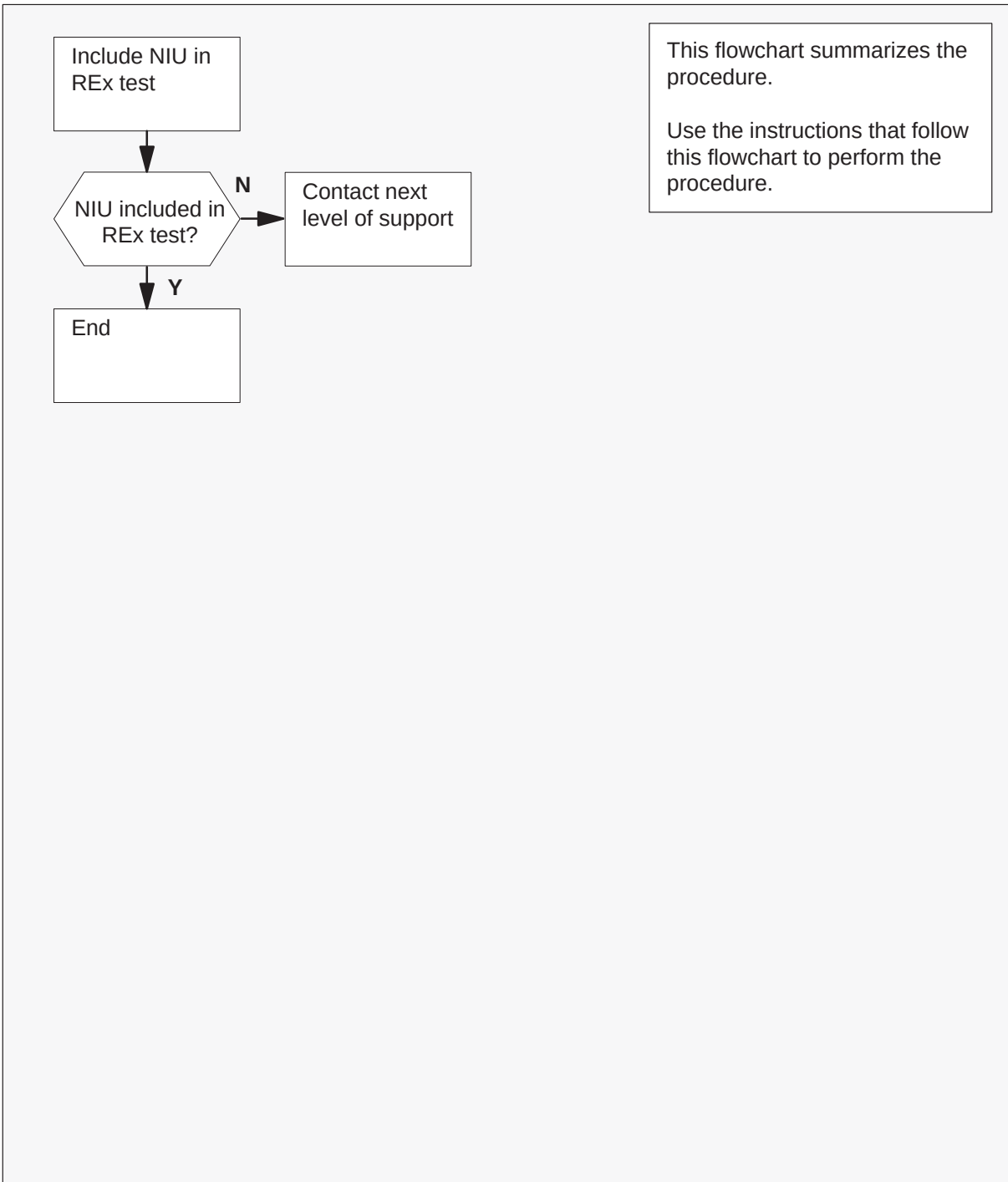
There are no common procedures.

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

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

- 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
is The REx schedule cannot include the NIU n.	step 5
is Command rejected. The PM is off-line.	step 6

- 5 Determine if you tried to add the NIU to the REx test schedule for the first or second time.

If it	Do
is the first try	step 4
is the second or next try	step 9

- 6 Determine from office records or from operating company personnel why the NIU is offline.

If you	Do
are permitted to return the NIU to service	step 7
are not permitted to return the NIU to service	step 10

- 7 To manually busy the posted NIU, type

>BSY PM

and press the Enter key.

Adding an NIU to an automatic REx test schedule

(end)

- 8 To return the posted NIU to service, type
>RTS PM
and press the Enter key.

If the RTS command	Do
passes	step 4
fails	step 9

- 9 For additional help, contact the next level of support.
- 10 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:

- NTNX36BP
- NTNX36CB
- 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

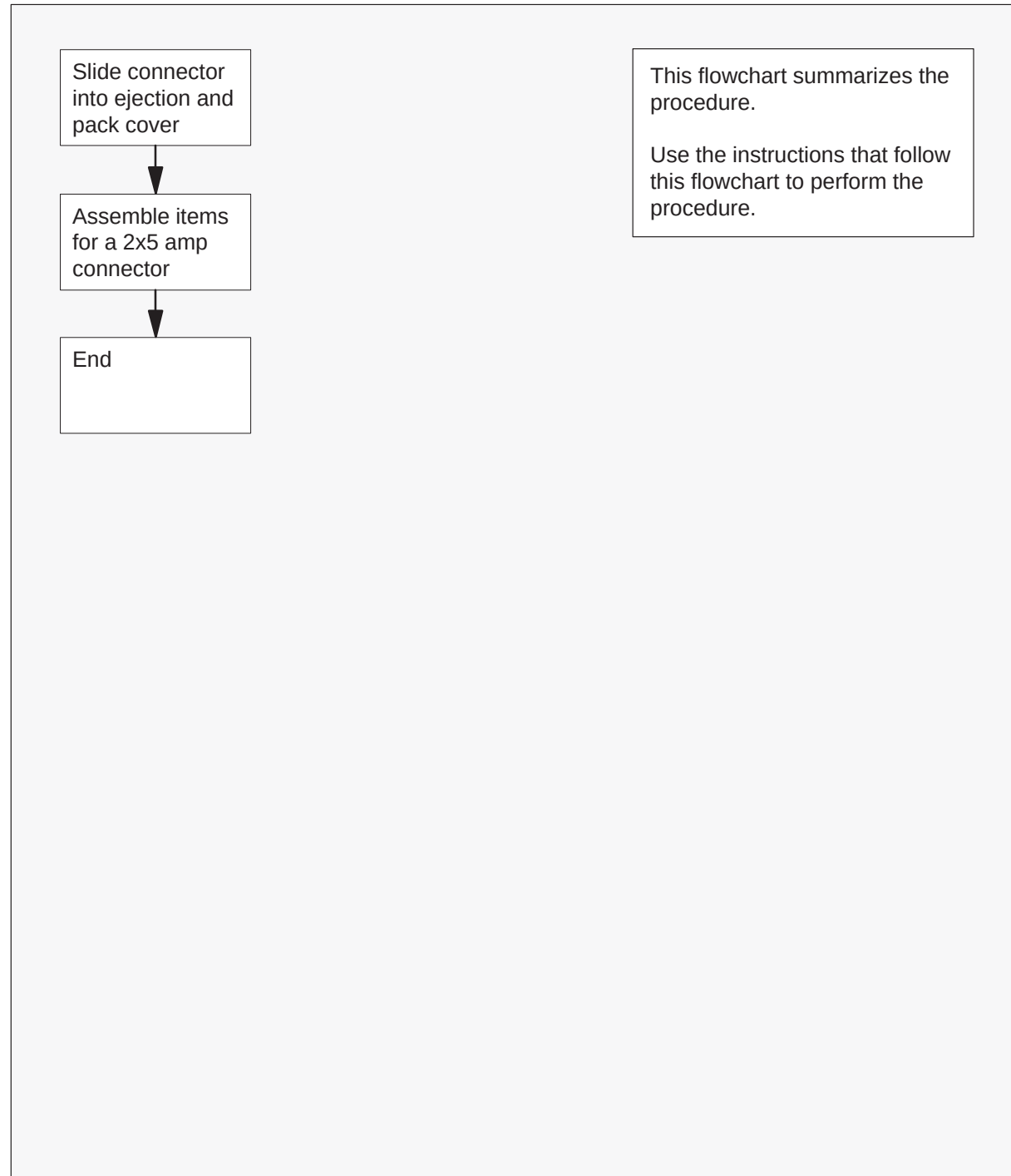
This procedure contains a summary flowchart and a list of steps. Use the flowchart as a summary of the procedure. Follow the steps to perform the procedure.

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)

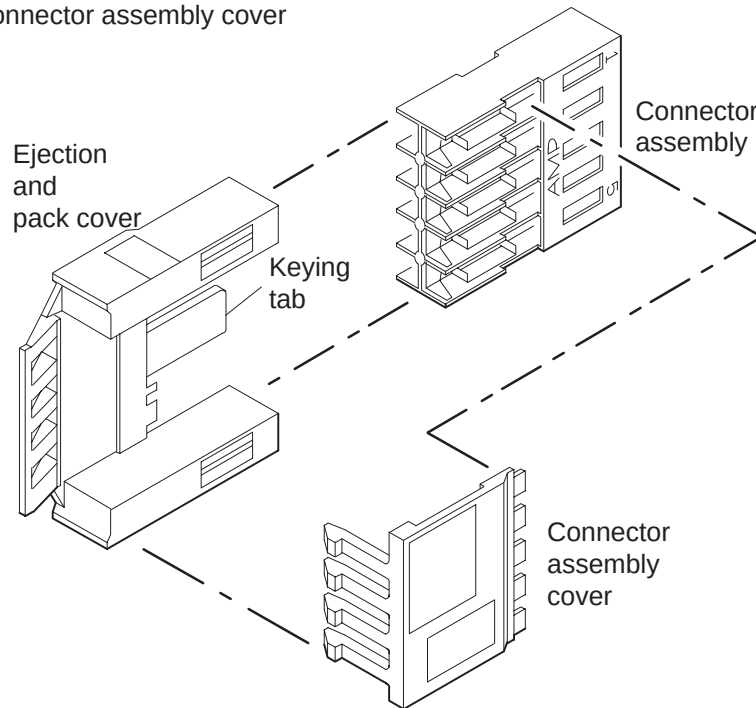
Summary of Assembling 2x5 AMP connectors in SuperNode cabling



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



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.

Assembling 2x5 AMP connectors in SuperNode cabling (continued)



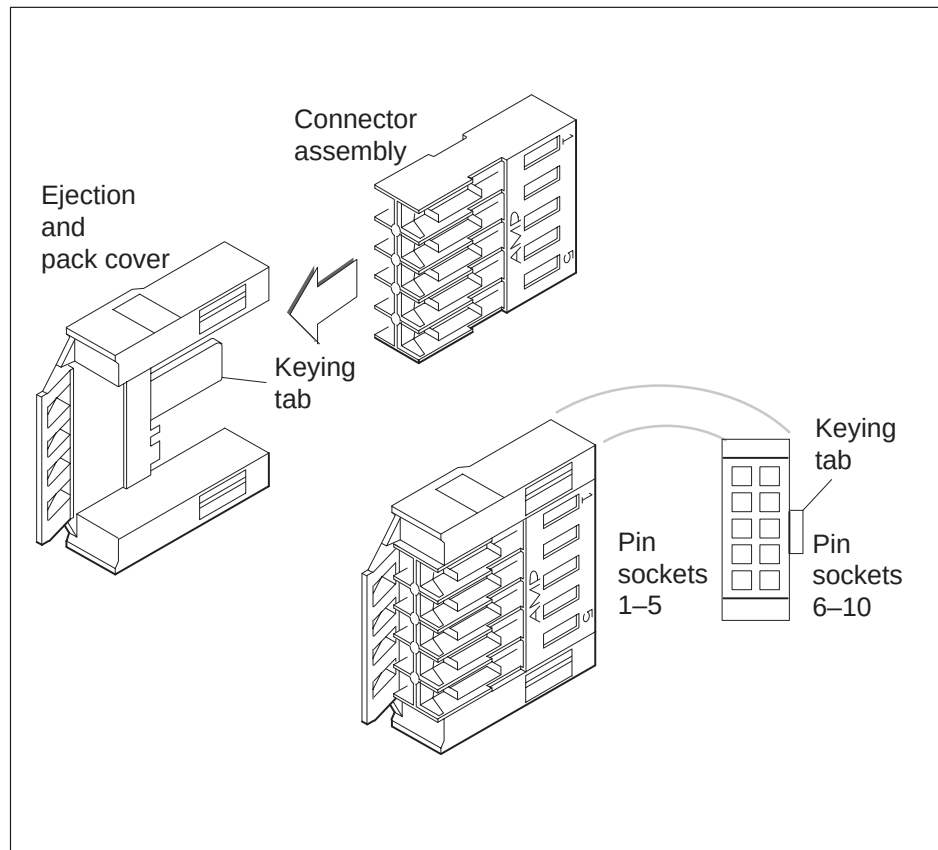
WARNING

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.

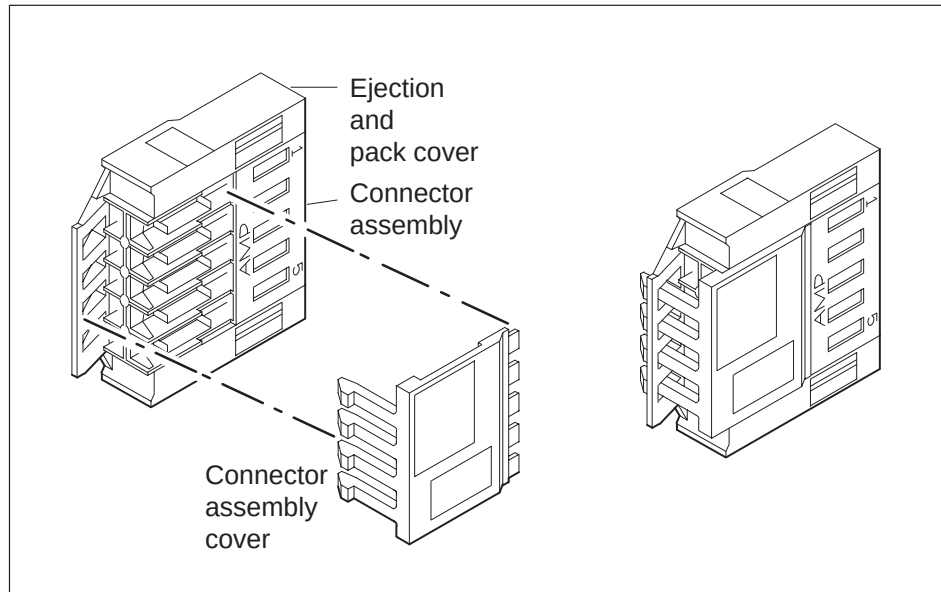
Slide the connector assembly into the ejection and pack cover.

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.

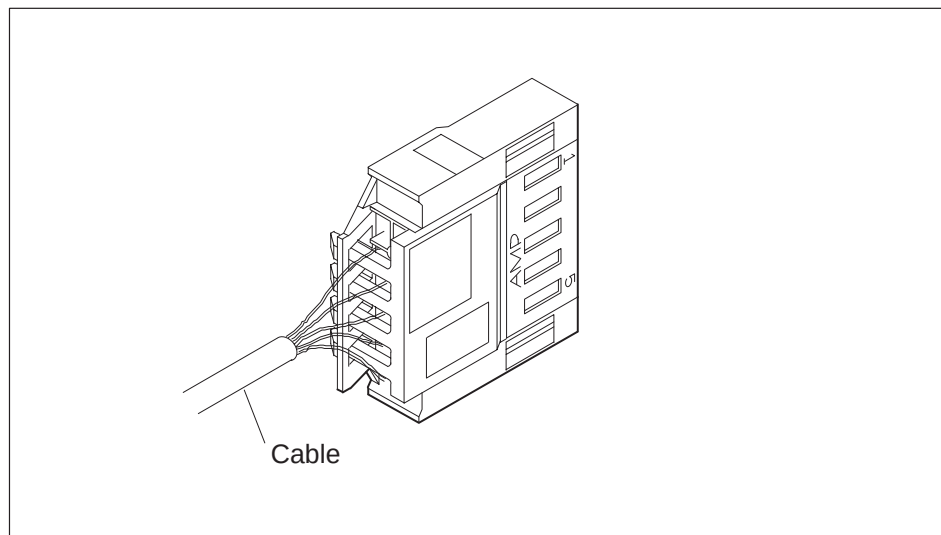


Assembling 2x5 AMP connectors in SuperNode cabling (end)

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



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.

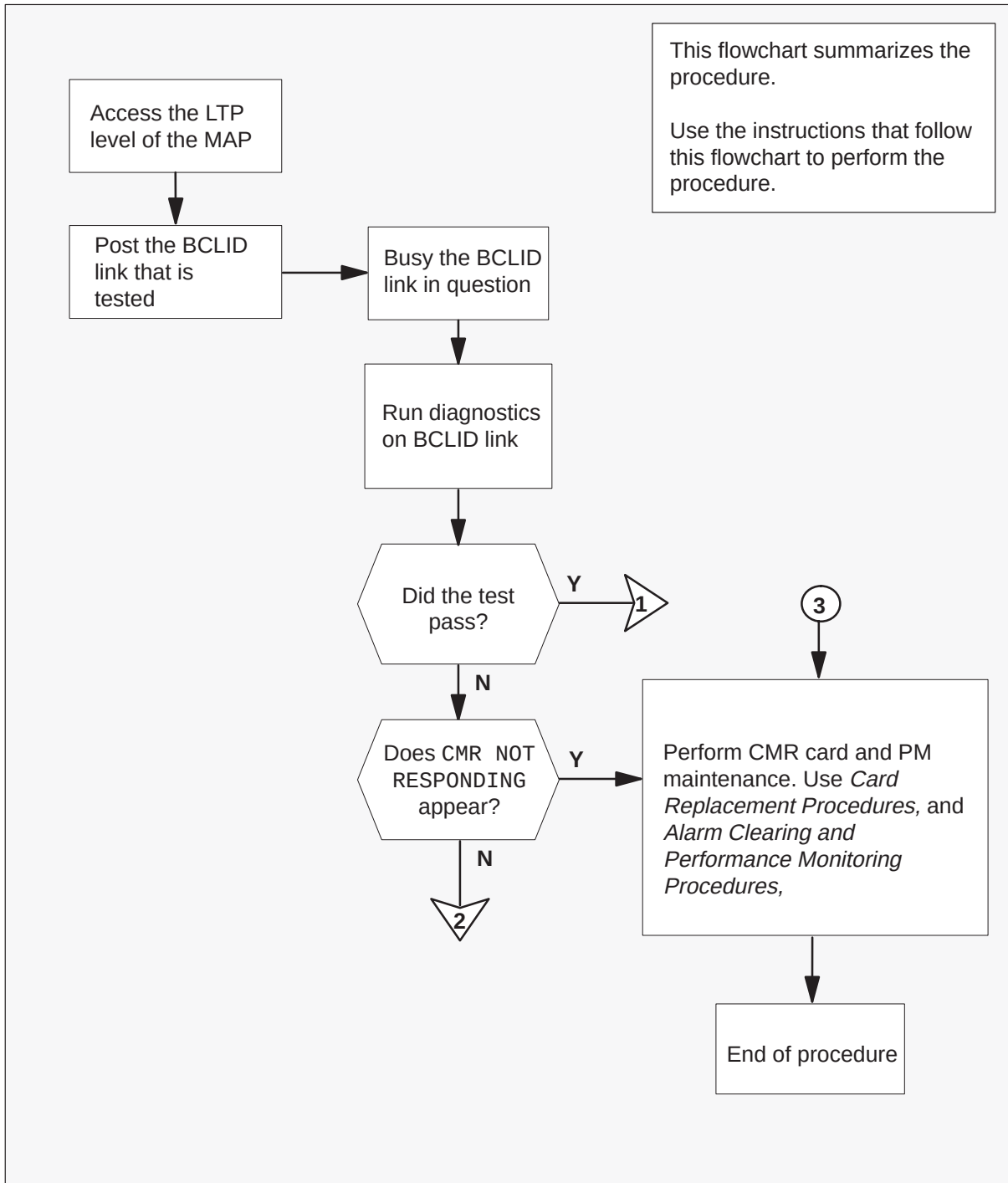
Action

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)

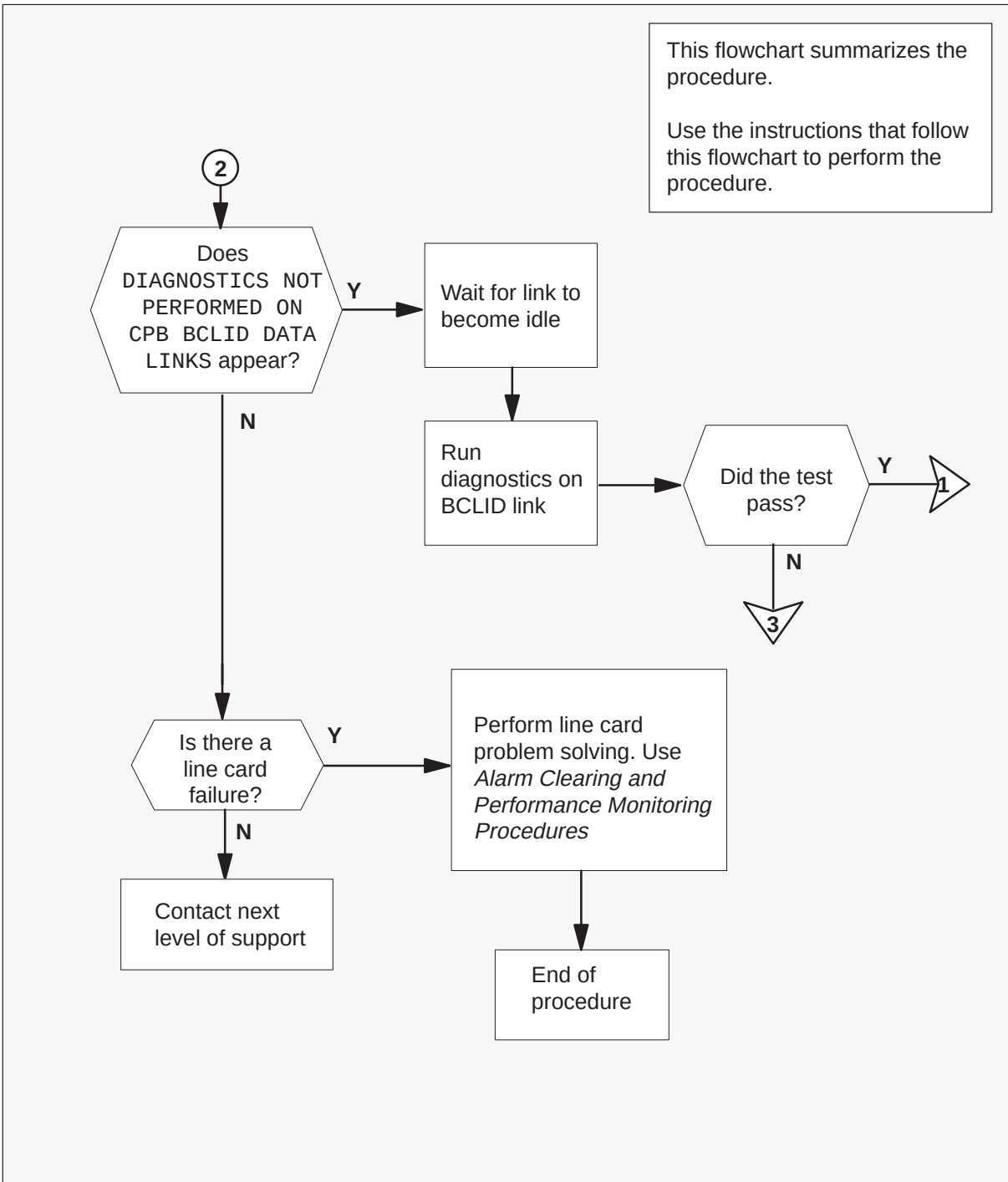
Summary of BCLID link failure



BCLID link failure

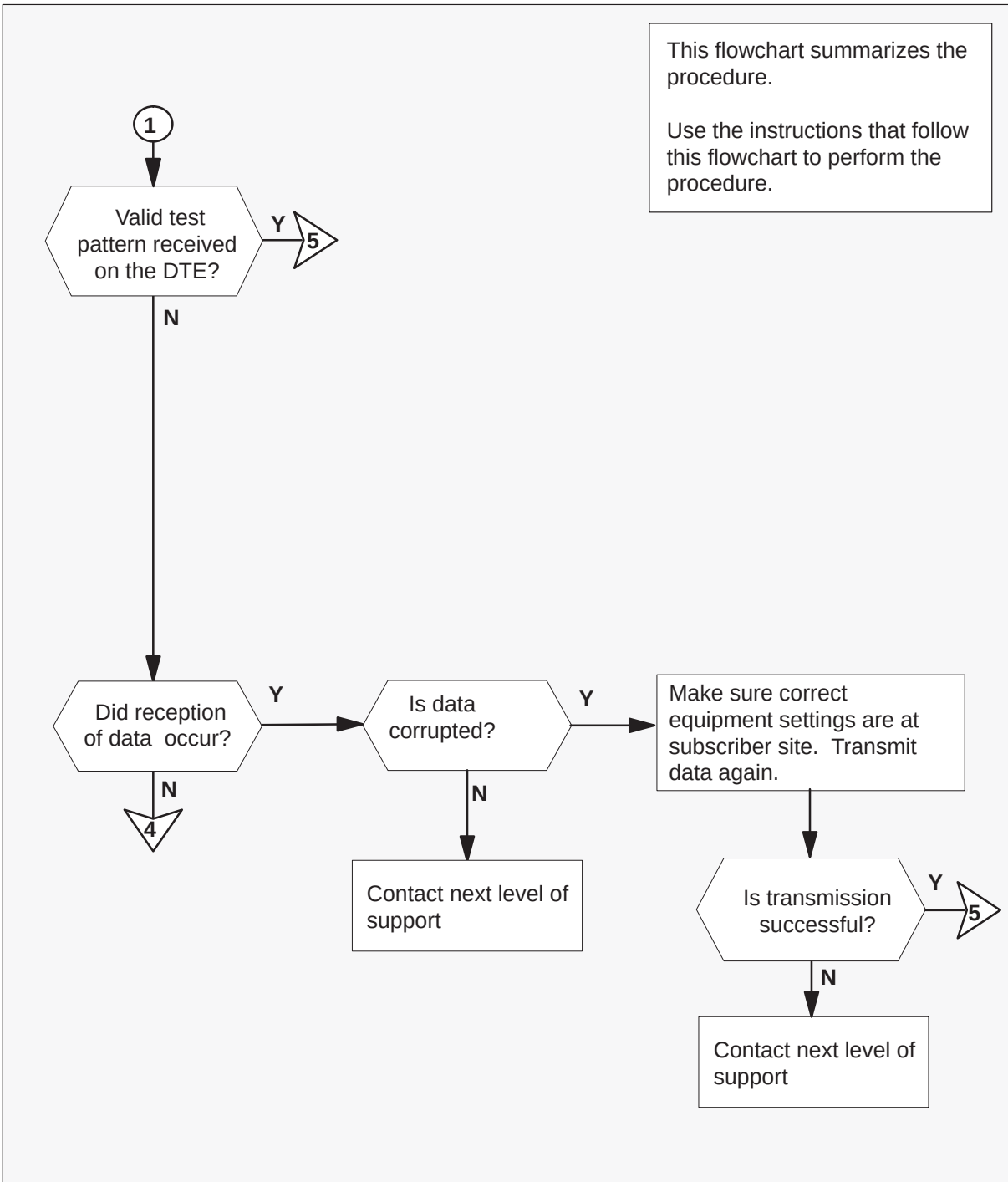
(continued)

Summary of BCLID link failure (continued)



BCLID link failure (continued)

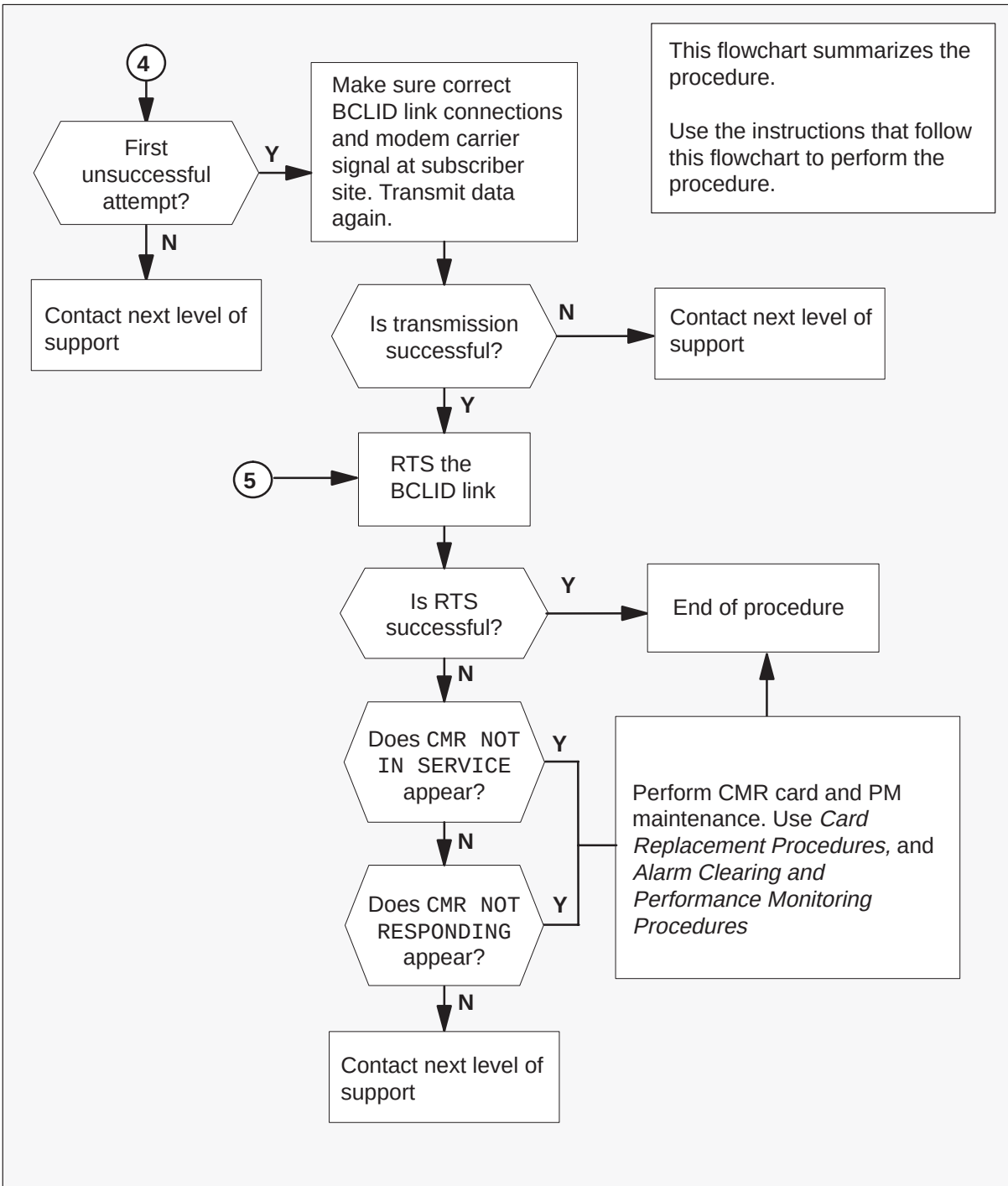
Summary of BCLID link failure (continued)



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.



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.

BCLID link failure

(continued)

- 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
```

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.

BCLID link failure
(continued)

- 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).

Example 1

BC 012345 678901 2345678 9012345678 I T

where

BC	indicates a BCLID message
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

Example 2

BC 6211000 2345678 9012345678 I T

BCLID link failure

(continued)

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.

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

If this	Do
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.

BCLID link failure (continued)

- 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.

If	Do
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
the following message appears: CMR NOT RESPONDING	step 23
a message other than listed here appears	step 25

BCLID link failure

(end)

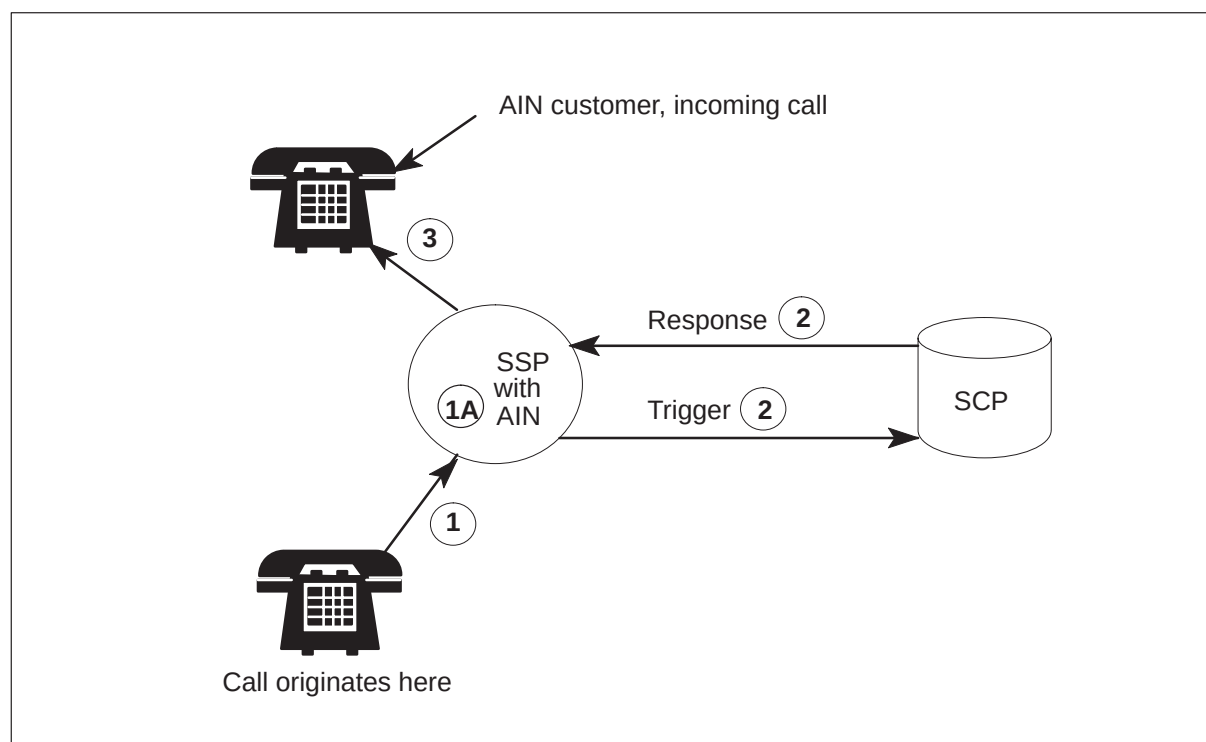
- 21 Go to *Card Replacement Procedures* for information on card replacement procedures. Go to *Alarm Clearing and Performance Monitoring Procedures* for information on peripheral module (PM) maintenance procedures. The CMR card is out of service. You cannot return the BCLID link to service. Return to this point.
- 22 Go to step 26.
- 23 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. 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.
- 24 Go to step 26.
- 25 For additional help, contact the next level of support.
- 26 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

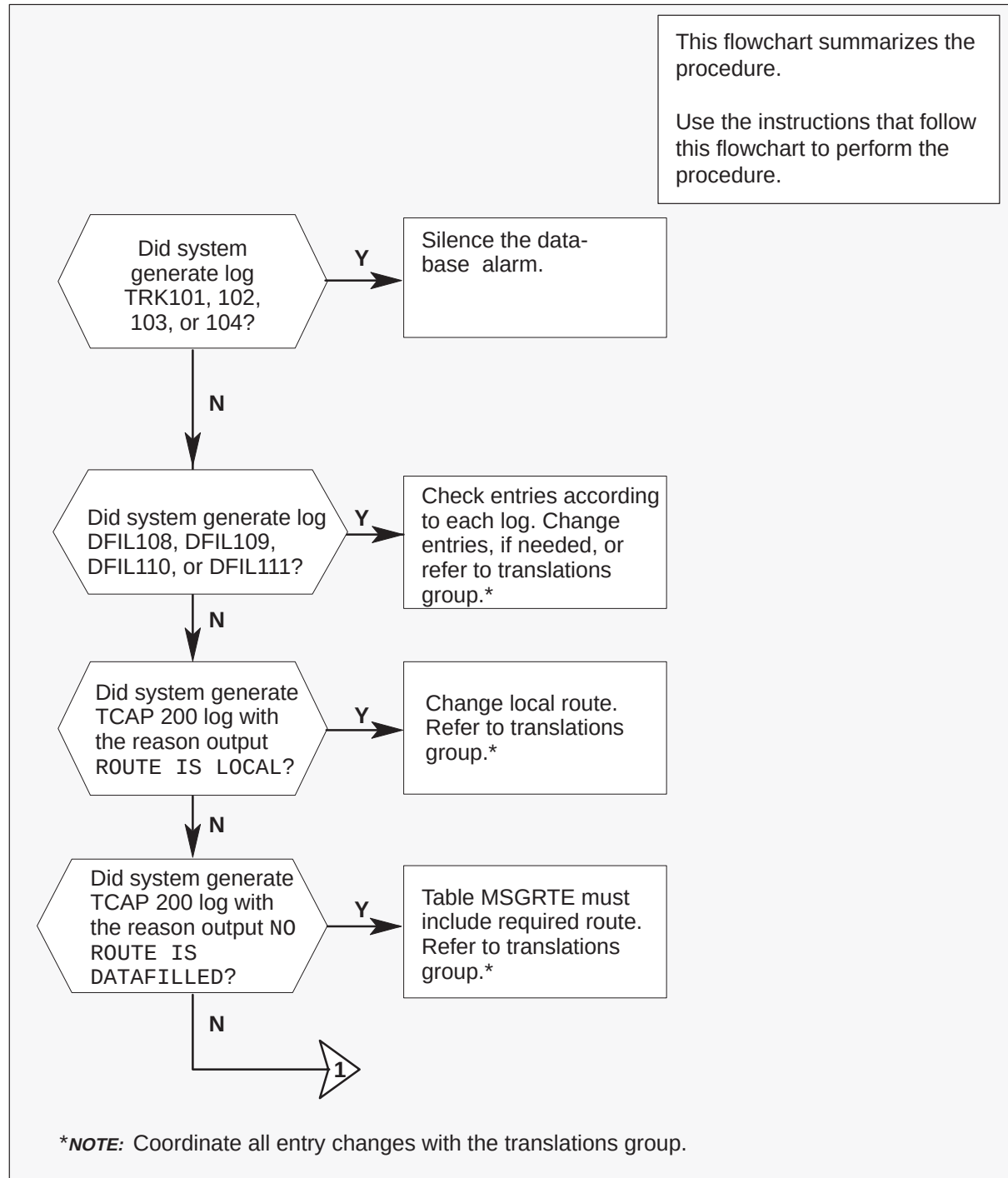
There are no common procedures.

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)

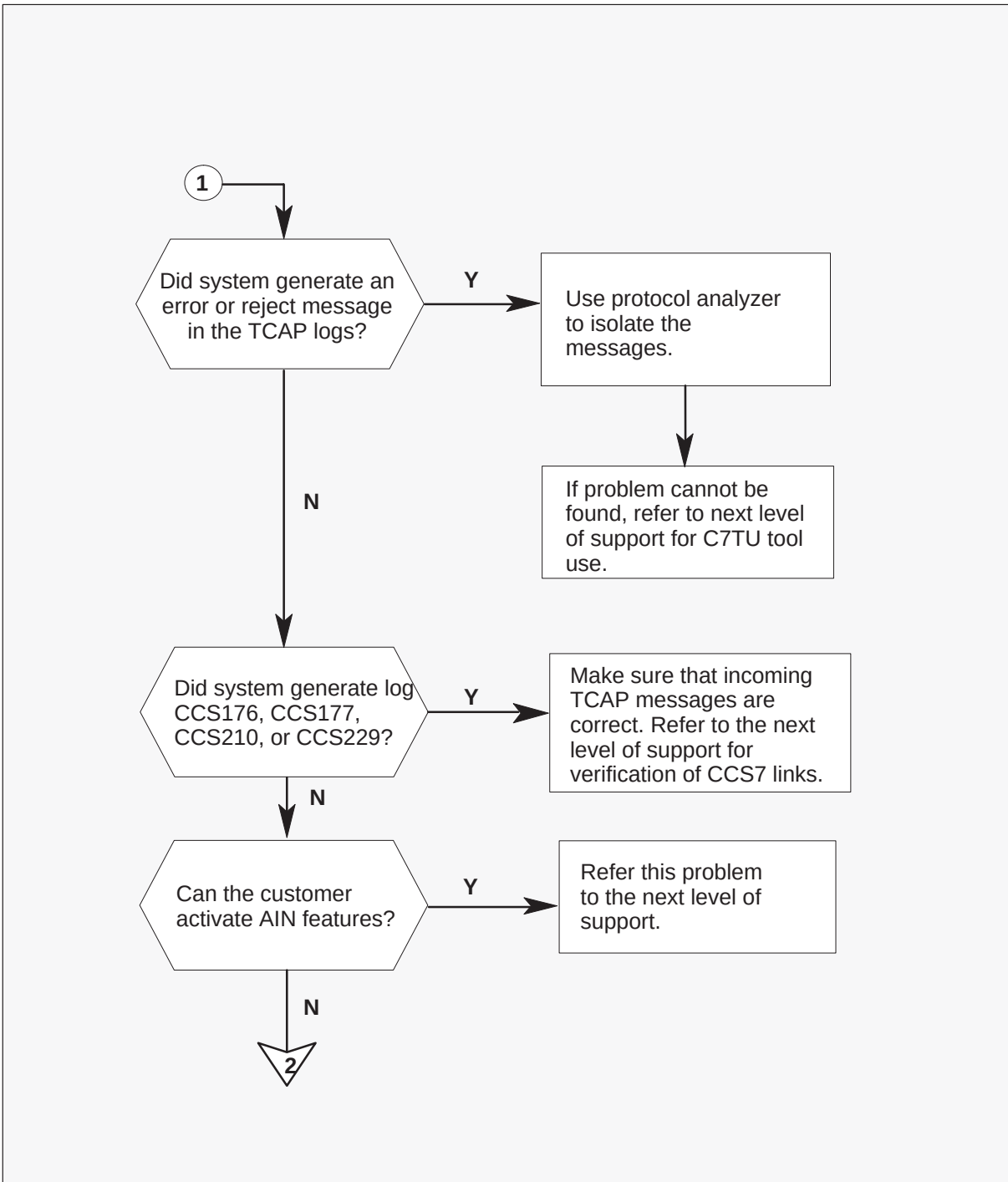
Summary of Cannot be called



Cannot be called

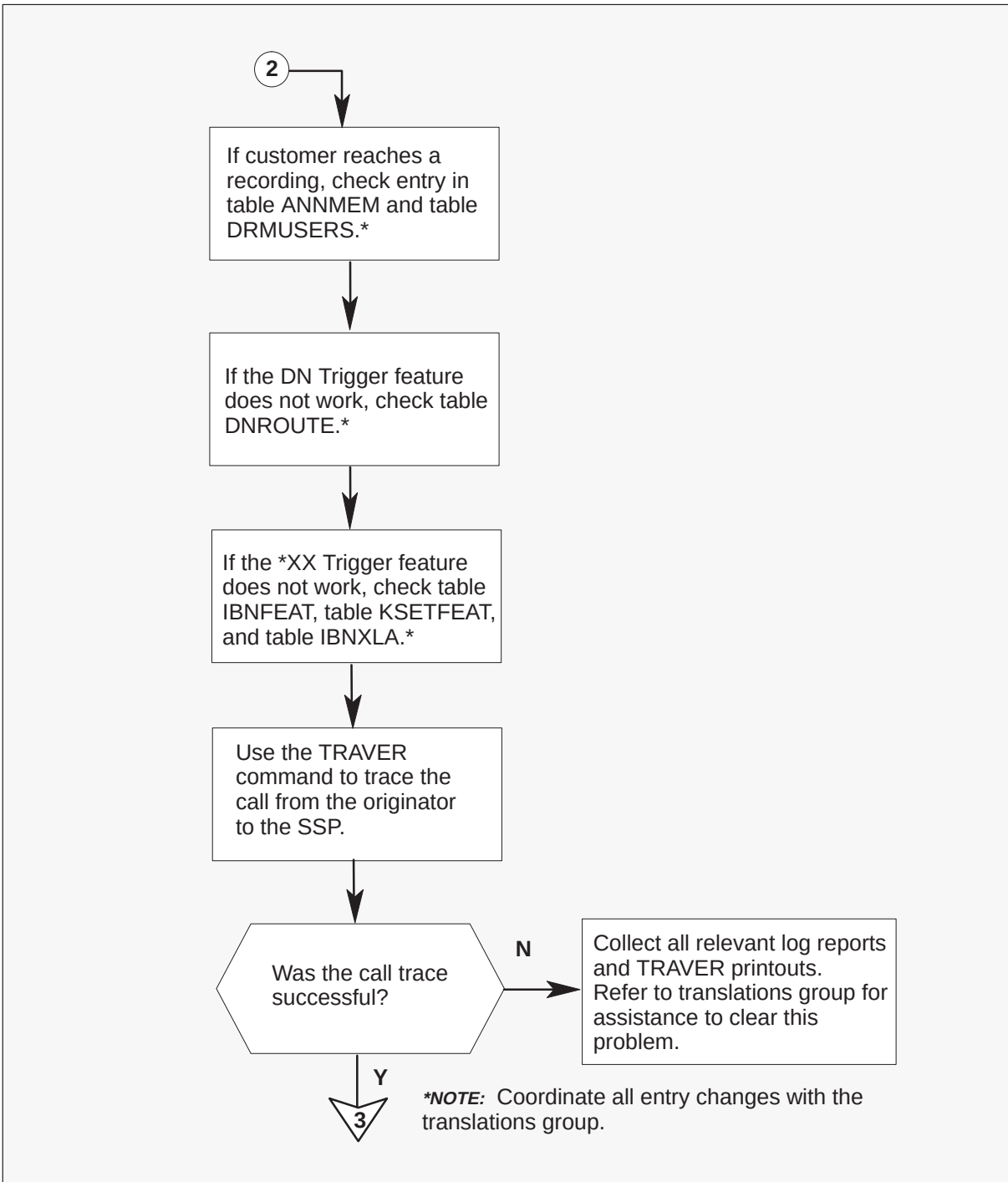
(continued)

Summary of Cannot be called (continued)



Cannot be called (continued)

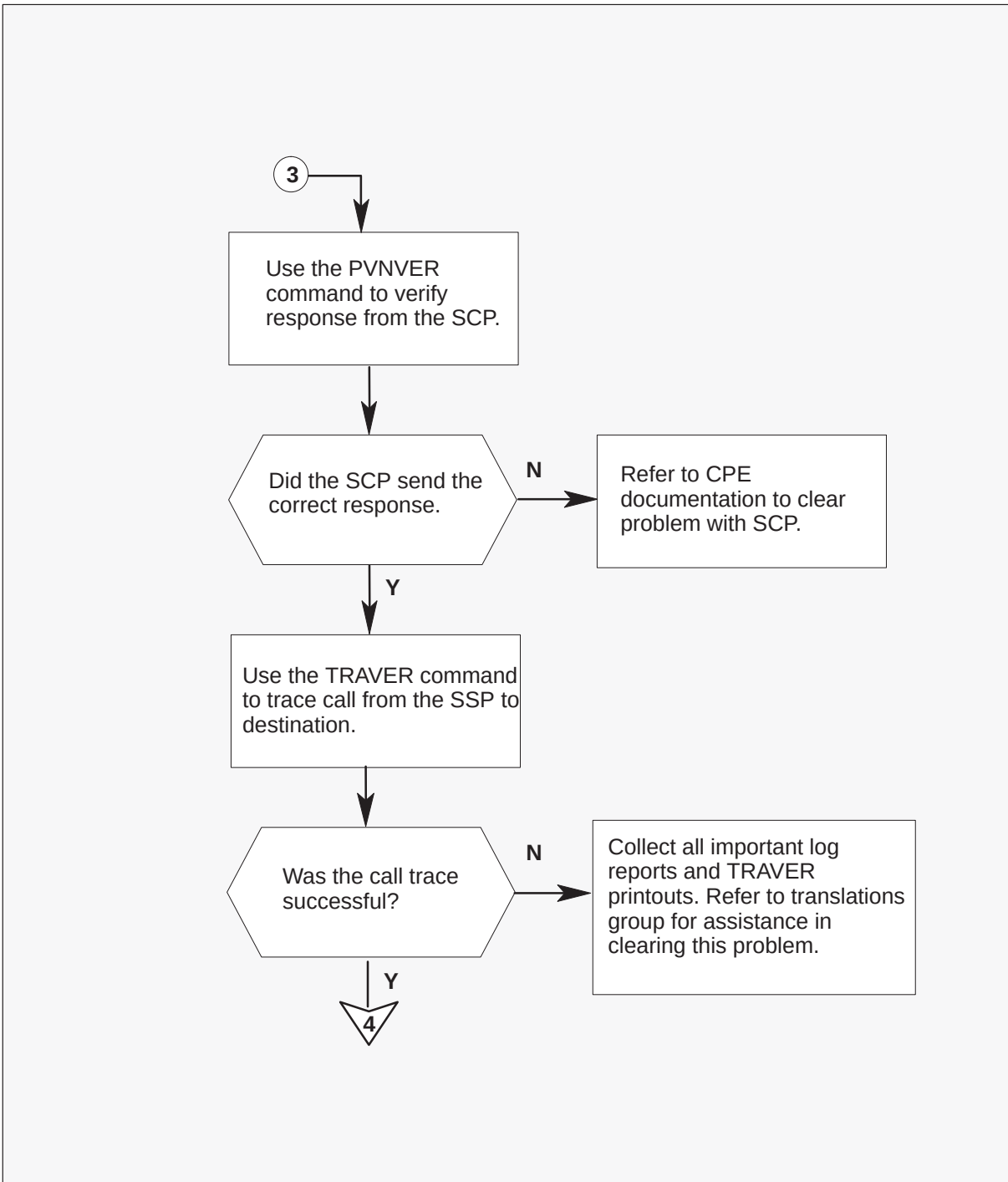
Summary of Cannot be called (continued)



Cannot be called

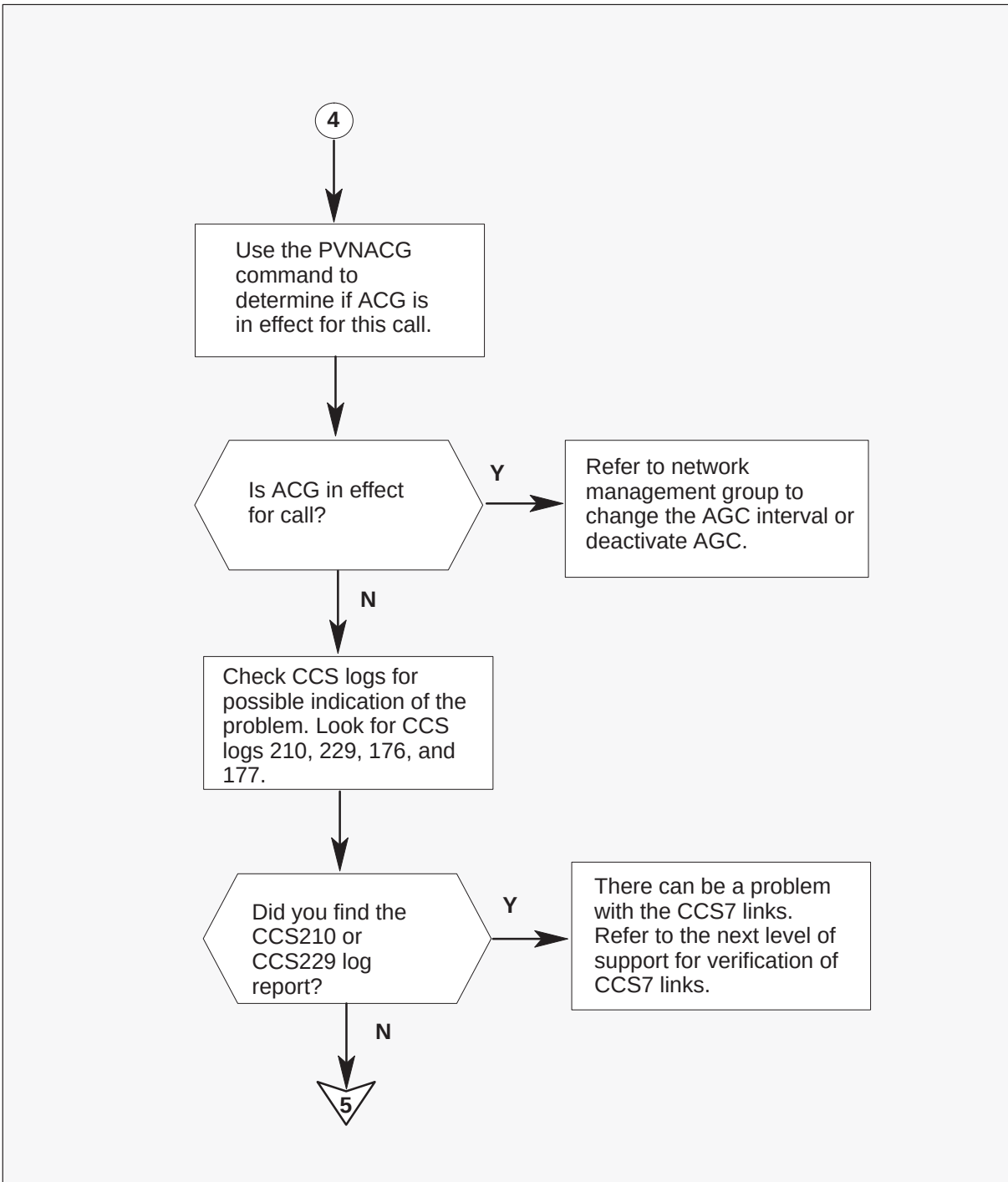
(continued)

Summary of Cannot be called (continued)



Cannot be called (continued)

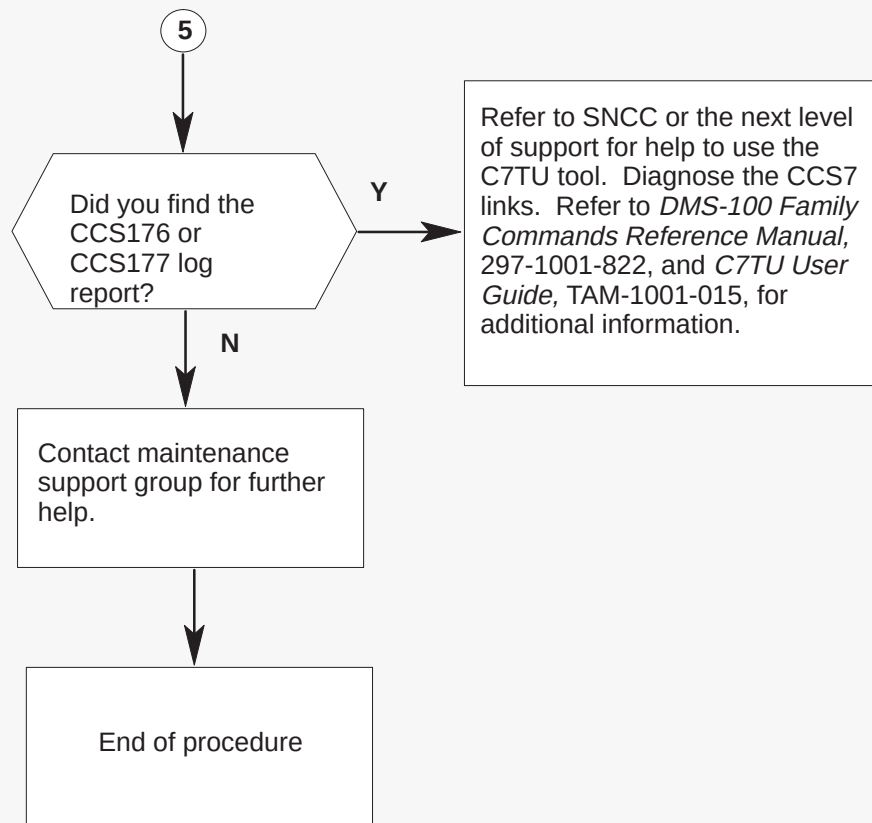
Summary of Cannot be called (continued)



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.

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
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.	

Cannot be called

(continued)

- 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.

- 5 Check log reports.

If log	Do
is log DFIL108	step 6
is log DFIL109	step 7
is log DFIL110	step 8
is log DFIL111	step 9
Note 1: For additional information, refer to <i>Translations Guide</i> , and <i>Log Report Reference Manual</i> .	
Note 2: Changes in entries must coordinate with the translations group in your company.	

- 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*.

Cannot be called (continued)

- 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 response 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.

- 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.

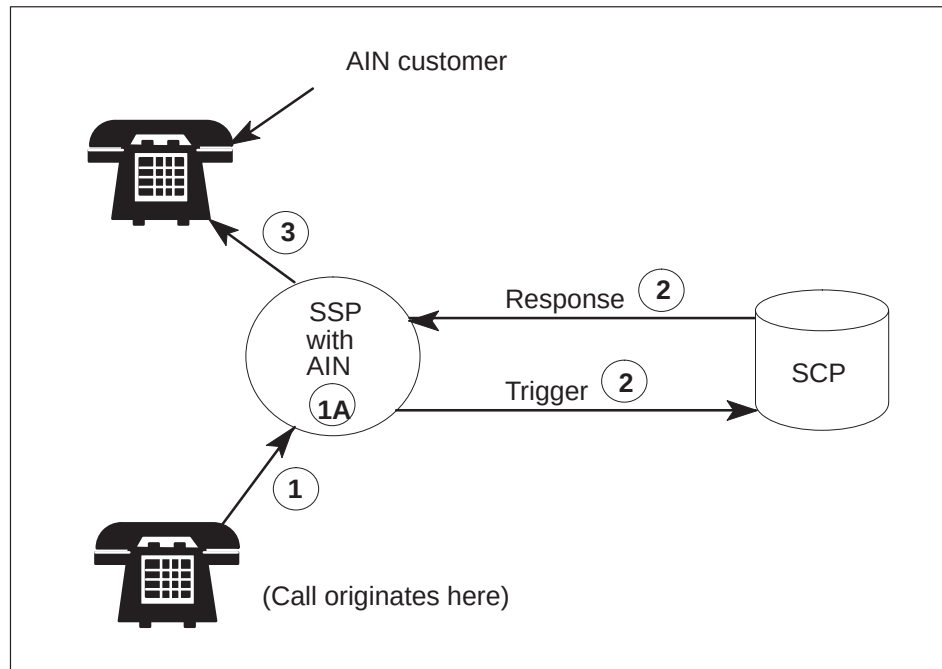
- 16** Refer to the following diagram for the steps to trace AIN calls.

Cannot be called

(continued)

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

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

Cannot be called

(continued)

- 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

If the message	Do
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION appears	step 19
other than listed here appears	step 22
Note: The table that follows this step-action procedure provides an example of this TRAVER.	

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

Cannot be called (continued)

- 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.

Cannot be called

(continued)

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

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.

Cannot be called (continued)

- 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:.

PVN 6 DIGIT ACG CODES:

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

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

If ACG	Do
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

- 24 Refer to network management for possible interval change or termination of ACG.

- 25 To obtain logs, activate the LOGUTIL log report system. Type

>LOGUTIL

and press the Enter key.

Cannot be called

(continued)

- 26 To view log reports, type

>OPEN log_report_type

and press the Enter key.

where

log_report_type is the alphabetical string that identifies the log report category that will generate

Example input:

>OPEN CCS

If	Do
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
Note: 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.	

- 27 Refer to the next level of support to check CCS7 links.
- 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 1 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.

Cannot be called
(continued)

Figure 1
TRAVER for incoming AIN call, public office dial plan trigger, from RES line

Line	Output
	(step 1 – The first number to SSP, or to VFG then to SSP)
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
24	TABLE LINEATTR
25	531 1FR NONE NT NSCR 254 906 NETI NLCA RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
26	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
27	TABLE STDPRTCT
28	NETI (1) (0)
29	. SUBTABLE STDPRT
30	. 19 19 N DD 1 NA
31	. SUBTABLE AMAPRT
32	. KEY NOT FOUND
33	. DEFAULT VALUE IS: NONE OVRNONE N
34	TABLE HNPACONT
35	906 911 19 (84) (1) (0) (0)
36	. SUBTABLE HNPACODE
37	. 903 903 FNPA 0
38	TABLE FNPACONT
39	903 872 - (3) (0) (3)
40	. SUBTABLE FNPACODE
41	. 223 223 1 Y
42	. SUBTABLE RTEREF
43	. . 1 N D S6S3ITO 0 N N
44	. EXIT TABLE RTEREF
45	EXIT TABLE FNPACONT
46	TABLE IBNFEAT
47	HOST 01 0 14 13 0 PIC PIC NETEAP Y
48	OVERLAP CARRIER SELECTION (OCS) APPLIES
49	TABLE LATAOLA
50	SSPLATA 9 INTER INTER STD
51	TABLE OCCINFO
52	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
53	TABLE EASAC
54	TUPLE NOT FOUND
55	TABLE STDPRTCT
56	NETI (1) (0)

Cannot be called
(continued)

Line	Output
57	TABLE STDPRTCT
58	NETI (1) (0)
59	. SUBTABLE STDPRT
60	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
61	. . TABLE OFRT
62	. . 209 N D S6S1ITOC7 0 N N
63	. . N D S6S1ITO 0 N N
64	. . EXIT TABLE OFRT
65	. TABLE STDPRTCT
66	. EAPI (1) (0)
67	. . SUBTABLE STDPRT
68	. . 1903 1904 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
69	. . . TABLE IBNRTE
70	. . . 212 VFG N N N NETINV 208
71	 TABLE DIGMAN
72	 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 210) (NEX 211)
73	 TABLE DIGMAN
74	 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
75	 EXIT TABLE DIGMAN
76	 TABLE DIGMAN
77	 211 (CL BEG) (REM3) (CL BEG) (INC 1) (CL BEG)
78	 EXIT TABLE DIGMAN
79	 EXIT TABLE DIGMAN
80	 EXIT TABLE IBNRTE
81	+++ TRAVER: SUCCESSFUL CALL TRACE +++
82	DIGIT TRANSLATION ROUTES
83	1 VFG: NETINV 19032231903 ST
84	TREATMENT ROUTES. TREATMENT IS: GNCT 1 T60
85	+++ TRAVER: SUCCESSFUL CALL TRACE +++
86	FF

Cannot be called

(continued)

Line	Output
	(step 1A – From VFG to SSP)
87	>TRAVER V NETINV 19032231903 B
88	TABLE VIRTGRPS
89	NETINV SIZE 1024 IBN N NETIN 0 0 0 N N N \$
90	TABLE NCOS
91	NETIN 0 0 0 NCIN (XLAS NXLA NXLA POTS)\$
92	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL\$
93	NETIN NXLA CXIN FXRES 0 DCIN
94	TABLE DIGCOL
95	POTS specified: POTS digit collection
96	NCOS PRELIM XLA name is NIL. Go to next XLA name.
97	CUST PRELIM XLA name is NIL. Go to next XLA name.
98	TABLE IBNXLA: XLANAME CXIN
99	TUPLE NOT FOUND
100	Default from table XLANAME:
101	CXIN (NET N N N 0 Y POTS N Y GEN (LATTR 501) (PVN UNIFORM) \$)\$ 9
102	TABLE DIGCOL
103	POTS specified: POTS digit collection
104	TABLE LINEATTR
105	501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC NETLATA1 0 NIL NIL 00 N \$
106	LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
107	+++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
108	+++ TRAVER: SUCCESSFUL CALL TRACE +++
109	PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP
110	+++ TRAVER: CALL TRACE TERMINATED; PROBLEM UNKNOWN +++
111	FF

Cannot be called
(continued)

Line	Output
	(step 2 – From SSP , Query sent to SCP and response back to SSP)
112	>PVNVER 9062261919 100 PVN 9032231903
113	The BSDB response
114	0 minutes 0.108 seconds
115	BSDB has sent a response message
116	BSDB has sent routing information
117	Invoke ID: 1. Correlation ID: 0
118	Parameter 1:
119	Primary carrier is: 180
120	Parameter 2:
121	The number is a national routing number
122	Routing number is: 9032231903
123	Parameter 3:
124	Outpulse number is 9032231903
125	Parameter 4:
126	Primary office route is 0000938
127	If unable to route, call will not overflow and not return
128	Call will outpulse the outpulse number
129	Call is a WATS call
130	Parameter 5:
131	Originating station type is a PVN line
132	Parameter 6:
133	Primary billing indicator
134	Call type 166
135	Service feature code 000
136	Parameter 7:
137	Overflow billing indicator
138	Call type 162
139	Service feature code 000
140	FF

Cannot be called

(continued)

Line	Output
	(step 3 – From SSP, out on office route that the SCP specifies to terminate number - NOTE: THIS EXAMPLE IS FOR PRIVATE ROUTING OVER OUTWATS)
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 1024 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 be called (continued)

```

Line   Output
174   OVERLAP CARRIER SELECTION (OCS) APPLIES
175   TABLE LATA1
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)
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

```

Figures 2 and 3 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 2 shows an AIN call that comes in from a T2 trunk. The AIN call uses the DN trigger.

Cannot be called

(continued)

Figure 2

TRAYER for incoming AIN call, directory number (DN) trigger; from a T2 trunk

Line	Output
	>TRAYER TR S3S5T2C7 2231721 B
1	TABLE TRKGRP
2	S3S5T2C7 T2 0 NPDGP NCRT TC MIDL 7 N NPRT NSCR 903 LCL N N \$
3	TABLE HNPACONT
4	903 952 2 (892) (1) (0) (0)
5	. SUBTABLE HNPACODE
6	. 223 223 DN 903 223
7	TABLE TOFCNAME
8	903 223
9	TABLE DNINV
10	903 223 1721 FEAT DNTRIG NONIBN 501 NETRES
11	TABLE DNATTRS
12	TUPLE NOT FOUND
13	TABLE DNGRPS
14	TUPLE NOT FOUND
15	+++ TRAYER: SUCCESSFUL CALL TRACE +++
16	DIGIT TRANSLATION ROUTES
17	+++ PVN CALL WILL QUERY SCP FOR TRANSLATION INFORMATION
18	1 FEATURE 9032231721 ST
19	TREATMENT ROUTES. TREATMENT IS: GNCT
20	1 T60
21	+++ TRAYER: SUCCESSFUL CALL TRACE +++

Cannot be called (continued)

Figure 3 shows an incoming AIN call from an IBN trunk. The AIN call also uses the DN trigger.

Figure 3
TRAVER for incoming AIN call, directory number (DN) trigger; from an IBN trunk

Line	Output
	>TRAVER TR S3S5IBN2C7 2231722 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 +++

Cannot be called

(continued)

Figure 4 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.

Figure 4**TRAVER for incoming AIN call, shared interoffice trunk (SIT) trigger**

Line	Output
	>QDN 2251702
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	>TRAVER L 2251702 19062261914 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
31	TABLE FNPACONT
32	906 256 - (2) (0) (2)
33	. SUBTABLE FNPACODE
34	. 226 226 1 Y
35	. SUBTABLE RTEREF
36	. . 1 N D S5S3ITOC7 0 N N
37	. EXIT TABLE RTEREF
38	EXIT TABLE FNPACONT
39	TABLE LCASCRCN
40	905 NET1 (5) MAND N
41	. SUBTABLE LCASCR
42	. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
43	TABLE PFXTREAT
44	MAND DD N DD UNDT
45	TABLE LENFEAT
46	HOST 00 0 00 08 S PIC PIC SSP Y
47	OVERLAP CARRIER SELECTION (OCS) APPLIES
48	TABLE LATAXLA
49	NETLATA2 906 INTER INTER STD
50	TABLE OCCINFO
51	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
52	TABLE EASAC
53	TUPLE NOT FOUND
54	TABLE STDPRTCT
55	NETA (1) (0)
56	. SUBTABLE STDPRT
57	. 10110 10110 EA DD 5 P NETI SSP Y OFRT 597 6 20 Y
58	. . TABLE OFRT
59	. . 597 CND EA INTNL SK 3
60	. . N D S5S3IT2C7A 15 D040 N
61	. . N D S5S3IT2A 15 D040 N
62	. . CND ALWAYS SK 2
63	. . N D S5S3IT2C7A 15 D140 N
64	. . N D S5S3IT2A 15 D140 N
65	. . EXIT TABLE OFRT
66	. TABLE STDPRTCT
67	. NETI (1) (0)
68	. . SUBTABLE STDPRT
69	. . 19 19 EA DD 1 T NA SSP Y OFRT 597 1 1 Y
70	. . . TABLE OFRT
71	. . . 597 CND EA INTNL SK 3
72	. . . N D S5S3IT2C7A 15 D040 N
73	. . . N D S5S3IT2A 15 D040 N
74	. . . CND ALWAYS SK 2

Cannot be called

(continued)

Line Output

75 . . . N D S5S3IT2C7A 15 D140 N

76 . . . N D S5S3IT2A 15 D140 N

77 . . . EXIT TABLE OFRT

78 +++ TRAVER: SUCCESSFUL CALL TRACE +++

79 DIGIT TRANSLATION ROUTES

80 1 S5S3IT2C7A D040 ST

81 2 S5S3IT2A D040 ST

82 TREATMENT ROUTES. TREATMENT IS: GNCT

83 1 T120

84 +++ TRAVER: SUCCESSFUL CALL TRACE +++

NOTE: THE CALL WILL QUERY IF OZZ = 040 or 140 and CARRIER ID = 110. THE TRIGGER POINT IS WHEN THE CALL HITS THE NSC SELECTOR.CALL #01

SHARED INTEROFFICE TRUNK TRIGGER: 10 DIGITS ROUTING VIA AN ATC TYPE TRUNK GROUP...

>TRAVER TR S3S5IT2A '040180' B

85 WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE

86 BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO

87 DOCUMENTATION.

88 TABLE TRKGRP

89 S3S5IT2A IT 0 NPDGP NCRT 2W NIL MIDL 905 IN01 NSCR 903 000 Y N \$

90 TABLE STDPRTCT

Cannot be called (continued)

Line	Output
91	IN01 (1) (0)
92	. SUBTABLE STDPRT
93	. 040180 040180 T NP 6 OFRT 209 6 6 NONE
94	. . TABLE OFRT
95	. . 209 CND EA INTNL ST 210
96	. . . SAME TABLE
97	. . . 210 N D S3S7EAPC7 0 D141 N
98	. . . N D S3S7EAP 0 D141 N
99	. . . EXIT SAME TABLE
100	. . N D S3S7EAPC7 0 N N
101	. . N D S3S7EAP 0 N N
102	. . EXIT TABLE OFRT
103	. SUBTABLE AMAPRT
104	. KEY NOT FOUND
105	. DEFAULT VALUE IS: NONE OVRNONE N
106	+++ TRAVER: SUCCESSFUL CALL TRACE +++
107	DIGIT TRANSLATION ROUTES
108	1 S3S7EAPC7 STP
109	2 S3S7EAP STP
110	TREATMENT ROUTES. TREATMENT IS: GNCT
111	1 T60
112	+++ 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.

Cannot be called

(continued)

Figure 5 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.

Figure 5**TRAVER for incoming AIN call, incoming trunk seizure (ITS) trigger****Line Output**

```

>QD N 2251703
-----
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 >TRAVER L 2251703 2261914 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
24	TABLE DIGCOL
25	DCNET 2 RPT
26	TABLE IBNXLA: XLANAME PX21NET
27	PX21NET 226 ROUTE N Y N 0 N 7 7 NDGT Y T IBNRTE 227 9
28	TABLE DIGCOL
29	NDGT specified: digits collected individually
30	TABLE IBNRTE
31	227 N N N N N S5S3IBN2A 0
32	N N N N N S5S3IBN2C7A 0
33	EXIT TABLE IBNRTE
34	+++ TRAVER: SUCCESSFUL CALL TRACE +++
35	DIGIT TRANSLATION ROUTES
36	1 S5S3IBN2A 2261914 ST
37	2 S5S3IBN2C7A 2261914 ST
38	TREATMENT ROUTES. TREATMENT IS: GNCT
39	1 T120
40	+++ TRAVER: SUCCESSFUL CALL TRACE +++
	>TRAVER L 2251703 9062261914 B
41	TABLE IBNLINES
42	HOST 00 0 02 08 0 DT STN IBN 2251703 NETWORK 0 21 905 \$
43	TABLE DNATTRS
44	TUPLE NOT FOUND
45	TABLE DNGRPS
46	TUPLE NOT FOUND
47	TABLE NCOS
48	NETWORK 21 0 0 AIN (XLAS PX21NET FXNET NDGT) \$
49	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
50	AND DIGCOL
51	NETWORK NXLA CXNET FXNET 0 DCNET
52	TABLE DIGCOL
53	DCNET 9 RPT

Cannot be called

(continued)

Line	Output
54	TABLE IBNXLA: XLANAME PX21NET
55	PX21NET 906 ROUTE N Y N 0 N 7 10 NDGT Y T IBNRTE 228 9
56	TABLE DIGCOL
57	NDGT specified: digits collected individually
58	TABLE IBNRTE
59	228 N N N N N S5S3IBN2C7A 0
60	N N N N N S5S3IBN2A 0
61	EXIT TABLE IBNRTE
62	+++ TRAVER: SUCCESSFUL CALL TRACE +++
63	DIGIT TRANSLATION ROUTES
64	1 S5S3IBN2C7A 9062261914 ST
65	2 S5S3IBN2A 9062261914 ST
66	TREATMENT ROUTES. TREATMENT IS: GNCT
67	1 T120
68	+++ TRAVER: SUCCESSFUL CALL TRACE +++
	>TRAVER L 2251703 2231903 B
69	TABLE IBNLINES
70	HOST 00 0 02 08 0 DT STN IBN 2251703 NETWORK 0 21 905 \$
71	TABLE DNATTRS
72	TUPLE NOT FOUND
73	TABLE DNGRPS
74	TUPLE NOT FOUND
75	TABLE NCOS
76	NETWORK 21 0 0 AIN (XLAS PX21NET FXNET NDGT) \$
77	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
78	AND DIGCOL
79	NETWORK NXLA CXNET FXNET 0 DCNET
80	TABLE DIGCOL
81	DCNET 2 RPT
82	TABLE IBNXLA: XLANAME PX21NET
83	PX21NET 223 ROUTE N Y N 0 N 7 7 NDGT Y T IBNRTE 227 9

Cannot be called (continued)

Line	Output
84	TABLE DIGCOL
85	NDGT specified: digits collected individually
86	TABLE IBNRTE
87	227 N N N N N S5S3IBN2A 0
88	N N N N N S5S3IBN2C7A 0
89	EXIT TABLE IBNRTE
90	+++ TRAVER: SUCCESSFUL CALL TRACE +++
91	DIGIT TRANSLATION ROUTES
92	1 S5S3IBN2A 2231903 ST
93	2 S5S3IBN2C7A 2231903 ST
94	TREATMENT ROUTES. TREATMENT IS: GNCT
95	1 T120
96	+++ TRAVER: SUCCESSFUL CALL TRACE +++
97	THE INCOMING TRUNK TRIGGER CALL TERMINATES FROM THE AIN S3_TO_S5_IBN
98	TRUNKS FROM S5 TO S3.
99	>TRAVER TR S3S5IBN2A 2261914 B
100	TABLE TRKGRP
101	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 \$
102	TABLE NCOS
103	NETIN 7 0 0 INVAR (XLAS PXIN7 NXLA NDGT) (PVN VAR 15) \$
104	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
105	DIGCOL
106	NETIN NXLA CXIN FXRES 0 DCIN
107	TABLE DIGCOL
108	DCIN 2 COL S 3
109	TABLE IBNXLA: XLANAME PXIN7
110	TUPLE NOT FOUND
111	Default from table XLANAME:

Cannot be called

(continued)

```

Line   Output
112    PXIN7
113      (NET N N N 0 Y POTS N Y GEN ( LATTR 517) (PVN VAR 15) $)$ F 9
114    TABLE DIGCOL
115    POTS specified: POTS digit collection
116    TABLE LINEATTR
117    517 1FR NONE NT NSCR 253 903 IN07 NLCA NONE 0 NIL NILSFC NETLATA2
      0 NIL NIL 00 Y NETRES 0 0 $
118    LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
119    +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
120    +++ TRAVER: SUCCESSFUL CALL TRACE +++
121    +++ TRAVER: SUCCESSFUL CALL TRACE +++
122
123    TABLE: NCOS
124      CUSTGRP  NCOS  NCOSNAME  LSC  TRAFSNO
125    OPTIONS
126    -----
127      NETIN    4  NCIN    0      0      (XLAS PXIN4 NXLA NDGT)
128      (PVN UNIFORM ) $
      NETIN    7  INVAR    0      0      (XLAS PXIN7 NXLA NDGT)
      (PVN VAR 15) $

NOTE: 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.

129    TABLE: XLANAME
130      DEFAULT
131    MAXDIG
132    -----
132      PXIN4
133    (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) $)$
134      9
135      PXIN4S
136      $
137      9
138      PXIN4L
139    (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) $)$
140      9

```

Cannot be called
(end)

Line	Output				
141	TABLE: IBNXLA				
142		KEY			
143	RESULT				
144	-----				
144	PXIN4	0			
145				AMBIG	PXIN4S
146	1 PXIN4L				
147	PXIN4	911			
148				AMBIG	SSP911
149	3 PXIN4L				
150	PXIN4S	0			
151				ATTO	
152	NETIN 0 28 N				

Cannot call out

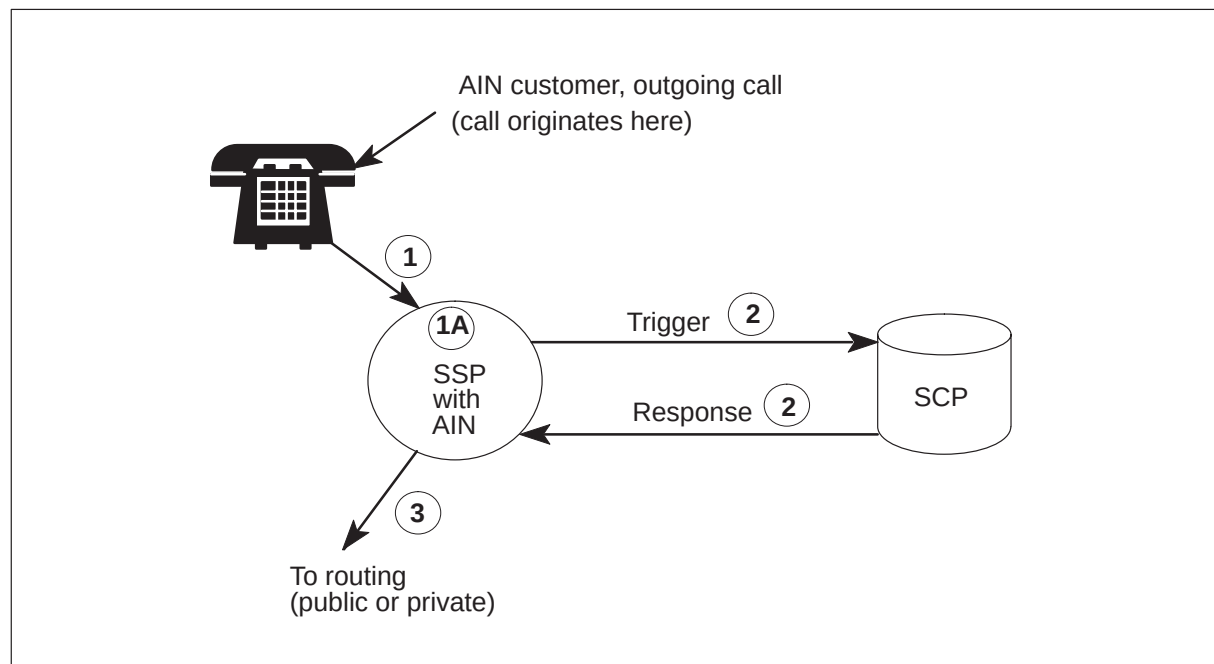
Application

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

Figure 1 is an abbreviated call sequence diagram for an outgoing AIN call.

Figure 1
Basic AIN call progression, outgoing call



Cannot call out (continued)

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.

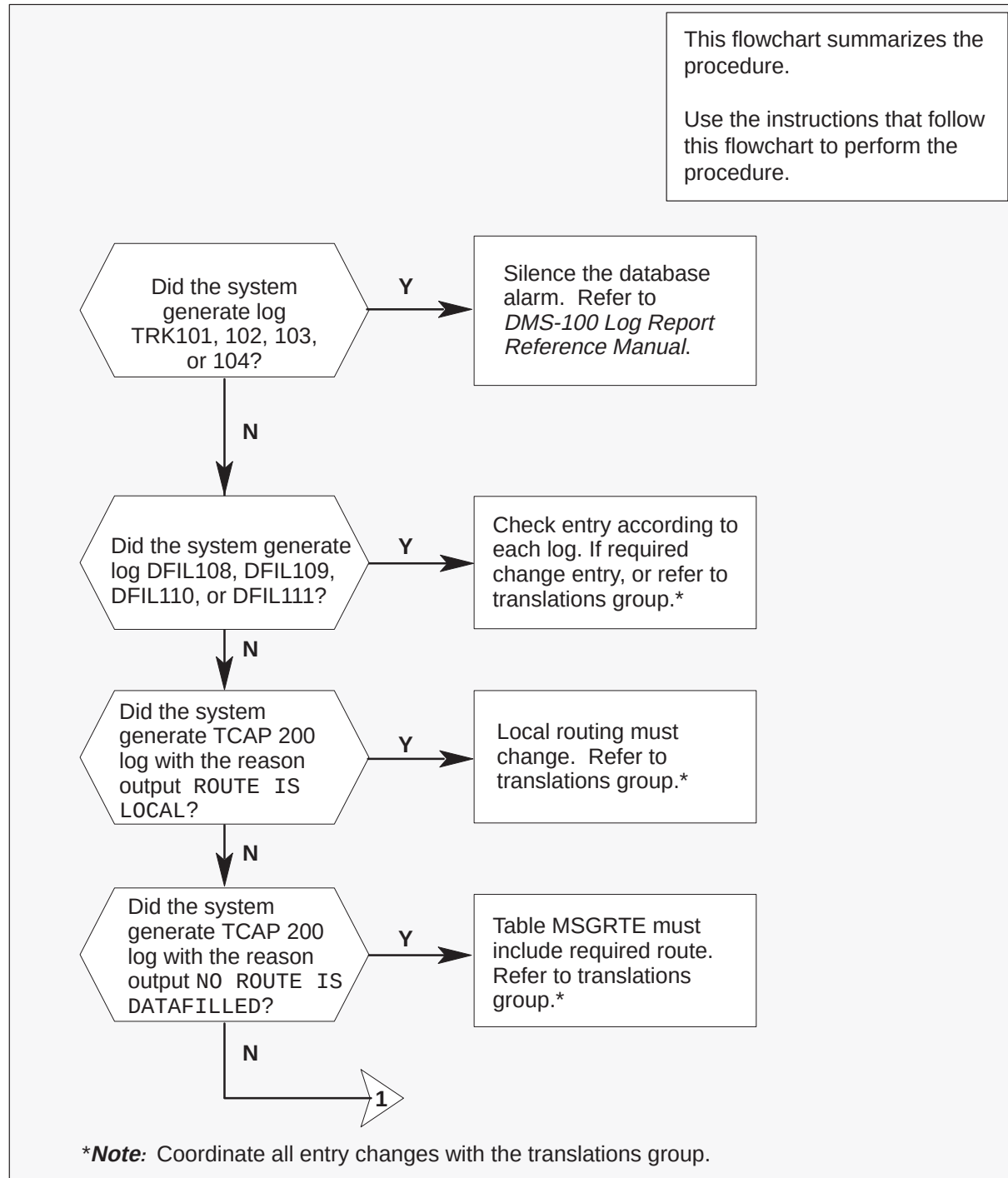
Action

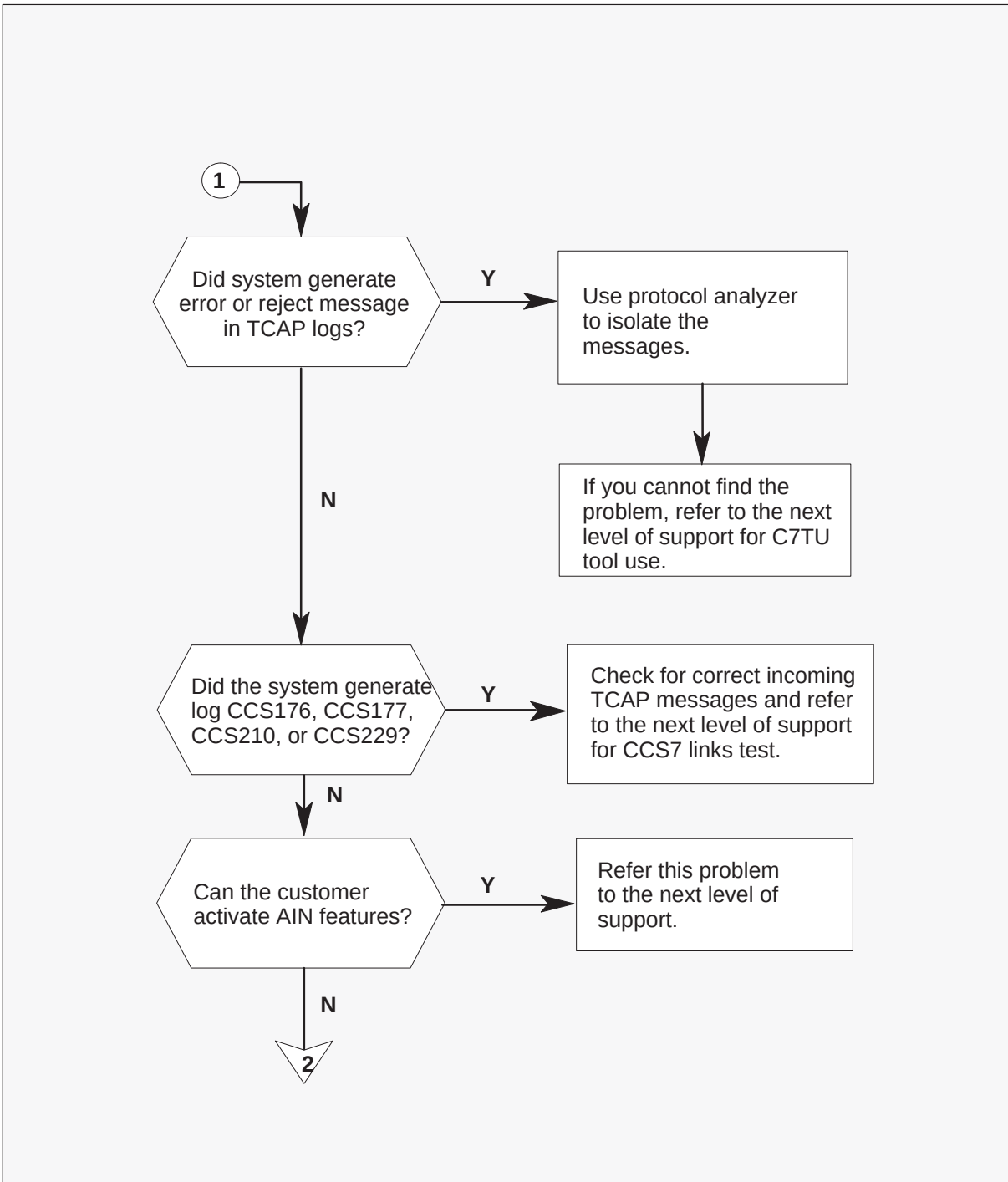
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Cannot call out

(continued)

Summary of Cannot call out

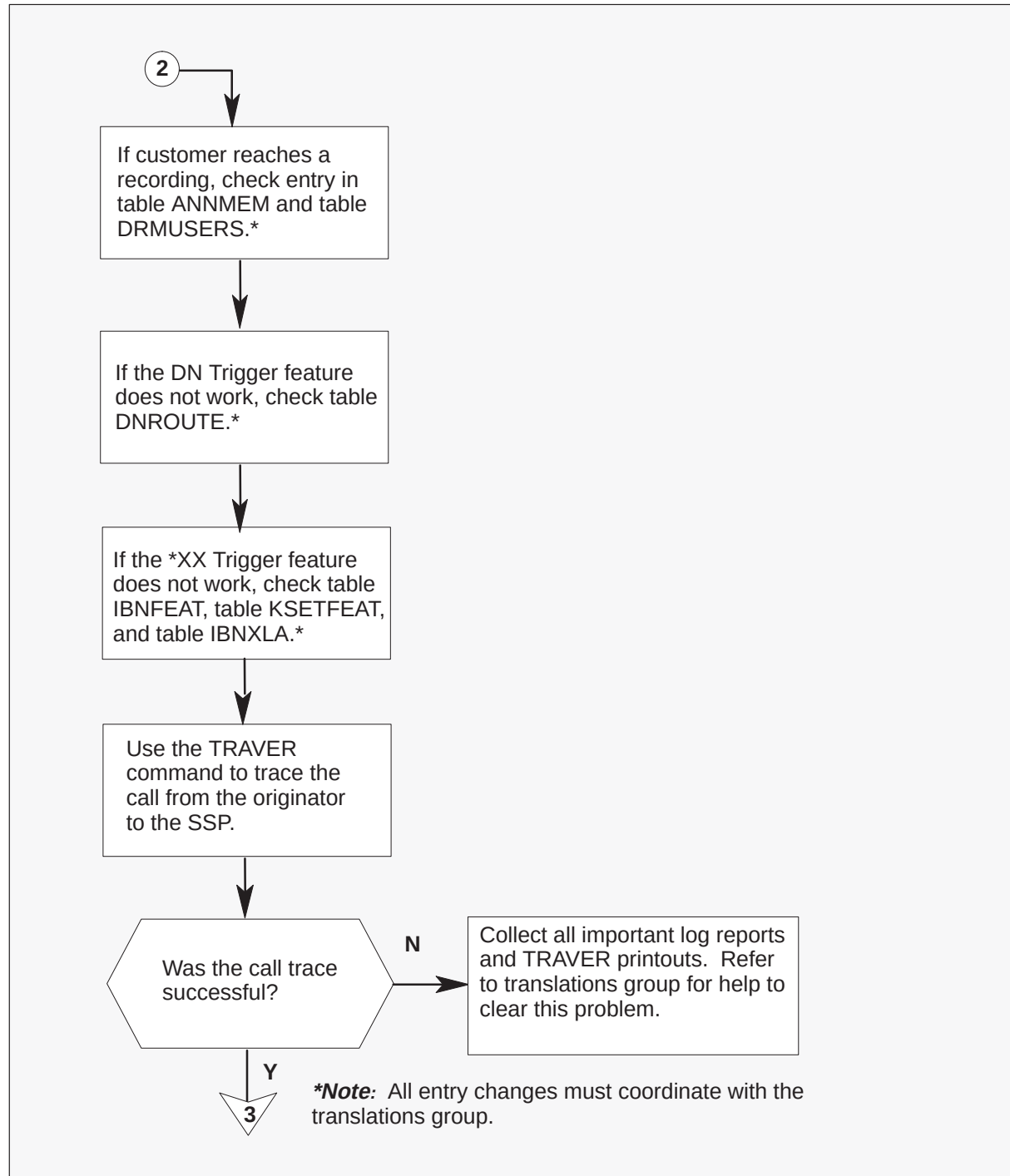


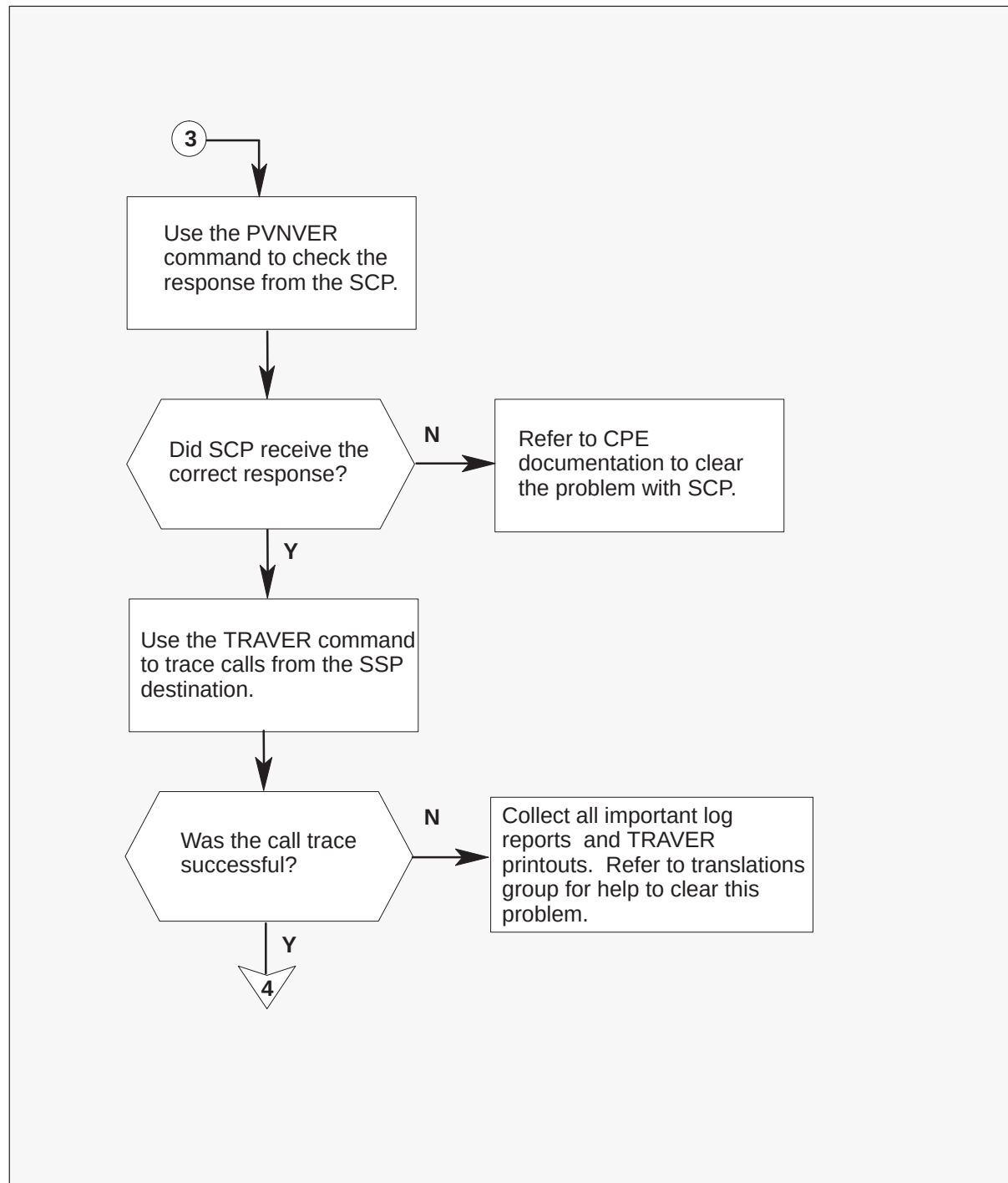
Cannot call out
(continued)**Summary of Cannot call** (continued)

Cannot call out

(continued)

Summary of Cannot call out (continued)

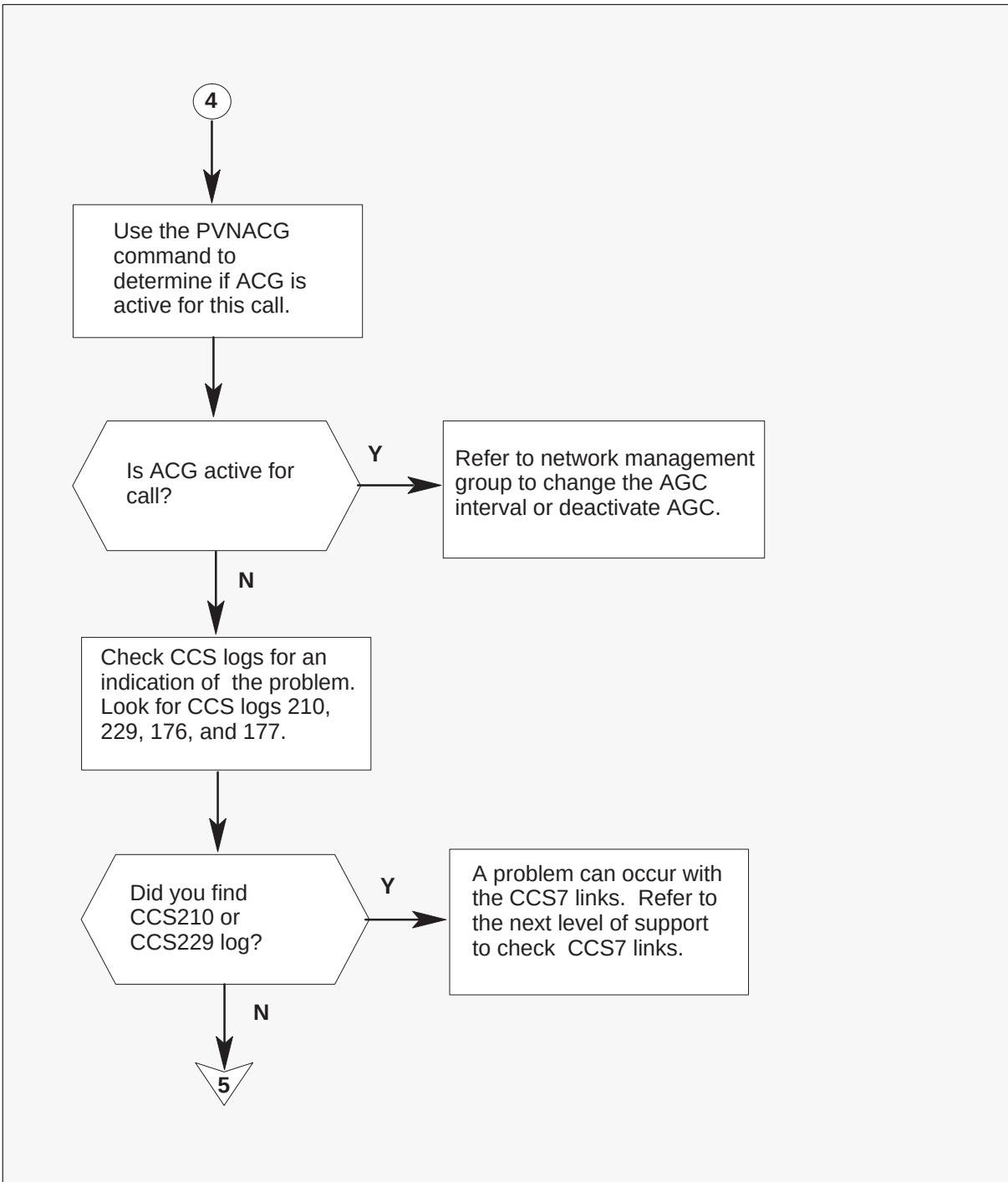


Cannot call out
(continued)**Summary of Cannot call out** (continued)

Cannot call out

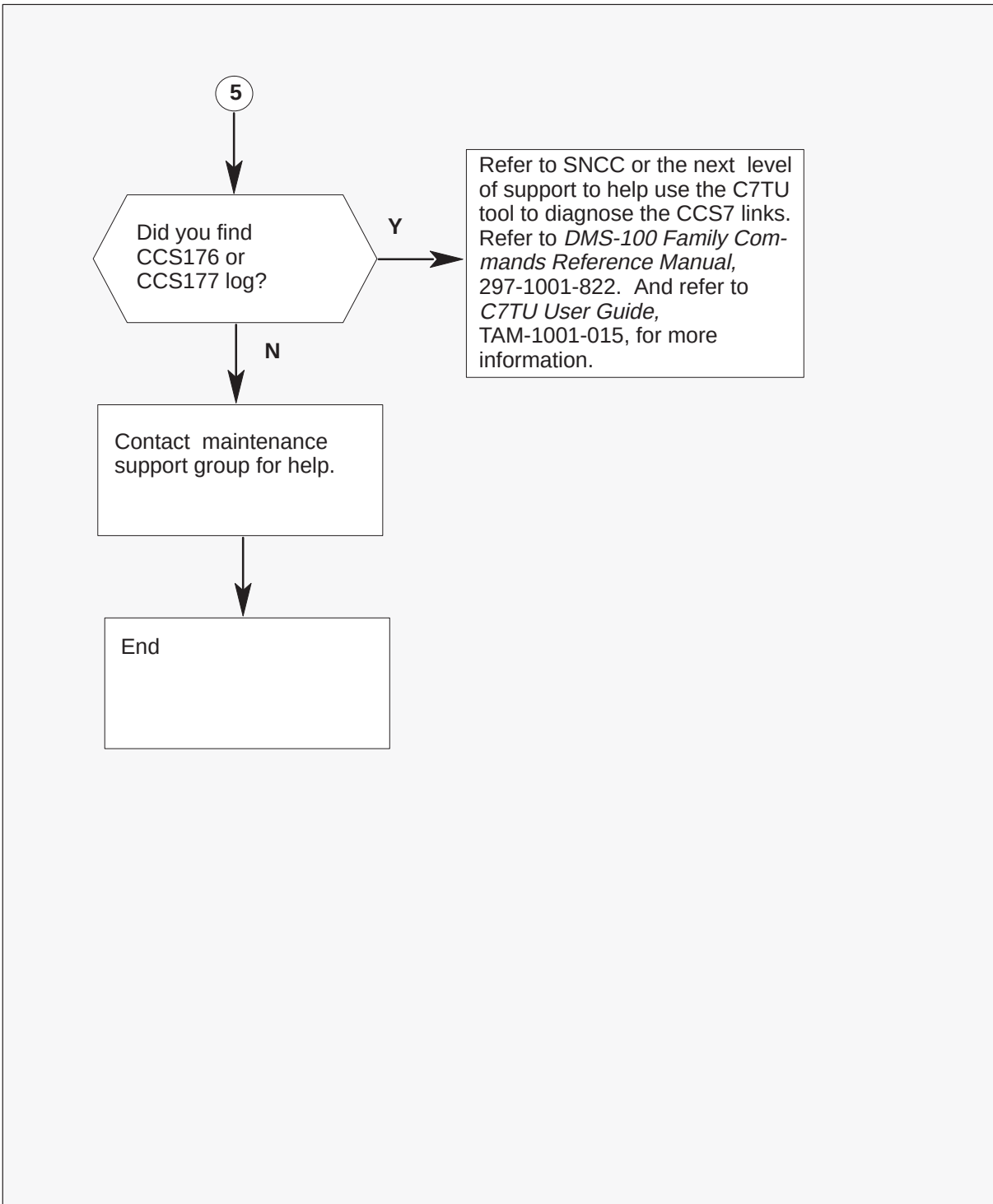
(continued)

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.

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

Cannot call out (continued)

- 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.

- 5 Check log reports.

If the log	Do
is DFIL108	step 6
is DFIL109	step 7
is DFIL110	step 8
is DFIL111	step 9
Note 1: For additional information, refer to <i>Translations Guide</i> and <i>Log Report Reference Manual</i>. Note 2: Coordinate changes in entries with the translations group in your company.	

- 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*.

Cannot call out

(continued)

- 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.
- 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.

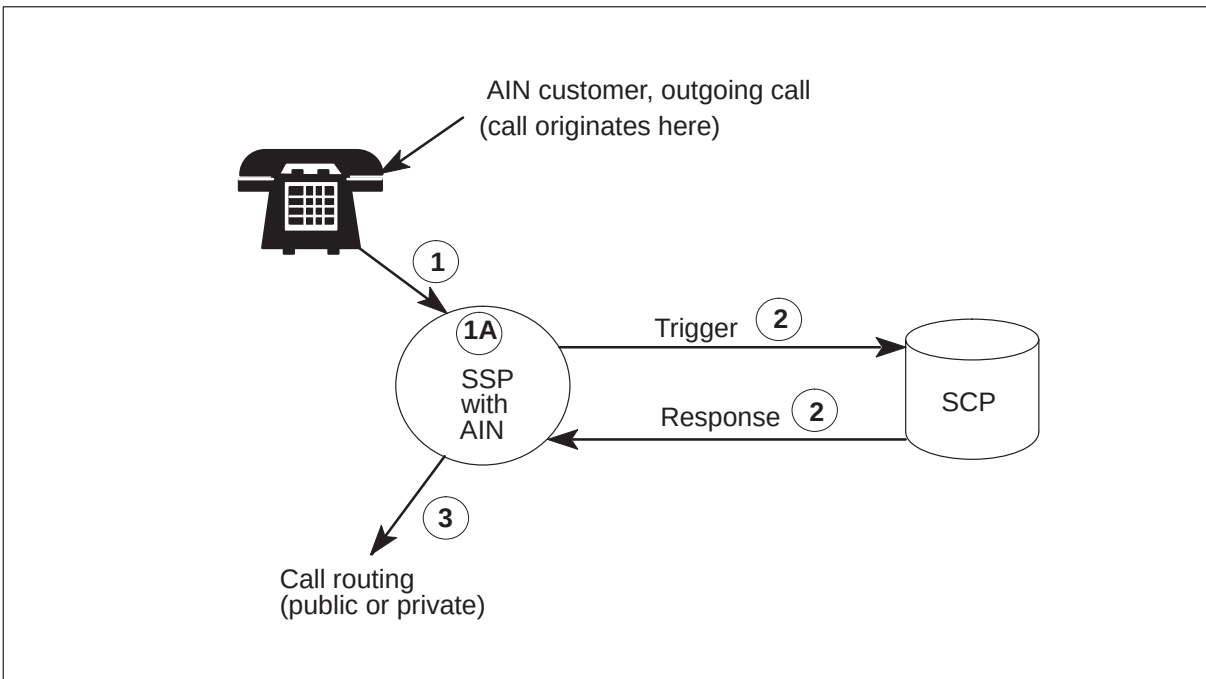
Refer to *Translations Guide* for additional information.

- 16** Refer to the following diagram for the steps of how to trace AIN calls. Proceed to step 17 to generate the TRAVERS.

Cannot call out (continued)

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

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

Cannot call out (continued)

- 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

If the message	Do
PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION appears	step 19
did not appear	step 22
Note: The table that follows this step-action procedure provides an example of this TRAVER.	

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

Cannot call out (continued)

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

and press the Enter key.

where

office_route_number is in Parameter 4 of PVNVER response

Cannot call out (continued)

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.

Cannot call out (continued)

- 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:

PVN 6 DIGIT ACG CODES:

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

NO ACG CONTROL IS IN EFFECT.			

If ACG	Do
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

- 24 Refer to network management for possible interval change or termination of ACG.
- 25 To activate the LOGUTIL log reporting system to obtain logs. Type
- >LOGUTIL**
- and press the Enter key.

Cannot call out (continued)

- 26 To view log reports, type

>OPEN log_report_type
and press the Enter key.

where

log_report_type is the alphabetical string that identifies the generated log report category

Example input:

>OPEN CCS

If	Do
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
Note: 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.	

- 27 Refer to the next level of support to check the CCS7 links.
- 28 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 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.

Cannot call out

(continued)

TRAYER Examples

Figure 2 shows the TRAYER 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 TRAYER example that ends with an RX selector, refer to figure 4.

Figure 2 TRAYER for outgoing AIN call, public office dial plan trigger, from a RES line

Line	Output
	(step 1 - First number to SSP, or to VFG then to SSP)
1	>TRAYER 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
24	TABLE LINEATTR
25	531 1FR NONE NT NSCR 254 906 NETI NLCA RTE1 N 0 NIL NILSFC SSPLATA 0 NIL NIL 00 Y NETRES 0 3 \$
26	LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
27	TABLE STDPRTCT
28	NETI (1) (0)
29	. SUBTABLE STDPRT
30	WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
31	BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
32	DOCUMENTATION.
33	. 19 19 N DD 1 NA
34	. SUBTABLE AMAPRT
35	. KEY NOT FOUND
36	. DEFAULT VALUE IS: NONE OVRNONE N
37	TABLE HNPACONT
38	906 911 19 (84) (1) (0) (0)
39	. SUBTABLE HNPACODE
40	. 903 903 FNPA 0
41	TABLE FNPACONT
42	903 872 - (3) (0) (3)
43	. SUBTABLE FNPACODE
44	. 223 223 1 Y
45	. SUBTABLE RTEREF
46	. . 1 N D S6S3ITO 0 N N
47	. EXIT TABLE RTEREF
48	EXIT TABLE FNPACONT
49	TABLE IBNFEAT
50	OPM0 01 0 14 13 0 PIC PIC NETEAP Y
51	OVERLAP CARRIER SELECTION (OCS) APPLIES
52	TABLE LATAXLA
53	SSPLATA 9 INTER INTER STD
54	TABLE OCCINFO
55	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
56	TABLE EASAC
57	TUPLE NOT FOUND
58	TABLE STDPRTCT
59	NETI (1) (0)

Cannot call out

(continued)

Line	Output
60	TABLE STDPRTCT
61	NETI (1) (0)
62	. SUBTABLE STDPRT
63	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
64	. . TABLE OFRT
65	. . 209 N D S6S1ITOC7 0 N N
66	. . N D S6S1ITO 0 N N
67	. . EXIT TABLE OFRT
68	. TABLE STDPRTCT
69	. EAPI (1) (0)
70	. . SUBTABLE STDPRT
71	. . 1903 1904 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
72	. . . TABLE IBNRTE
73	. . . 212 VFG N N N NETINV 208
74	 TABLE DIGMAN
75	 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 210) (NEX 211)
76	 TABLE DIGMAN
77	 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
78	 EXIT TABLE DIGMAN
79	 TABLE DIGMAN
80	 211 (CL BEG) (REM3) (CL BEG) (INC 1) (CL BEG)
81	 EXIT TABLE DIGMAN
82	 EXIT TABLE DIGMAN
83	. . . EXIT TABLE IBNRTE
84	+++ TRAVER: SUCCESSFUL CALL TRACE +++
85	DIGIT TRANSLATION ROUTES
86	1 VFG: NETINV 19032231903 ST
87	TREATMENT ROUTES. TREATMENT IS: GNCT 1 T60
88	+++ TRAVER: SUCCESSFUL CALL TRACE +++
89	FF

Cannot call out (continued)

Line Output

(step 1A - From VFG to SSP)

```

90      >TRAVER V NETINV 19032231903 B
91      TABLE VIRTGRPS
92      NETINV SIZE 1024 IBN N NETIN 0 0 0 N N N $
93      TABLE NCOS
94      NETIN 0 0 0 NCIN ( XLAS NXLA NXLA POTS)$
95      TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
          DIGCOL$
96      NETIN NXLA CXIN FXRES 0 DCIN
97      TABLE DIGCOL
98      POTS specified: POTS digit collection
99      NCOS PRELIM XLA name is NIL.  Go to next XLA name.
100     CUST PRELIM XLA name is NIL.  Go to next XLA name.
101     TABLE IBNXLA: XLANAME CXIN
102     TUPLE NOT FOUND
103     Default from table XLANAME:
104     CXIN
          (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM) $)$ 9
105     TABLE DIGCOL
106     POTS specified: POTS digit collection
107     TABLE LINEATTR
108     501 1FR NONE NT NSCR 0 906 NETA NLCA N RTE1 N 0 NIL NILSFC
          NETLATA1 0 NIL NIL 00 N $
109     LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
110     +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION

111     +++ TRAVER: SUCCESSFUL CALL TRACE +++

112     PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP

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

114     FF

```

Cannot call out

(continued)

Line	Output
	(step 2 - From SSP, query sent to SCP and response back to SSP)
115	>PVNVER 9062261919 100 PVN 9032231903
116	The BSDb response
117	0 minutes 0.108 seconds
118	BSDb has sent a response message
119	BSDb has sent routing information
120	Invoke ID: 1. Correlation ID: 0
121	Parameter 1:
122	Primary carrier is: 180
123	Parameter 2:
124	The number is a national routing number
125	Routing number is: 9032231903
126	Parameter 3:
127	Outpulse number is 2231903
128	Parameter 4:
129	Primary office route is 0000938
130	If unable to route, call will overflow to the next possible route
131	Call will outpulse the routing number
132	Call is a WATS call
133	Parameter 5:
134	Originating station type is a PVN line
135	Parameter 6:
136	Primary billing indicator
137	Call type 166
138	Service feature code 000
139	Parameter 7:
140	Overflow billing indicator
141	Call type 272
142	Service feature code 000
143	FF

Cannot call out (continued)

Line Output

**(step 3 - From SSP, out on office route specified by SCP to terminating number.
NOTE: THIS EXAMPLE IS FOR PRIVATE ROUTING OVER OUTWATS.)**

```

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 LATA1
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

Cannot call out (continued)

Figure 3 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.

Figure 3 TRAVER for outgoing AIN call, dial plan trigger of public office, from a 1FR line

Line	Output
	>TRAVER L 2231902 19062261914 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 LATAULA
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
39	TABLE STDPRTCT
40	NETI (1) (0)
41	. SUBTABLE STDPRT
42	. 10180 10180 EA DD 5 P EAPI NETEAP Y OFRT 209 6 20 Y
43	. . TABLE OFRT
44	. . 209 CND EA INTNL ST 210
45	. . . SAME TABLE
46	. . . 210 N D S3S7EAPC7 0 D141 N
47	. . . N D S3S7EAP 0 D141 N
48	. . . EXIT SAME TABLE
49	. . . N D S3S7EAPC7 0 N N
50	. . . N D S3S7EAP 0 N N
51	. . EXIT TABLE OFRT
52	. TABLE STDPRTCT
53	. EAPI (1) (0)
54	. . SUBTABLE STDPRT
55	. . 1906 199 EA DD 1 T NA SSP Y IBNRTE 212 1 1 Y
56	. . . TABLE IBNRTE
57	. . . 212 VFG N N N NETINV 208
58	 TABLE DIGMAN
59	 208 (CL BEG) (INC 000) (CL END) (CB 10) (COM 000 000
60	 210) (NEX 21
61	 TABLE DIGMAN
62	 210 (CL BEG) (REM 3) (CL BEG) (INC 1903) (CL BEG)
63	 EXIT TABLE DIGMAN
64	 TABLE DIGMAN
65	 211 (CL BEG) (REM 3) (CL BEG) (INC 1) (CL BEG)
66	 EXIT TABLE DIGMAN
67	 EXIT TABLE IBNRTE
68	+++ TRAVER: SUCCESSFUL CALL TRACE +++
69	DIGIT TRANSLATION ROUTES
70	1 VFG: NETINV 19062261914 ST
71	TREATMENT ROUTES. TREATMENT IS: GNCT
72	1 T120
73	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Cannot call out (continued)

Line Output

```

72 >TRAVER V NETINV 19062261914 B
73 TABLE VIRTGRPS
74 NETINV SIZE 2047 IBN 9032231000 NETIN 0 0 0 N N N $
75 TABLE NCOS
76 NETRIN 0 0 0 NCIN ( XLAS NXLA NXLA POTS)$
77 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
    DIGCOL
78 NETIN NXLA CXIN FXRES 0 DCIN
79 TABLE DIGCOL
79 POTS specified: POTS digit collection
80 NCOS PRELIM XLA name is NIL. Go to next XLA name.
81 CUST PRELIM XLA name is NIL. Go to next XLA name.
82 TABLE IBNXLA: XLANAME CXIN
83 TUPLE NOT FOUND
84 Default from table XLANAME:
85 CXIN
86 (NET N N N 0 Y POTS N Y GEN ( LATTR 501) (PVN UNIFORM ) )$ 9
87 TABLE DIGCOL
88 POTS specified: POTS digit collection
88 TABLE LINEATTR
89 501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
90 NIL NIL 00 N $
    LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
91 +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
92 +++ TRAVER: SUCCESSFUL CALL TRACE +++
93 PVN DIALING NOT SUPPORTED FOR THIS TRUNK GROUP
94 +++ TRAVER: CALL TRACE TERMINATED; PROBLEM UNKNOWN +++

```

Cannot call out(continued)

Line	Output
95	>PVNVER 9032231902 100 PVN 9062261914
96	The BSDB response took
97	0 minutes, 0.102 seconds
98	BSDB has requested the SSP to play an announcement
99	and collect digits
100	Invoke ID: 1, Correlation ID: 0
101	Parameter 1:
102	Announcement type is: Non-terminating
103	Call will be routed to
104	Announcement id: 255
105	Parameter 2:
106	Six digits should be collected
107	Next par is: <AUTHCODE> STRING
108	Enter: <AUTHCODE>
109	>122290
110	The BSDB response took
111	0 minutes, 0.106 seconds
112	BSDB has sent a response message
113	BSDB has sent routing information
114	Invoke ID: 1, Correlation ID: 0
115	Parameter 1:
116	Primary carrier is: 180
117	Parameter 2:
118	The number is a national routing number
119	Routing number is: 9062261914
120	Parameter 3:
121	Originating station type is a PVN line
122	Parameter 4:
123	Authorization code is: 122290
124	Parameter 5:
125	Primary billing indicator
126	Call type 166
127	Service feature code 000
128	BSDB has requested termination information
129	Invoke ID: 2, Correlation ID: 0
130	Parameter 1:
131	Echo data 01 03 05 09 11 21
132	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

Cannot call out (continued)

option must be used to specify which line attribute will be used to route the call when the response is returned from the BSDB.

Line	Output
130	>QDN 2231923
131	-----
131	DN: 2231923
132	TYPE: SINGLE PARTY LINE
132	SNPA: 903 SIG: DT LNATTIDX: 501
133	LINE EQUIPMENT NUMBER: HOST 16 0 00 02
134	LINE CLASS CODE: 1FR
135	LINE TREATMENT GROUP: 0
136	CARDCODE: 6X17AB GND: N PADGRP: STDLN BNV: NL MNO: N
137	PM NODE NUMBER : 166
138	PM TERMINAL NUMBER : 3
139	OPTIONS:
140	DGT PIC NETEAP Y
141	-----
141	>TRAVER L 2231923 1018019062261914 B
142	TABLE LINEATTR
142	501 1FR NONE NT NSCR 0 903 NETA NLCA RTE1 0 NIL NILSFC NETLATA2 0
143	NIL NIL 00 N \$
144	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
144	TABLE DNATTRS
145	TUPLE NOT FOUND
146	TABLE DNGRPS
147	TUPLE NOT FOUND
148	TABLE STDPRTCT
149	NETA (1) (0)
150	. SUBTABLE STDPRT
151	. 10180 10180 EA DD 5 P EAPN NETEAP Y OFRT 215 6 20 Y
152	. . TABLE OFRT
153	. . 215 N D S3S7EAPC7 0 N N
154	. . N D S3S7EAP 0 N N
155	. . EXIT TABLE OFRT
156	. TABLE STDPRTCT
157	. EAPN (1) (0)
158	. . SUBTABLE STDPRT
159	. . 1906 1906 EA DD 1 T NA NETEAP Y OFRT 209 1 1 Y
160	. . . TABLE OFRT
161	. . . 209 CND EA INTNL ST 210

Cannot call out

(continued)

Line	Output
162	 SAME TABLE
163	 210 N D S3S7EAPC7 0 D141 N
164	 N D S3S7EAP 0 D141 N
165	 EXIT SAME TABLE
166	 N D S3S7EAPC7 0 N N
167	 N D S3S7EAP 0 N N
168	 EXIT TABLE OFRT
169	. SUBTABLE AMAPRT
170	. KEY NOT FOUND
171	. DEFAULT VALUE IS: NONE OVRNONE N
172	TABLE HNPACONT
173	903 911 0 (88) (1) (0) (0)
174	. SUBTABLE HNPACODE
175	. 906 906 FNPA 0
176	TABLE FNPACONT
177	906 871 - (3) (0) (3)
178	. SUBTABLE FNPACODE
179	. 226 226 1 Y
180	. SUBTABLE RTEREF
181	. . 1 N D S3S6ITOC7 0 N N
182	. EXIT TABLE RTEREF
183	EXIT TABLE FNPACONT
184	OVERLAP CARRIER SELECTION (OCS) APPLIES
185	TABLE LATAXLA
186	NETLATA2 906 INTER INTER STD
187	TABLE OCCINFO
188	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
189	Y Y N N
190	TABLE EASAC
191	TUPLE NOT FOUND
192	Using Equal Access (EA) route OFRT 209 from Pretranslation
193	TABLE OFRT
194	209 CND EA INTNL ST 210
195	. SAME TABLE
196	. 210 N D S3S7EAPC7 0 D141 N
197	. N D S3S7EAP 0 D141 N
198	. EXIT SAME TABLE
199	. N D S3S7EAPC7 0 N N
200	. N D S3S7EAP 0 N N
201	EXIT TABLE OFRT
202	+++ TRAVER: SUCCESSFUL CALL TRACE +++
203	DIGIT TRANSLATION ROUTES
204	1 S3S7EAPC7 9062261914 ST
	2 S3S7EAP 9062261914 ST
	TREATMENT ROUTES. TREATMENT IS: GNCT
	1 T120
	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Cannot call out (continued)

Figure 4 shows a TRAVER ending with an RX selector, which could be used instead of step 1 in the previous examples.

In figure 4, 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.

Figure 4 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
	>TRAVER L 2231726 72261914 B
27	TABLE KSETLINE
28	NETIN 1 1 DN Y 2231726 NETIN 0 6 903 (SFC) \$
29	TABLE DNATTRS
30	TUPLE NOT FOUND
31	TABLE DNGRPS
32	TUPLE NOT FOUND
33	TABLE NCOS
34	NETIN 6 0 0 INVAR (XLAS PXIN6 NXLA NDGT)\$
35	TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT, AND DIGCOL
36	NETIN NXLA CXIN FXRES 0 DCIN
37	TABLE DIGCOL
38	DCIN 2 COL S 3
39	TABLE IBNXLA: XLANAME PXIN6
40	TUPLE NOT FOUND
41	Default from table XLANAME
42	PXIN6
43	(NET N N N 0 Y POTS N Y GEN (LATTR 517) (PVN VAR 15) \$) \$F
44	TABLE DIGCOL
45	POTS specified: POTS digit collection
46	TABLE LINEATTR
47	517 1FR NONE NT NSCR 253 903 IN06 NLCA RTE1 0 NIL NILSFC NETLATA2 0 NIL NIL 00 Y NETRES 0 0 \$
48	LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
49	+++PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION INFORMATION
50	+++ TRAVER: SUCCESSFUL CALL TRACE +++
51	+++ TRAVER: SUCCESSFUL CALL TRACE +++

The example in figure 5 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 2.

Cannot call out (continued)

Figure 5 TRAYER for outgoing AIN call, automatic flexible reroute (AFR) trigger

Line Output

In the first TRAYER, 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.

```

>TRAYER 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 +++ TRAYER: SUCCESSFUL CALL TRACE +++

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

28 +++ TRAYER: 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.

>TRAVER L 2231903 72261914 B

```

29  TABLE KSETLINE
30  HOST 16 1 17 27 1 MDN MCA Y Y 2231903 NETIN 0 3 903 (AUTODISP) $
31  TABLE DNATTRS
32  903 223 1903
33  (PUBLIC (NONUNIQUE ) $)$ $
34  TABLE DNGRPS
35  TUPLE NOT FOUND
36  TABLE NCOS
37  NETIN 3 0 0 NCIN (XLAS PXIN3 NXLA NDGT) $
38  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRTMT,
    AND DIGCOL
39  NETIN NXLA CXIN FXRES 0 DCIN
40  TABLE DIGCOL
41  DCIN 7 COL S 3
42  TABLE IBNXLA: XLANAME PXIN3
43  PXIN3 7 NET N N N 1 Y POTS N Y GEN ( LATTR 512) ( PVN VAR 10)$
44  TABLE DIGCOL
45  POTS specified: POTS digit collection
46  TABLE LINEATTR
47  512 1FR NONE NT NSCR 255 903 IN01 NLCA RTE1 0 NIL NILSFC NETLATA2
    0 NIL NIL 00 $
48  LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
49  +++ PVN CALL WILL QUERY SCP DATABASE FOR TRANSLATION
    INFORMATION+++

50  TRAVER: SUCCESSFUL CALL TRACE ++++++

51  TRAVER: SUCCESSFUL CALL TRACE +++

```

Cannot call out (continued)

The following figures display other examples of outgoing triggers.

Figure 6 TRAVER for outgoing AIN call, directory number (DN) trigger from a line

Line	Output
	>TRAVER L 2231702 2231910 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)

Line	Output
37	. SUBTABLE HNPACODE
38	. 223 223 DN 903 223
39	TABLE TOFCNAME
40	903 223
41	TABLE DNINV
42	903 223 1910 FEAT DNTRIG NONIBN 501 NETRES
43	TABLE DNATTRS
44	TUPLE NOT FOUND
45	TABLE DNGRPS
46	TUPLE NOT FOUND
47	TABLE LCASCRCN
48	903 NET1 (9) MAND N
49	. SUBTABLE LCASCR
50	. 223 226
51	TABLE PFXTREAT
52	MAND NP Y NP UNDT
53	+++ TRAVER: SUCCESSFUL CALL TRACE +++
54	DIGIT TRANSLATION ROUTES
55	+++ PVN CALL WILL QUERY SCP FOR TRANSLATION INFORMATION
56	1 FEATURE 9032231910 ST
57	TREATMENT ROUTES. TREATMENT IS: GNCT
58	1 T120
59	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Cannot call out (continued)

Figure 7 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)

Figure 8 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)

Figure 9 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
32	TABLE TOFCNAME
33	903 223
34	TABLE DNINV
35	903 223 1912 FEAT DNTRIG IBN 501 NETIN 0 Y
36	TABLE DNATTRS
37	TUPLE NOT FOUND
38	TABLE DNGRPS
39	TUPLE NOT FOUND
40	+++ TRAVER: SUCCESSFUL CALL TRACE +++
41	+++DIGIT TRANSLATION ROUTES+++
42	+++ PVN CALL WILL QUERY SCP FOR TRANSLATION INFORMATION
43	1 FEATURE 9032231912 ST
44	TREATMENT ROUTES. TREATMENT IS: GNCT
45	1 T120
46	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Cannot call out
(continued)

Figure 10 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)

Figure 11 TRAYER for outgoing AIN call, private office dial plan trigger (PVN UNIFORM)**Line Output****>TRAYER 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 +++ TRAYER: SUCCESSFUL CALL TRACE +++

23 +++ TRAYER: SUCCESSFUL CALL TRACE +++

```

***XX trigger call**

The TRAYER in figure 7 shows an MDC line that dials an * feature code of *77. This call triggers a query to the SCP.

Cannot call out
(continued)

Figure 12 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)

Figure 13 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)

Figure 14 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)

Figure 15 TRAYER for outgoing AIN call, 3/6/10 digit POTS trigger, for a 10-didit trigger**Line Output**

```

>TRAYER 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 HNPAC 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
   TRAYER NOT AVAILABLE
26
   +++ TRAYER: SUCCESSFUL CALL TRACE +++
27
   +++ TRAYER: SUCCESSFUL CALL TRACE +++

```

For other examples of TRAYER 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

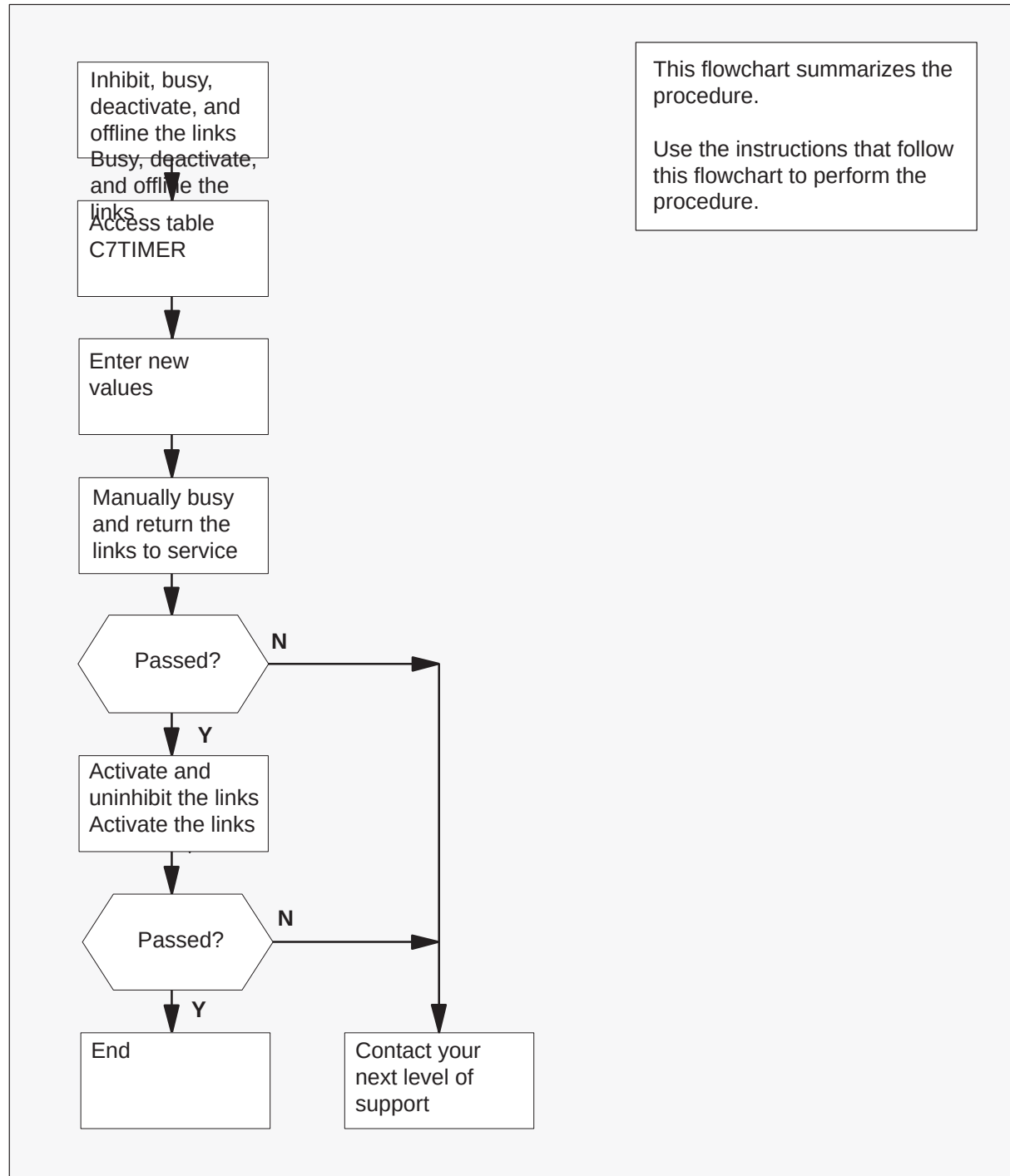
There are no common procedures.

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.



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

If	Do
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.

Changing table C7TIMER entries (continued)

Go to step 2.

- 4 To inhibit the link, type

>INH link_no

and press the Enter key.

where

link_no is the number of the inhibited link (0 to 15)

If the INH command	Do
passes	step 5
fails	step 27

- 5 To manually busy the links, type

>BSY ALL

and press the Enter key.

Note: Manually busied links transmit maintenance and test messages. The far end office uses the links to send all types of messages.

If the BSY command	Do
passes	step 6
fails	step 27

- 6 To deactivate the link, type

>DEACT ALL

and press the Enter key.

- 7 To offline the link, type

>OFFL ALL

and press the Enter key.

Changing table C7TIMER entries (continued)

- 8 Determine if all the links are offline.

If all the links	Do
are Offl	step 9
are not Offl	step 27

- 9 To return to the CI level of the MAP display, type

>QUIT ALL

and press the Enter key.

- 10 To access table C7TIMER, type

>TABLE C7TIMER

and press the Enter key.

MAP response:

TABLE: C7TIMER

- 11 To change the position of the tuple, type

>POSITION key_value

and press the Enter key.

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

>POSITION Q703 1

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

Note: In the example input, Q703 is SPECREF and 1 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

Changing table C7TIMER entries (continued)

- 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.

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 30 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:

```
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.
```

Changing table C7TIMER entries (continued)

- 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.

Note: Manually busied links transmit maintenance and test messages. The far end office uses the links to send all types of messages.

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

Changing table C7TIMER entries

(continued)

- 22 Determine if all the offline links are SysB.

If all the links	Do
are SysB	step 23
are not SysB	step 20

- 23 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.

If the ACT command	Do
passes	step 24
fails	step 27

- 24 Determine if the links that return to service in step 21 are activated.

If all links	Do
activate	step 25
activate	step 28
do not activate	step 23

Changing table C7TIMER entries (end)

- 25** To uninhibit one of the activated links in step 23, type

>UINH link_no

and press the Enter key.

where

link_no is the number of the uninhibited link(0 to 15)

Note: To proceed, wait for the link to reach the aligned ready (AlnRdy) state.

If the UINH command	Do
passes	step 26
fails	step 27

- 26** Determine if the activated links in step 23 are uninhibited.

If all the links are	Do
are uninhibited	step 28
are inhibited	step 25

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

- 28** The procedure is complete.

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

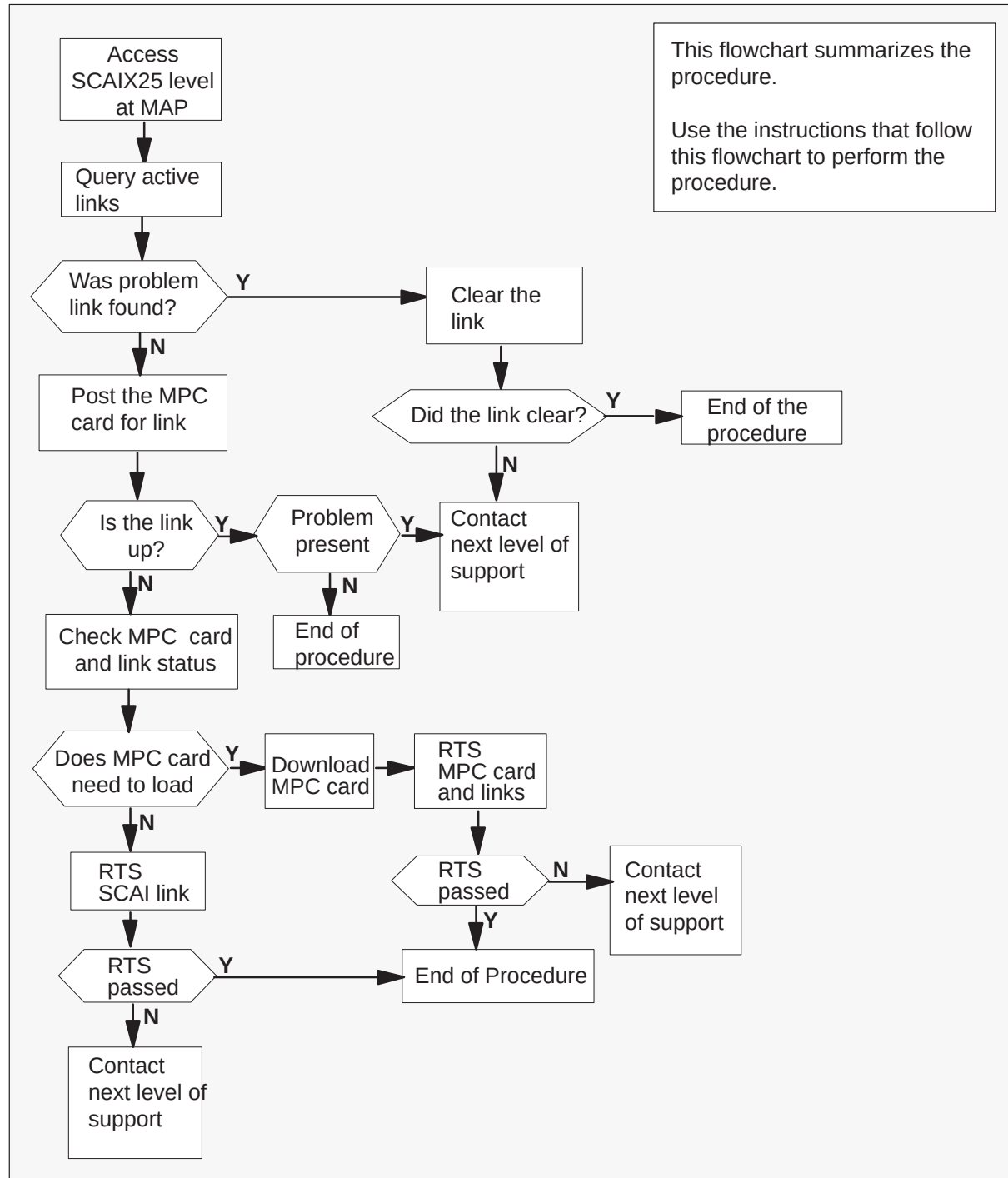
There are no common procedures.

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

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

Clearing problems on the SCAI link (continued)

- 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
 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.

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

Example of a MAP display:

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

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

Clearing problems on the SCAI link

(continued)

- 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.

If the MAP display of the posted MPC card	Do
resembles the following display	step 9
does not resemble the following display	step 16

Example of a MAP display:

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

- 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
```

Clearing problems on the SCAI link (continued)

- 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.

If RTS	Do
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

- 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

If RTS	Do
passes	step 17
fails	step 16

Clearing problems on the SCAI link (end)

14



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.



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.

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.

If the link	Do
clears	step 17
did not clear	step 16

16 For additional help, contact the next level of support.

17 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

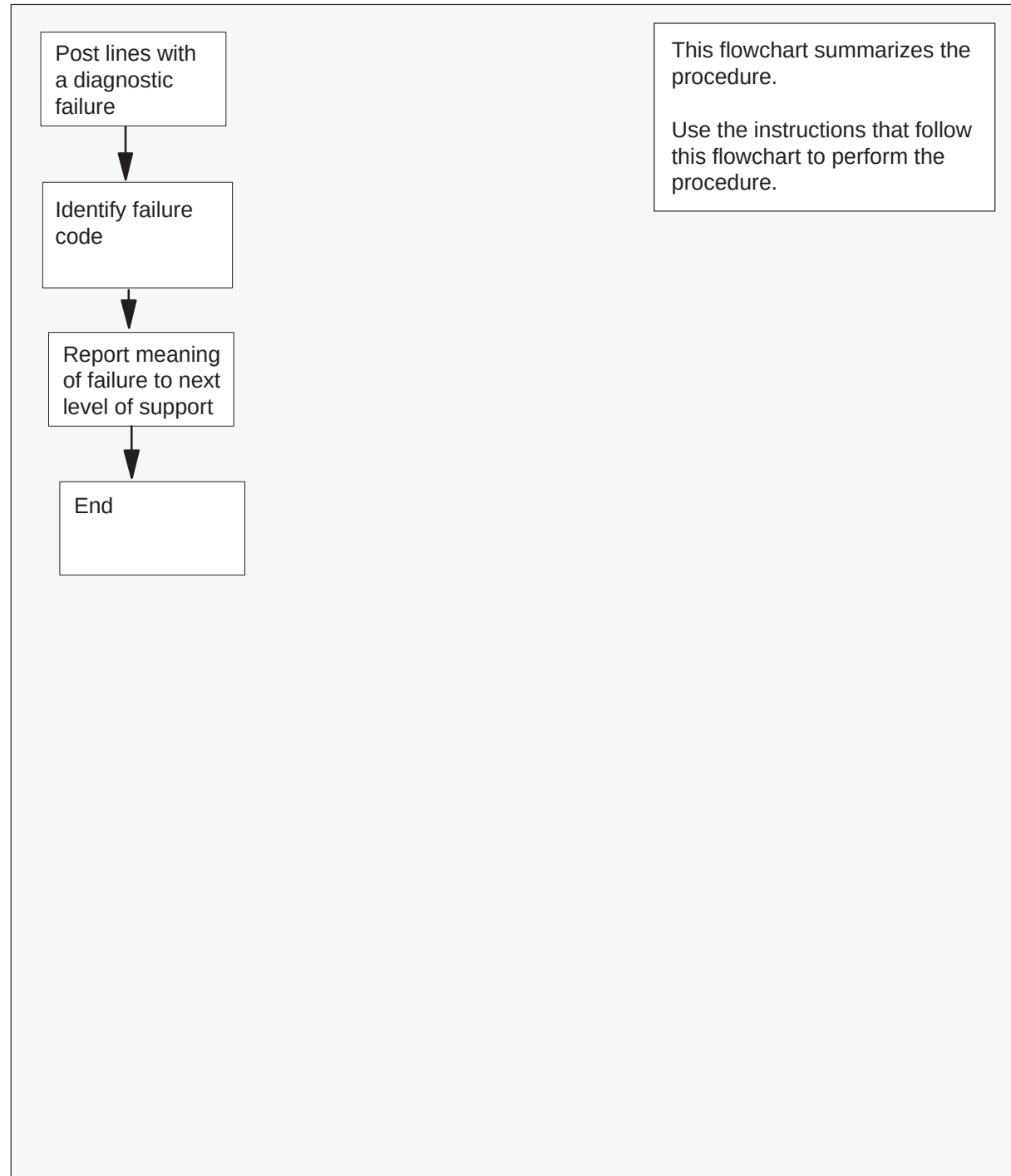
There are no common procedures.

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      DF MSET      DELQ      BUSYQ      PREFIX

LCC  PTY  RNG.....LEN..... DN      STA F S LTA TE
IBN              REM1 00 0 00 06 6137224345 IDL m
```

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

Failure Code	Meaning
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 loopback 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 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

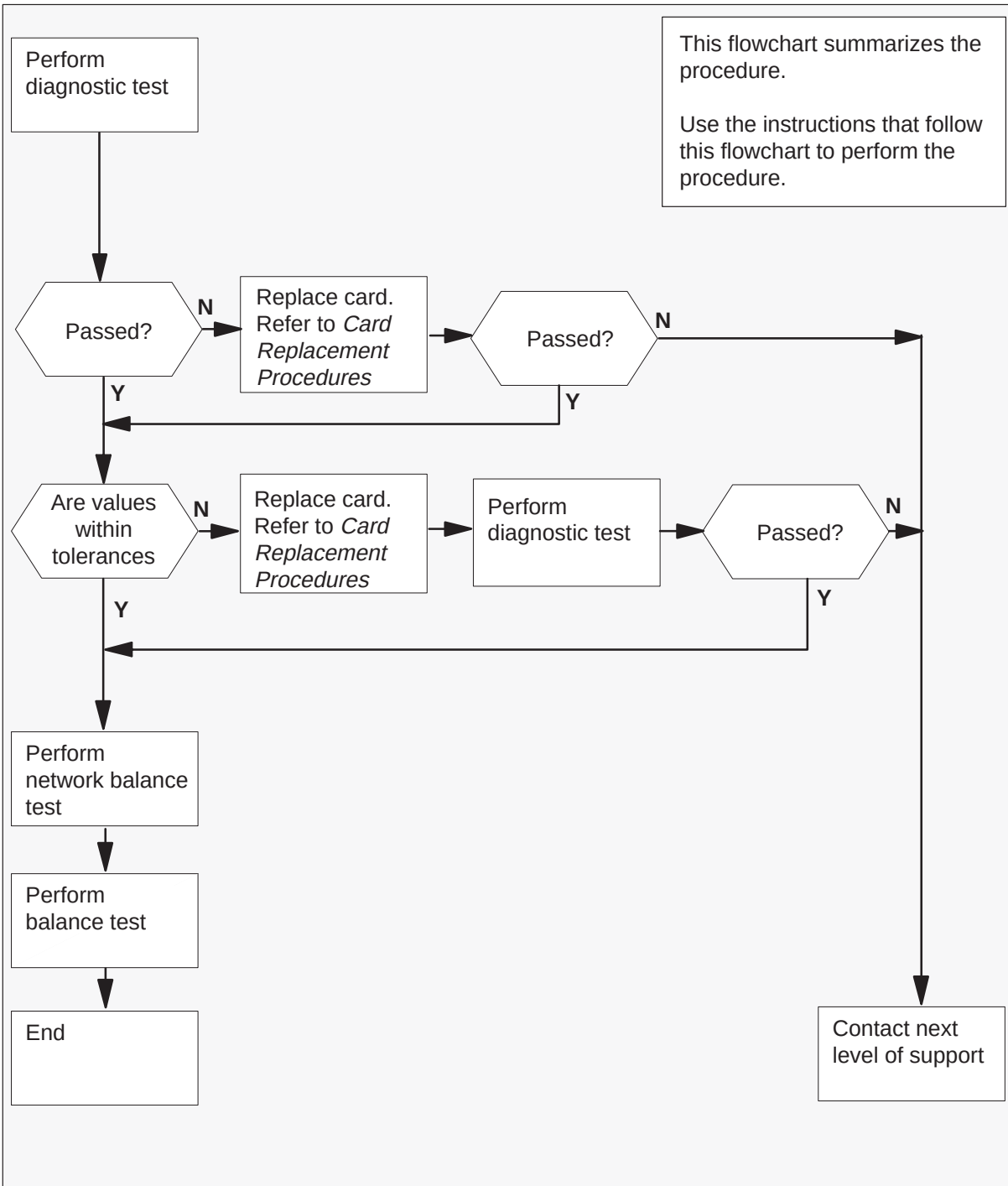
There are no common procedures.

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:

```
RNG ....LEN..... DN      STA F S LTA TE RESULT
8FR T4  HOST 00 0 12 19 6136211076 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

Correcting a call cut-off problem

(continued)

- 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), 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.

- 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

Correcting a call cut-off problem (continued)

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

>LTPLTA;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 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

```

Correcting a call cut-off problem

(continued)

- 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 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:

```
+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.

Correcting a call cut-off problem (end)

- 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

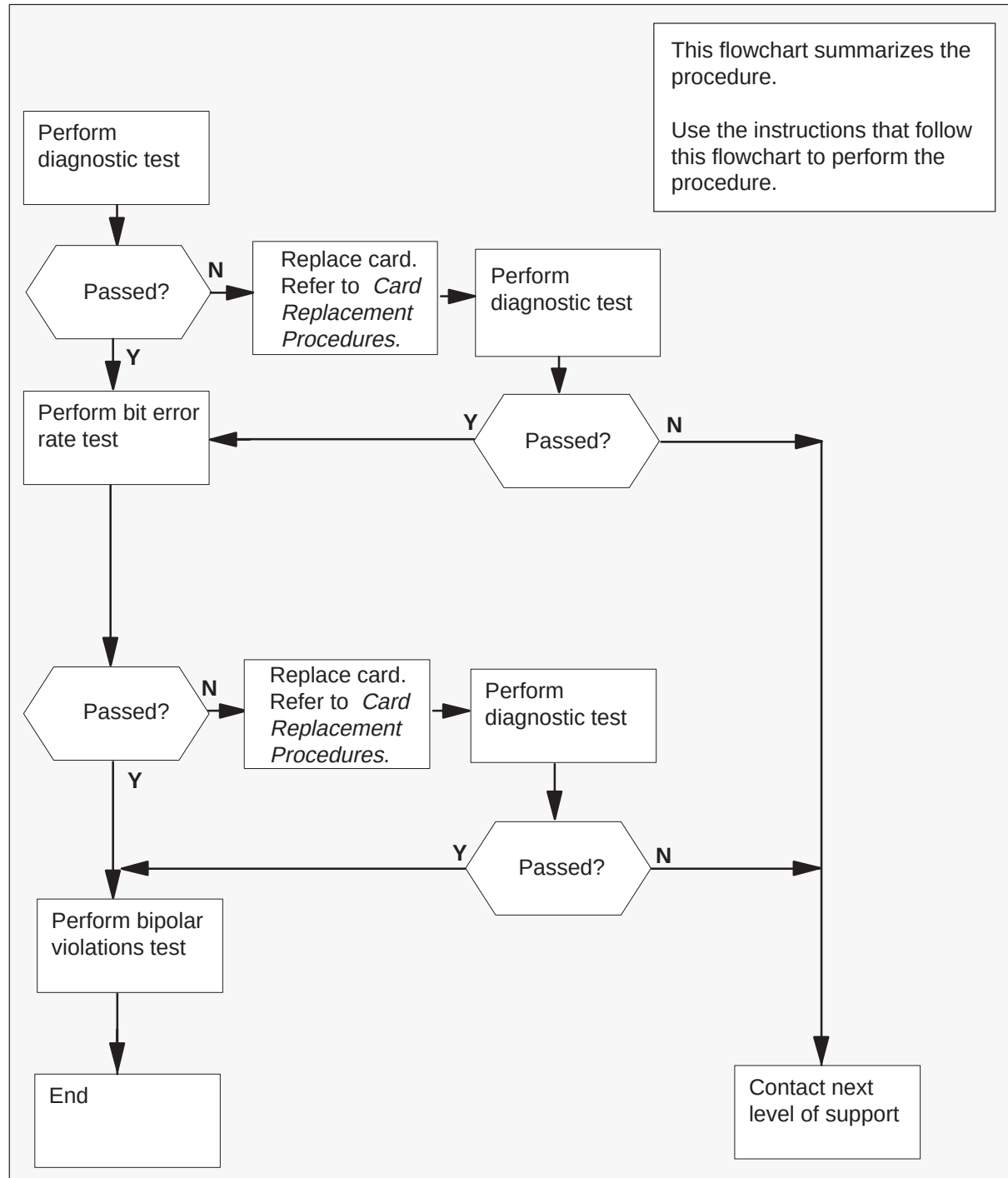
There are no common procedures.

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:

```
LCC PTY RNG ....LEN..... DN STA F S LTA TE
RESULT 8FR T4 HOST 00 0 12 19 6136211076 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

Correcting a data error problem (continued)

- 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), 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

Correcting a data error problem

(continued)

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

>LTPLTA;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 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 NO NON LOADED NO
```

Correcting a data error problem (continued)

- 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:

```
+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

Correcting a data error problem

(continued)

- 15 To perform a bit error rate test, type

>LTPDATA;BERT START

and press the Enter key.

Example of a MAP response:

```
LCC PTY RNG ...LEN... DN STA F S LTA
TE RESULT
IBN DATA HOST 02 0 00 04 722 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.

- 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
```


Correcting a data error problem (continued)

- 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

Correcting a data error problem

(continued)

- 21 To perform a bit error rate test, type

>LTPDATA;BERT START

and press the Enter key.

Example of a MAP response:

```
LCC PTY RNG ...LEN... DN STA F S LTA TE RESULT
IBN DATA HOST 02 0 00 04 722 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

Correcting a data error problem (continued)

- 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:

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 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*.

If the RES, CAP, VAC, and VDC values	Do
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.

Correcting a data error problem

(end)

- 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 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

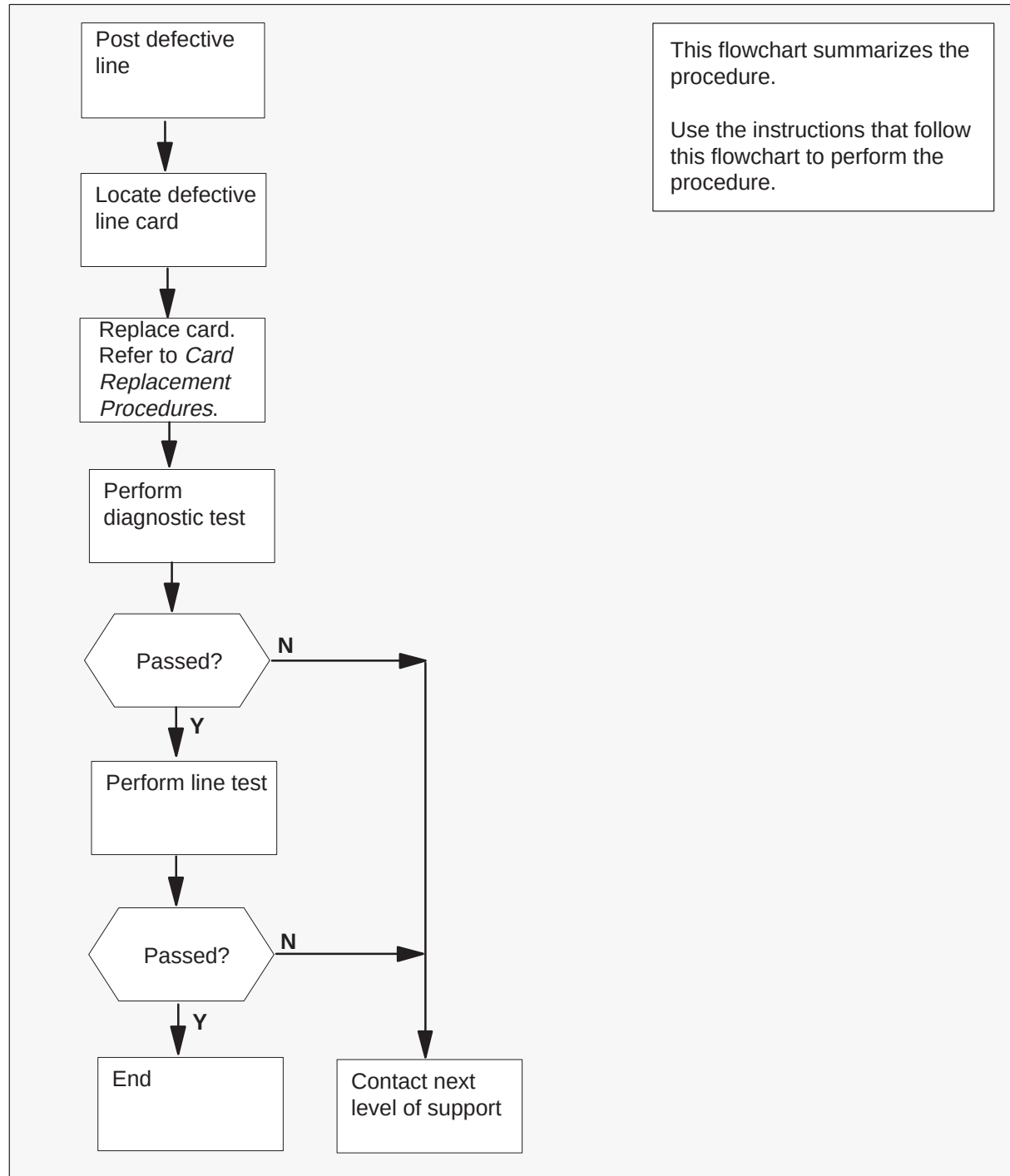
There are no common procedures.

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:

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

Correcting a line flux cancellation error (continued)

- 5 To perform a diagnostic test on the defective line card, 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 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.

Correcting a line flux cancellation error (continued)

- 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
is +LINE101, and other information	step 12
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	step 12

Correcting a line flux cancellation error (continued)

- 8 To perform a test for possible faults in the outside plant, type
>LTPLTA;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 9
fails	step 12

- 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 11
are outside the tolerances	step12

Correcting a line flux cancellation error (end)

- 11 To perform a test of the DIGITONE pad or DIGITONE dial of the posted station, type

>DGTST

and press the Enter key.

Example of a MAP response:

TEST PASSED, DIGITS RECEIVED: 7

If the test	Do
passes	step 13
fails	step 12

- 12 For additional help, contact the next level of support.
- 13 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

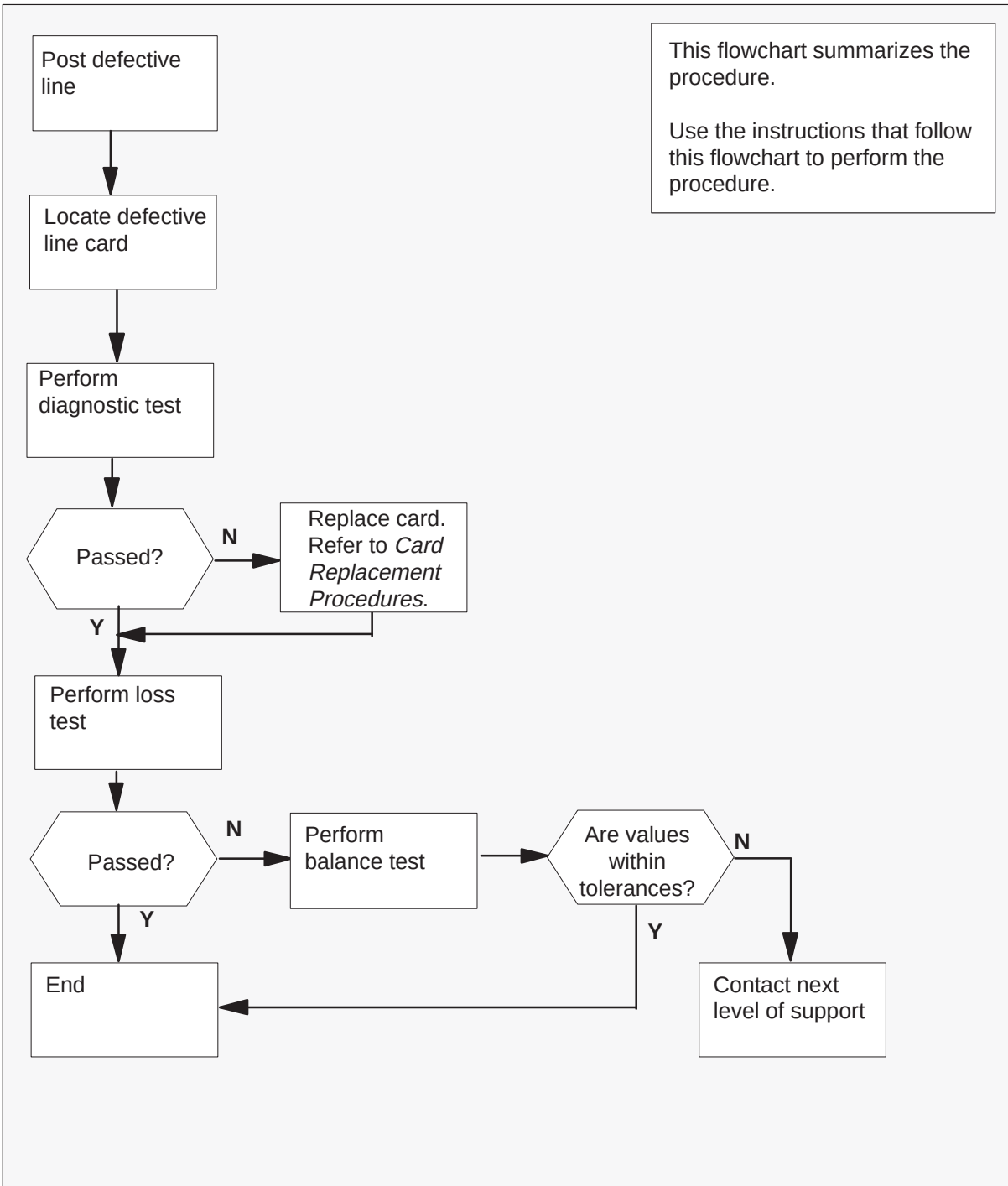
There are no common procedures.

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:

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 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.

Correcting a line loop detect error (continued)

- 5 To perform a diagnostic test on the defective line card, 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 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

Correcting a line loop detect error

(continued)

- 8 To perform a loss test to check for possible faults in the outside plant, type

>LTPMAN;LOSS

and press the Enter key.

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 IDL 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:

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 IDL TTU
```

```
TEST: Onhook Balnet 2DB Pad
      Previous Non loaded No
      Previous Non loaded No
```

- 11 Record the test results for the next level of support.

Correcting a line loop detect error (end)

- 12 To perform a test for damage in the outside plant, 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		

If the test	Do
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*.

If the RES, CAP, VAC, and VDC values	Do
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

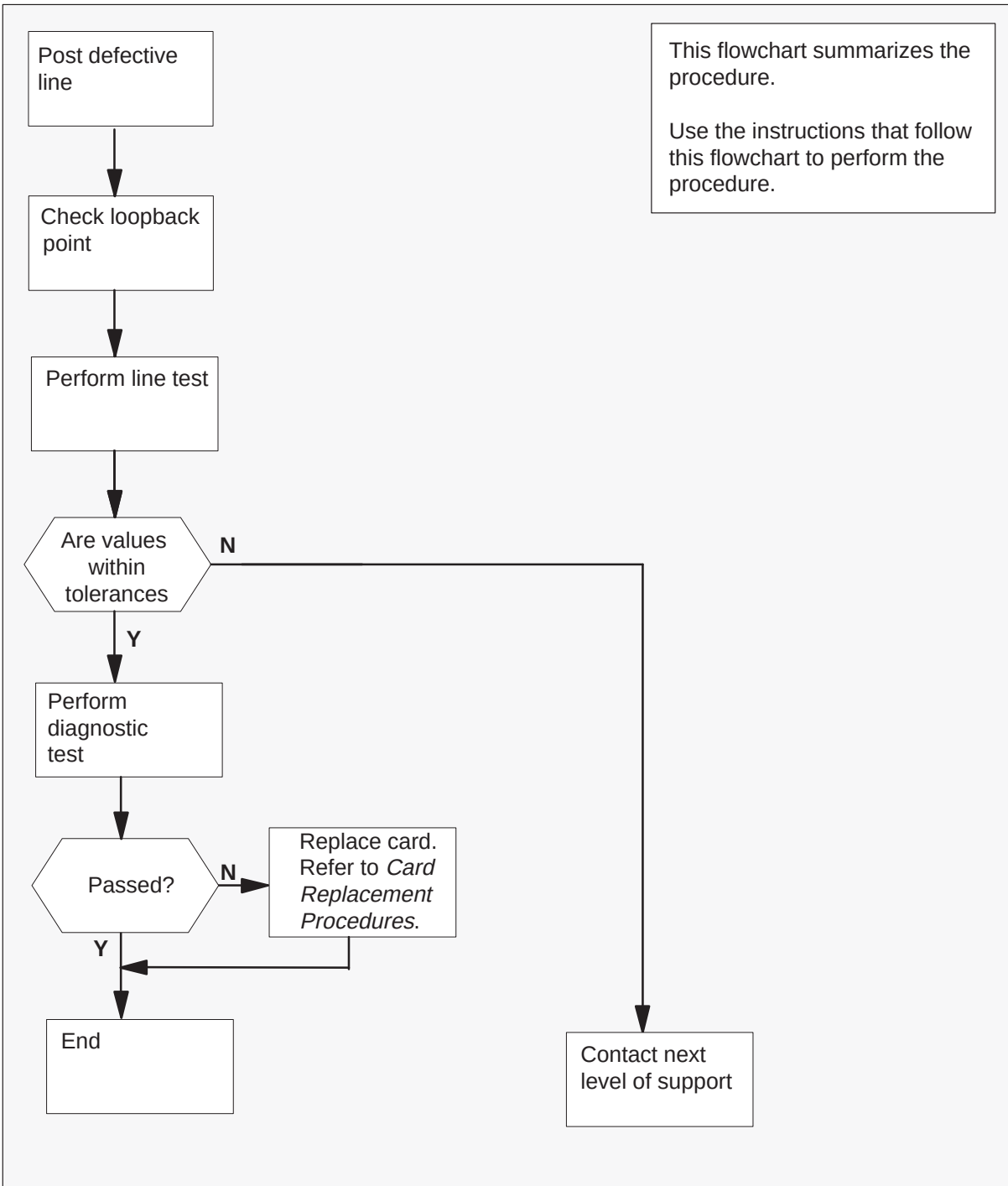
There are no common procedures.

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:

```
LCC PTY RNG ...LEN.... DN      STA F S LTA TE RESULT
1FR      HOST 00 1 00 01 613 621 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:

```
LCC PTY RNG ...LEN.... DN      STA F S LTA TE RESULT
1FR      HOST 00 1 00 01 613 621 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  -  -
```

Correcting a line loopback problem (continued)

- 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
is not correctly set	step 5

- 5 To set the correct loopback, type

>LOOPBK location

and press the Enter key.

where

location 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 *Maintenance Guide*.

Example of a MAP response:

LOOPBACK AT DU ACTIVATED

If the loopback	Do
activates	step 6
did not activate	step 14

Correcting a line loopback problem (continued)

- 6 To perform a line test for possible damage in the outside plant, type
>LTPLTA;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 7
fails	step 14

- 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 recorded values in step 7 are within the tolerances listed in the *Maintenance Guide*.

If the RES, CAP, VAC, and VDC values	Do
are within the tolerances	step 9
are outside the tolerances	step 14

Correcting a line loopback problem (continued)

- 9 To perform a diagnostic test, type

>LTP;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 15
is +LINE101, and other information	step 10
is COULD NOT SEIZE LINE	step 14

- 10 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
```

- 11 Record the product engineering code (PEC), the PEC suffix, and the location of the defective line card.
- 12 Replace the defective line card recorded in step 11 to replace the card. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Correcting a line loopback problem

(end)

- 13** To perform a diagnostic test on the line card, 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 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

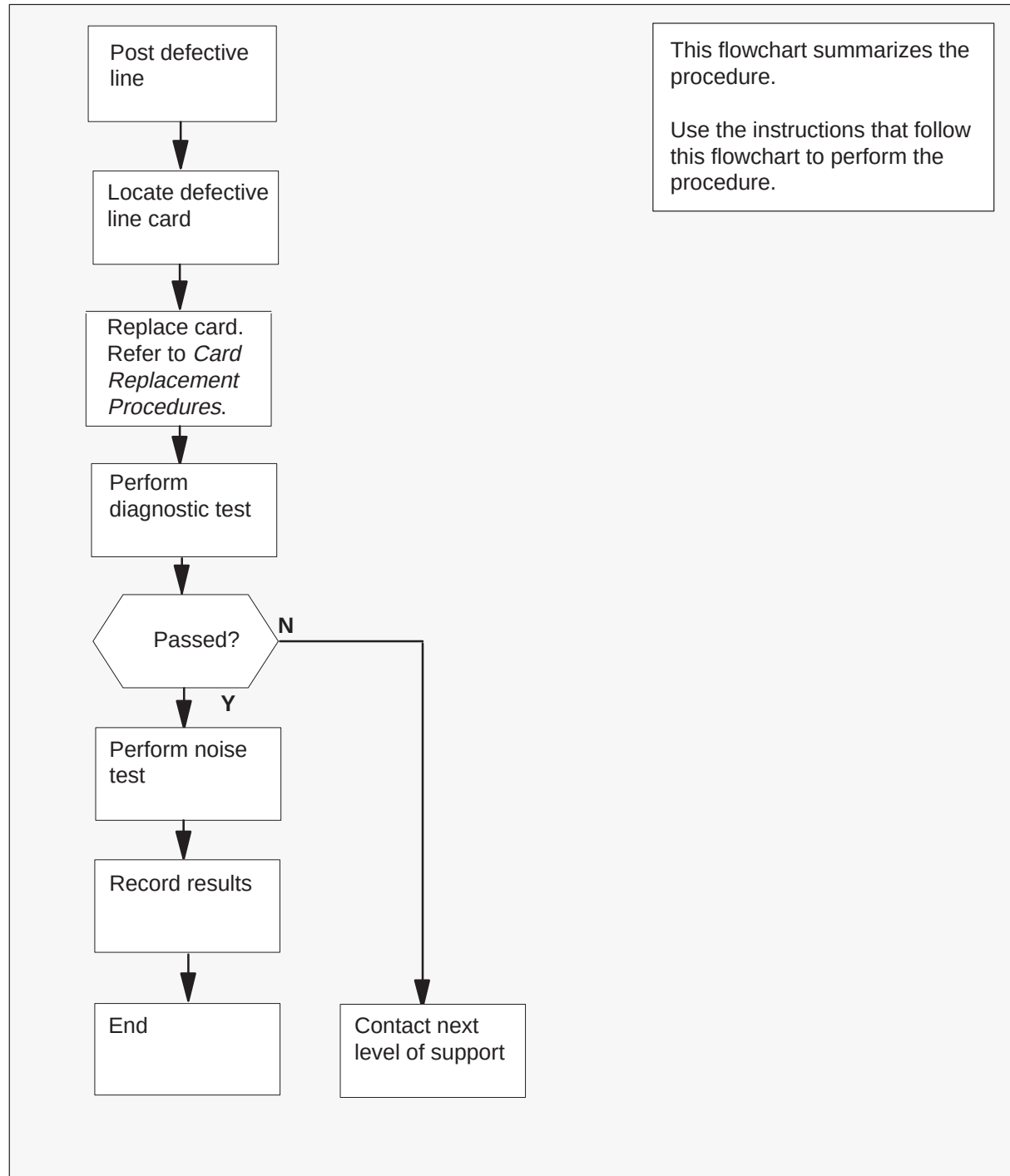
There are no common procedures.

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:

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

Correcting a line noise problem

(end)

- 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:

```
+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:

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

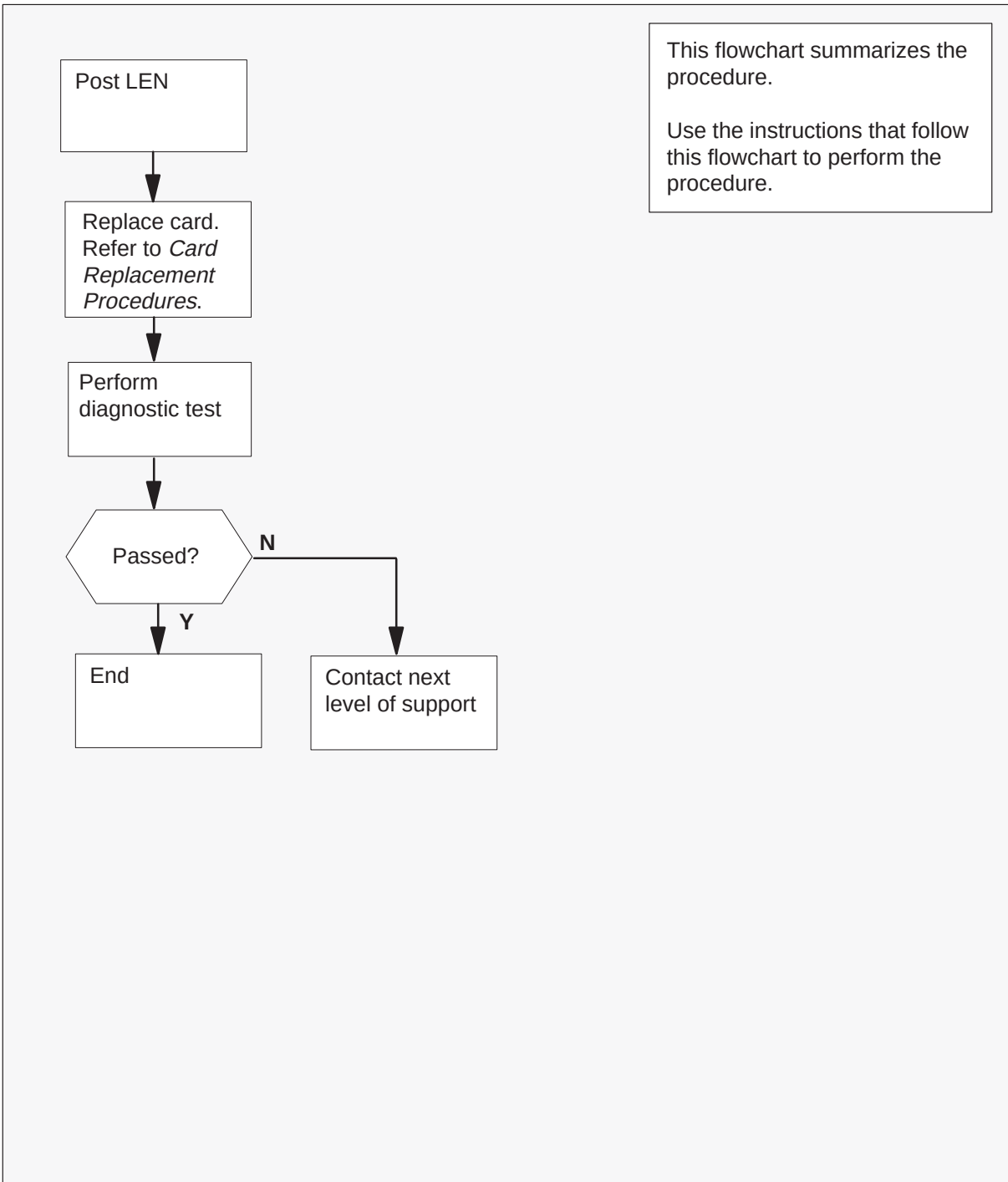
Action

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:

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

Correcting a line pad test problem

(end)

- 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:

```
+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 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

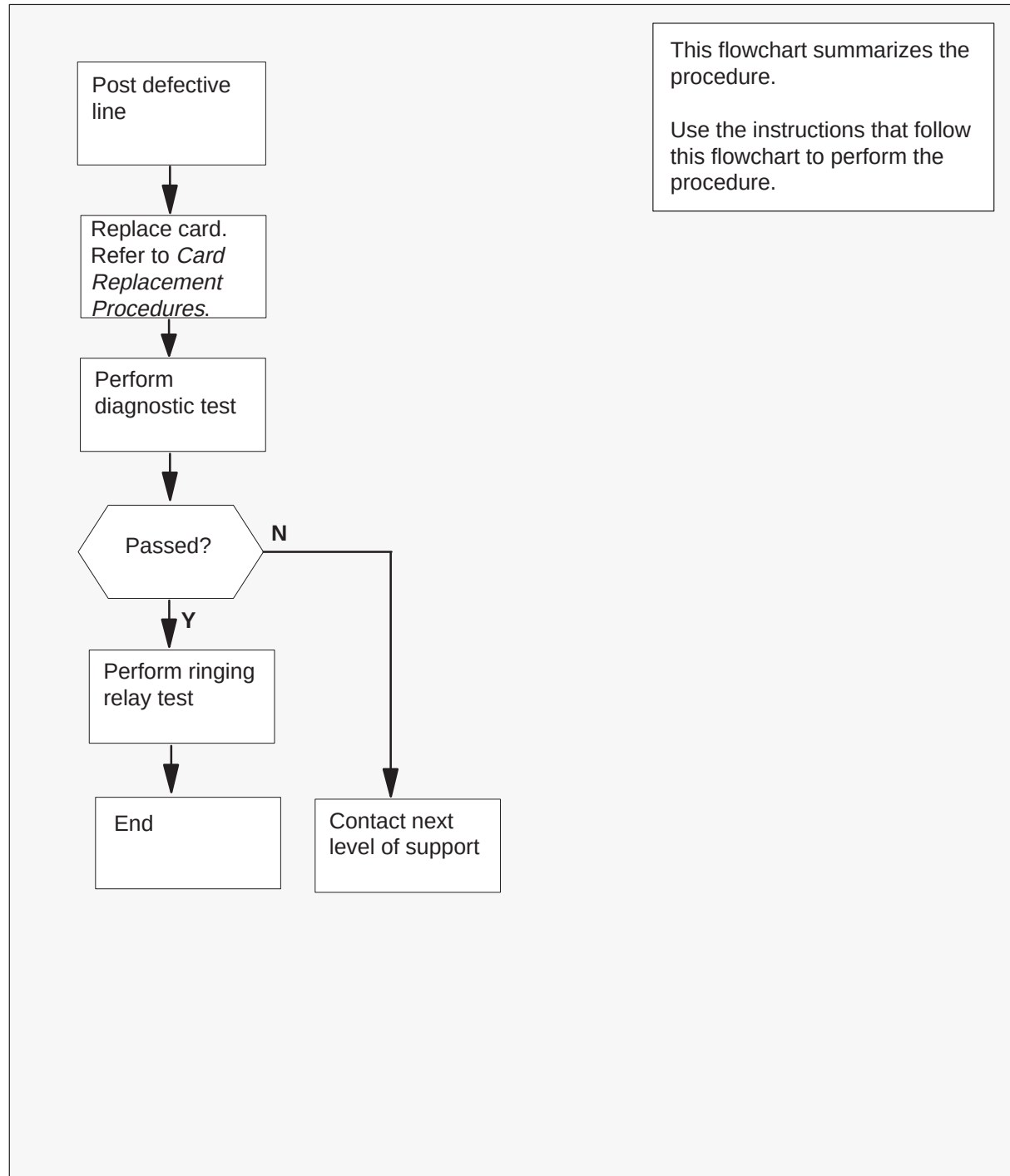
There are no common procedures.

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 (continued)

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.

- 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.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 613 621 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.

Correcting a line ringing failure (end)

- 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:

```
+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 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.

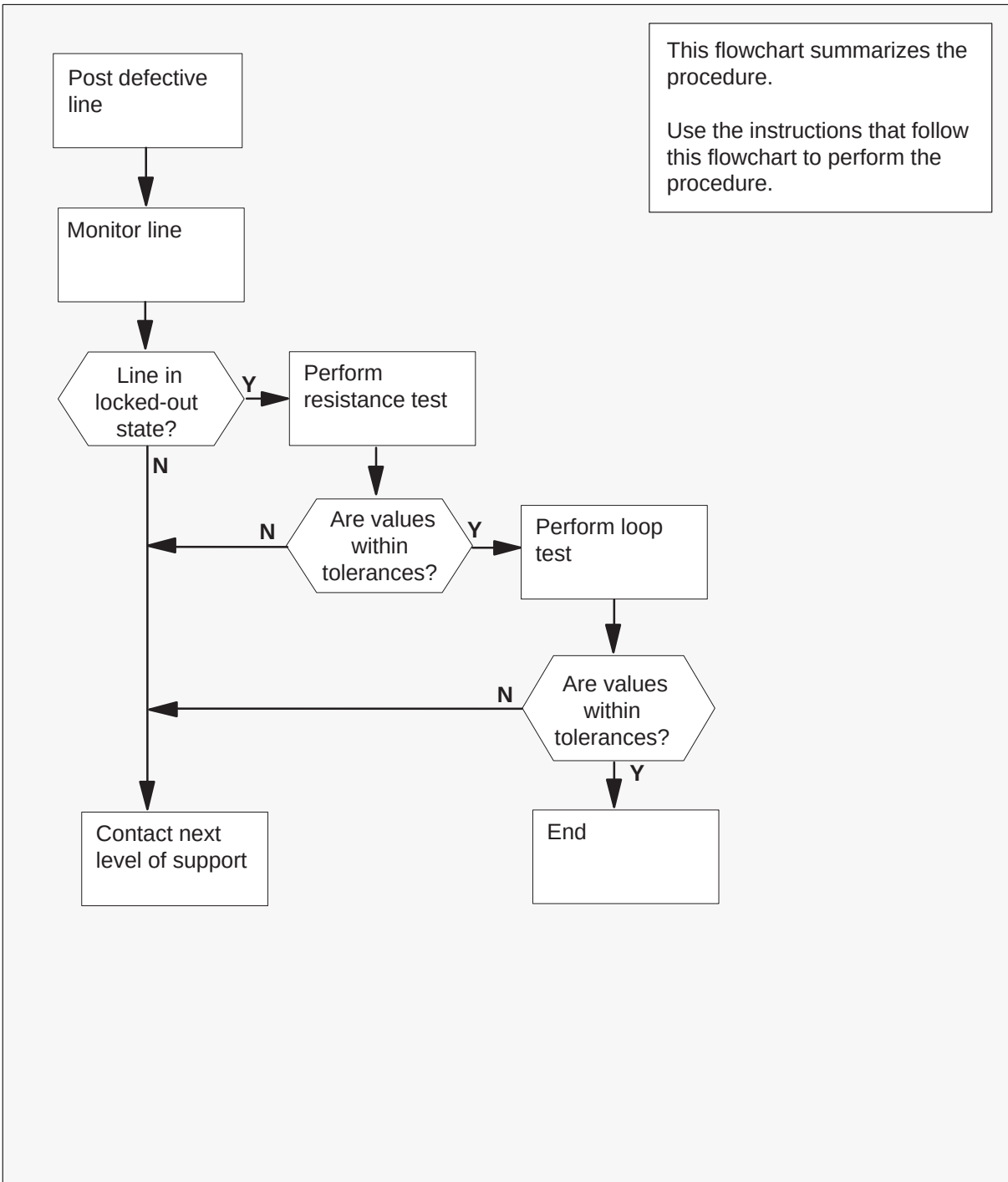
Action

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:

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

- 3 To return the posted line to the idle state, type
>RTS
 and press the Enter key.

Example of a MAP response:

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

If the line state	Do
is IDL	step 10
is other than listed here	step 4

Correcting a line synchronization loss at a U-loop (continued)

- 4 Monitor the state of the line at the LTP level.

If the line state	Do
is L0	step 5
is other than listed here	step 9

- 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		

If the RES value in the MAP response	Do
is between 1.2 k Ω and 3 k Ω	step 6
is not between 1.2 k Ω and 3 k Ω	step 9

Correcting a line synchronization loss at a U-loop (end)

- 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		

If the test	Do
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.

If the RES, CAP, VAC, and VDC values	Do
are within the tolerances	step 10
are outside the tolerances	step 9

- 9 For additional help, contact the next level of support.
- 10 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

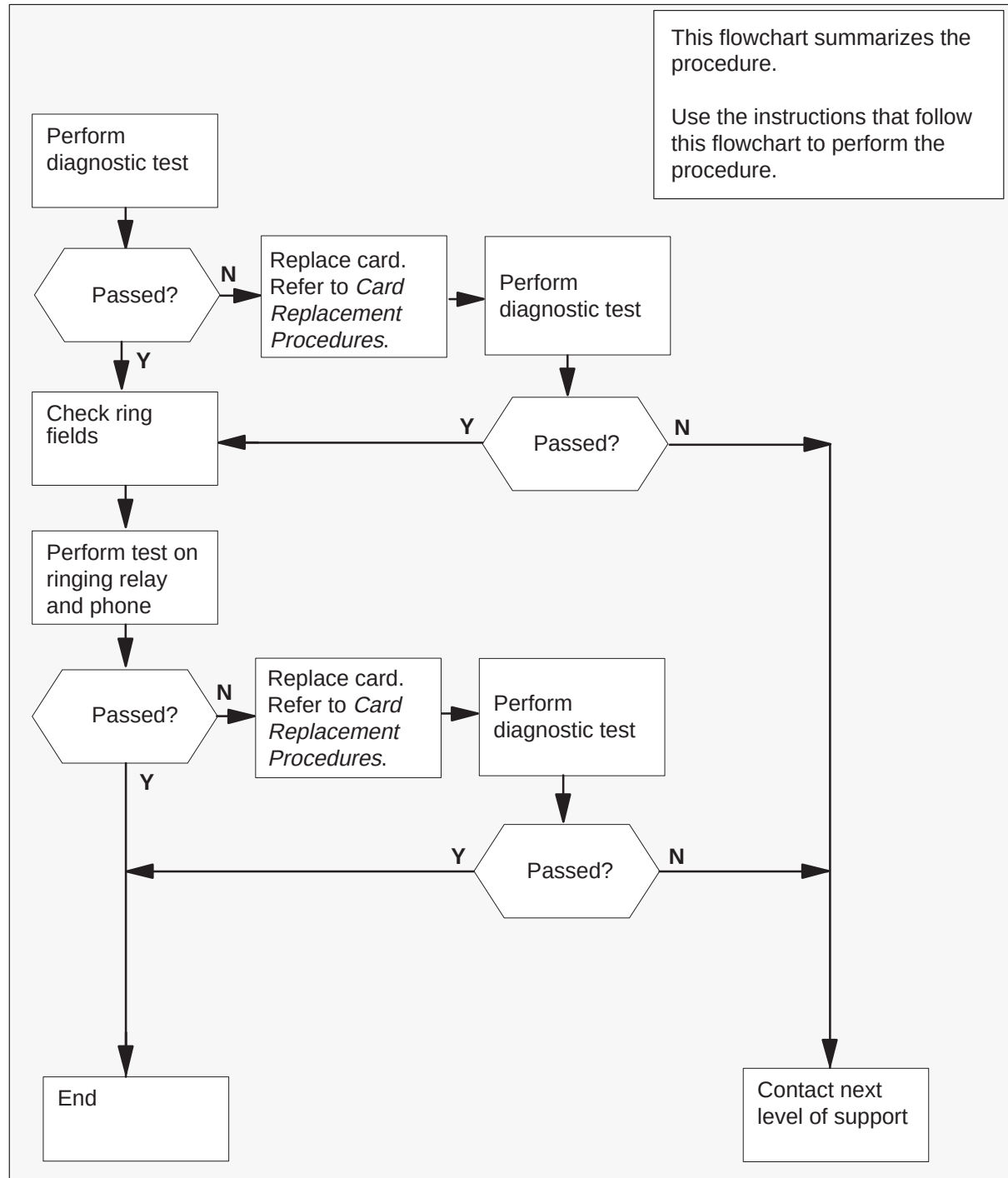
There are no common procedures.

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:

```
LCC PTY RNG ...LEN... DN STA F S LTA TE RESULT
1FR R1 HOST 00 1 00 01 6136214777 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
```

Correcting a line that does not receive calls

(continued)

- 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.

- 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
is 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"):

Correcting a line that does not receive calls

(continued)

- 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.

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"):
```

Correcting a line that does not receive calls

(end)

- 16 To confirm the command, type

>YES

and press the Enter key.

If the test	Do
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

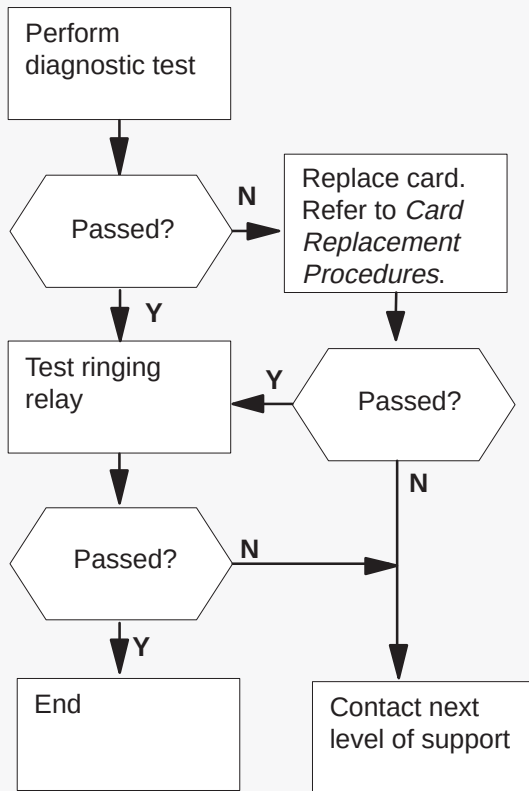
There are no common procedures.

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



This flowchart summarizes the procedure.

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

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:

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR      HOST 00 1 00 01 6136214777 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

Correcting a line that does not ring

(continued)

- 4 To locate the defective line card, type

>CKTLOC

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 COULD NOT RUN LINE_CARD_ DIAGNOSTIC	step 10

Correcting a line that does not ring (end)

- 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

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

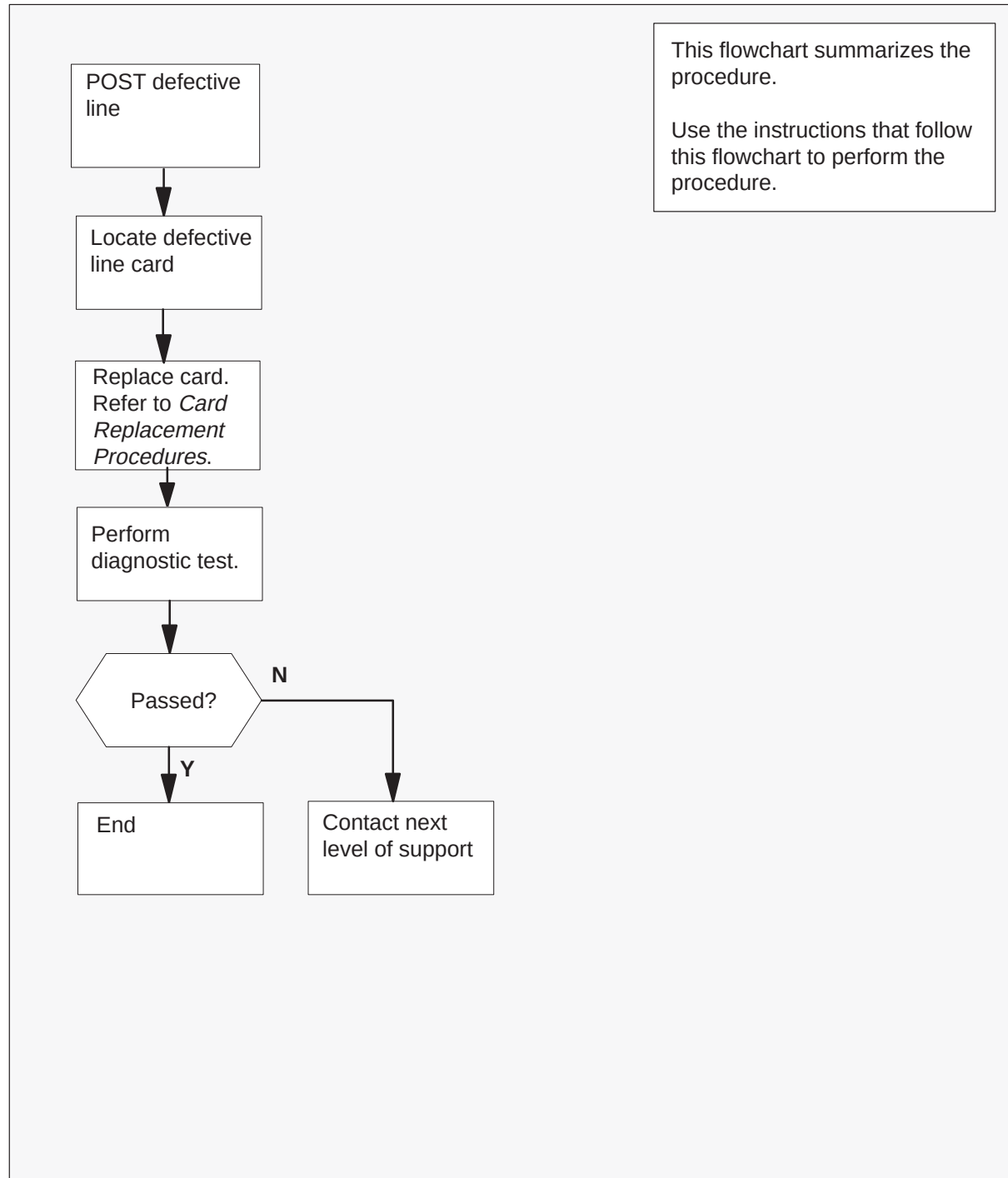
There are no common procedures.

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

(continued)

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.

- 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.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 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.

Correcting a line transhybrid error (continued)

- 5 To perform a diagnostic test on the defective line card, 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 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.

Correcting a line transhybrid error

(end)

- 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

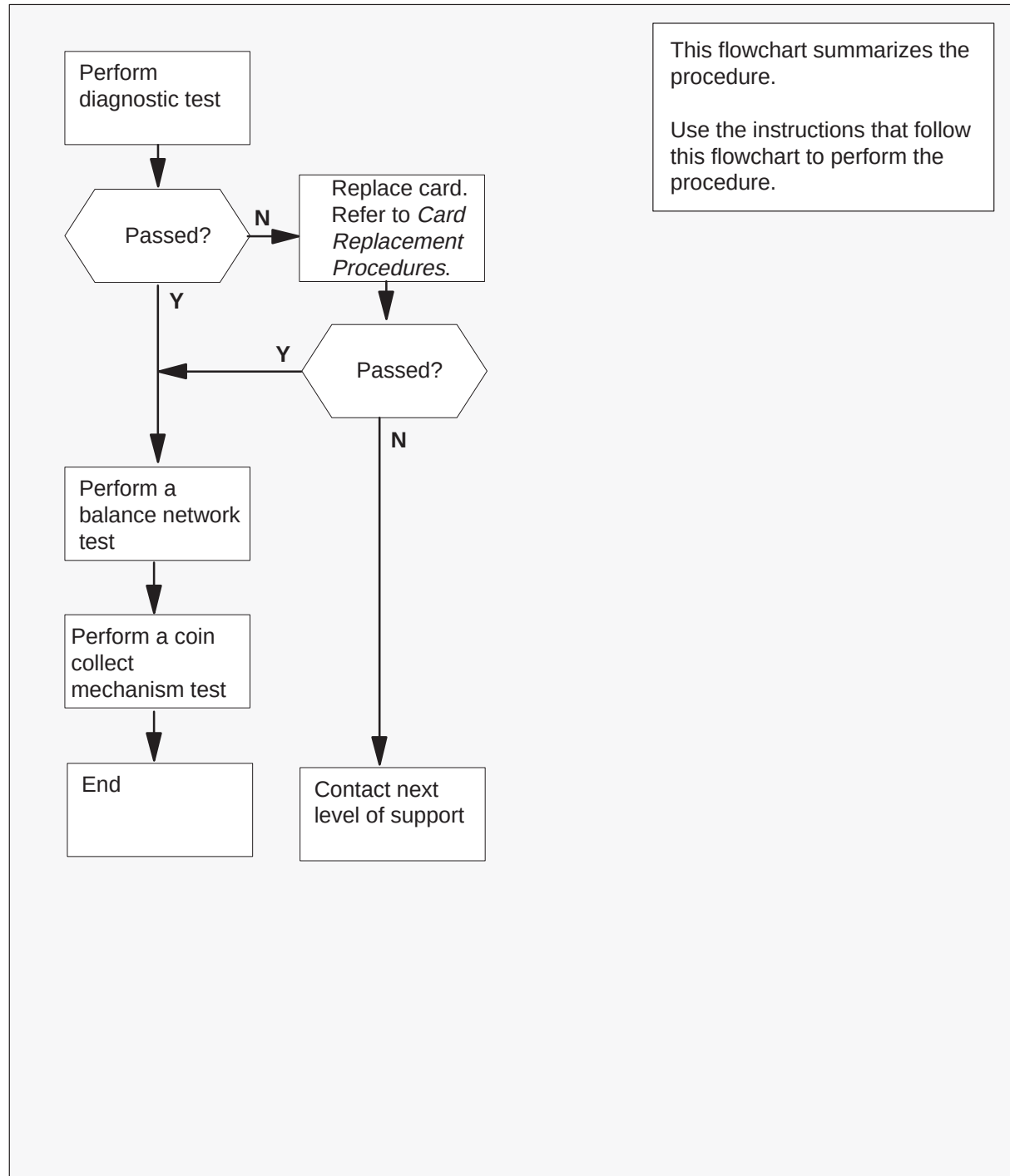
There are no common procedures.

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:

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 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

Correcting a line with free pay telephone service

(continued)

- 4 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 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 replaced line card in step 7, 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 LINE_CARD_DIAGNOSTIC	step12

Correcting a line with free pay telephone service (end)

- 8 To perform a network balance test, type

>LTPLTA;BALNET

and press the Enter key.

Example of a MAP response:

Test:	Onhook	2DBalnet	2DB Pad
	PREVIOUS	Non loaded	No
	RESULT	Non loaded	No

- 9 Record the test results for the next level of support.

- 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 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

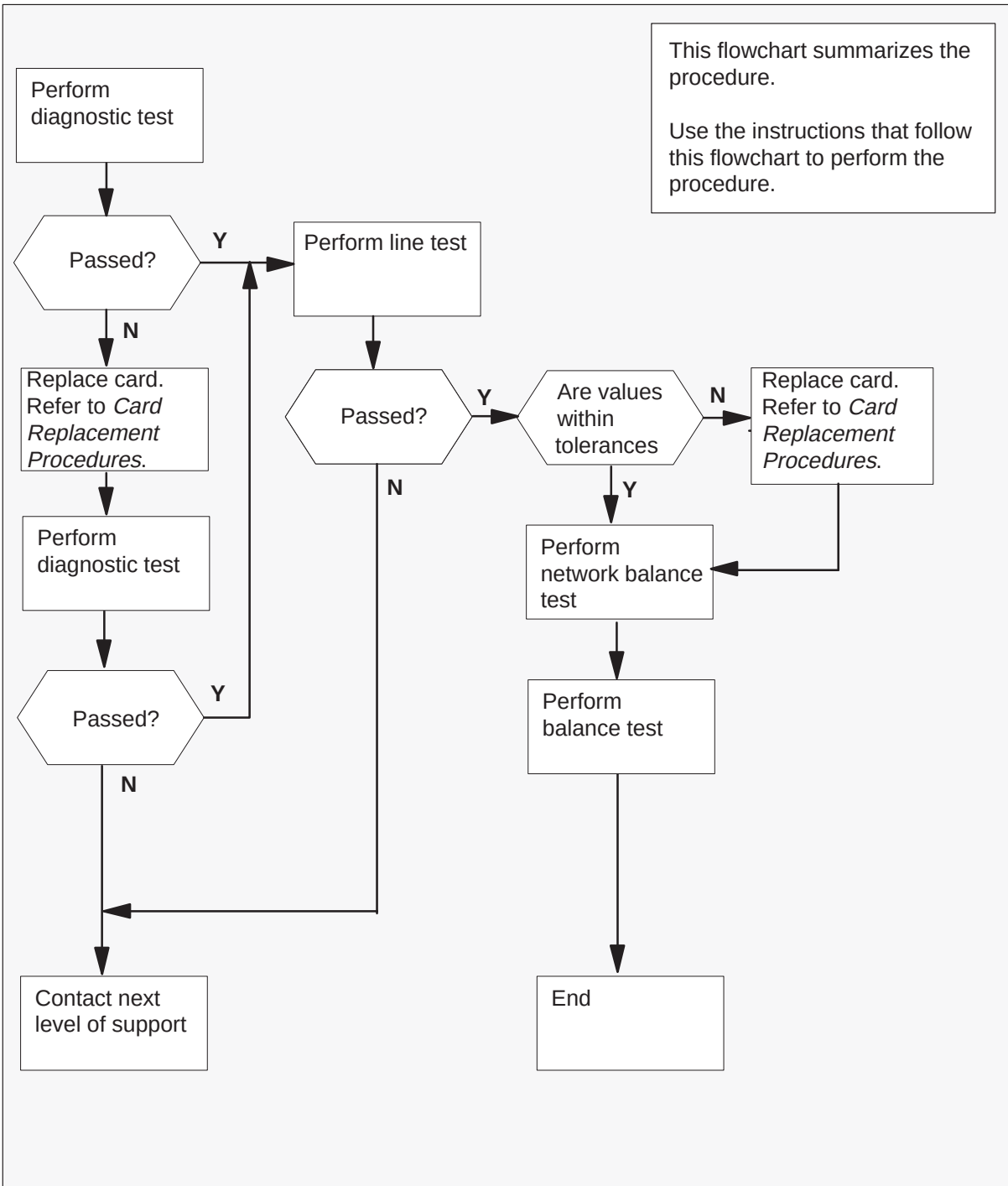
There are no common procedures.

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:

```
LCC PTY RNG ...LEN.... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 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

Correcting a no ANI on coin line condition (continued)

- 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 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

Correcting a no ANI on coin line condition (continued)

- 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:

```
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
```

Correcting a no ANI on coin line condition (continued)

- 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:

```
+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
```

Correcting a no ANI on coin line condition (end)

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 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

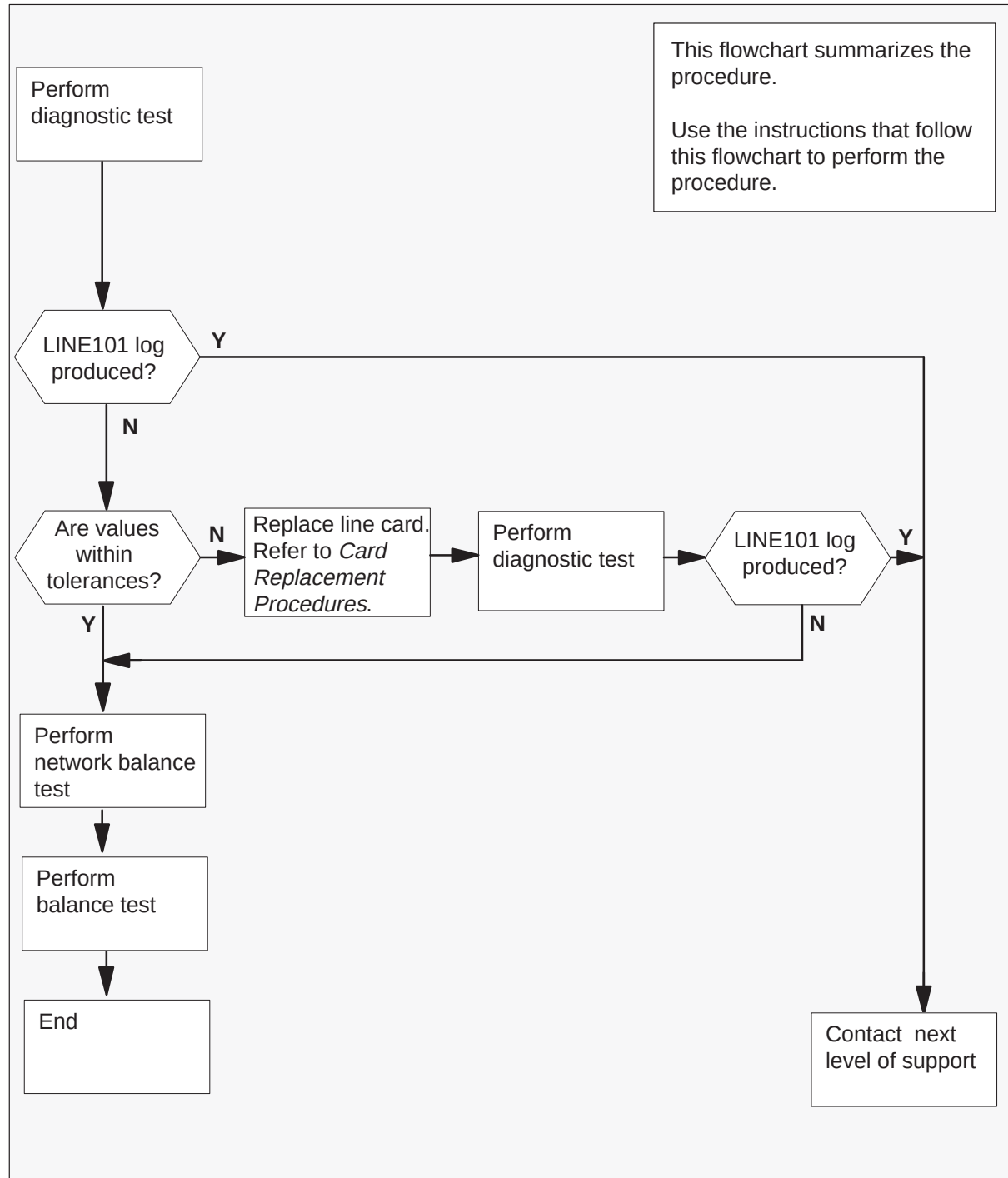
There are no common procedures.

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 of the subscriber where the line is cut off, 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:

```
LCC PTY RNG . . . .LEN. . . . DN STA F S LTA TE RESULT 8FR
T4 HOST 00 0 12 19 6136211076 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

Correcting a ringing pretrip problem (continued)

- 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 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

Correcting a ringing pretrip problem (continued)

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

>LTPLTA;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 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
```

Correcting a ringing pretrip problem

(continued)

- 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.

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.

Correcting a ringing pretrip problem (end)

- 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

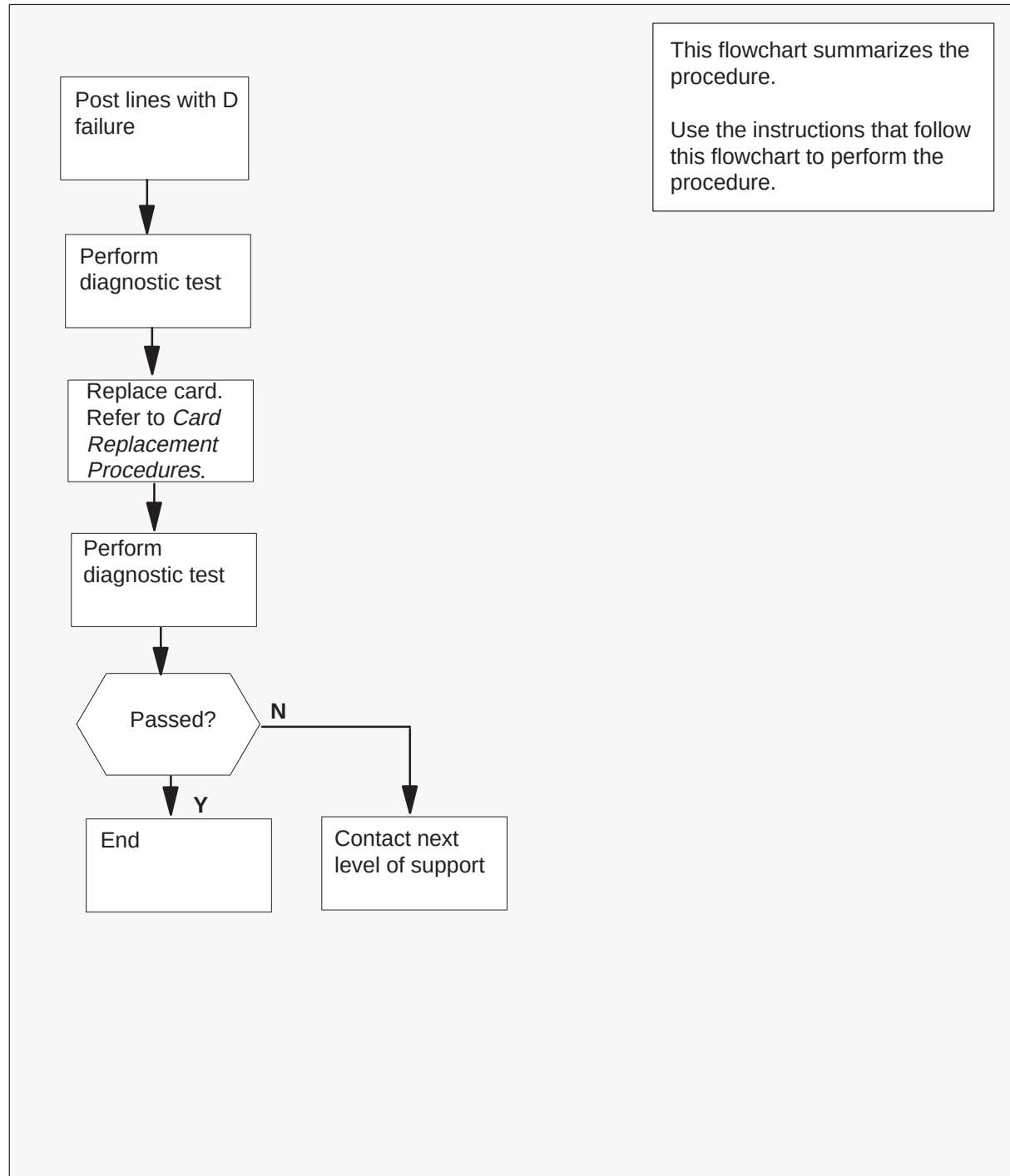
There are no common procedures.

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.

Correcting a stuck test access line relay (end)

- 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:

```
+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 DIAGNOSTIC ABORTED	step 8

- 8 For additional help, contact the next level of support. is
- 9 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

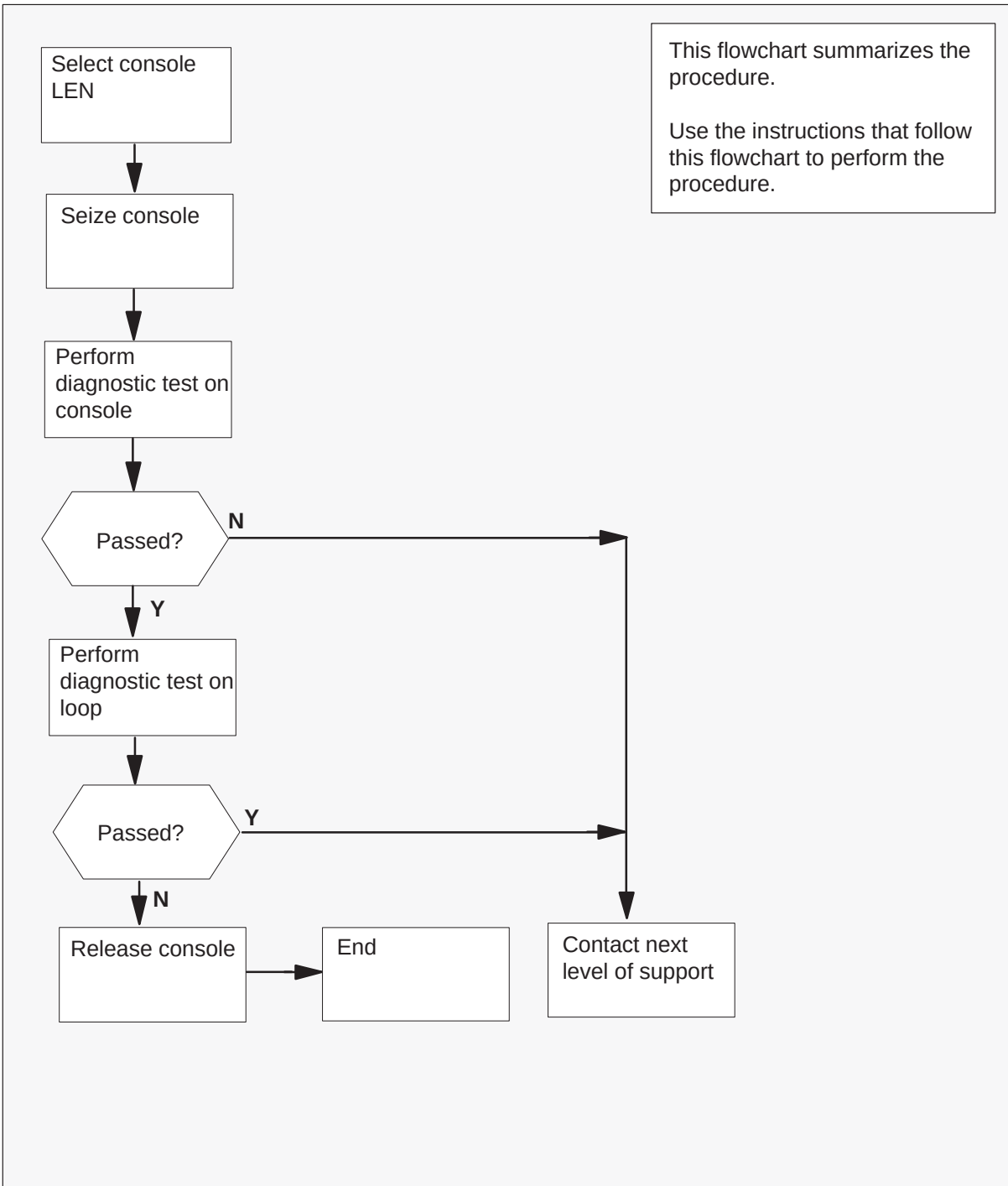
There are no common procedures.

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: REPLACE	step 6
is CONSOLE LOOP AROUND TEST FAIL	step 9

Correcting an attendant console problem

(end)

- 6 To perform an IBNCON-level diagnostic test on the loop, type
>DIAGNOSE LOOP
and press the Enter key.

If the MAP response	Do
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.

If the RTS command	Do
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

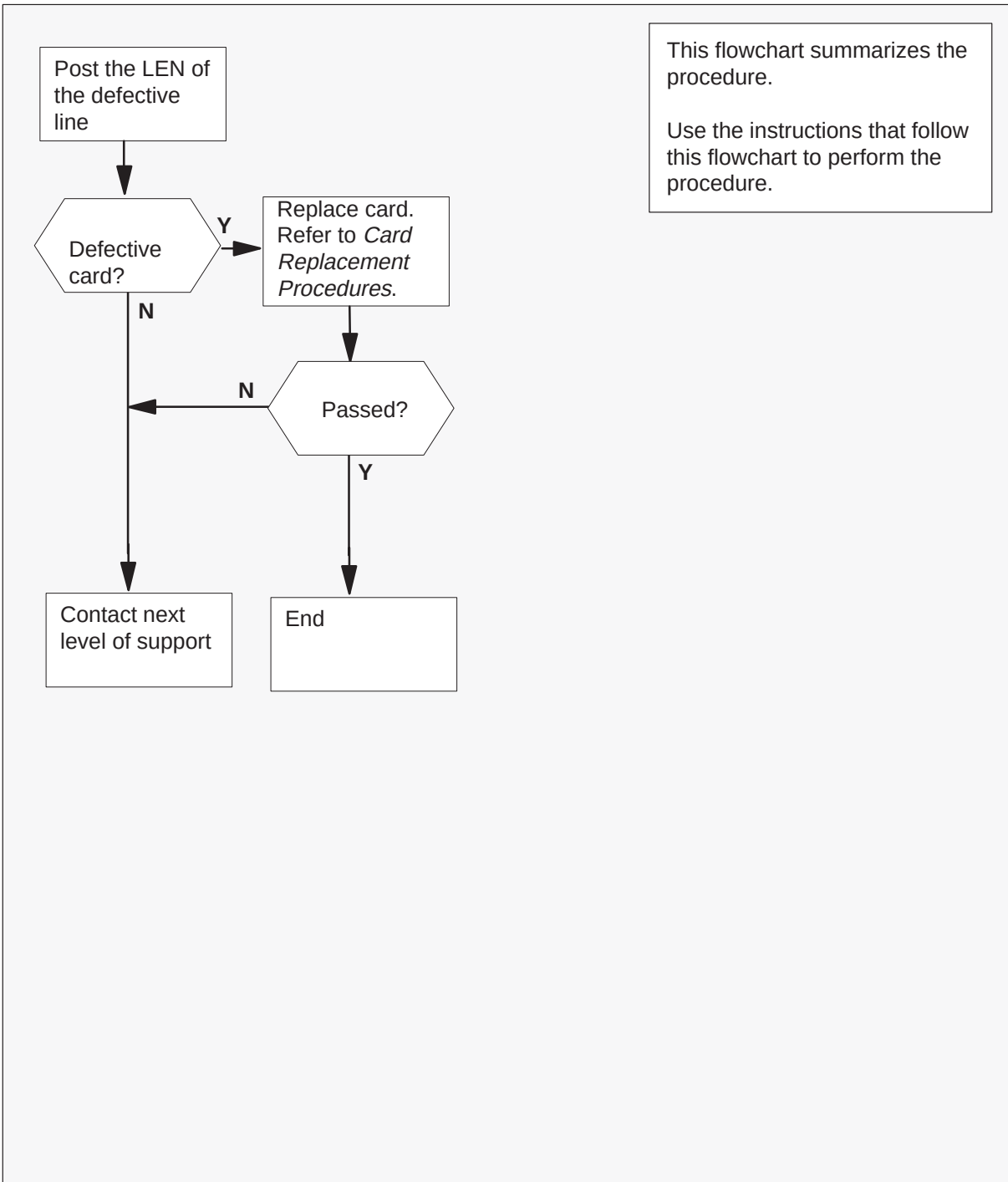
There are no common procedures.

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:

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

Correcting an automatic line test failure (end)

- 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:

```
+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 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

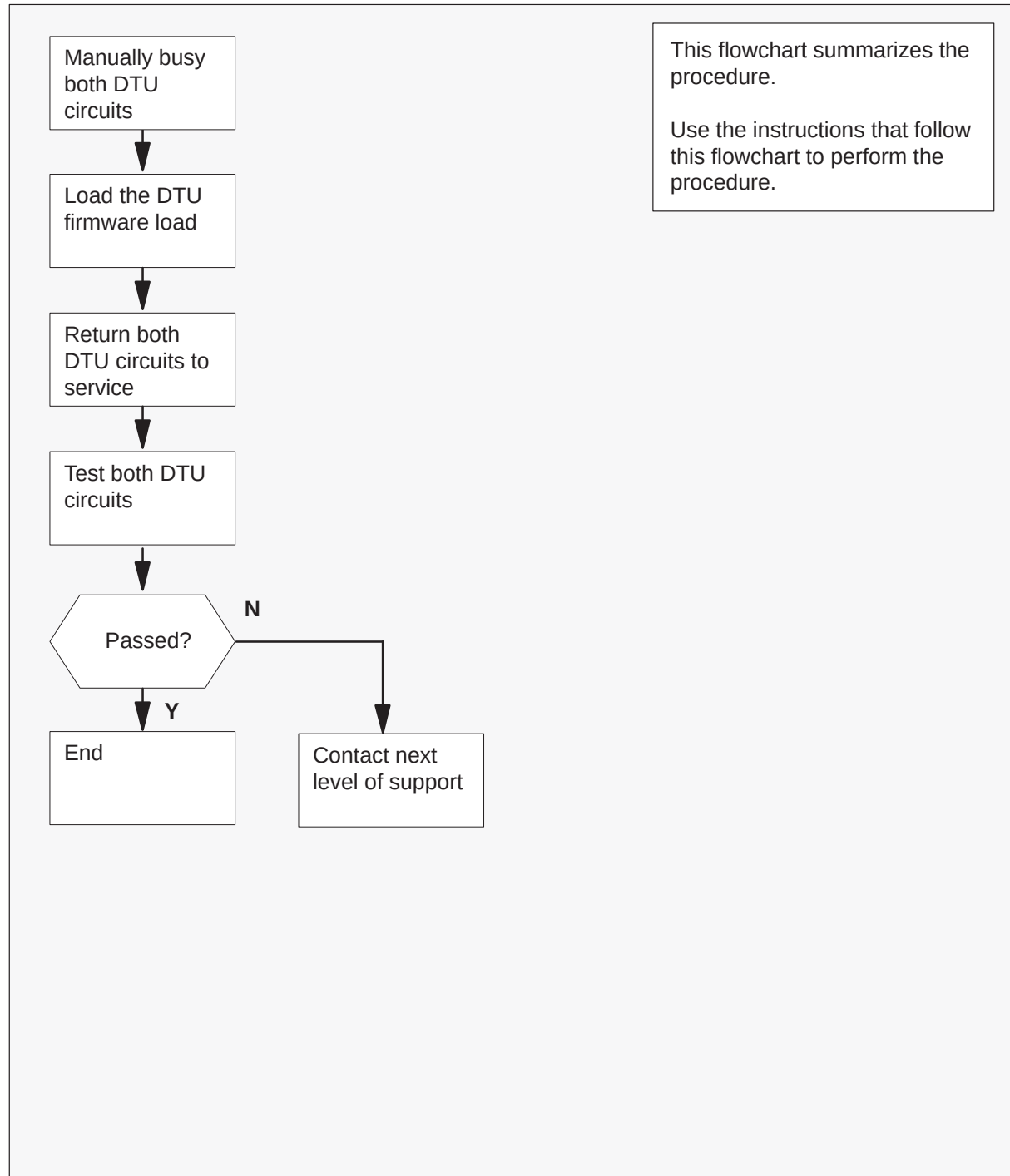
There are no common procedures.

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

At the MAP terminal

1



WARNING

Degradation of digital trunk bit error rate testing

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



WARNING

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
0	MTM	6	2 DTU			0	IDL

Correcting digital test unit problems (continued)

- 3 To manually busy the DTU 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  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.

Correcting digital test unit problems

(continued)

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:

```

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

Correcting digital test unit problems (continued)

- 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:

Correcting digital test unit problems

(continued)

- 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

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 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 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.

Correcting digital test unit problems (continued)

15



WARNING

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.



WARNING

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.

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

Correcting digital test unit problems

(continued)

- 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
is other than listed here	step 18

- 18** To access the PM level of the MAP display, type

>PM

and press the Enter key.

Correcting digital test unit problems (continued)

- 19** 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
- 20** To manually busy the MTM, type
>BSY
 and press the Enter key.
- 21** To return the MTM to service, type
>RTS
 and press the Enter key.
- 22** To access the TTP level of the MAP display, type
>TRKS;TTP
 and press the Enter key.
- 23** 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 MB	
	HOLD2 DTU	1 SZD . .	

If the state of the circuit	Do
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

Correcting digital test unit problems (continued)

- 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:

```

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.

Correcting digital test unit problems

(continued)

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.

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	. .

Correcting digital test unit problems (continued)

- 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
  
```

- 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
  
```

If the TST command	Do
passes	step 38
fails	step 37

Correcting digital test unit problems

(end)

- 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

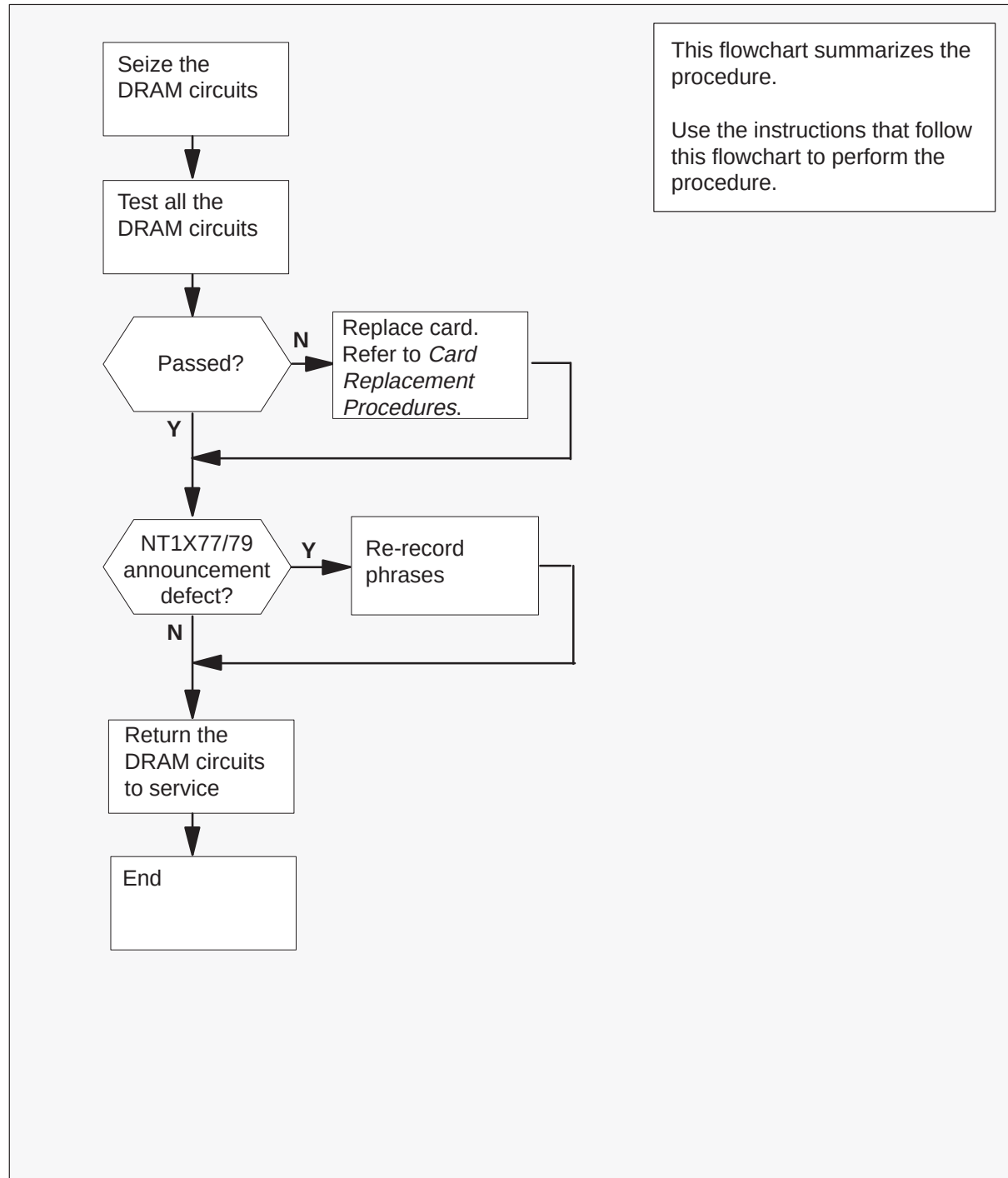
There are no common procedures.

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



WARNING

Loss of announcement services

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



WARNING

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
```

Correcting DRAM announcement trouble (continued)

- 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

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
```

Correcting DRAM announcement trouble (continued)

- 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
fails	step 31

- 10** To move the next circuit into the control position, type

>NEXT

and press the Enter key.

Correcting DRAM announcement trouble (continued)

- 11 Repeat steps 7 through 10 for all the DRAM circuits in the posted set.

If	Do
one or more DRAM circuits failed a test	step 12
DRAM circuits did not fail a test	step 31

- 12 Determine if the announcement problem relates to NT1X77 or NT1X79 cards.

If the problem	Do
is associated with an NT1X77 or NT1X79 card	step 13
is not associated with an NT1X77 or NT1X79 card	step 31

- 13 To access the DRAM recording utility, type

>DRAMREC

and press the Enter key.

- 14 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 member number assigned to the headset trunk (table TRKMEM)

Example input:

>CONNECT 0 HSET 0

Correcting DRAM announcement trouble (continued)

- 15** 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

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.

Correcting DRAM announcement trouble (continued)

- 17 To record the phrase, type

>RECORD phrase_ext length
and press the Enter key.

where

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.

Correcting DRAM announcement trouble (continued)

- 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.
- 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

Correcting DRAM announcement trouble (end)

- 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 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

- 28 To return the circuit in the control position to service, type

>RTS

and press the Enter key.

- 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

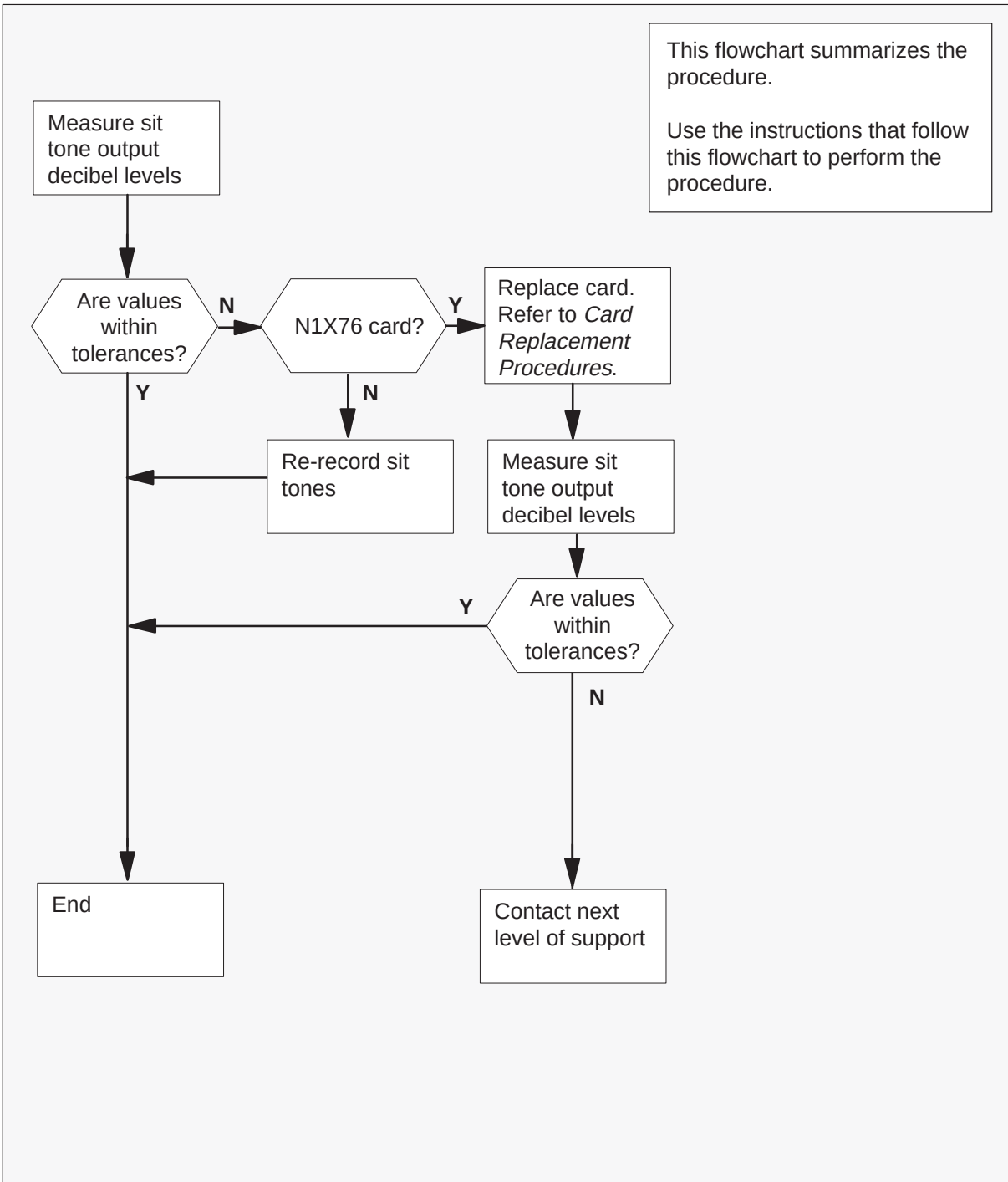
There are no common procedures.

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



WARNING

Loss of announcement services

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



WARNING

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.

Correcting DRAM sit tone trouble(continued)

- 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

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.

Correcting DRAM sit tone trouble (continued)

- 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

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

Correcting DRAM sit tone trouble

(continued)

- 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:

```
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

Correcting DRAM sit tone trouble (continued)

- 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
do not have an output decibel level of -13 dB	step 24

Correcting DRAM sit tone trouble

(end)

- 19 To load the sit tones on the DRAM, type

>SITLOAD dram_no

and press the Enter key.

where

dram_no is the member number of the DRAM controller

MAP response:

SITDATA HAS BEEN SUCCESSFULLY LOADED

- 20 Repeat steps 6 through 12 to test all the sit tones. Return to this point.
- 21 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 -13dB	step 22
does not have an output decibel level of -13 dB	step 24

- 22 To quit DRAMREC, type

>QUIT

and press the Enter key.

- 23 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.

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

- 25 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.

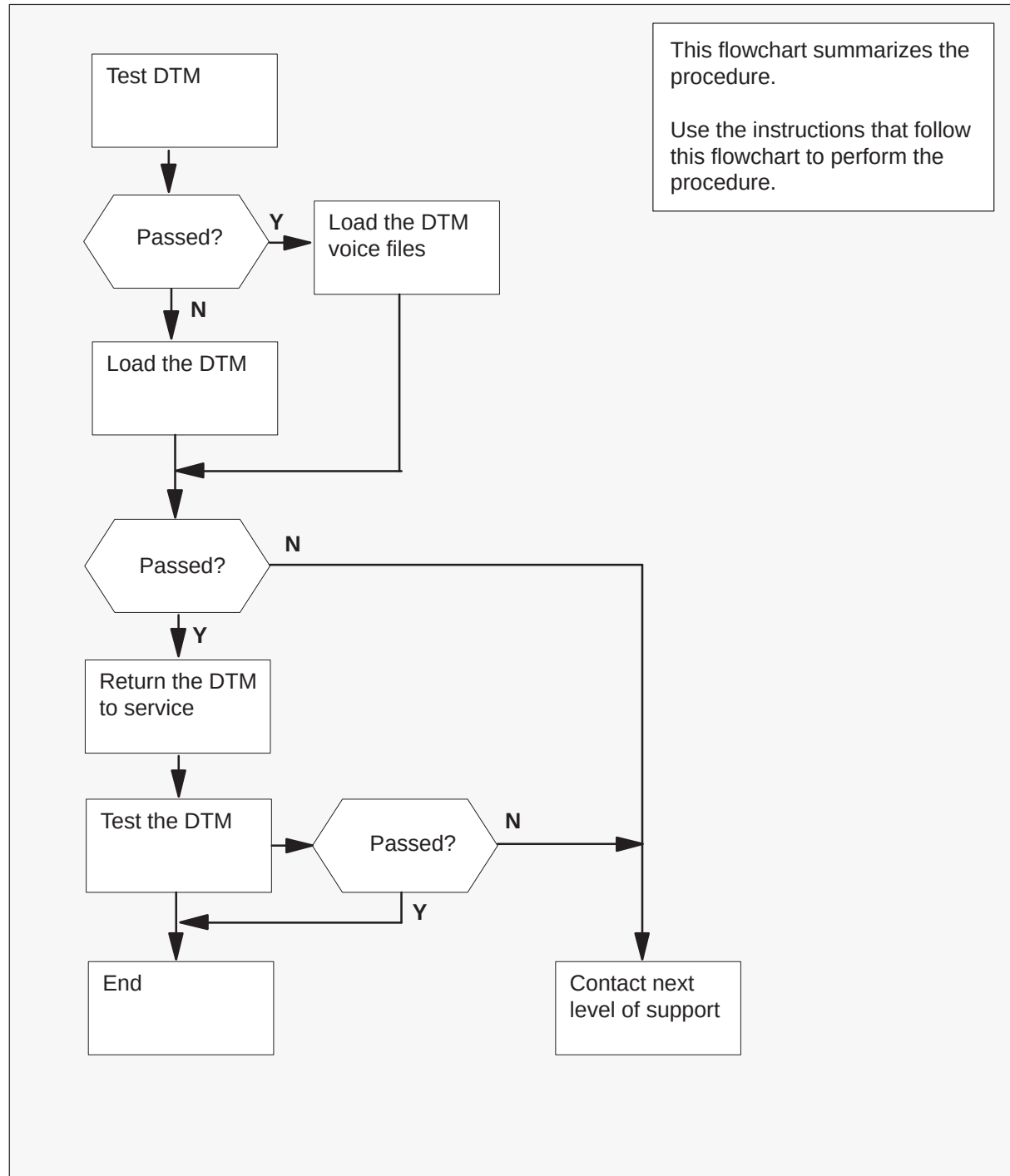
Action

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



WARNING

Loss of announcement services

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



WARNING

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.

Correcting EDRAM voice file problems

(continued)

- 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
 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.

Correcting EDRAM voice file problems (continued)

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:

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.

Correcting EDRAM voice file problems

(continued)

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.

 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.

Correcting EDRAM voice file problems (continued)

- 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 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
```

- 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:

TABLE: EDRAMINV

Correcting EDRAM voice file problems

(continued)

- 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.

Correcting EDRAM voice file problems (continued)

27 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

Correcting EDRAM voice file problems

(continued)

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.



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.

Correcting EDRAM voice file problems (continued)

- 30 To test the DTM, type

>TST

and press the Enter key.

If the TST command	Do
passes	step 31
fails	step 36

- 31 To access the TTP level of the MAP, type

>MAPCI;MTC;TRKS;TTP

and press the Enter key.

- 32 To post a DTM circuit, type

>POST TM DTM dtm_no

and press the Enter key.

where

dtm_no is the number of the 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  MB

```

- 33 To return the posted DTM circuit to service, type

>RTS

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  IDL

```

- 34 To post the next DTM circuit, type

>NEXT

and press the Enter key.

Correcting EDRAM voice file problems

(end)

- 35 Repeat steps 33 and 34 until all the DTM circuits return to service.
When all circuits return to service, go to step 37.
- 36 For additional help, contact the next level of support.
- 37 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

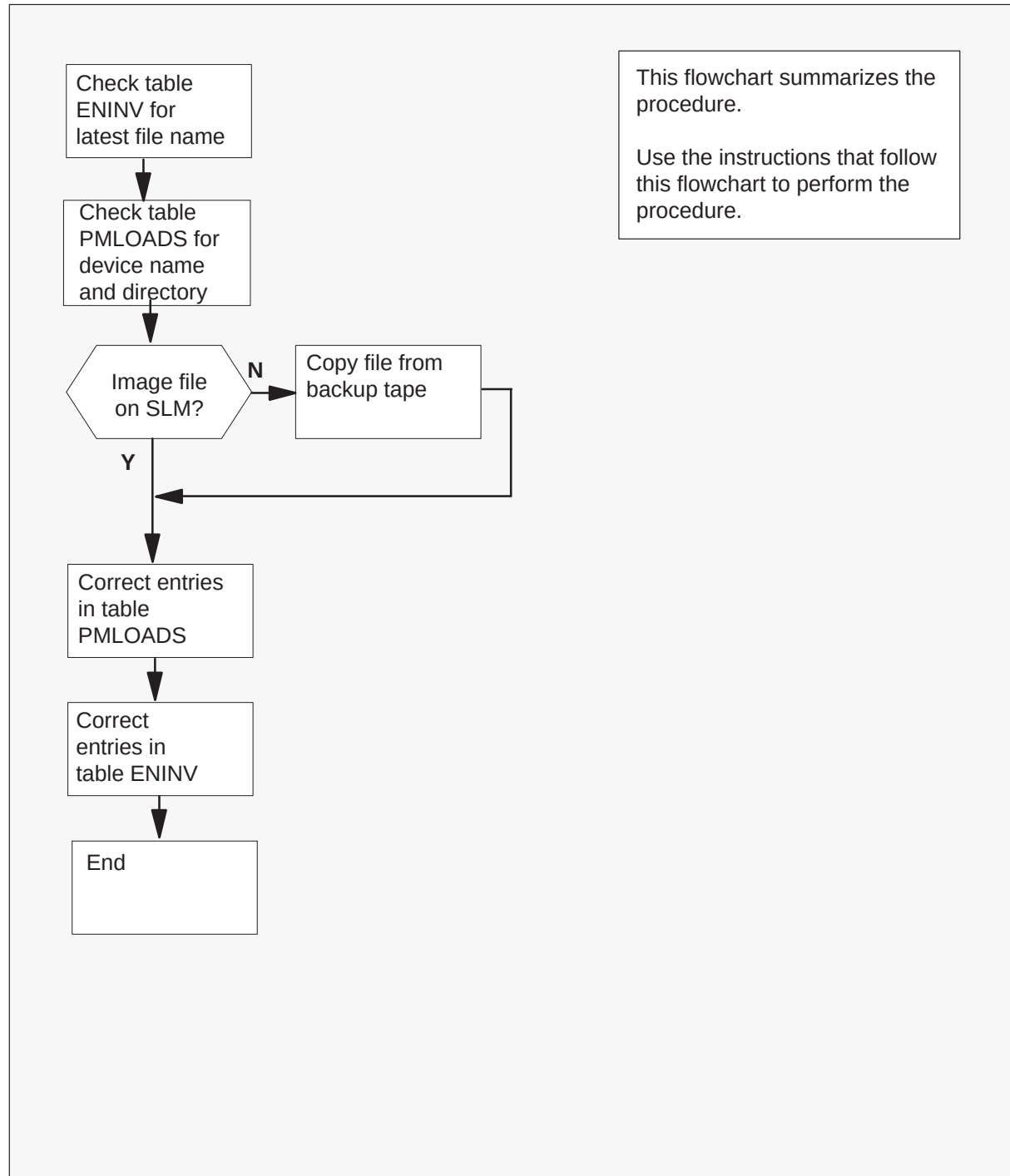
There are no common procedures.

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.

Correcting enhanced network load entries

(continued)

- 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
is not present	step 8

- 8 To find other file names in table ENINV, type
- >POSITION file_name**
 and press the Enter key.
- where*
- file_name is another image file name
- 9 Record the device and volume names associated with the image file.
- 10 To exit table PMLOADS, type
- >QUIT**
 and press the Enter key.
- 11 To access the disk utility level, type
- >DISKUT**
 and press the Enter key.
- 12 To list the volumes on the device specified in table PMLOADS, type
- >LISTVOL Sslm_numberD**
 and press the Enter key.
- where*
- slm_number is 00 or 01
- 13 Record the name of the volume present in table PMLOADS.

Correcting enhanced network load entries

(continued)

- 14** To list the files 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

Example input:

>LISTFL S00DIMAGE1

Example of a MAP response:

File information for volume S00DIMAGE1:

{NOTE: 1 BLOCK = 512 BYTES }

LAST FILE MODIFY CODE DATE	O R I O R E T P G C O E C N	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 0 F	13460	6730	1020	APX35CG
930212	0 0 F	7154	3577	1020	ERS35CG
930216	0 0 F	33936	16968	1020	FPX35CG
930216	0 0 F	5334	2667	1020	LRC35CG
930215	0 0 F	5334	2667	1020	LCC35CG
930129	0 0 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

Correcting enhanced network load entries

(continued)

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

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.

Correcting enhanced network load entries (continued)

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.



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.

Correcting enhanced network load entries (continued)

At the MAP terminal

- 26 Find an expired image file on the SLM disk.

If an out-of-date image file	Do
is present	step 27
is not present	step 29

- 27 To list the files on the volume to identify the software for the system, 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

- 28 To delete the expired file, type
>DELETEFL old_file_name
and press the Enter key.
where
old_file_name is the old image file name

- 29 To exit the disk utility level, type
>QUIT
and press the Enter key.

- 30 Determine if the differences between the table information and the file and volume of the SLM disk cause errors.

If the errors	Do
are in table PMLOADS only	step 31
are in table PMLOADS and table ENINV	step 31
are in table ENINV only	step 45

Correcting enhanced network load entries (continued)

- 31 To access table PMLOADS, type

>TABLE PMLOADS

and press the Enter key.

MAP response:

TABLE: PMLOADS

- 32 Determine the nature of the error.

If the error	Do
is a device name or volume name only that are not correct	step 33
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

- 33 To access the tuple that has the wrong device name or volume name, type

>POSITION file_name

and press the Enter key.

where

file_name is the latest ENET image file name from step 16

- 34 To change the wrong device name or volume name to the correct name, type

>CHANGE DEV Sdisk_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

Example of a MAP response:

TUPLE TO BE CHANGED:

ENC34BB S01DISLOADS

ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT

Correcting enhanced network load entries (continued)

- 35 To confirm the command, type

>Y

and press the Enter key.

MAP response:

TUPLE CHANGED

Go to step 43.

- 36 To access the tuple that has the wrong image file name, type

>POSITION invalid_file_name

and press the Enter key.

where

invalid_file_name is the wrong ENET image file name.

- 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

Correcting enhanced network load entries (continued)

- 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

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

Correcting enhanced network load entries

(continued)

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.

If errors	Do
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

new_file_name is the correct load file name
new_file_name is the correct load file name

Correcting enhanced network load entries (end)

48 Determine if more tuples require change.

If more tuples	Do
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 line test unit problems

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

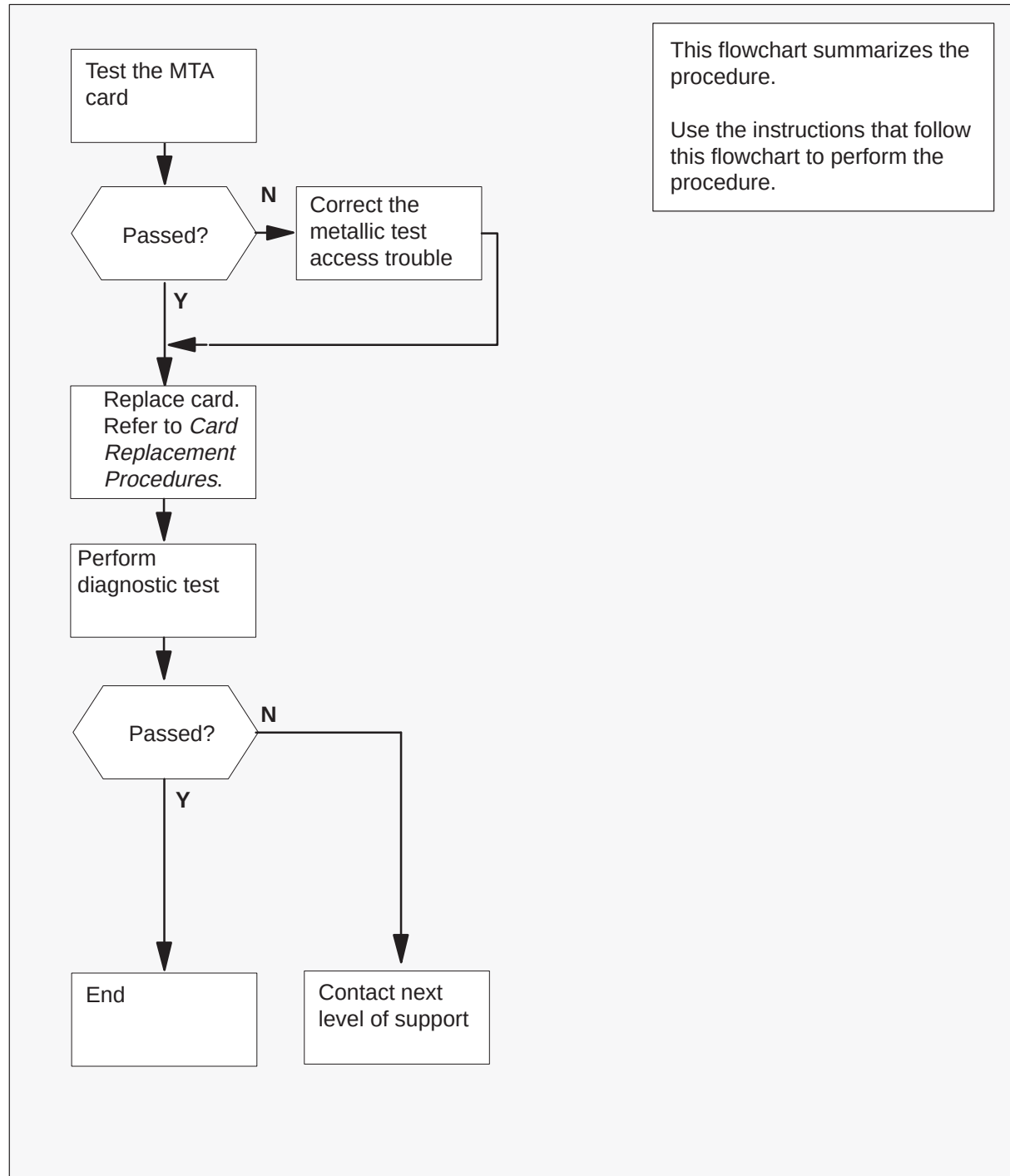
This procedure refers to *How to correct metallic test access trouble*.

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 line test unit problems (continued)

Summary of Correcting line test unit problems



Correcting line test unit problems

(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

cli 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
      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.

Correcting line test unit problems (continued)

- 5 To post the defective LTU circuit, type

>POST G clli member_no

and press the Enter key.

where

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
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      2  2  LTU          0  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
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      2  2  LTU          0  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
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      2  2  LTU          0  SZD . .
                                   P_MB
```

Correcting line test unit problems

(continued)

- 8 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 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

Correcting line test unit problems (continued)

- 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

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.

Correcting line test unit problems

(continued)

- 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.

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

Correcting line test unit problems (continued)

- 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
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      2  2  LTU          0  IDL
```

- 25** To return the LTU circuit to service, type

>RTS

and press the Enter key.

Example of a MAP response:

```
POST      8  DELQ          BUSYQ          DIG
TTP  6-002
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      2  2  LTU          0  SZD . .
                                   P_IDL
```

Correcting line test unit problems

(continued)

- 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:

POST	DELQ	BUSYQ	PREFIX
LCC PTY RNG LEN	DN	STA F S LTA TE	
RESULT RES	HOST 02 0 00 30	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

Correcting line test unit problems (end)

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

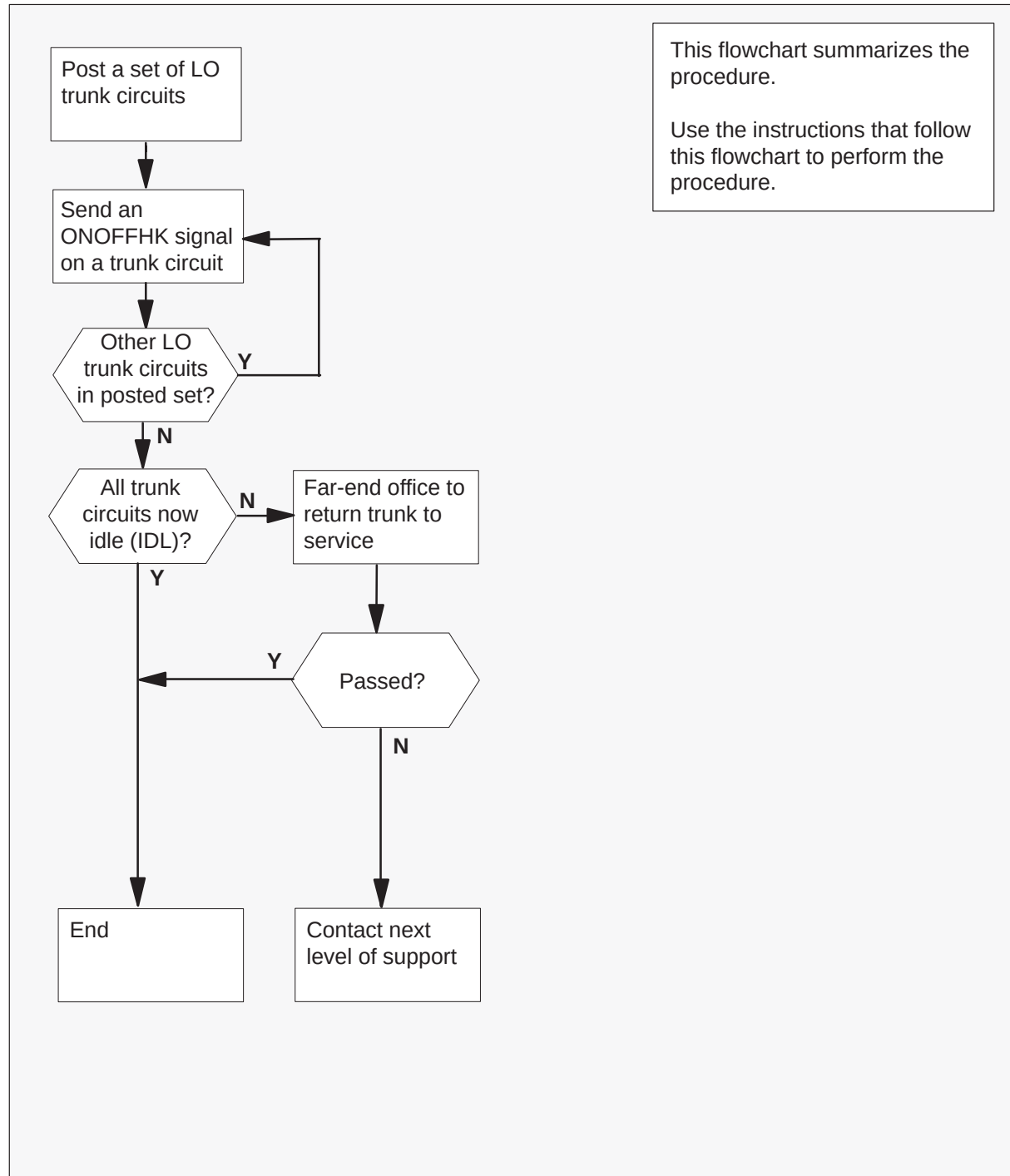
Action

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
```


Correcting locked-out trunks (continued)

- 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

- 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.

Correcting locked-out trunks

(end)

- 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.

- 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

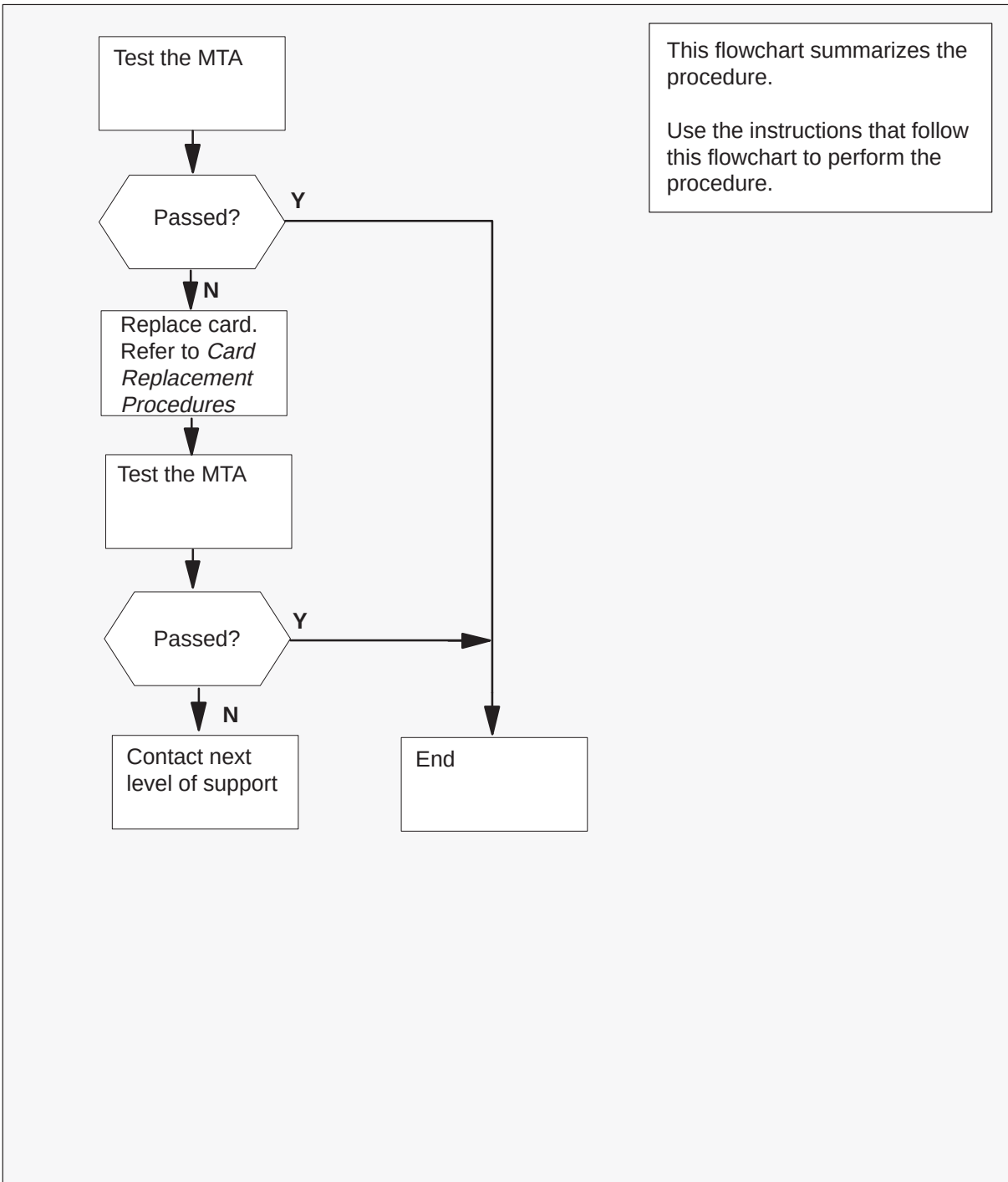
MTA is a hardware device that provides metal connections between test access points. An example of the device is subscriber line circuits in a digital switching center. MTA also provides connections with different types of test equipment.

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



WARNING

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.



WARNING

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.



WARNING

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.



WARNING

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.

Correcting metallic test access problems

(continued)

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

- 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.

Correcting metallic test access problems (end)

- 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

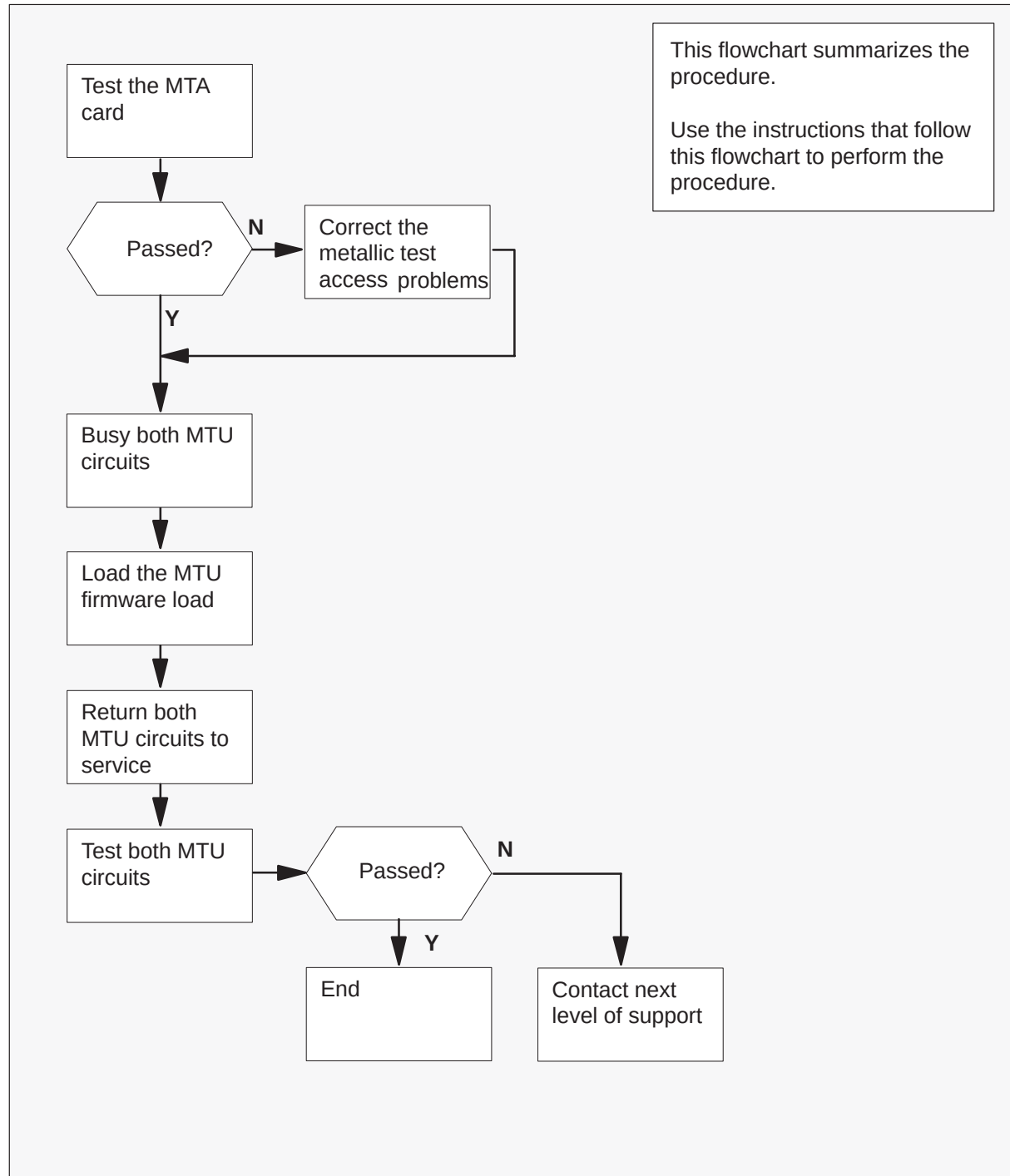
This procedure refers to *Correcting metallic test access problems*.

Action

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 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



WARNING

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.



WARNING

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.

Correcting metallic test unit problems (continued)

- 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:

```
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.

Correcting metallic test unit problems

(continued)

- 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:

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	SZD . .
							P_MB

Correcting metallic test unit problems (continued)

- 8 To hold the 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	MTM 6 3 MTU		1 IDL
	HOLD1 MTU		0 SZD . .

- 9 To busy the second circuit of the defective MTU, 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 MTU		1 MB
	HOLD1 MTU		0 SZD . .

- 10 To seize the second MTU circuit, type

>SEIZE

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 SZD . . P_MB
	HOLD1 MTU		0 SZD . .

Correcting metallic test unit problems

(continued)

- 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
                                HOLD1  MTU          0  SZD  .  .
                                HOLD2  MTU          1  SZD  .  .
```

- 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

Correcting metallic test unit problems

(continued)

Example of a MAP response:

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.

Correcting metallic test unit problems

(continued)

- 18 To quit the disk utility, type

>QUIT

and press the Enter key.

- 19



WARNING

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.



WARNING

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

Correcting metallic test unit problems

(continued)

- 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:

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.

Correcting metallic test unit problems (continued)

- 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:

```

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

Correcting metallic test unit problems

(continued)

- 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:

```
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

Correcting metallic test unit problems (continued)

- 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
is other than MB	step 32

- 32 To access the PM level of the MAP, type

>PM

and press the Enter key.

Correcting metallic test unit problems

(continued)

- 33** 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
- 34** To manually busy the MTM, type
>BSY
and press the Enter key.
- 35** To return the MTM to service, type
>RTS
and press the Enter key.
- 36** To access the TTP level of the MAP display, type
>TRKS;TTP
and press the Enter key.
- 37** 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 defective 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 SZD . .
	HOLD2	MTU	1 SZD . .

Correcting metallic test unit problems (continued)

- 38 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
  
```

- 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

Correcting metallic test unit problems

(end)

- 41 For additional help, contact the next level of support.
- 42 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

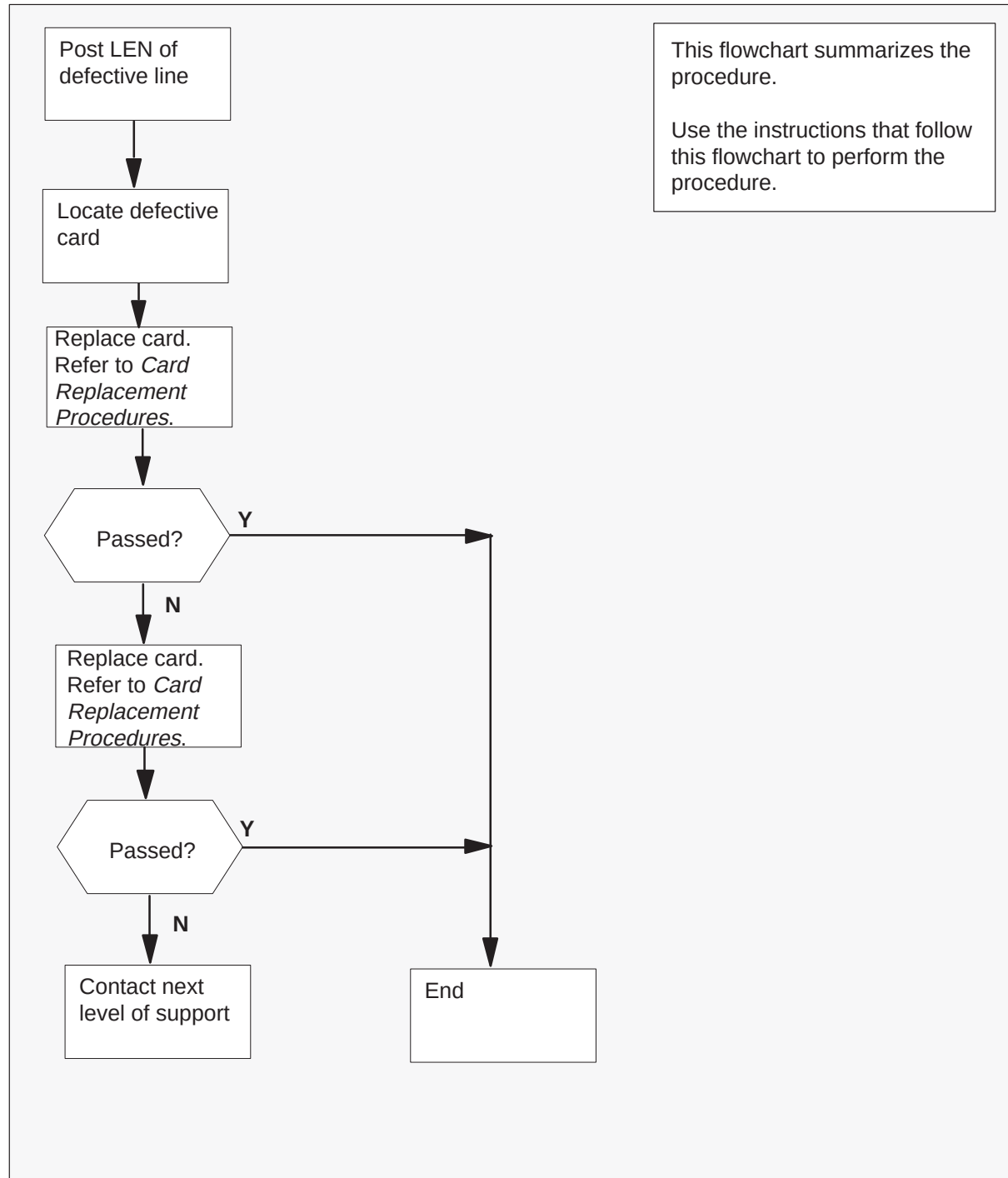
There are no common procedures.

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.

Correcting no response from a peripheral module (continued)

- 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:

```
+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.

Correcting no response from a peripheral module (end)

- 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:

```
+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
```

If the MAP response	Do
is +LINE100, and other information	step 10
is +LINE101, and other information	step 9
is COULD NOT RUN LINE_CARD_DIAGNOSTIC	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.

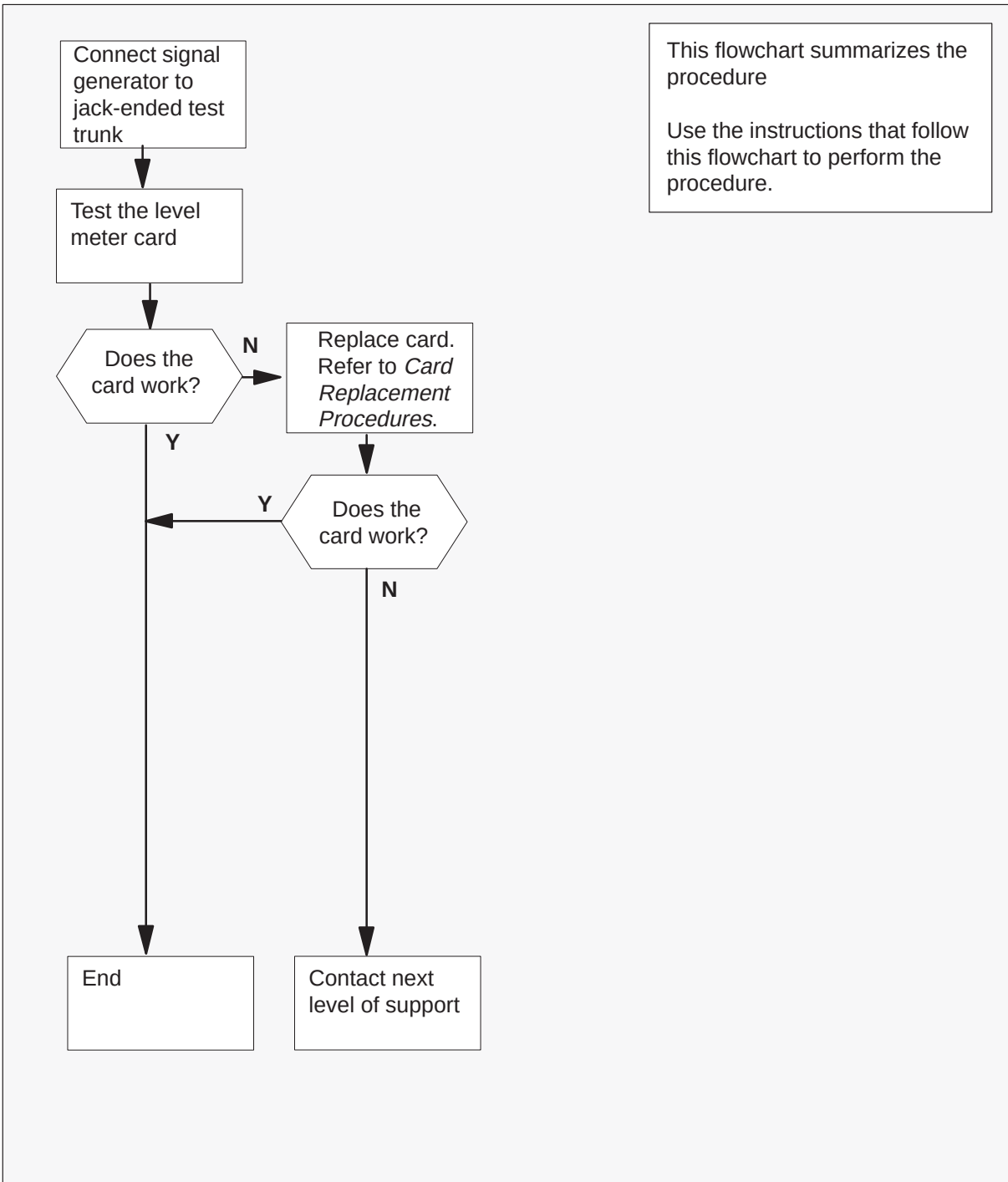
Note 1: This procedure requires a signal generator.

Note 2: In some MTM shelves, the NT4X65 card replaces the NT0X70, NT2X45, and NT2X53 cards.

Note 3: In ISM shelves, the NTFX42 card replaced the NT0X70, NT2X45, NT2X53, and NT2X59 cards.

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



WARNING

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.



WARNING

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.

Correcting PCM level meter card problems (continued)

- 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
      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:

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-003
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      1 18  TTT          0  MB
  
```

Correcting PCM level meter card problems (continued)

- 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
      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.

Correcting PCM level meter card problems

(continued)

- 10 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

```

- 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.

Correcting PCM level meter card problems(continued)

- 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
do not match the MAP levels	step 20

- 17 To access the TTP level of the MAP display, type

>TTP

and press the Enter key.

- 18 To release the TTT circuit, type

>RLS

and press the Enter key.

Example of a MAP response:

```
POST      1  DELQ          BUSYQ          DIG
TTP  6-003
      PM NO.          COM LANG      STA S R  DOT TE
RESULT
OG      MTM      1 18    TTT          0  MB
```

Correcting PCM level meter card problems (end)

- 19** To return the TTT circuit to service, type

>RTS

and press the Enter key.

Example of a MAP response:

```

POST      1  DELQ          BUSYQ          DIG
TTP  6-003
      PM NO.          COM LANG          STA S R  DOT TE
RESULT
OG      MTM      1 18    TTT          0  IDL
  
```

If the state of the TTT circuit	Do
is IDL	step 21
is other than listed here	step 20

- 20** For additional help, contact the next level of support.
- 21** 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

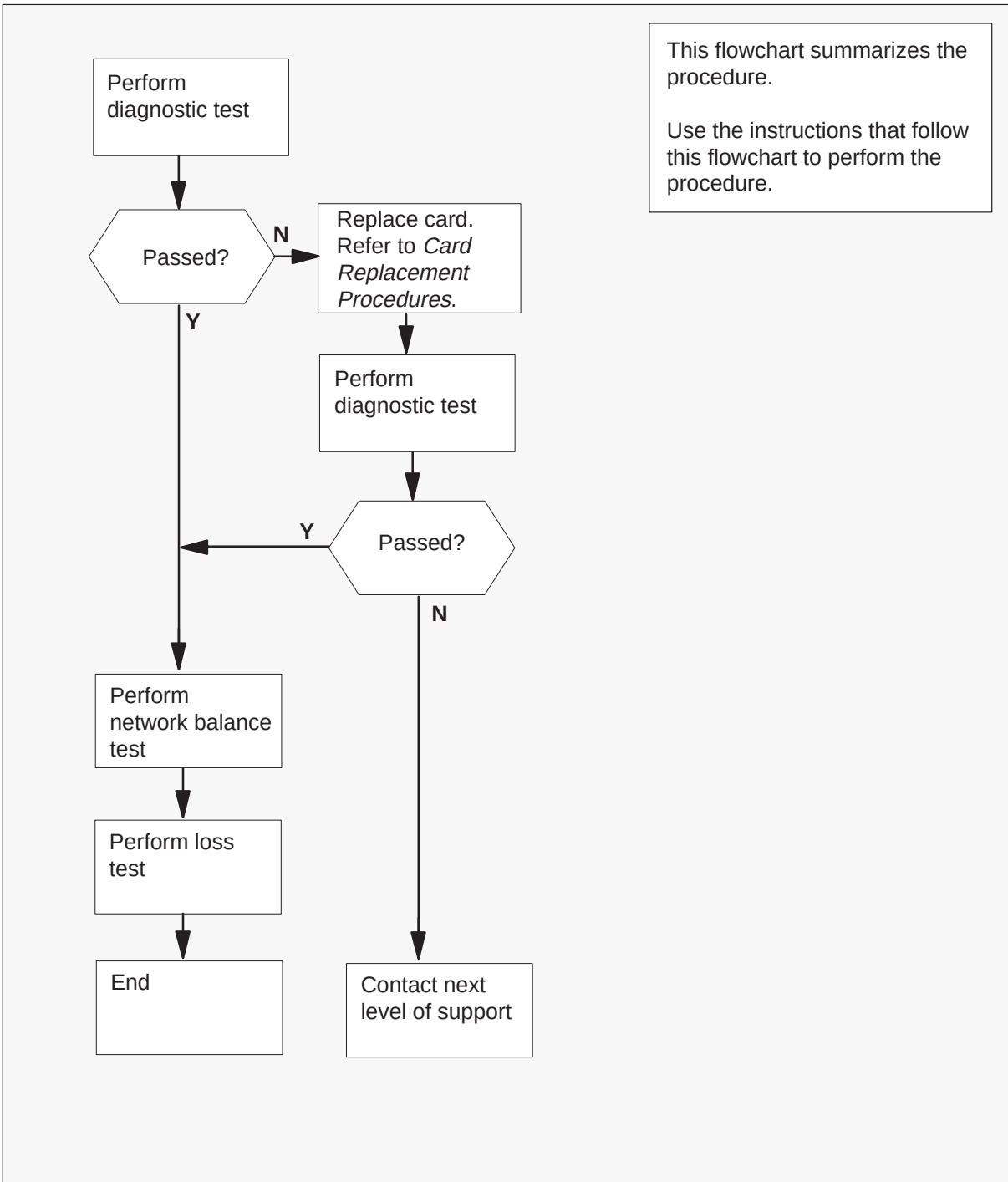
There are no common procedures.

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:

```
LCC PTY RNG ...LEN... DN STA F S LTA TE RESULT
1FR HOST 00 1 00 01 6136214777 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

Correcting poor line transmission or reception

(continued)

- 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 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

>LTPLTA;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.

Correcting poor line transmission or reception

(continued)

- 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

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.

Correcting poor line transmission or reception (end)

- 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.

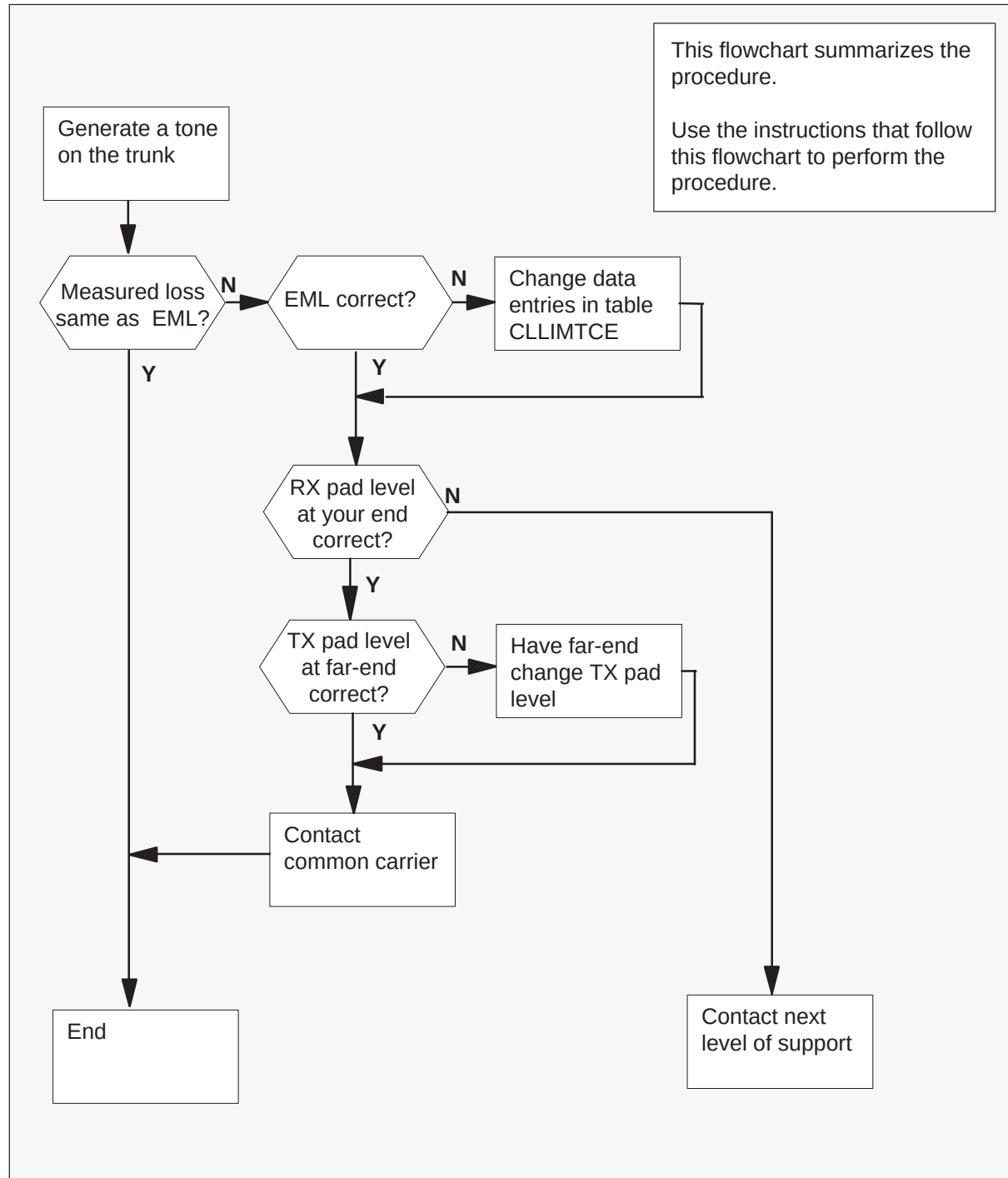
Action

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.



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).

Correcting receive-level problems on T1 trunks

(continued)

- 4 To seize the trunk circuit, type

>SEIZE

and press the Enter key.

Example of a MAP response:

CKT SEIZED

- 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

```

Correcting receive-level problems on T1 trunks(continued)

- 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

and press the Enter key.

Example of a MAP response:

```
POST      5  DELQ          BUSYQ          DIG
TTP  6-002
      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
```


Correcting receive-level problems on T1 trunks

(continued)

- 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
      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

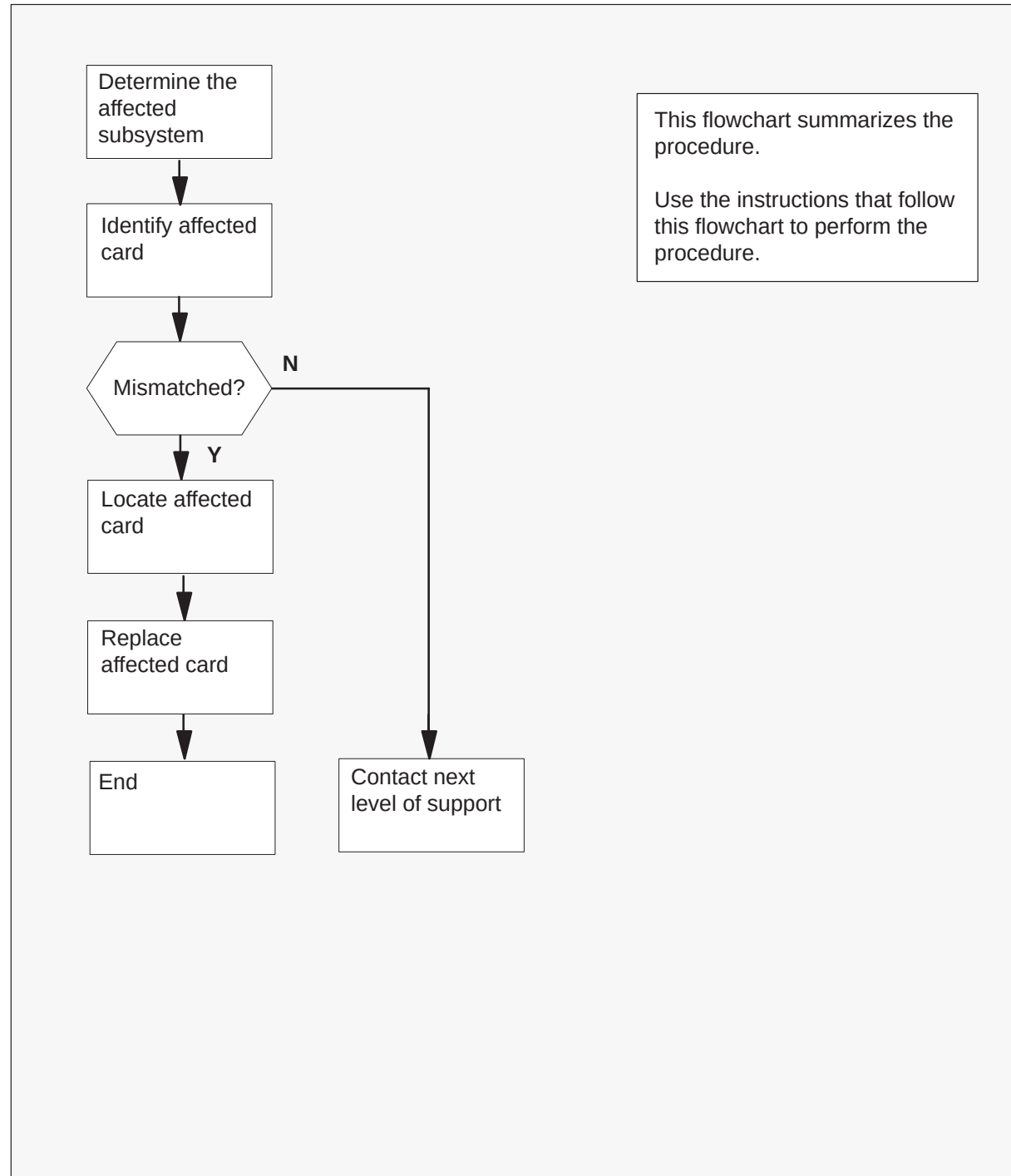
There are no common procedures.

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.

MS105 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.

Correcting release mismatch problems

(continued)

- 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
more than one MS card affected	step 8

- 8 Choose a card to work on.

- 9 To quit the log utility, type

>QUIT

and press the Enter key.

- 10 To access the Shelf level of the MAP display for the affected MS, type

>MAPCI;MTC;MS;SHELF shelf_number

and press the Enter key.

where

shelf_number is the shelf number (0 to 3) of the affected MS

Correcting release mismatch problems (continued)

- 11 To determine if the card is not compatible with the software load, type

>QUERYMS MS ms_number CARD card_number IDPROM
and press the Enter key.

where

ms_number is the number of the affected MS (0 or 1)

card_number is the number of the affected card (1 to 26)

Note: A card that is not a compatible card has a label NO under the COMPATIBLE header of the MAP response.

Example input:

>QUERYMS MS 0 CARD 7 IDPROM

Example of a MAP response:

```
MS0 load contents: MS-S release 36CE
There are 16 slots equipped on MS: 0 shelf: 0
REx test last run MS: 0 90:05:10 00:00:00 AUTO    SUCCESSFUL
MS card information:
Site Flr  Rpos Bay_id  Shf  Description  Slot EqPEC
HOST 01 A01 DPCC 0 39 MS 0:0:20 26 9X17AA FRNT
HOST 01 A01 DPCC 0 39 MS 0:0:20 26 9X73AA BACK
MS SHELF CARD SLOT SIDE EQPEC BASE EXCEPT REL COMPATIBLE
0 0 7 26 FRNT NT9X17AA S0 SA S9 YES
0 0 7 26 BACK NT9X23BA 40 NONE 10 *NO
```

If the card	Do
is compatible	step 63
is not compatible	step 12

- 12 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.
```

If the replacement card	Do
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      . .
```


Correcting release mismatch problems (continued)

- 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:

Request to MAN BUSY MS:0 shelf:0 card:13 submitted.

Request to MAN BUSY MS:0 shelf:0 card:13 passed.

If the BSY command	Do
passes	step 16
fails	step 63

- 16 Perform the correct card replacement in *Card Replacement Procedures*. Complete the procedure and return to this point.

- 17 To return the manual busy MS to service, type

>RTS ms_number

and press the Enter key.

where

ms_number is the number of the manual busy MS (0 or 1)

Example of a MAP response:

Request to RTS MS:0 shelf:0 card:22 submitted.

Request to RTS MS:0 shelf:0 card:22 passed.

If the RTS command	Do
passes	step 18
fails	step 63

Correcting release mismatch problems

(continued)

- 18 Determine if other MS cards that are not compatible are present.

Note: Step 8 contains a record of this information.

If other MS cards	Do
are present	step 19
are not present	step 22

- 19 To open the CM logs, type

>OPEN CM

and press the Enter key.

- 20 To display the CM log reports, type

>BACK

and press the Enter key.

Enter this command as many times as needed to make the log reports appear.

- 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

Correcting release mismatch problems (continued)

- 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:

```
Querycm basic print-out
CPU  SHELF  SLOT  SIDE  EQPEC  BASE  EXCEPT  REL  COMPATIBLE
0    0     17  FRNT  NT9X12AB  10   13 14    15    YES
0    0     17  BACK  NT9X20AA  50   None 5K    YES
0    0     18  FRNT  NT9X12AB  10   13 14    15    YES
0    0     18  BACK  NT9X20AA  50   None 5J    YES
1    0     21  FRNT  NT9X12AB  10   13 14    1A    YES
1    0     21  BACK  NT9X20AA  50   None 51    YES
1    0     22  FRNT  NT9X12AB  10   13 14    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

Correcting release mismatch problems

(continued)

- 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 NT9X22cards (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.

Correcting release mismatch problems (continued)

- 31** To decide if the replacement card is compatible with the software load, type

>CHECKREL CM 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 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

Correcting release mismatch problems

(continued)

- 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

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

Correcting release mismatch problems (continued)

- 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
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

- 37** To switch activity, type

>SWACT

and press the Enter key.

Example of a MAP response

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"):

Correcting release mismatch problems (continued)

- 38 To confirm the command, type

>YES

and press the Enter key.

If the response	Do
is Maintenance action submitted. Switch of activity successful.	step 39
is other than listed here	step 63

- 39 To match the memories of the CPUs, type

>MEMORY;MATCH ALL

and press the Enter key.

Example of a MAP response:

Matching memory between CPUs in sync.
Match ok.

If the response indicates memory 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.

Correcting release mismatch problems (continued)

- 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 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 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.



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

Correcting release mismatch problems (continued)

At the MAP terminal

- 47 To drop synchronization, type

>CM;DPSYNC

and press the Enter key.

If the response	Do
is About to drop sync with CPU n active. There inactive CPU is a jammed. Do you want to continue? Confirm ("YES", "Y", "NO" OR "N"):	step 48
is Drop synchronization failed	step 63
is aborted. Active CPU n has a damaged processor 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.

If A1	Do
flashes	step 50
did not flash	step 63

Correcting release mismatch problems

(continued)

- 50 Determine the application and PEC for the replaced cards.

Note: You recorded this information in step 27.

If the application and PEC for the card that requires replacement	Do
is CM: NT9X10, NT9X13, NT9X21, NT9X22, NT9X26, NT9X30, NT9X31, NT9X46	step 51
is MC: NT9X12, NT9X20, NT9X22	step 51
is memory: NT9X14	step 51
is PMC: NT9X12, NT9X22, 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

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.

Correcting release mismatch problems

(continued)

- 55 Determine the PEC and application of the cards that you replaced.

Note: A record of this information is in step 27.

If the card	Do
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:

Maintenance action submitted.

Memory test ok.

If the TST command	Do
passes	step 57
fails	step 63

Correcting release mismatch problems

(continued)

- 57 To return the manual busy PMC port to service, type

>PMC;RTS 0 PORT port_number

and press the Enter key.

where

port_number is the number of the manual busy port (0 or 1)

If the RTS command	Do
passes	step 58
fails	step 63

- 58 To return the manual busy MC to service, type

>MC;RTS mc_number

and press the Enter key.

where

mc_number is the number of the manual busy MC (0 or 1)

If the RTS command	Do
passes	step 59
fails	step 63

- 59 Locate other incompatible CM cards.

Note: You recorded this information in step 27.

If other incompatible cards	Do
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

Correcting release mismatch problems (end)

62 To synchronize the CM, type

>CM;SYNC

and press the Enter key.

If the response	Do
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
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.	step 63
indicates other than listed here	step 63

63 For additional help, contact the next level of support.

64 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

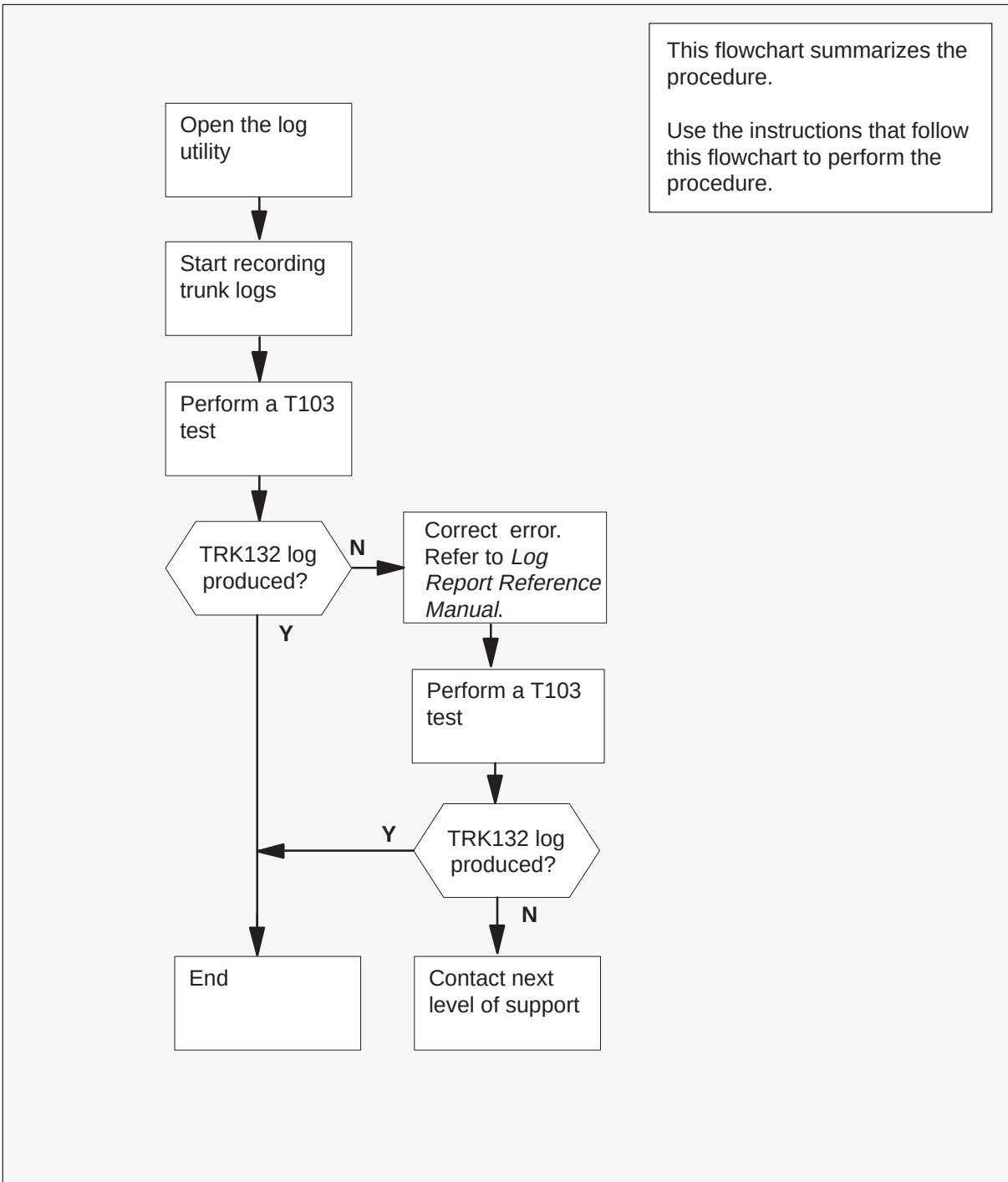
There are no common procedures.

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*
- cli 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 TDTC00GD 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	TDTC00GD		0	IDL

Correcting supervision trouble on intertoll T1 trunks (continued)

- 6 To seize the trunk, type

>SEIZE

and press the Enter key.

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.

Correcting supervision trouble on intertoll T1 trunks (end)

- 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
```

- 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 TDTC00GD          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

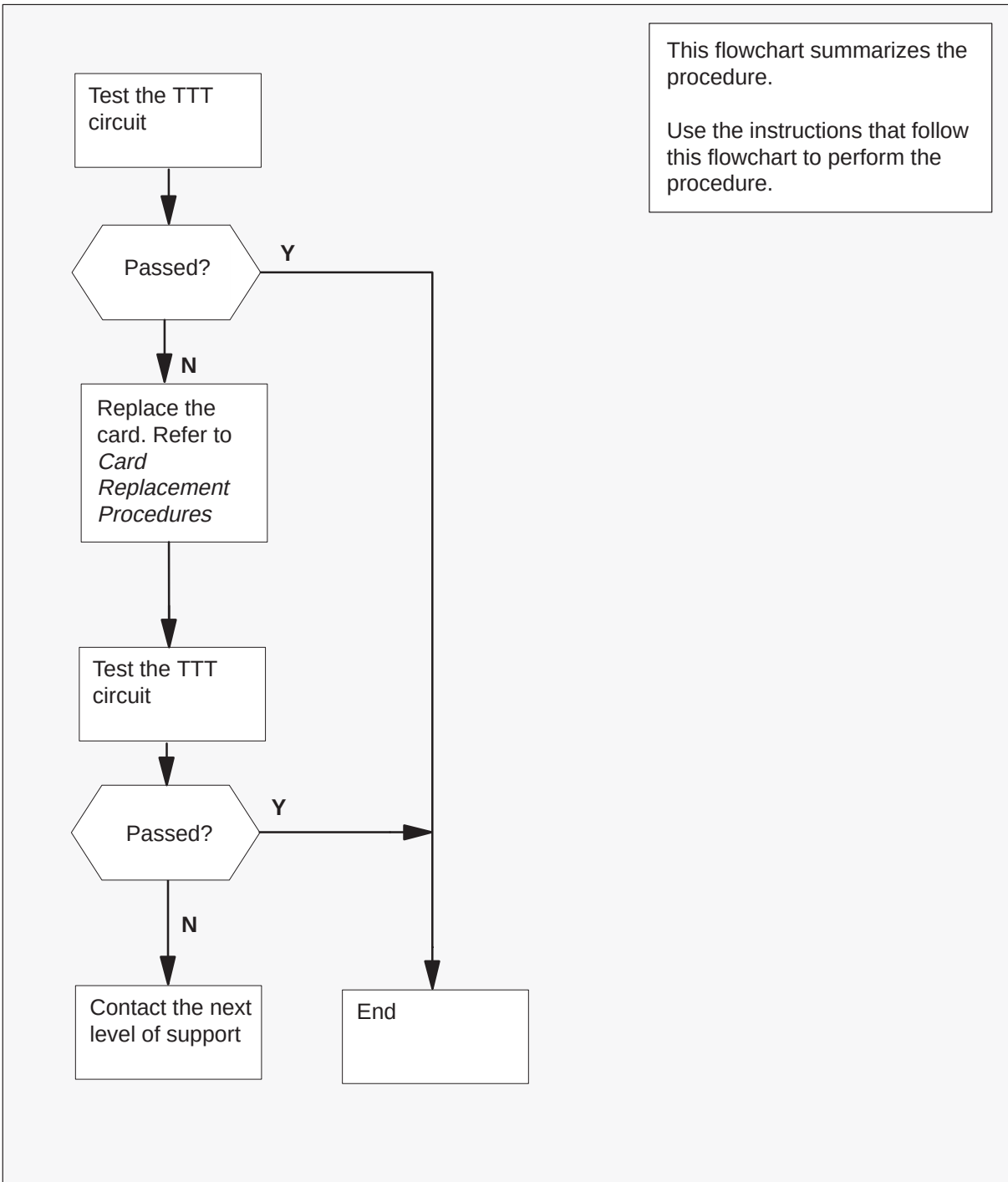
There are no common procedures.

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

cli 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

Correcting transmission test trunk trouble

(continued)

- 4 To seize the TTT 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    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

Correcting transmission test trunk trouble (continued)

- 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:

```
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.

Correcting transmission test trunk trouble (continued)

- 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:

```
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
```

If the TTT circuit	Do
returns to service	step 16
does not return to service	step 15

Correcting transmission test trunk trouble (end)

- 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

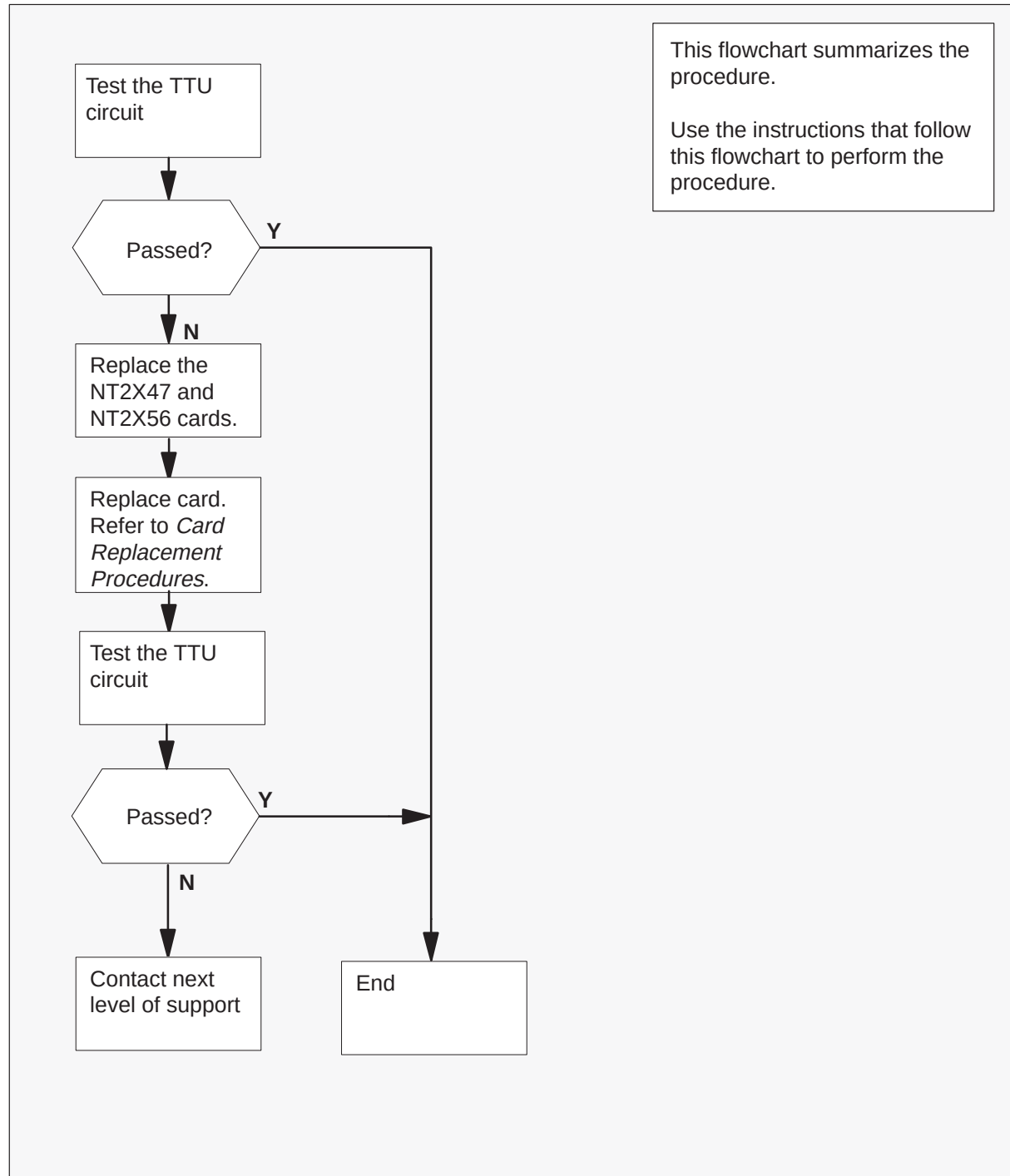
There are no common procedures.

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

Correcting transmission test unit trouble

(continued)

- 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
```

- 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.

Correcting transmission test unit trouble (continued)

- 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

- 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

Correcting transmission test unit trouble (end)

- 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.

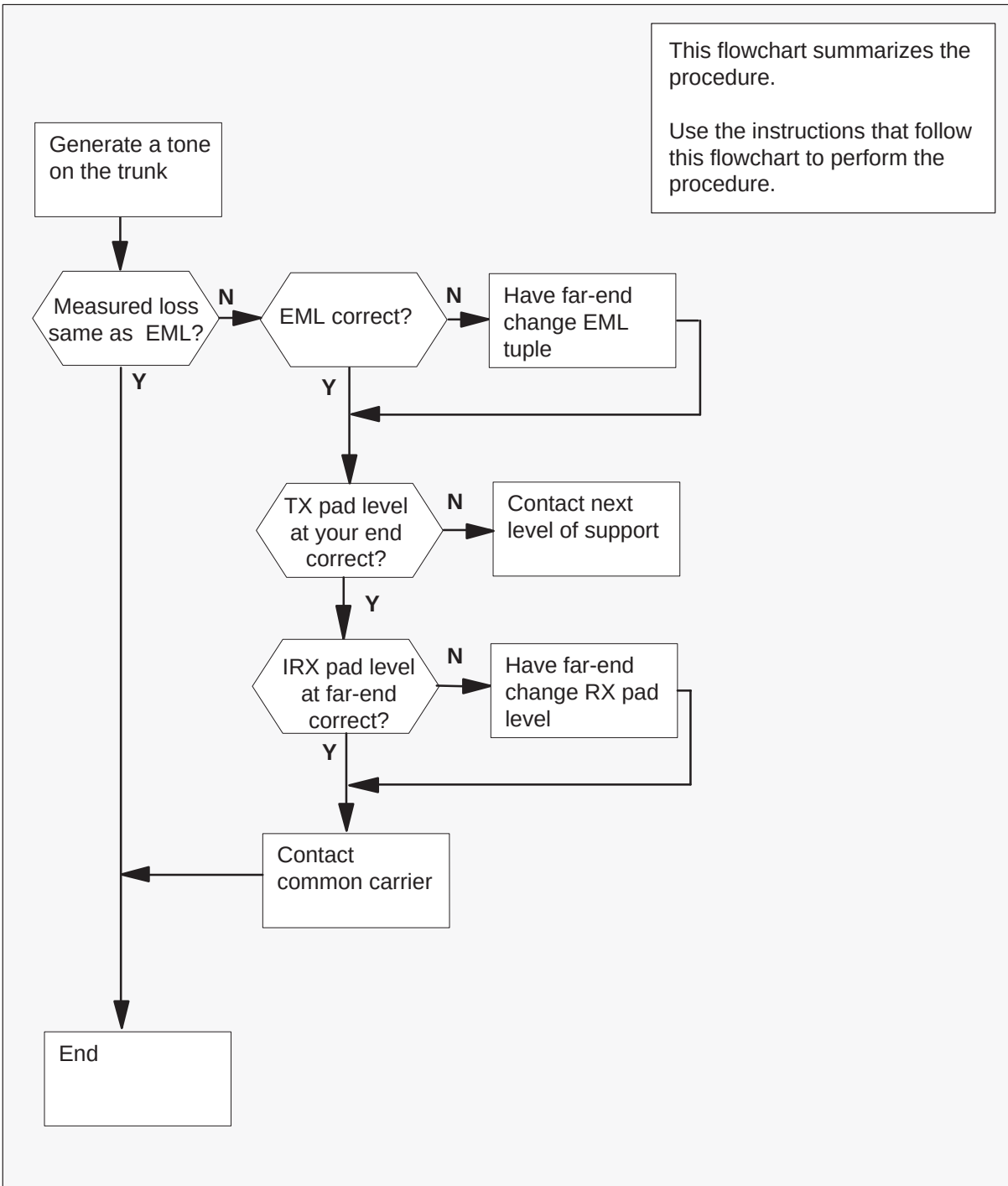
Action

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.



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).

Correcting transmission-level trouble on T1 trunks (continued)

- 4 To seize the trunk circuit, type

>SEIZE

and press the Enter key.

Example of a MAP response:

```
POST      5  DELQ          BUSYQ          DIG
TTP  6-002
      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

Correcting transmission-level trouble on T1 trunks (end)

- 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
is not present	step 11

- 10** Ask the operating company personnel for the common carrier if it has transmission-level problems.

- 11** To release the circuit, type

>RLS

and press the Enter key.

Go to step 13.

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

- 13** The procedure is complete.

Determining 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.

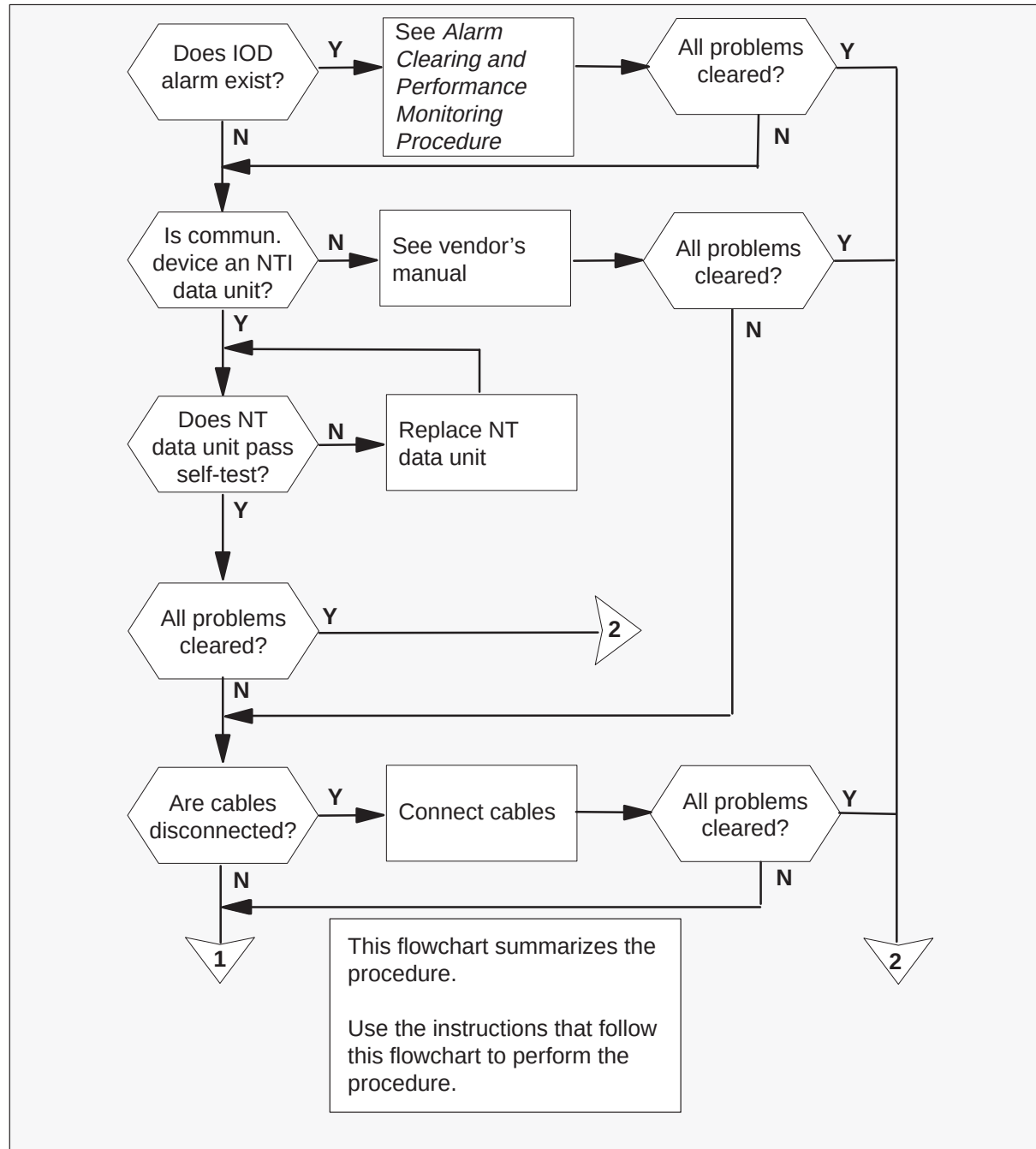
Determining location of problems (ACDMIS, NACD, MACD) (continued)

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.

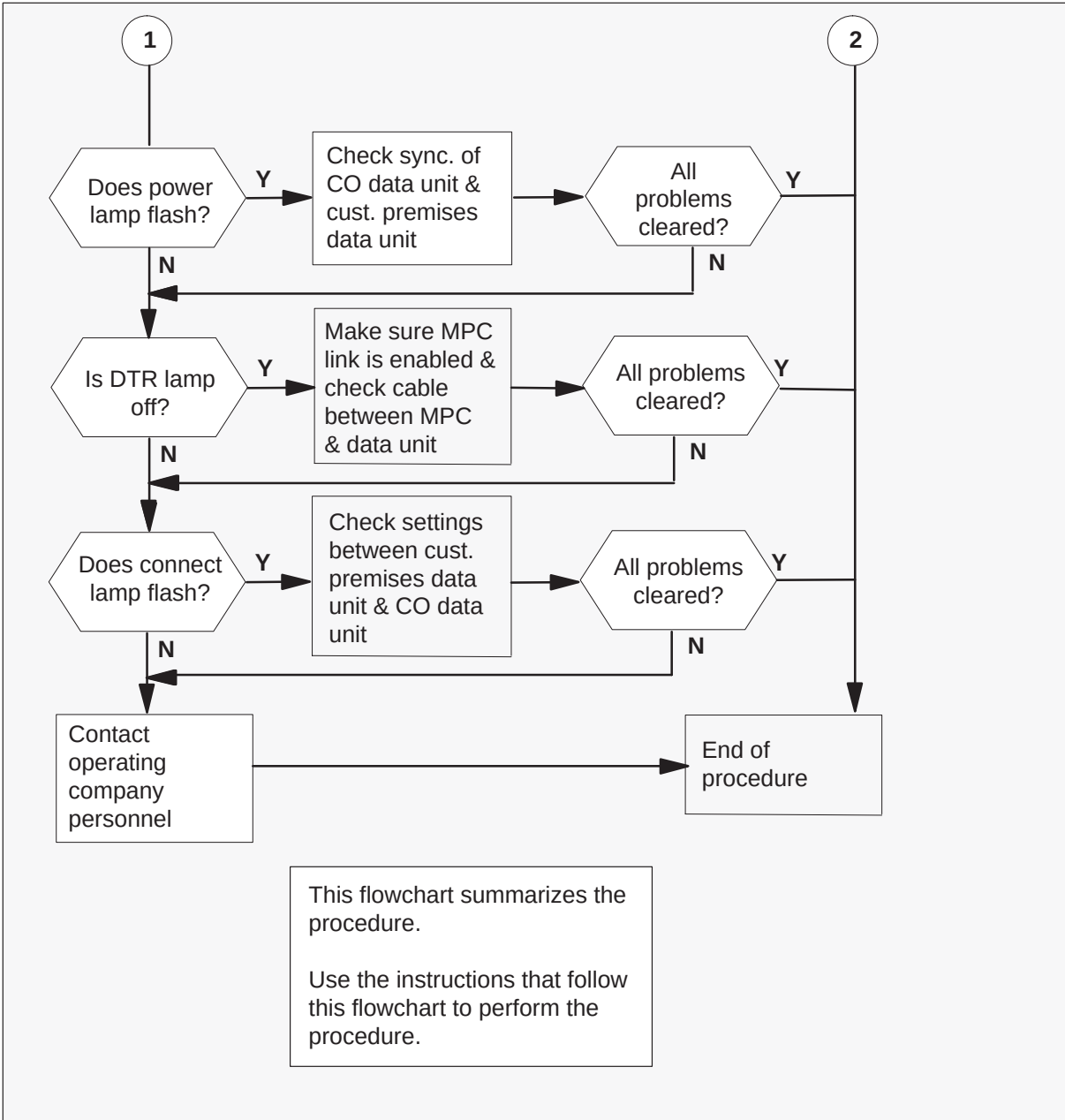
Determining location of problems (ACDMIS, NACD, MACD) (continued)

Summary of Determining location of trouble



Determining location of problems (ACDMIS, NACD, MACD) (continued)

Summary of Determining location of trouble (continued)



Determining location of problems (ACDMIS, NACD, MACD) (continued)

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

Determining location of problems (ACDMIS, NACD, MACD)

(continued)

- 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
is an NT data unit	step 7

- 6** Check the vendor manual for the communication device. Follow the instructions to test, repair, or replace the communication device.

If customer premises	Do
do not receive data	step 9
receive data	step 18

Determining location of problems (ACDMIS, NACD, MACD)

(continued)

- 7 To verify the operation of the data unit for the CO NT4X25 Meridian, perform a self-test.

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.

A short beep sounds.

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.

If the CO data unit	Do
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

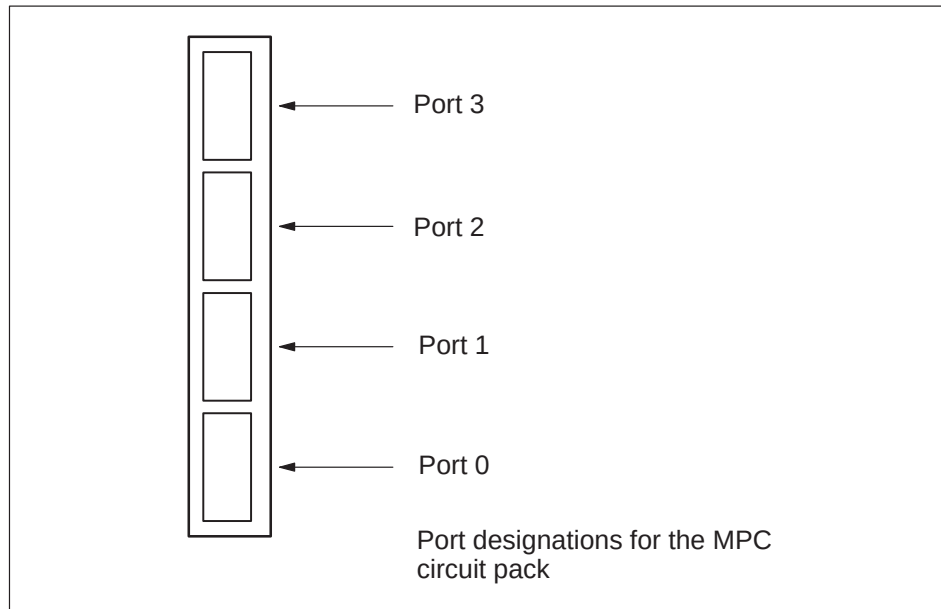
- 8 Use the unit instructions to replace the data unit with a new NT4X25 Meridian data unit. Return to Step 7.

Determining location of problems (ACDMIS, NACD, MACD) (continued)

- 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.



If you	Do
find disconnected cables	step 10
do not find disconnected cables	step 11

- 10** Connect the disconnected cables.

If you	Do
find the problem	step 11
find and clear the problem and other problems are not present	step 18

Determining location of problems (ACDMIS, NACD, MACD) (continued)

- 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

Determining location of problems (ACDMIS, NACD, MACD) (end)

- 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

- 15 Check for correct design settings.

If the connect lamp	Do
flashes	step 16
does not flash	step 17

- 16 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.

If you	Do
do not find the problem	step 17
find and clear the problem and other problems are not present	step 18

- 17 Inform the correct operating company personnel of a problem with the data link outside the CO or with the CPE.

- 18 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

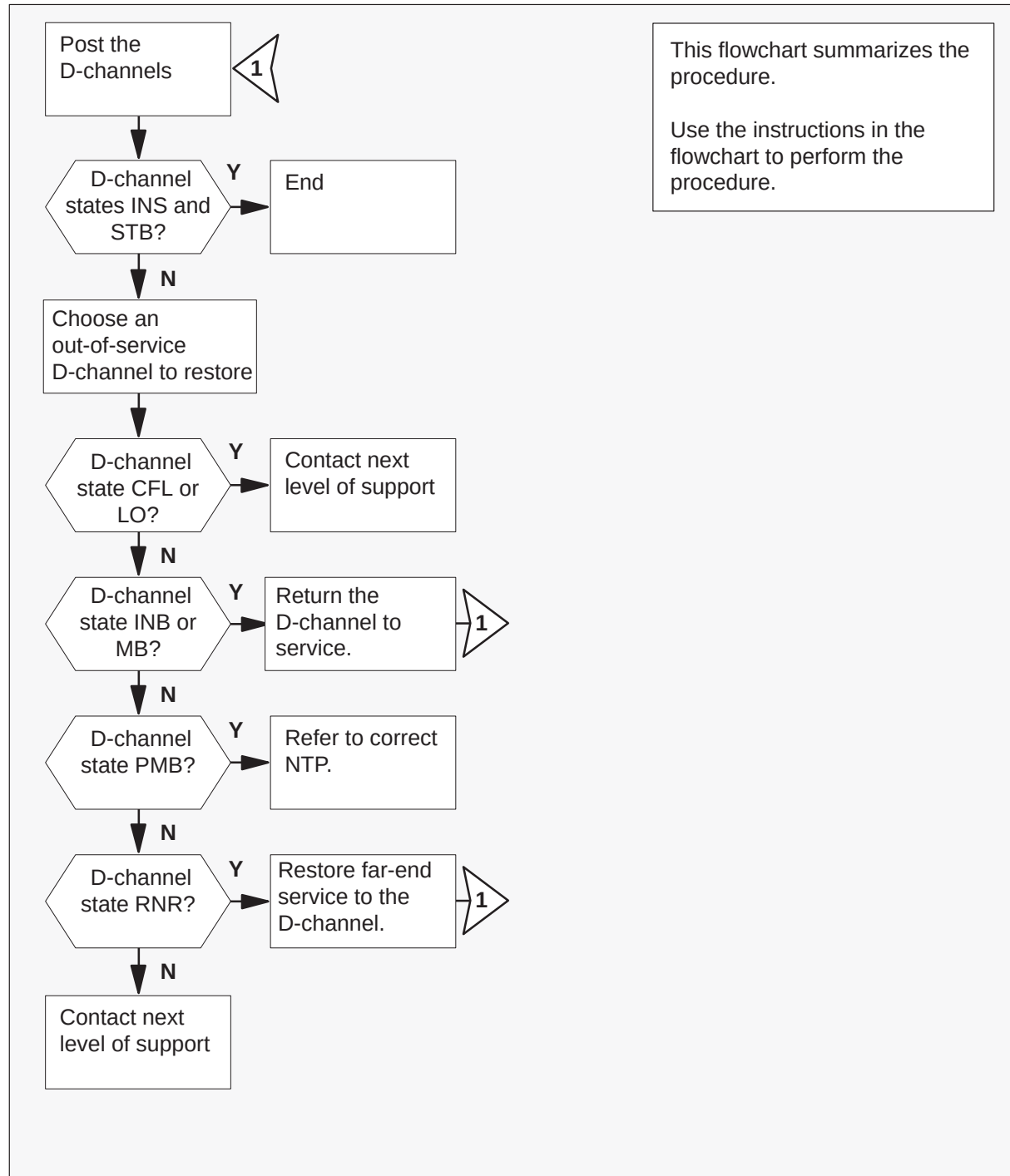
There are no common procedures.

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)

- 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

- 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.

Determining the D-channel state

ISDN PRI primary and backup D-channels (end)

- 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

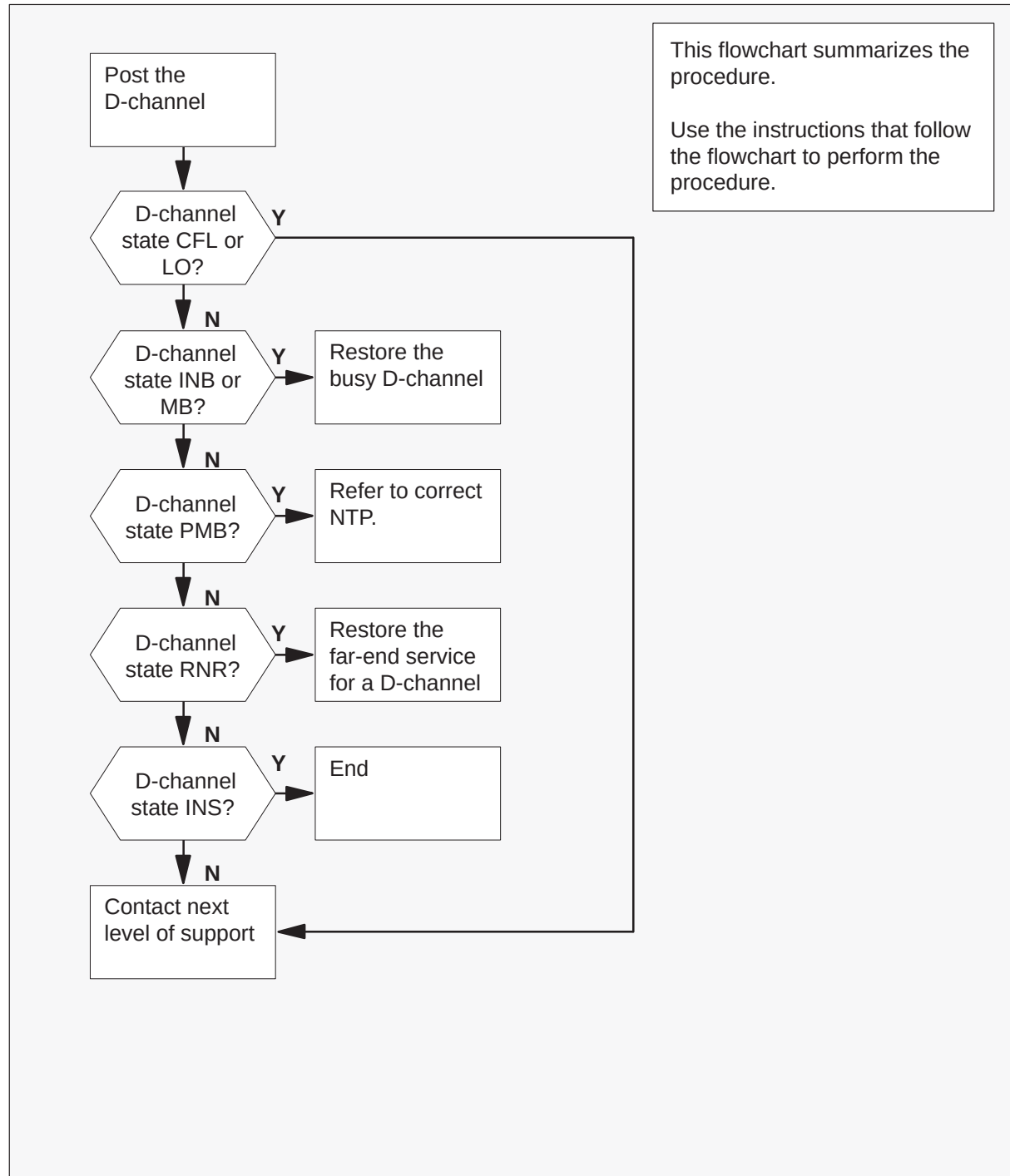
There are no common procedures.

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
  
```

Determining the D-channel state

ISDN PRI single D-channel (end)

- 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
is PMB (peripheral manual busy)	step 7
is RNR (remote does not answer)	step 6
is other than listed here	step 8

- 5 Perform the procedure *ISDN PRI single D-channel Returning a busy D-channel to service* in this document. Do not return to this procedure.
- 6 Perform the procedure *ISDN PRI single D-channel Restoring far-end service for a D-channel* in this document. Do not return to this procedure.
- 7 Perform the procedure in *Alarm Clearing and Performance Monitoring Procedures*. Do not return to this procedure.
- 8 For additional help, contact the next level of support.
- 9 The procedure is complete.

Determining the line state

Application

Use this procedure to determine the line state.

Definition

Table 1 lists and describes the ISDN BRI line and channel states.

Table 1
Summary of line and special connection states

State	Description
***	<i>Invalid state</i> The connection type and status in table SPECCONN do not correspond.
CMB	<i>Connection PM busy</i> You cannot use the SPECCONN channel because one of the PMs in the connection is busy (BSY).
CMT	<i>Connection in maintenance</i> You cannot use the SPECCONN channel because it is under maintenance.
CNA	<i>Connection not available</i> The SPECCONN channel contains data, but a request to the peripheral module to set the connection fails.
CON	<i>Connection connected</i> The SPECCONN channel connects and can handle traffic.
CPB	<i>Call processing busy</i> The system is processing one of the following: • circuit-switched calls • DMS packet handler (PH) packet-switched calls • ISDN line with a permanent virtual circuit (PVC)
Note: Call processing for the generic services framework (GSF) supports the EDCH, but not the DCH.	
—continued—	

Determining the line state

(continued)

Table 1
Summary of line and special connection states (continued)

State	Description
CPD	<i>Call processing deload</i> The system is processing the circuit-switched calls or DMS PH packet-switched calls. The system waits for manual maintenance.
CUT	<i>Cutoff</i> The cut-off relay starts, and cuts the ISDN line card off from the subscriber.
DEL	<i>Deloaded</i> 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.
DMB	<i>D-channel maintenance busy</i> The path between the DCH or EDCH card and the ISDN line does not work for one of the following reasons: • The DCH or EDCH is out of service. • The ISG channel is out of service. • The LCME link has defects. • The connection between the DCH or EDCH and the ISDN line card does not connect or is not active. • The DMB lines, which also babble and register as incoming message overload (ICMO), have the I fail flag set.
Note: Call processing for the generic services framework (GSF) supports the EDCH, but not the DCH.	
—continued—	

Determining the line state (continued)

Table 1
Summary of line and special connection states (continued)

State	Description
DMB (inverse video)	<i>D-channel maintenance busy</i> The path between the DCH or EDCH card and the ISDN line does not work for one of the following reasons: • A DCH babbler is busying the ISDN line. You cannot use the line for call processing. • The ISDN line can report as an ICMO line. The I fail flag represents the DCH and ICMO conditions or the DCH condition.
IDL	<i>Idle</i> Customers can use circuit-switched and packet-data services
INB	<i>Installation busy</i> The ISDN line is out of service for one of the following reasons: • The line data is not in tables. • The BSY INB command sets the line to INB.
LMB	<i>Line module busy</i> The LCME, LCME drawer, or LGC is out of service.
LO	<i>Lock out</i> The ISDN line card and the NT1 lose synchronization. Lockout does not apply to the S/T-line card.
MB	<i>Manual busy</i> 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.
NEQ	<i>Not equipped</i> Table LNINV does not contain this line.
Note: Call processing for the generic services framework (GSF) supports the EDCH, but not the DCH.	
—continued—	

Determining the line state

(continued)

Table 1
Summary of line and special connection states (continued)

State	Description
PSU	<i>Packet service unavailable</i> D-channel or B-channel access to the DMS PH is not available.
SB	<i>System busy</i> 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 babler audit.
Note: Call processing for the generic services framework (GSF) supports the EDCH, but not the DCH.	
—end—	

Table 2 lists and describes the ISDN BRI fail flags. Line quality problems require a bit error rate test (BERT).

Table 2
Summary of fail flags

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.
Note: GSF call processing supports the EDCH, but not the DCH.	
—continued—	

Determining the line state (continued)

Table 2
Summary of fail flags (continued)

Flag	Description
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.
I	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 - the system scheduled an in-service diagnostic - the line is in the shower queue, or - the line is in a diagnostic queue for an incoming message overflow
Note: GSF call processing supports the EDCH, but not the DCH.	
—continued—	

Determining the line state

(continued)

Table 2
Summary of fail flags (continued)

Flag	Description
S	A failed short in-service diagnostic is present in the following; • the shower queue • the DIAG command with the INS parameter, or • the automatic line test (ALT). The system generates a log when the failure occurs.
U	A utility card fails. The failure applies to the 2B1Q line card in the LCME. The point-of-use power supply fails.
Note: GSF call processing supports the EDCH, but not the DCH.	
—end—	

Common procedures

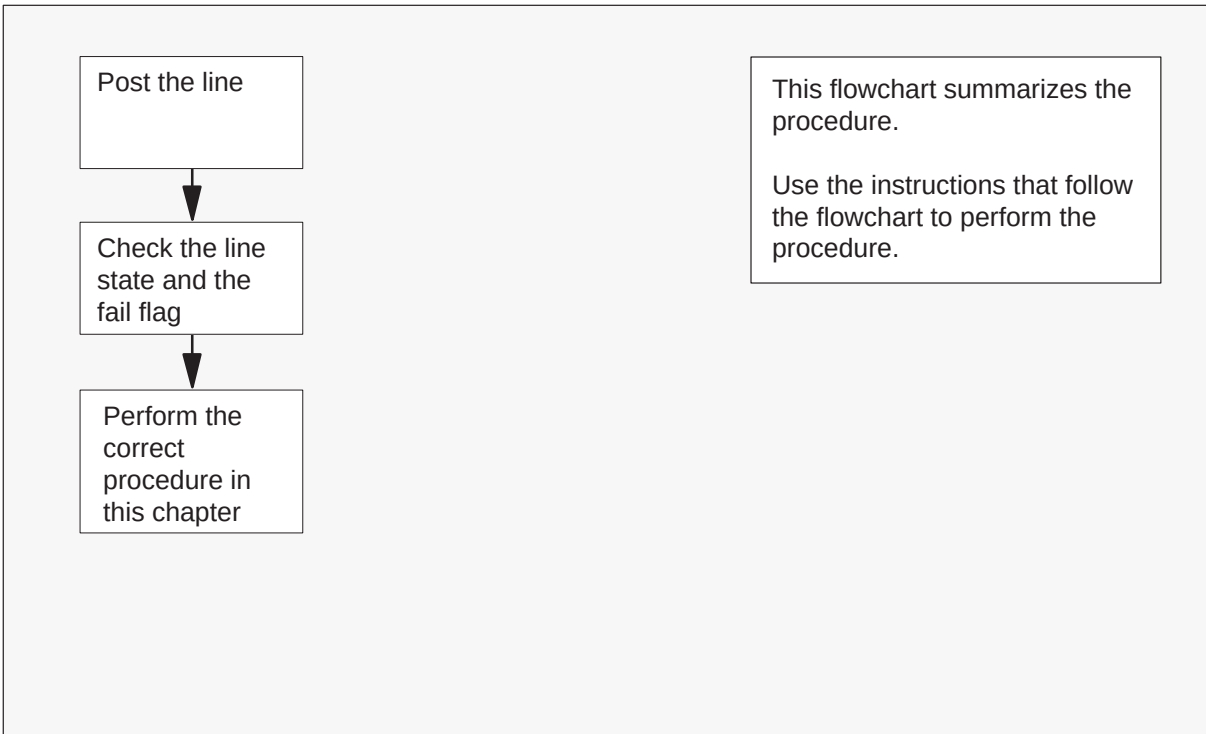
There are no common procedures.

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 line state (continued)

Summary of Determining the line state



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 **For legacy lines:**

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 RESULT
ISDN LOOP HOST 67 1 15 06 DN 7428118 IDL
    
```

Determining the line state

(continued)

3 For GSF lines:

To post the line, type

>POST L len

and press the Enter key.

where

len is the line equipment number

Example of a MAP display:

```
LCC PTY RNG .LEN..... DN STA F/S LTA TE RESULT
ISDN LOOP   HOST 67 1 15 06 NODIRN IDL
```

Note: Sets and DN cannot post GSF lines.

4 Determine the state of the line and the fail flag.

If the line state	Do
is CPB	step 5
is CPD	step 6
is CUT	step 7
is DEL	step 8
is DMB	step 9
is IDL	step 10
is INB	step 11
is LMB	step 12
is LO	step 13
is MB	step 14
is PSU	step 15
is other than listed here	step 16

5 Perform the procedure *Line state is Call processing busy (CPB)*. Do not return to this procedure.

6 Wait until the line state changes to MB. Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.

7 Perform the procedure *Line state is Cut (CUT)*. Do not return to this procedure.

Determining the line state (end)

- 8 Wait until the line state changes to MB. Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 9 Perform the procedure *Line state is D-channel maintenance busy (DMB)*. Do not return to this procedure.
- 10 Perform the procedure *Line state is Idle (IDL)*. Do not return to this procedure.
- 11 Perform the procedure *Line state is Installation busy (INB.)* Do not return to this procedure.
- 12 Perform the procedure *Line state is Line module busy (LMB)*. Do not return to this procedure.
- 13 Perform the procedure *Line state is Lock out (LO)*. Do not return to this procedure.
- 14 Perform the procedure *Line state is Maintenance busy (MB)*. Do not return to this procedure.
- 15 Perform the procedure *Line state is Packet service unavailable (PSU)*. Do not return to this procedure.
- 16 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.

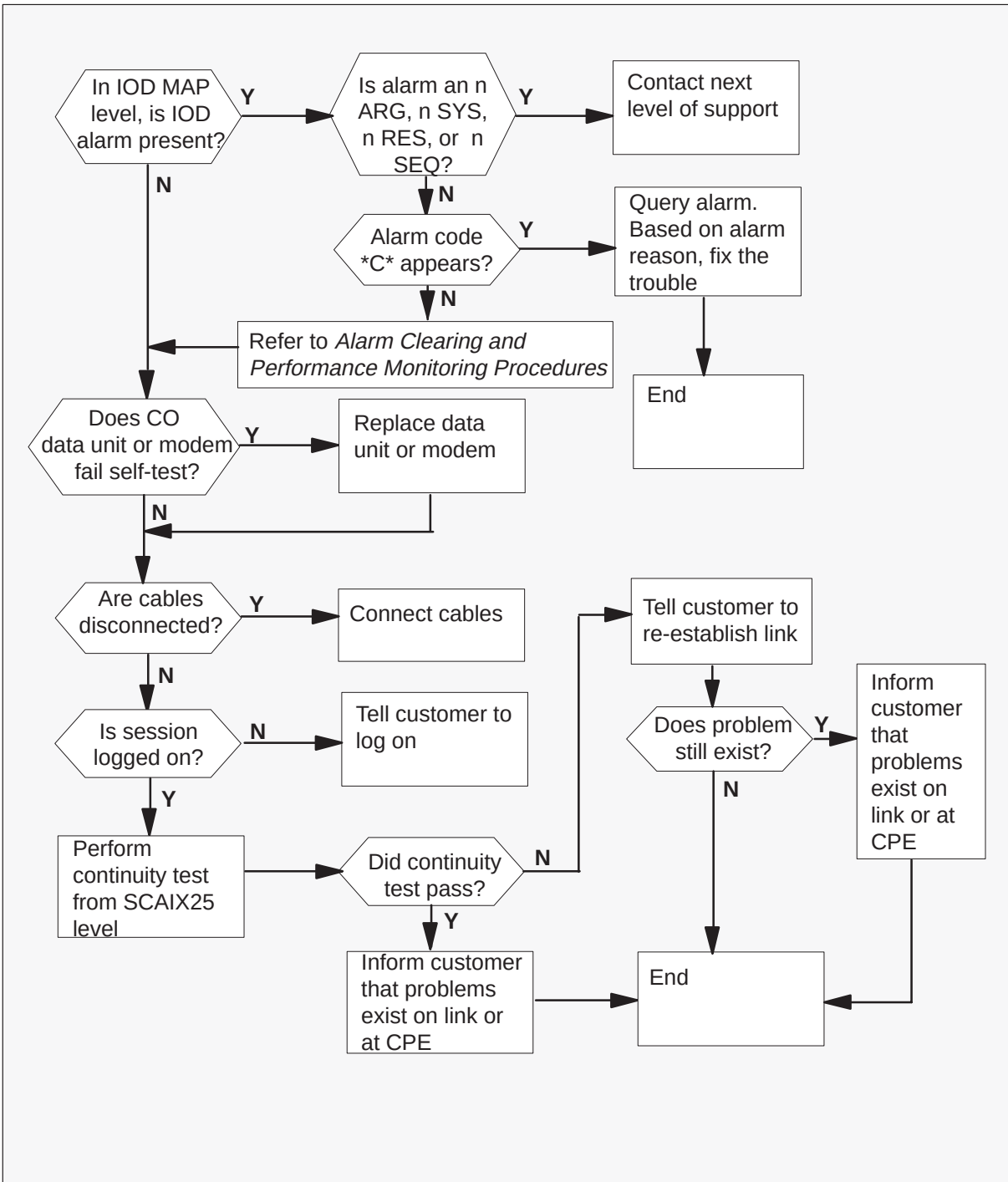
Action

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	.	.	.	.	.	.

If an alarm code	Do
n ARG, n SYS, n RES, or n SEQ appears	step 32
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

Determining the location of the problem

(continued)

- 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.
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.

Determining the location of the problem (continued)

- 14 To test the MPC, type
>TST
 and press the Enter key.

If the test	Do
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.

- 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.

If the link	Do
is cleared	step 19
is not cleared	step 33

Determining the location of the problem

(continued)

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.

If the CO data unit	Do
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.

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.

If	Do
you find disconnected cables	step 22
you do not find disconnected cables	step 24

- 22** Connect the disconnected cables.

- 23** Go to step 34.

Determining the location of the problem (continued)

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.

If the session	Do
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

and press the Enter key.

If the test	Do
failed	step 31
passed	step 32

Determining the location of the problem

(end)

- 31 Tell the subscriber to establish the link again and to log on.

If the problem	Do
stops	step 34
continues	step 32

- 32 Inform operating company personnel a problem is present in the data link outside the CO or with the customer premises equipment.
- 33 For additional help, contact the next level of support.
- 34 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

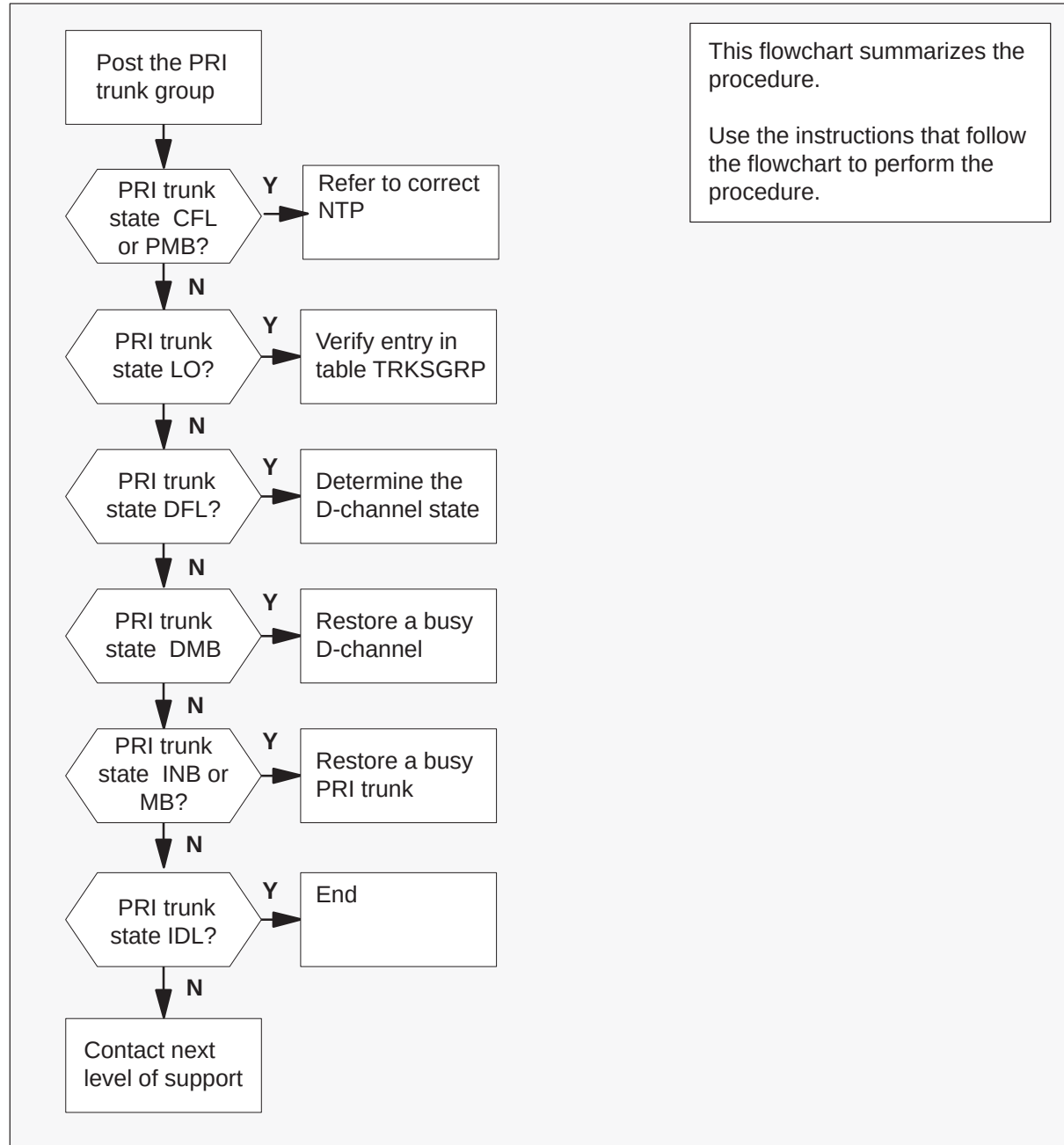
There are no common procedures.

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 DT	CI 7 9 1	F1AAA105IPTLA	MB R

Example of a MAP response:

LAST CKTN = 9
POSTED CKT IDLED
SHORT CLLI IS: F1AAA1
OK,CKT POSTED

Determining the trunk state

ISDN PRI trunk (continued)

- 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
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

- 5 Perform the procedure *ISDN PRI single D-channel Determining the D-channel state* in this document. Do not return to this procedure.
- 6 Perform the procedure *ISDN PRI primary and backup D-channels Determining the D-channel state* in this document. Do not return to this procedure.
- 7 Perform the procedure *ISDN PRI single D-channel Returning a busy D-channel to service* in this document. Do not return to this procedure.
- 8 Perform the procedure *ISDN PRI primary and backup D-channels Returning a busy D-channel to service* in this document. Do not return to this procedure.
- 9 Perform the procedure *ISDN PRI trunk Returning a busy PRI trunk to service* in this document. Do not return to this procedure.
- 10 Perform the procedure to clear the alarm in *Alarm Clearing and Performance Monitoring Procedures*. Do not return to this procedure.

Determining the trunk state ISDN PRI trunk (end)

- 11 To access table TRKSGRP, type
>TABLE TRKSGRP
and press the Enter key.
- 12 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 *ISDN PRI Maintenance Guide*. Do not return to this procedure.
- 13 Perform the procedure, “DS–1 Trouble Isolation and Correction Methods” in the *ISDN PRI Maintenance Guide*. Do not return to this procedure.
- 14 For additional help, contact the next level of support.
- 15 The procedure is complete.

Digital test access

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

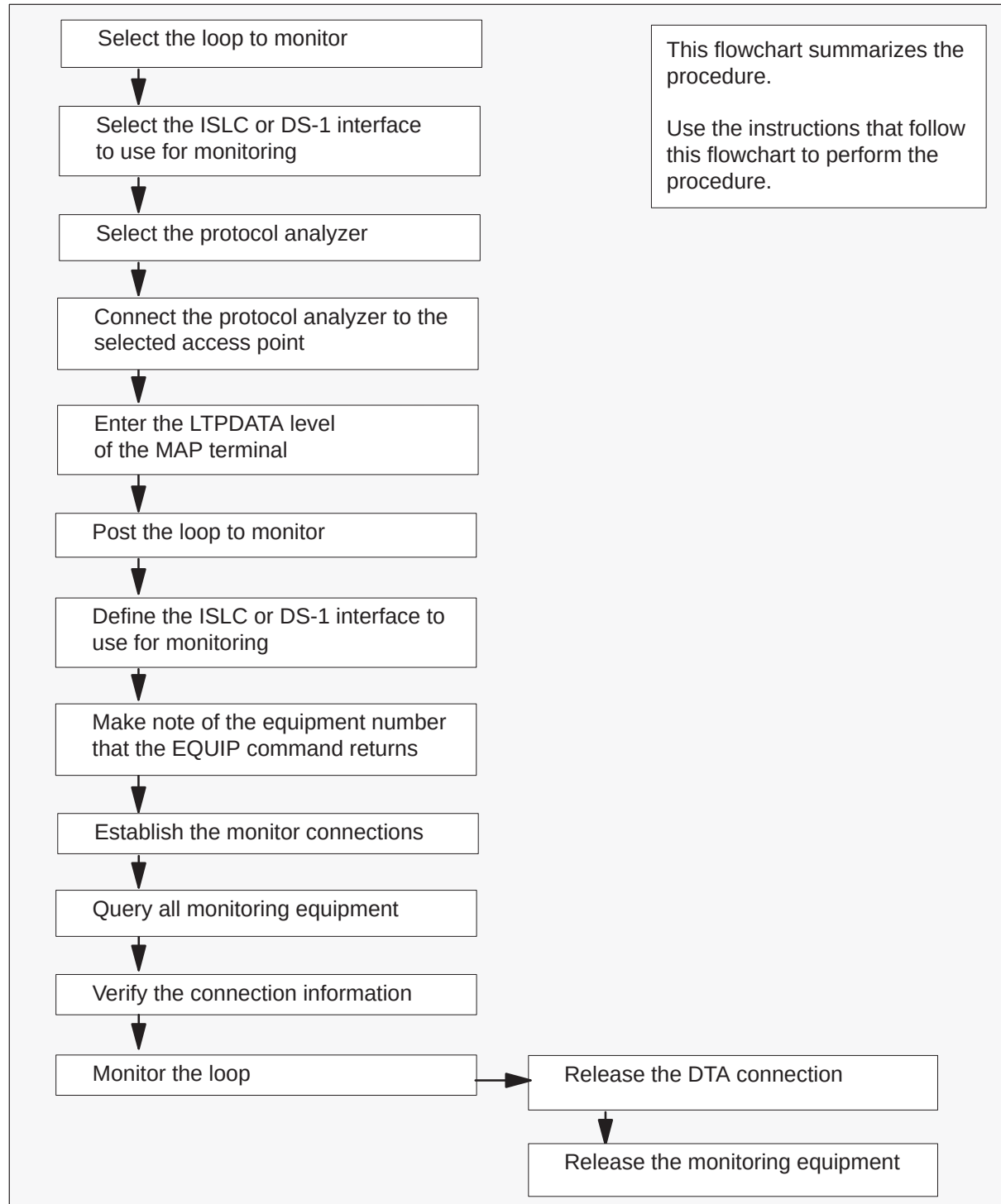
There are no common procedures.

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 (continued)

Summary of How to set up and release equipment that monitors digital test access



Digital test access

(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

Digital test access (continued)

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).

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

Digital test access

(continued)

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.

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.

Digital test access (end)

- 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.

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.

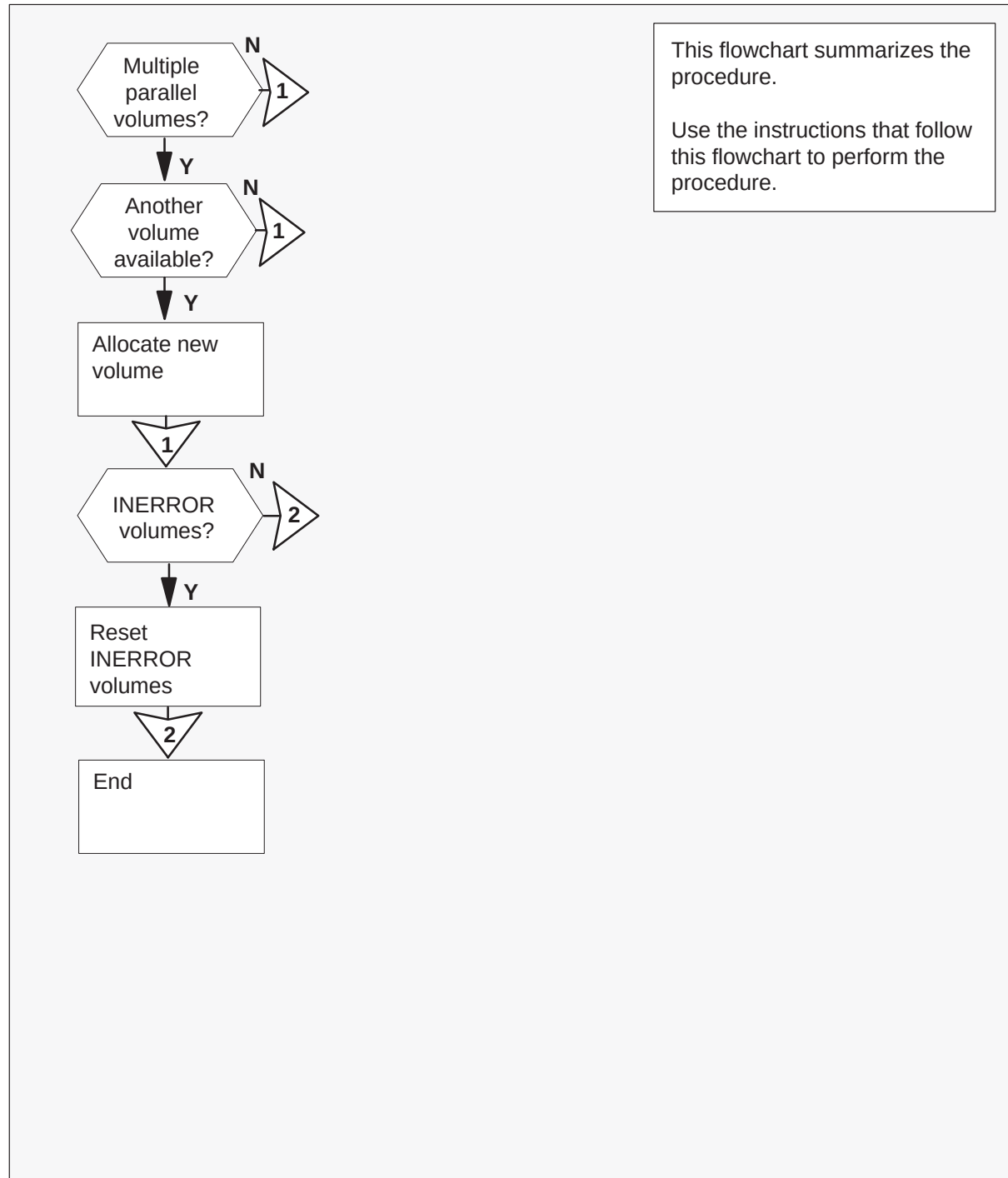
Action

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



DIRP 101 logs

Reason 2 (continued)

Reason 2



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 2 (continued)

- 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

ssys is the subsystem

DIRP 101 logs

Reason 2 (continued)

- 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 5 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

DIRP 101 logs Reason 2 (end)

- 10** Note the MAP response in the PARALLEL field.

Example of a MAP response:

```

SSNAME  SSNO  SEQNO  ROTATES  POOLNO  PARLPOOL  EMERGENCY
AMA      0      1      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.

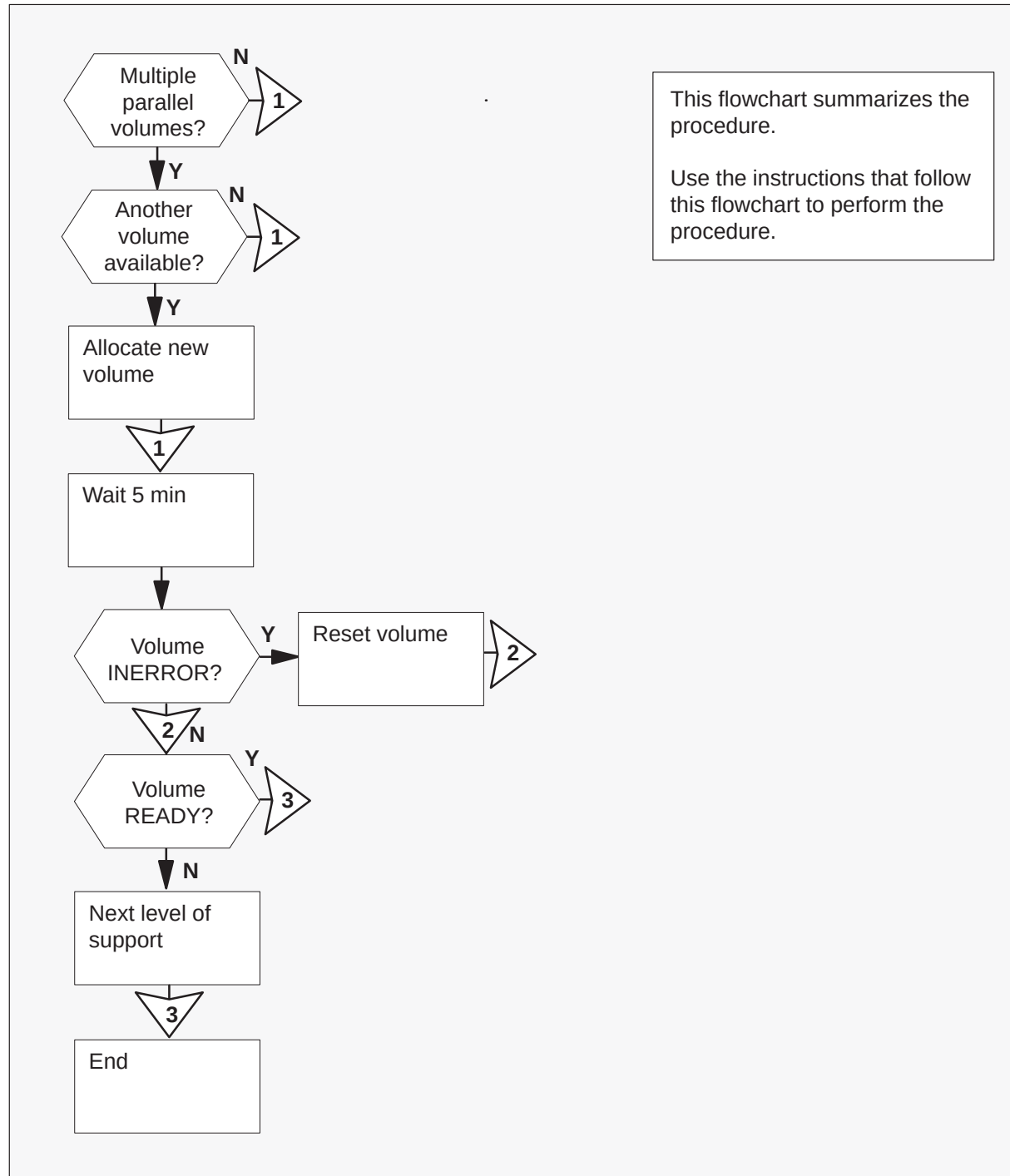
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 26 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	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 affected subsystem indicated by the log, type

>QUERY ssys VOLUMES

and press the Enter key.

where

ssys is the subsystem

DIRP 101 logs

Reason 26 (continued)

- 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 5 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

DIRP 101 logs Reason 26 (end)

- 11** 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    D0000AMA  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 INERROR	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.

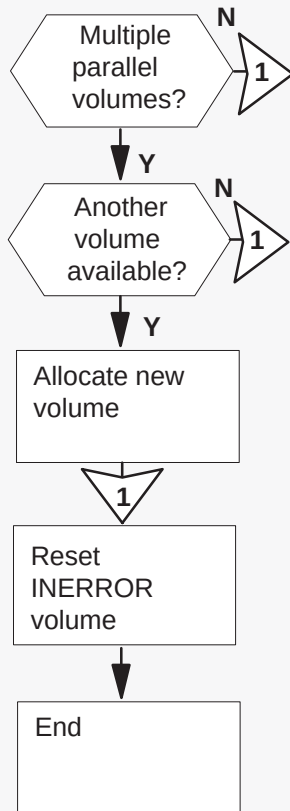
Action

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



This flowchart summarizes the procedure.

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

DIRP 101 logs

Reason 27 (continued)

Reason 27



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 27 (continued)

- 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
-----	----	---	-----	-----	-----	-----	-----
BAS00001	Base	Y	ON	-	-	-	95/09/26

If the switch	Do
has the functionality group BAS00001	step 3
does not have the functionality group BAS00001	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

ssys is the subsystem

DIRP 101 logs
Reason 27 (end)

- 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 5, 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.

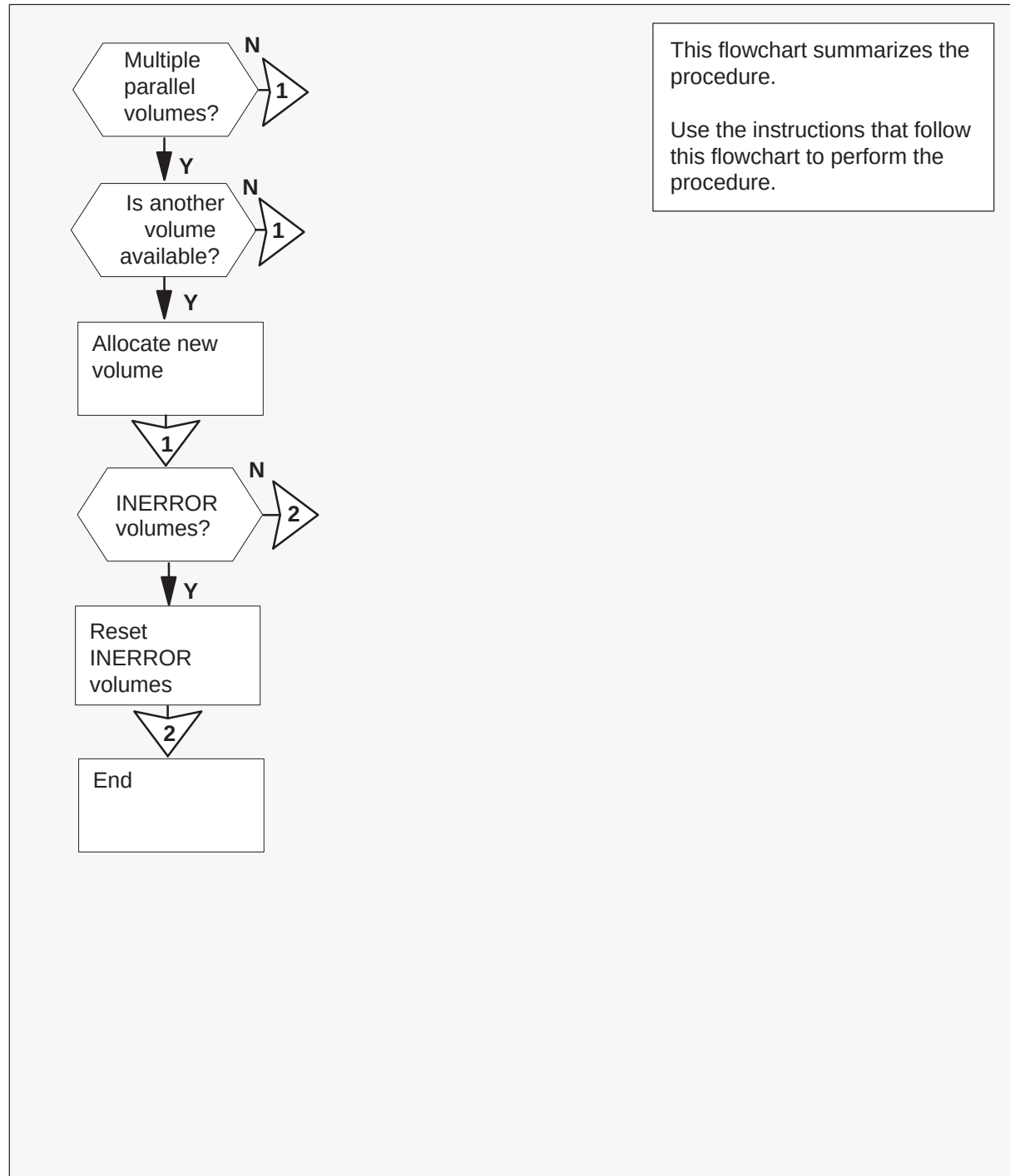
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs
Reason 46 (continued)

- 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 BAS00001	step 3
does not have functionality group BAS00001	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
ssys is the subsystem

DIRP 101 logs Reason 46 (continued)

- 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

DIRP 101 logs

Reason 46 (end)

- 10 Note the MAP response in the PARALLEL field.

```
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 INERROR	step 12
no parallel volumes are marked INERROR	step 13

- 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.

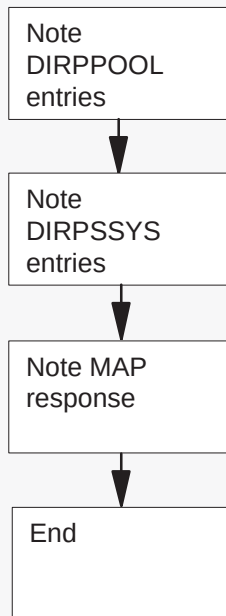
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 51 (end)

- 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
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.

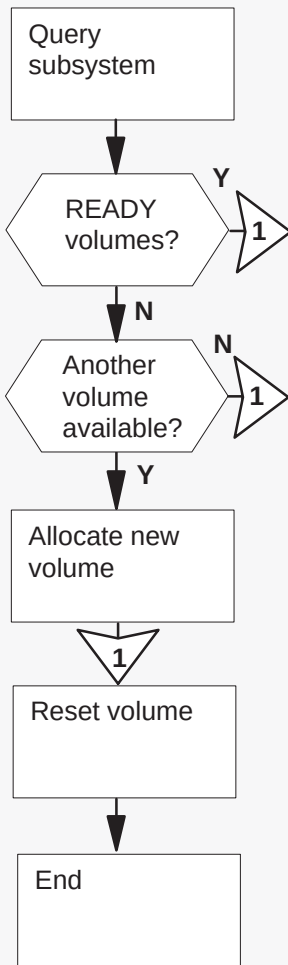
Action

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



This flowchart summarizes the procedure.

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

DIRP 101 logs

Reason 56 (continued)

Reason 56

At the MAP terminal

1



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 56 (continued)

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.

If a regular volume	Do
is READY	step 8
is not READY	step 5

- 5 Contact the next level of support to identify a volume available for regular recording.
- 6 Determine if another volume is available.

If another volume	Do
is available	step 7
is not available	step 8

- 7 In step 5, the next level of support identifies the volume to move to the affected subsystem.

Refer to Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures.

- 8 Reset the regular volume marked INERROR.
Refer to Recovering volumes marked INERROR in Recovery Procedures.
- 9 For additional help, contact the next level of support.

DIRP 101 logs
Reason 56 (end)

10 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.

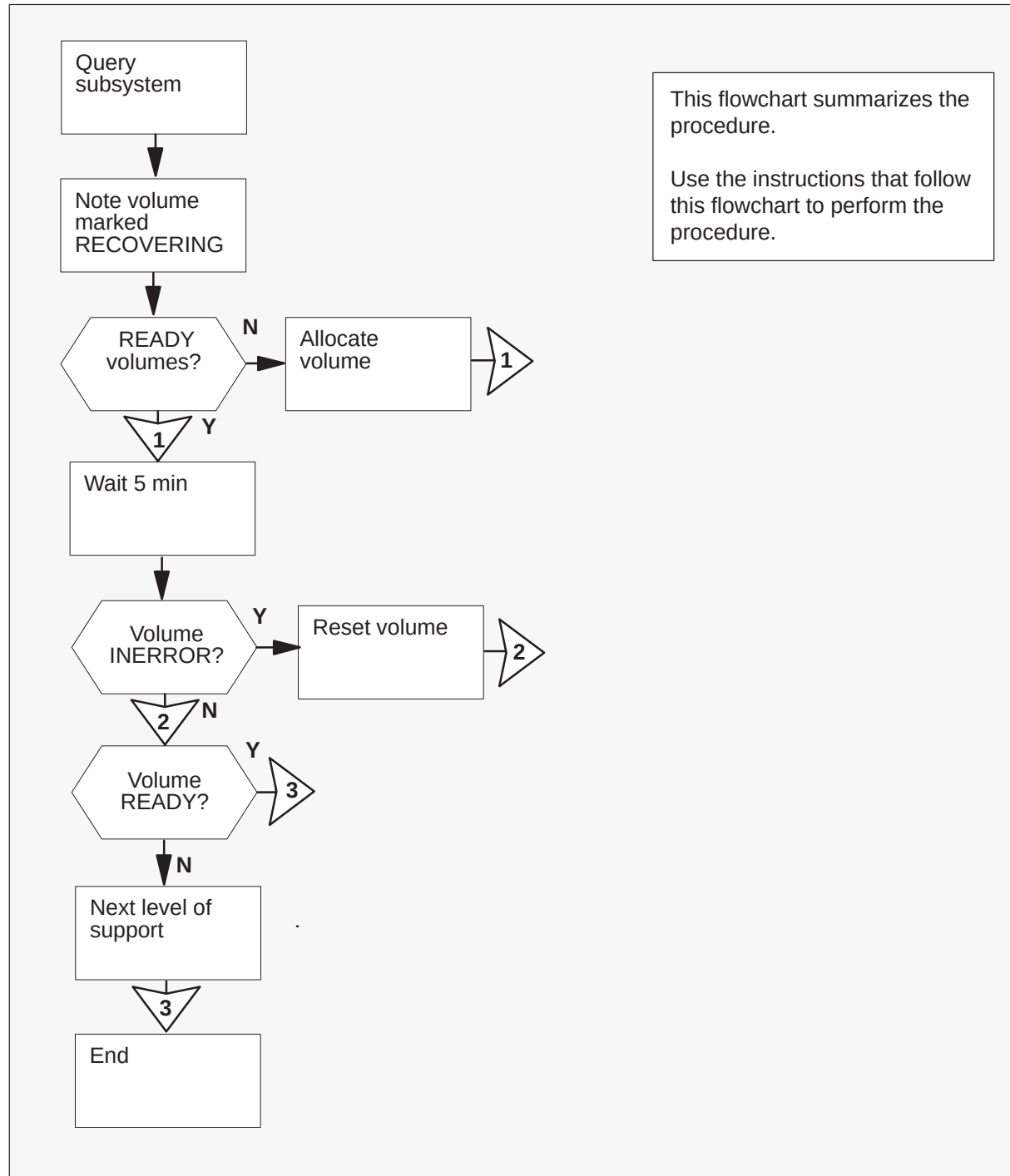
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs Reason 78 (continued)

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.
- 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.

DIRP 101 logs

Reason 78 (end)

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
is neither READY nor INERROR	step 13

- 12** Reset the volume 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 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.

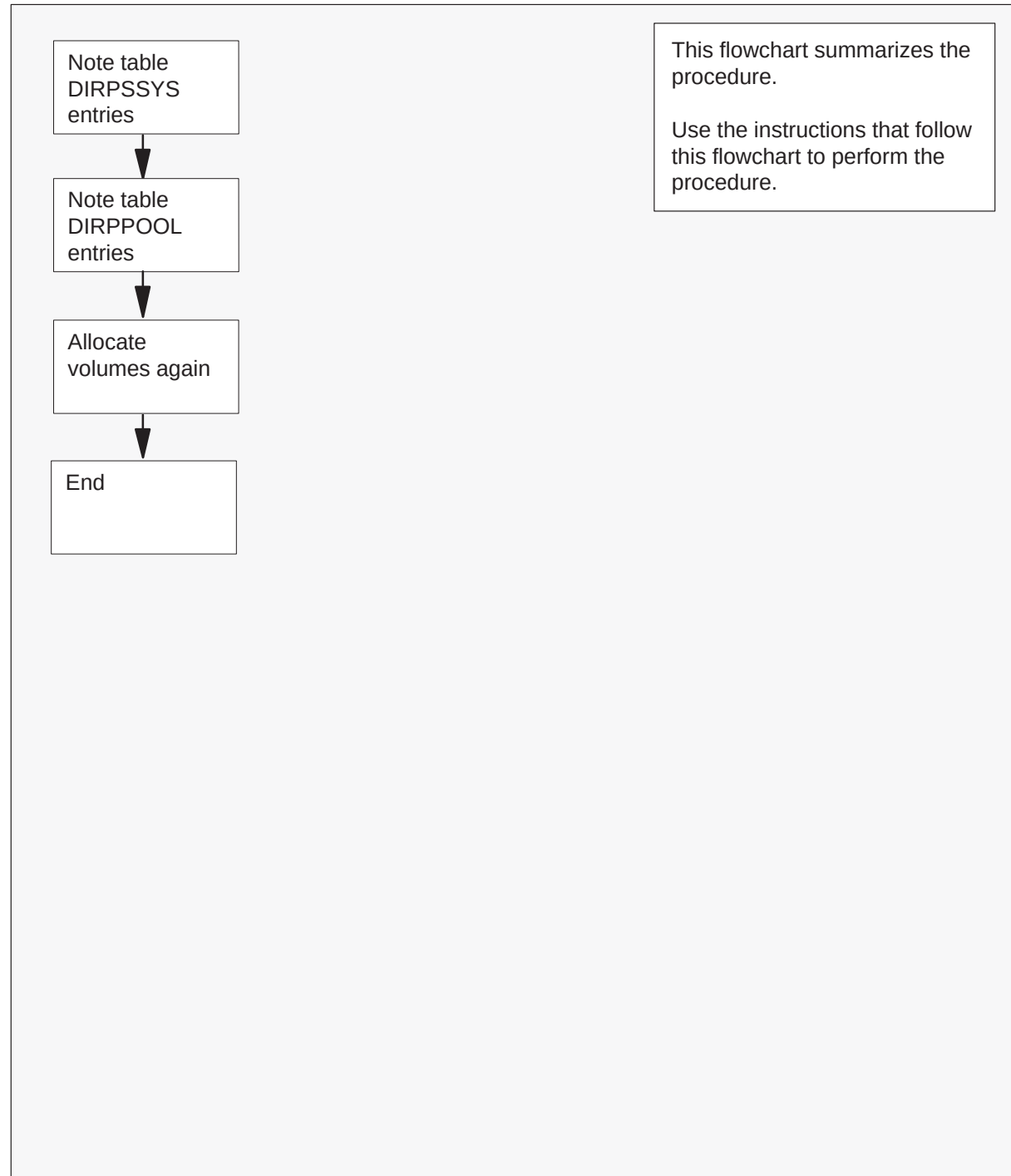
Action

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 (continued)

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.

DIRP 101 logs

Reason 100 (end)

- 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.

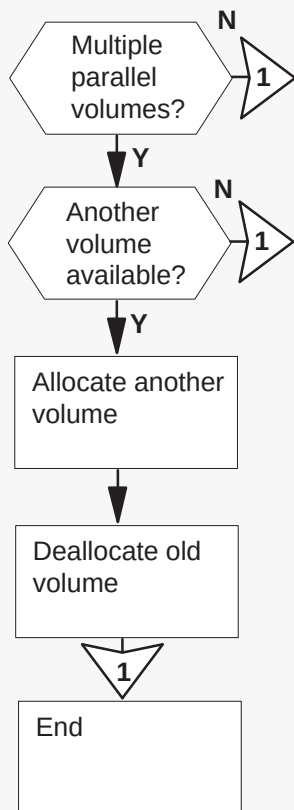
Action

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



This flowchart summarizes the procedure.

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

DIRP 101 logs

Reason 127 (continued)

Reason 127



CAUTION

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.



CAUTION

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.

DIRP 101 logs
Reason 127 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.
- where*
- ssys is the subsystem

DIRP 101 logs Reason 127 (end)

- 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 5 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.

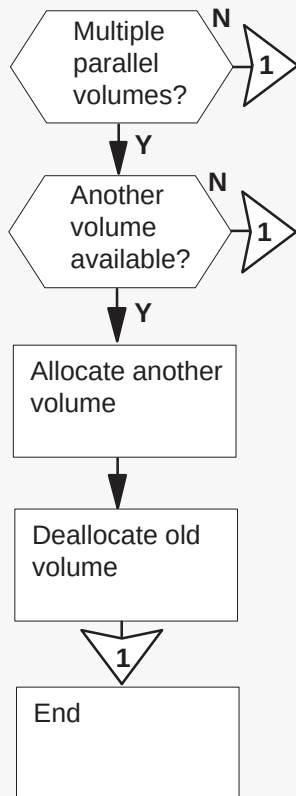
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 129 (continued)

- 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
-----	----	---	-----	-----	-----	-----	-----
BAS00001	Base	Y	ON	-	-	-	95/09/26

If the switch	Do
has the functionality group BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.

where

ssys is the subsystem

DIRP 101 logs

Reason 129 (end)

- 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 5 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.

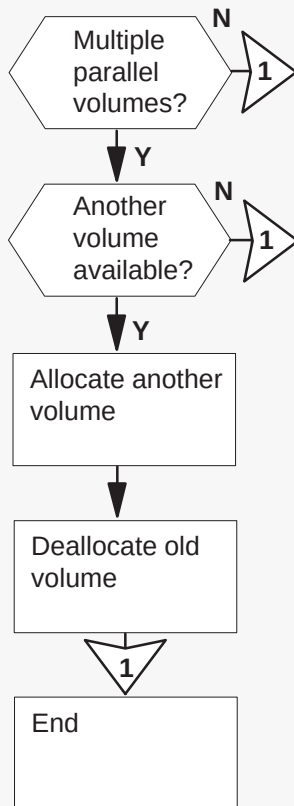
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs
Reason 153 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.
- where*
- ssys is the subsystem

DIRP 101 logs Reason 153 (end)

- 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 5 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

The procedure is complete.

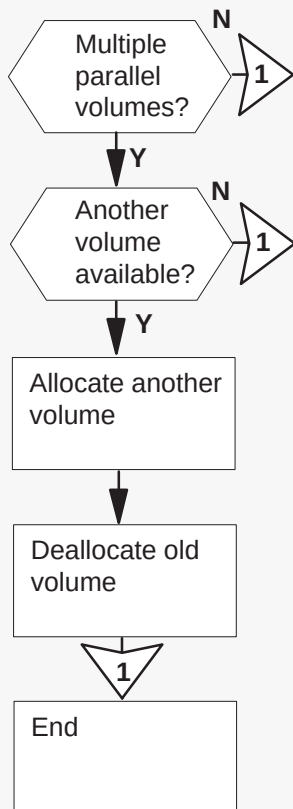
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 154 (continued)

- 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
-----	----	---	-----	-----	-----	-----	-----
BAS00001	Base	Y	ON	-	-	-	95/09/26

If the switch	Do
has the functionality group BAS00001	step 3
does not have the functionality group BAS00001	step 10

- 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.

where

ssys is the subsystem

DIRP 101 logs

Reason 154 (end)

- 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 5 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.

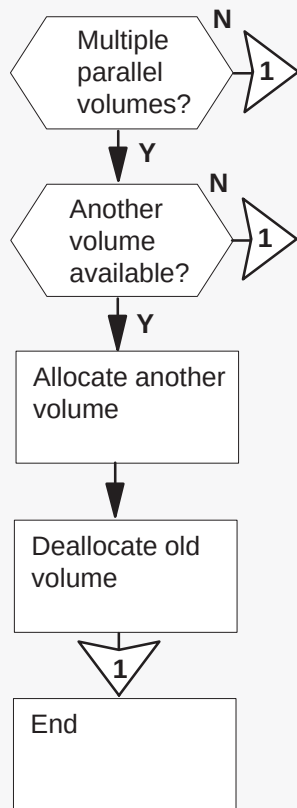
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs
Reason 155 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.
- where*
 ssys is the subsystem

DIRP 101 logs Reason 155 (end)

- 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 5 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.

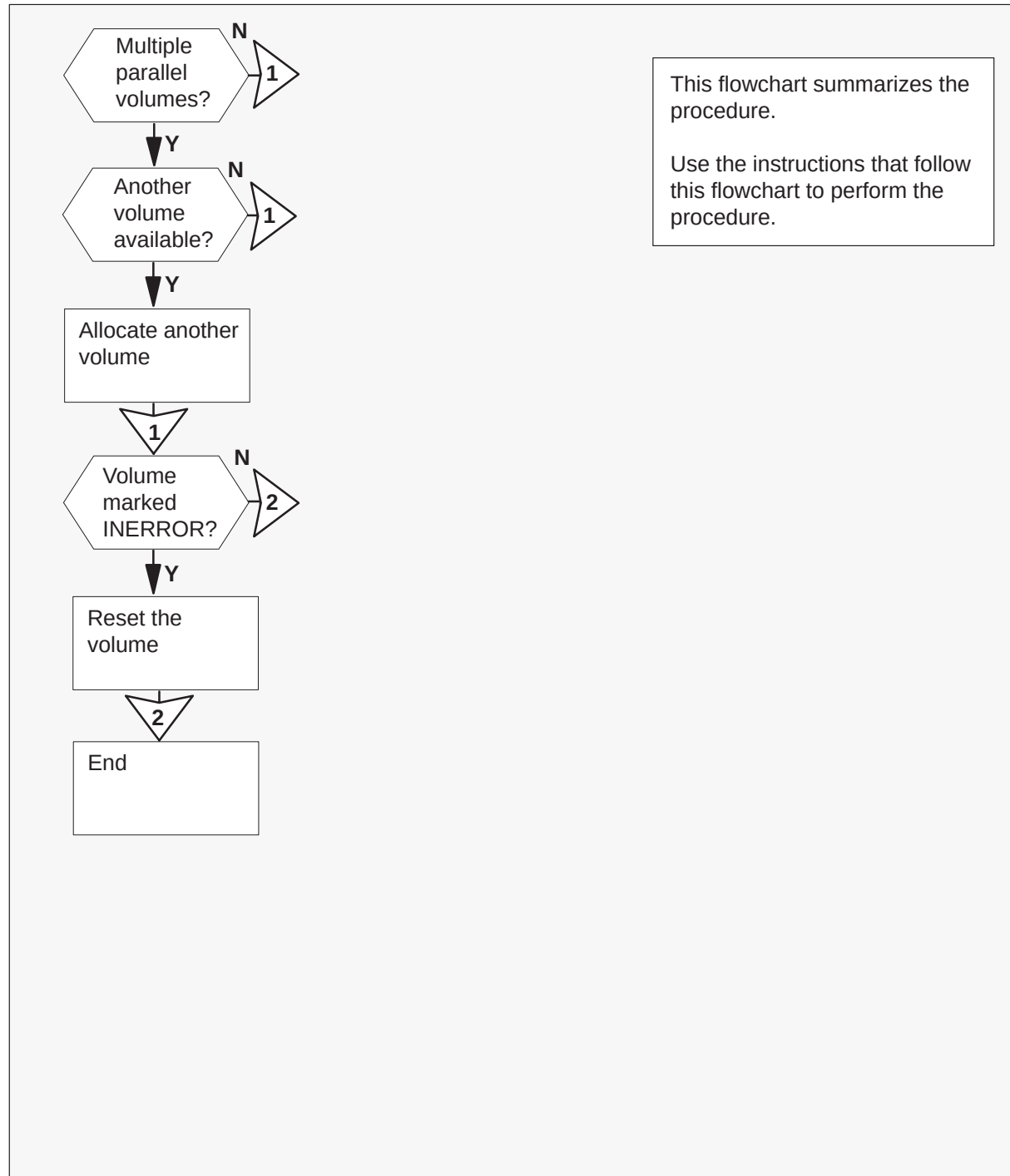
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 223 (continued)

- 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
-----	----	---	-----	-----	-----	-----	-----
BAS00001	Base	Y	ON	-	-	-	95/09/26

If the switch	Do
has the functionality group BAS00001	step 3
does not have the functionality group BAS00001	step 9

- 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.

where

ssys is the subsystem

DIRP 101 logs

Reason 223 (continued)

- 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 5 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.

DIRP 101 logs
Reason 223 (end)

- 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.

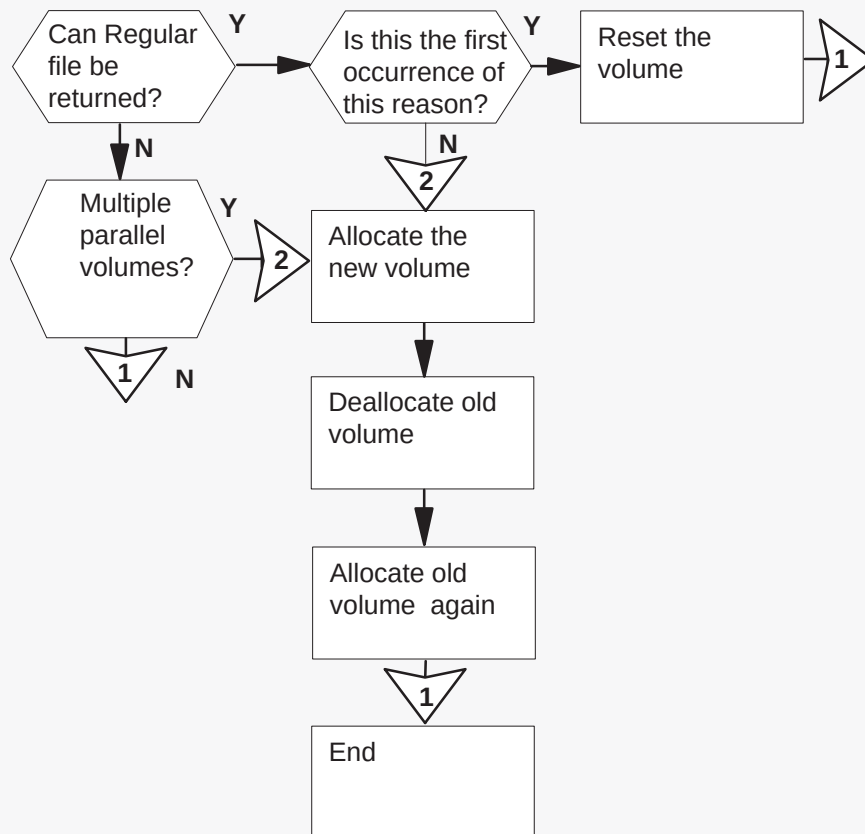
DIRP 101 logs

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



CAUTION

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.



CAUTION

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.

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.

If the file	Do
is regular	step 2
is parallel	step 9

2 Determine if this occurrence is the first occurrence of this reason.

If this	Do
is the first occurrence	step 3
is not the first occurrence	step 5

3 Reset the normal volume that the log indicates.

DIRP 101 logs

Reason 251 (continued)

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.

If another volume	Do
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.
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.

DIRP 101 logs
Reason 251 (continued)

- 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 BAS00001	step 11
does not have the functionality group BAS00001	step 20

- 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

DIRP 101 logs Reason 251 (end)

- 13 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

- 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.

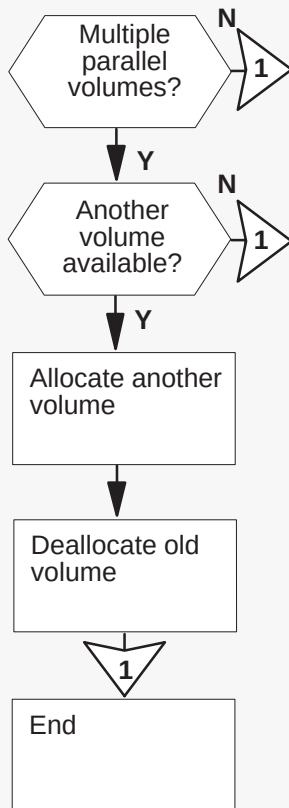
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 266 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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

Deallocate and press the Enter key.

where

ssys is the subsystem

DIRP 101 logs

Reason 266 (end)

- 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.

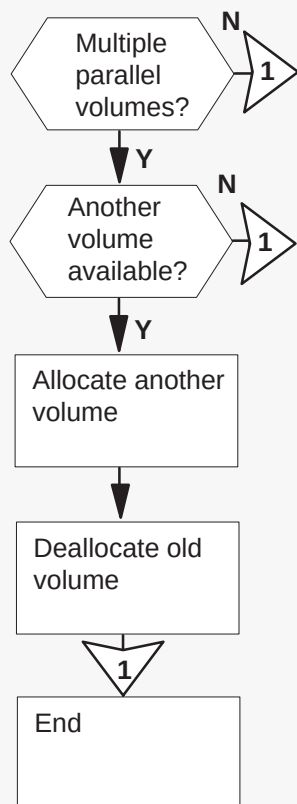
Action

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



This flowchart summarizes the procedure.

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

DIRP 101 logs

Reason 267 (continued)

Reason 267



CAUTION

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.



CAUTION

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.

DIRP 101 logs

Reason 267 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.

where

ssys is the subsystem

DIRP 101 logs Reason 267 (end)

- 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.

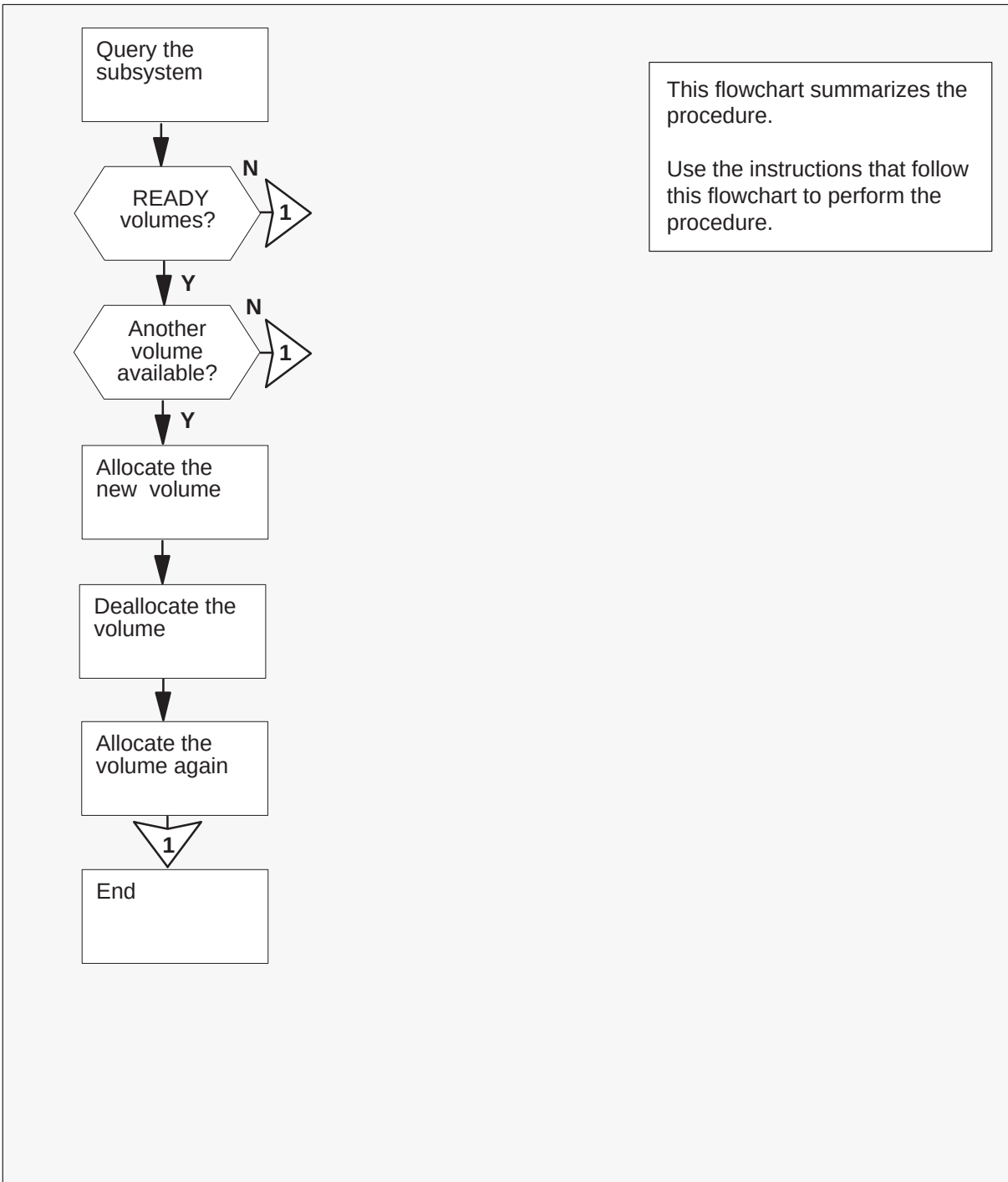
Action

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



CAUTION

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.



CAUTION

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.

DIRP 101 logs Reason 279 (continued)

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

- Determine if any regular volumes are READY.

If regular volumes	Do
are READY	step 5
are not READY	step 11

- Contact the next level of support to identify a volume that is available for regular recording.
- Determine if another volume is available.

If another volume	Do
is available	step 7
is not available	step 11

- Allocate the volume that the next level of support identified in step 5 to the affected subsystem.

Refer to *Allocating recording volumes in the DIRP utility in Routine Maintenance Procedures* and return to this point.

- Deallocate the volume that the log identifies from the affected subsystem.

Refer to *Deallocating recording volumes in the DIRP utility in Routine Maintenance Procedures* and return to this point.

- Allocate the volume you deallocated in step 8 to the affected subsystem.

DIRP 101 logs

Reason 279 (end)

Refer to *Allocating 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 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.

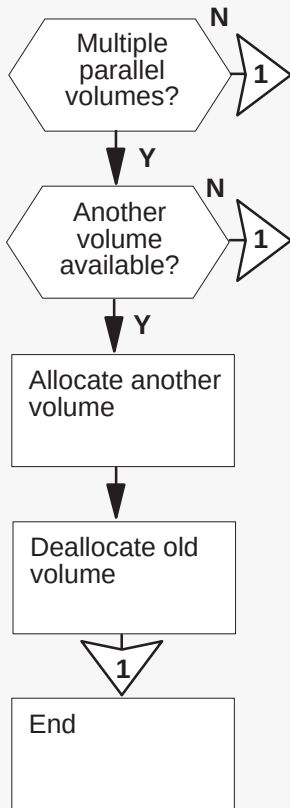
Action

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



This flowchart summarizes the procedure.

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

DIRP 101 logs

Reason 280 (continued)

Reason 280



CAUTION

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.



CAUTION

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.

DIRP 101 logs
Reason 280 (continued)

- 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 BAS00001	step 3
does not have the functionality group BAS00001	step 11

- 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.
- where*
- ssys is the subsystem

DIRP 101 logs Reason 280 (end)

- 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 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.

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

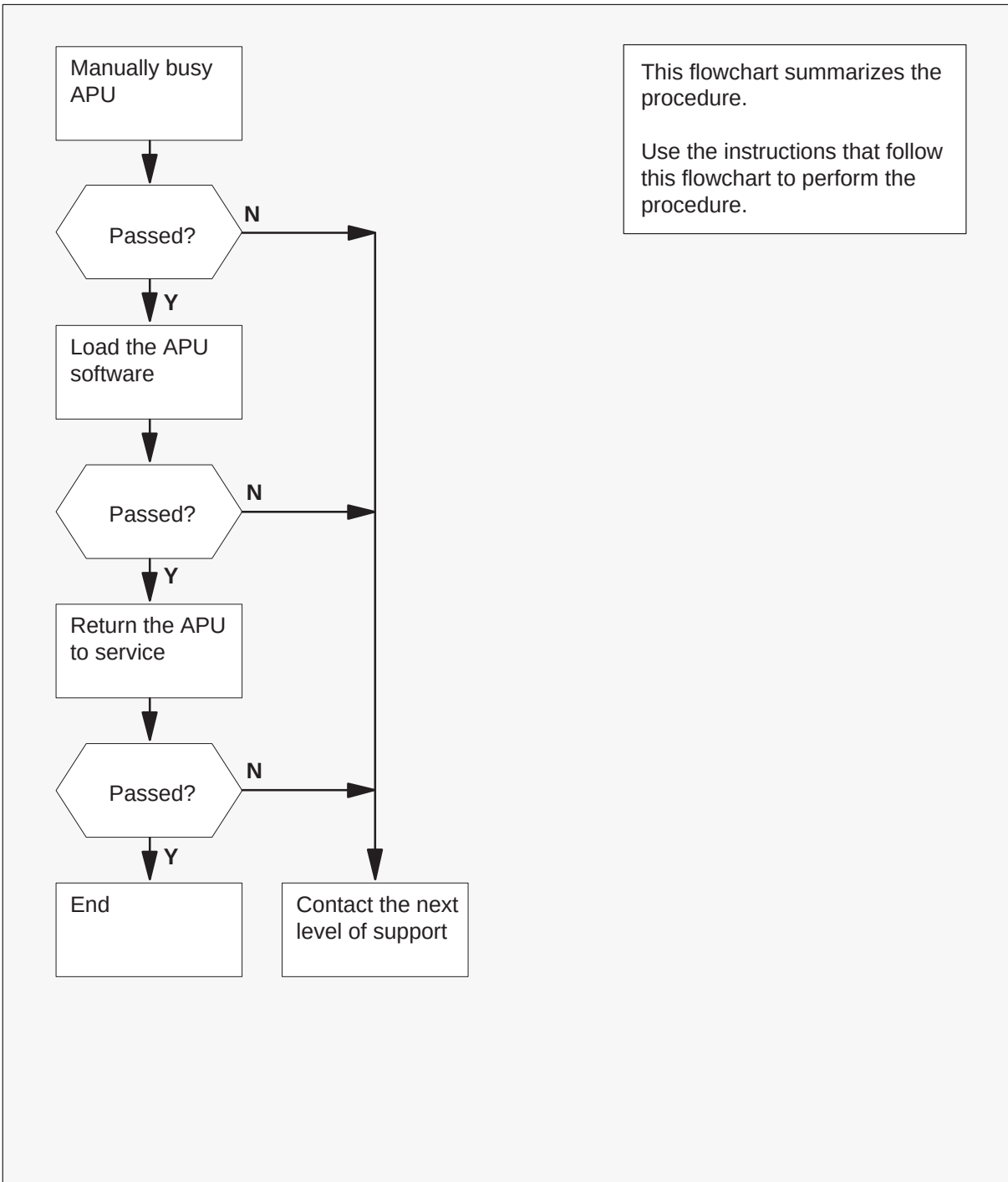
There are no common procedures.

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.

If the APU	Do
is InSv	step 5
is ISTb	step 4

- 4 Perform the correct procedure to clear alarms in the *Alarm and Performance Monitoring Procedures*.

Downloading software to an APU (continued)

- 5 To manually busy the posted APU, type
>BSY
and press the Enter key.

If the BSY command	Do
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
and press the Enter key.

If the BSY FORCE 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 posted APU, type
>LOADPM
and press the Enter key.

If the LOADPM command	Do
passes	step 9
fails	step 10

Downloading software to an APU

(end)

- 9 To return the posted APU to service, type:

>RTS

and press the Enter key.

If the RTS 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 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.

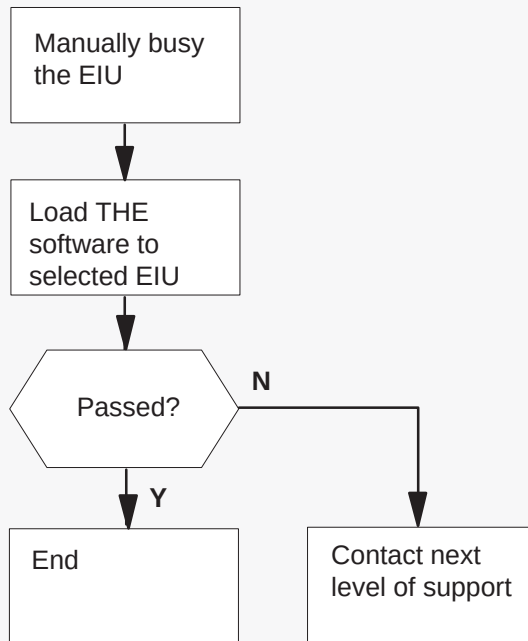
Action

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



This flowchart summarizes the procedure.

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

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.

If the response is	Do
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

Downloading software to an EIU (continued)

- 4 To load the software to the posted EIU, type

>BSY EIU FORCE

and press the Enter key.

Example of a MAP response:

```
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"):
```

To	Do
proceed with BSY FORCE request.	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.

Downloading software to an EIU (end)

- 7 To load the software to the selected EIU, type

>LOADPM

and press the Enter key.

Example of a MAP response:

EIU 205 LOADPM Passed

If the LOADPM command	Do
passed	step 8
failed	step 9

- 8 To return the EIU to service, type

>RTS

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 a 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

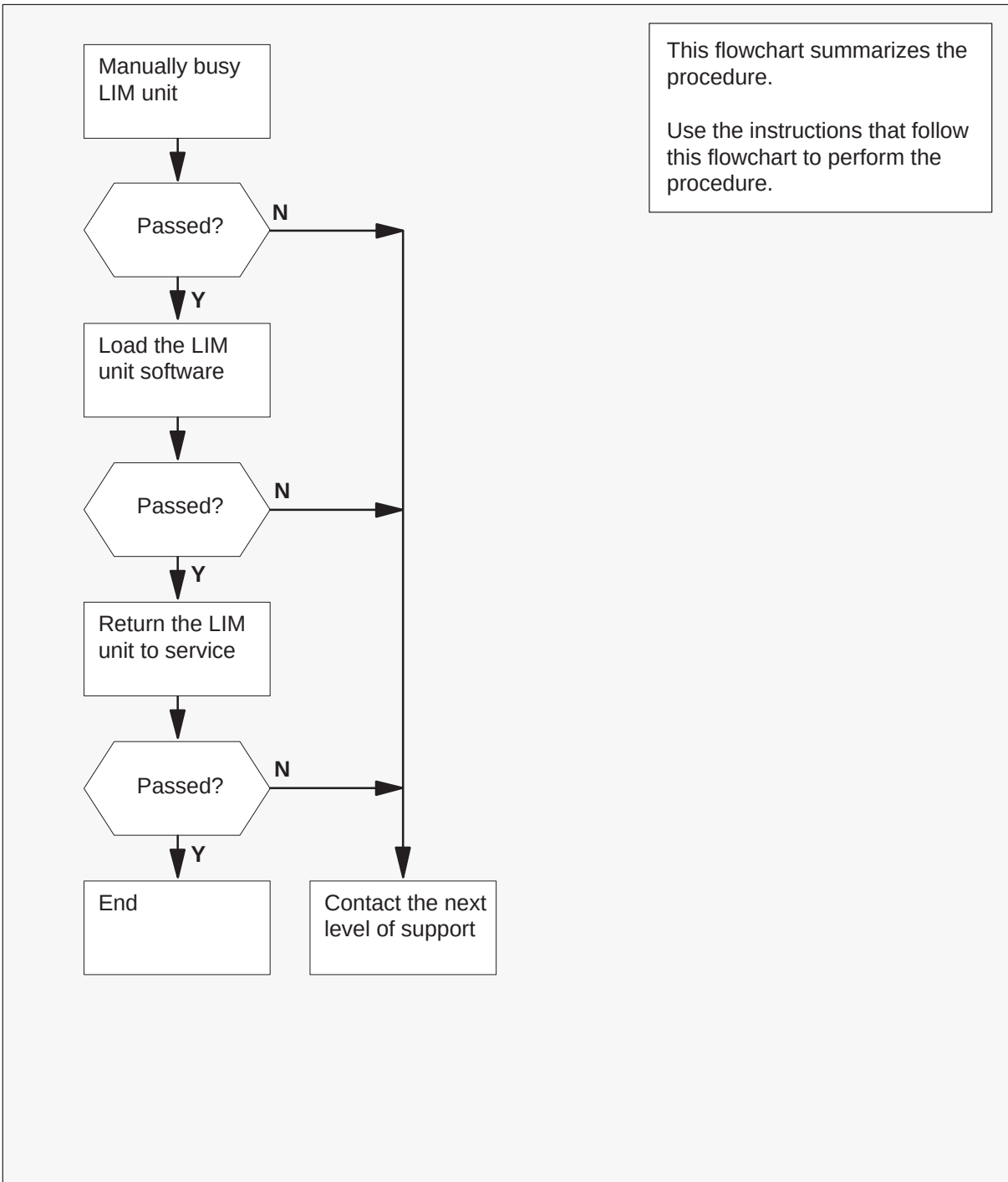
There are no common procedures.

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 a LIM unit (continued)

Summary of Downloading software to a LIM unit



Downloading software to a LIM unit (continued)

Downloading software to a 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.



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	ISTb	Links_00S	Taps_00S
Unit0:	Insv	2	.
Unit1:	ISTb	2	.

Downloading software to a LIM unit (continued)

- 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")

- 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

Downloading software to a LIM unit (end)

- 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

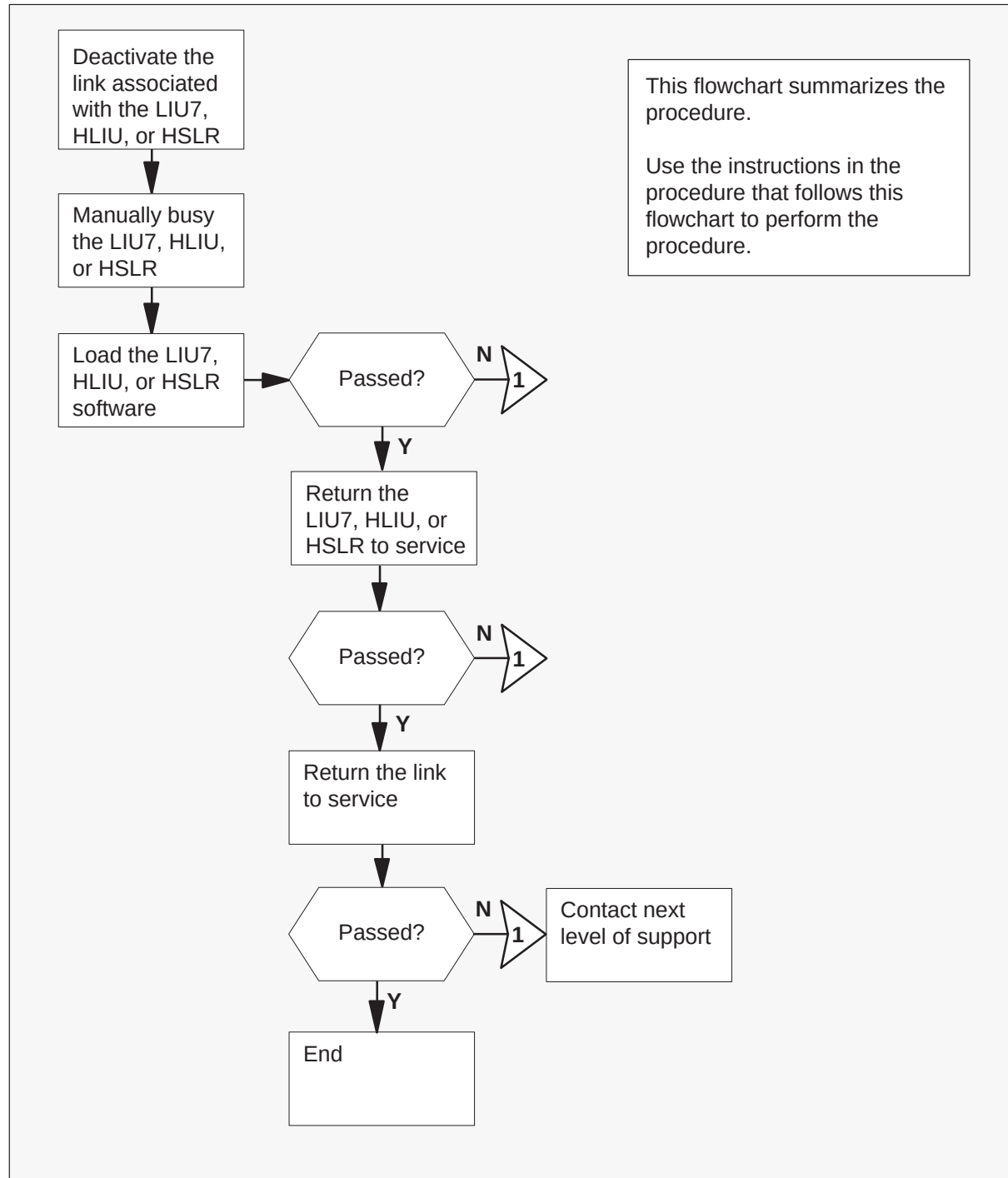
None

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 00S/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)

link_no is the number of the link (0 to 7)

If the response is	Do
Link link_no:Traffic is running on that link Please confirm ("YES", "Y", "NO", or "N"):	step 8
other	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

Downloading software to an LIU7, HLIU, or HSLR (continued)

- 9 Deactivate the link associated with the LIU7 by typing

>DEACT link_no

and pressing the Enter key.

where

link_no is the number of the link (0 to 15)

link_no is the number of the link (0 to 7)

If the DEACT command	Do
passed	step 10
failed	step 20

- 10 Return to the PM level of the MAP display and post the LIU7, HLIU, or HSLR by typing

>PM;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)

- 11 Manually busy the LIU7, HLIU, or HSLR by typing

>BSY

and pressing the Enter key.

If the response is	Do
Busying <LIU7,HLIU,HSLR> liu_no will take a CCS7 resource out of service Please confirm ("YES","Y","NO", or "N"): other	step 12 step 20

Downloading software to an LIU7, HLIU, or HSLR (continued)

- 12 Confirm the command by typing

>YES

and pressing the Enter key.

If the BSY command	Do
passed	step 13
failed	step 20

- 13 Load the software to the selected LIU7, HLIU, or HSLR by typing

>LOADPM

and pressing the Enter key.

Example of a MAP response:

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.

Downloading software to an LIU7, HLIU, or HSLR (continued)

- 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)

link_no is the number of the link (0 to 7)

If the RTS command	Do
passed	step 18
failed	step 20

- 18** Activate the link associated with the LIU7 or DLIU by typing

>ACT link_no

and pressing the Enter key.

where

link_no is the number of the link (0 to 15)

link_no is the number of the link (0 to 7)

If the ACT command	Do
passed	step 19
passed	step 21
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

Downloading software to an LIU7, HLIU, or HSLR (end)

link_no is the number of the link (0 to 15)

If the UINH command	Do
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.

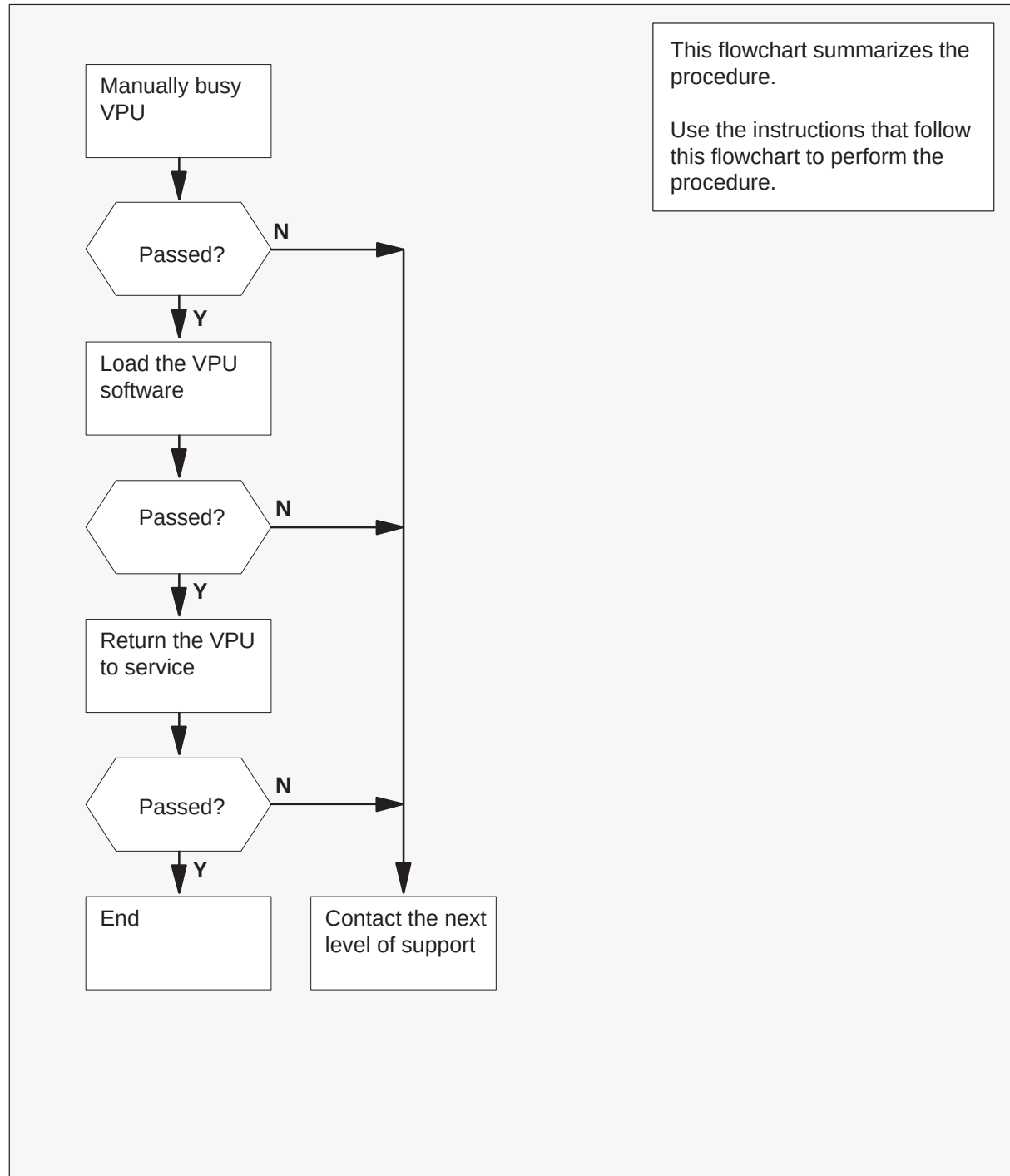
Action

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

Downloading software to a VPU

(continued)

4



CAUTION

Loss of service

Removal of a VPU from service reduces Automated Directory Assistance Service (ADAS) service capacity.



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

and press the Enter key.

If the BSY 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 BSY FORCE command	Do
passes	step 8
causes the system to prompt for approval	step 7

Downloading software to a VPU (end)

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 LOADPM command	Do
passes	step 9
fails	step 10

9 To return the VPU to service, type
>RTS
 and press the Enter key.

If the RTS 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

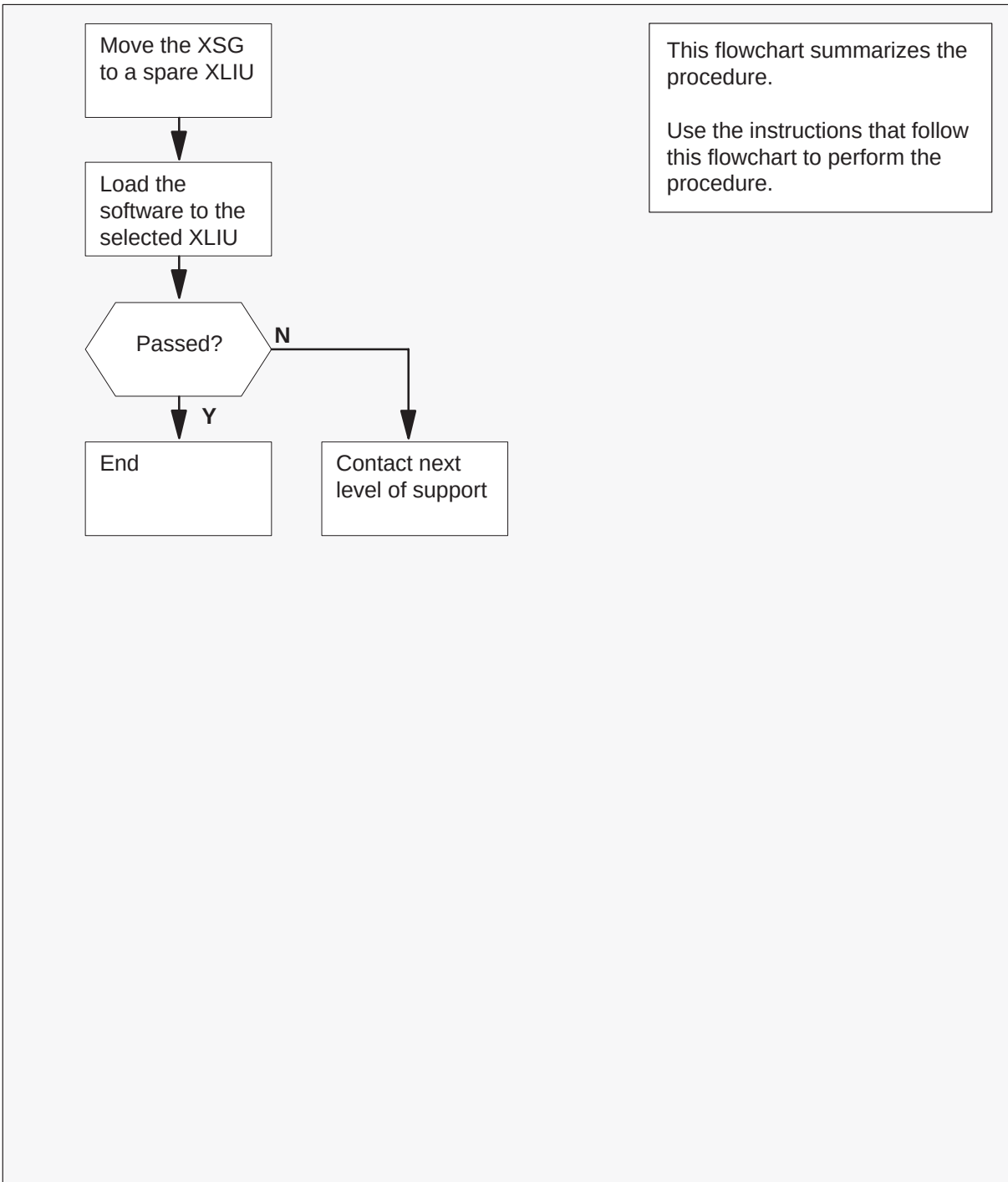
There are no common procedures.

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

Downloading software to an XLIU (continued)

- 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
```

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.

If the posted XLIU	Do
works, and associates with an XSG	step 4
is a spare	step 6

- 4 Perform the procedure *Moving an XSG to a spare XLIU* in *Routine Procedures*. Complete the procedure and return to this point.
- 5 Go to step 9.

Downloading software to an XLIU

(continued)

- 6 To manually busy the posted XLIU, type

>BSY

and press the Enter key.

If the response is	Do
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

- 7 To manually force bsy the XLIU, type

>BSY FORCE

and press the Enter key.

Example of a MAP response:

```
WARNING: XLIU 132 is currently being imaged.  
Do you wish to abort imaging to proceed with the BSY  
request?  
Please confirm ("YES", "Y", "NO", or "N"):
```

To	Do
proceed with BSY FORCE request	step 8
abort BSY FORCE request	step 12

- 8 To force bsy the XLIU by type

>YES

and press the Enter key.

Example of a MAP response:

```
Imaging will be aborted on XLIU 132.
```

Downloading software to an XLIU (end)

- 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.

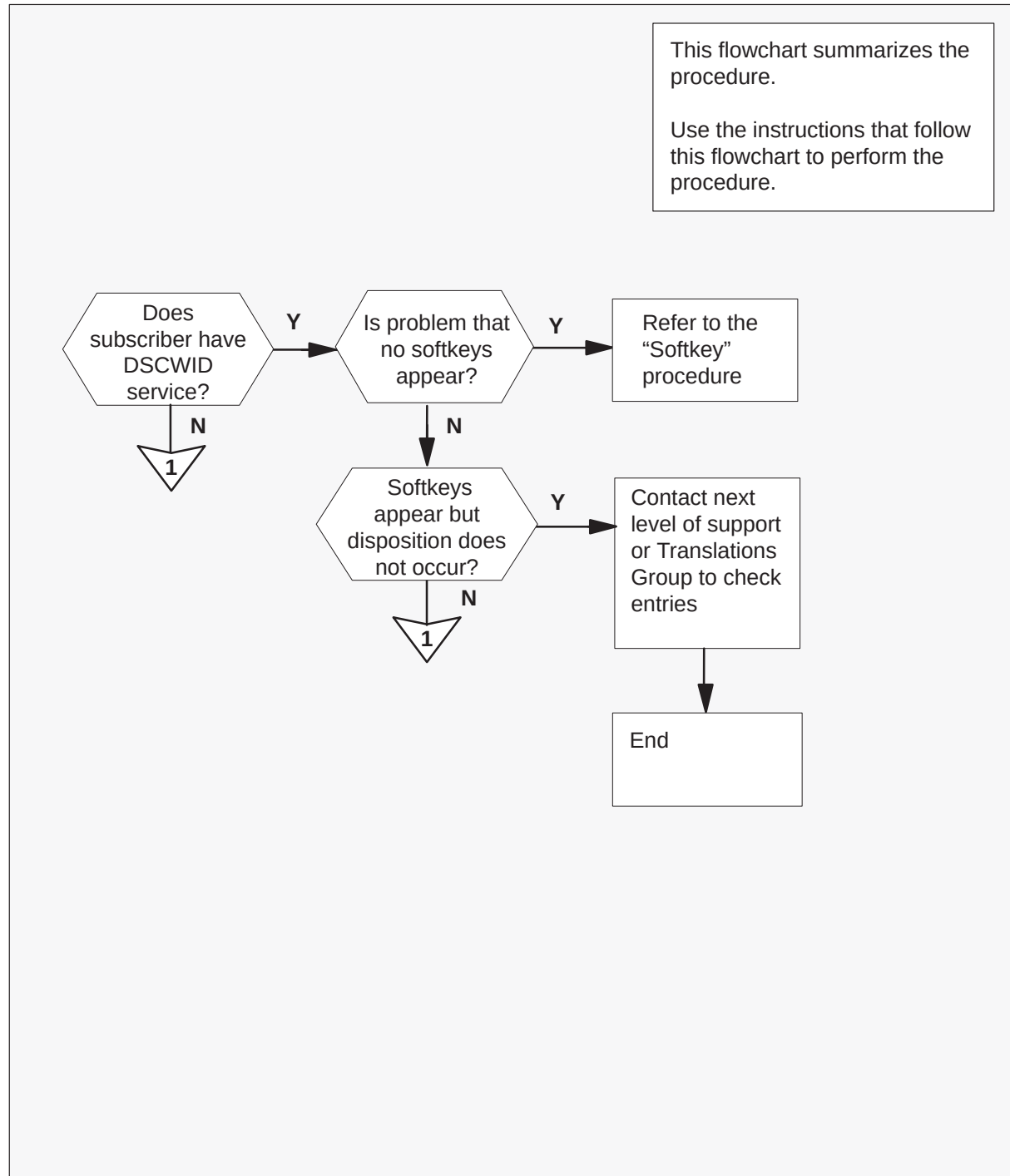
Action

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.

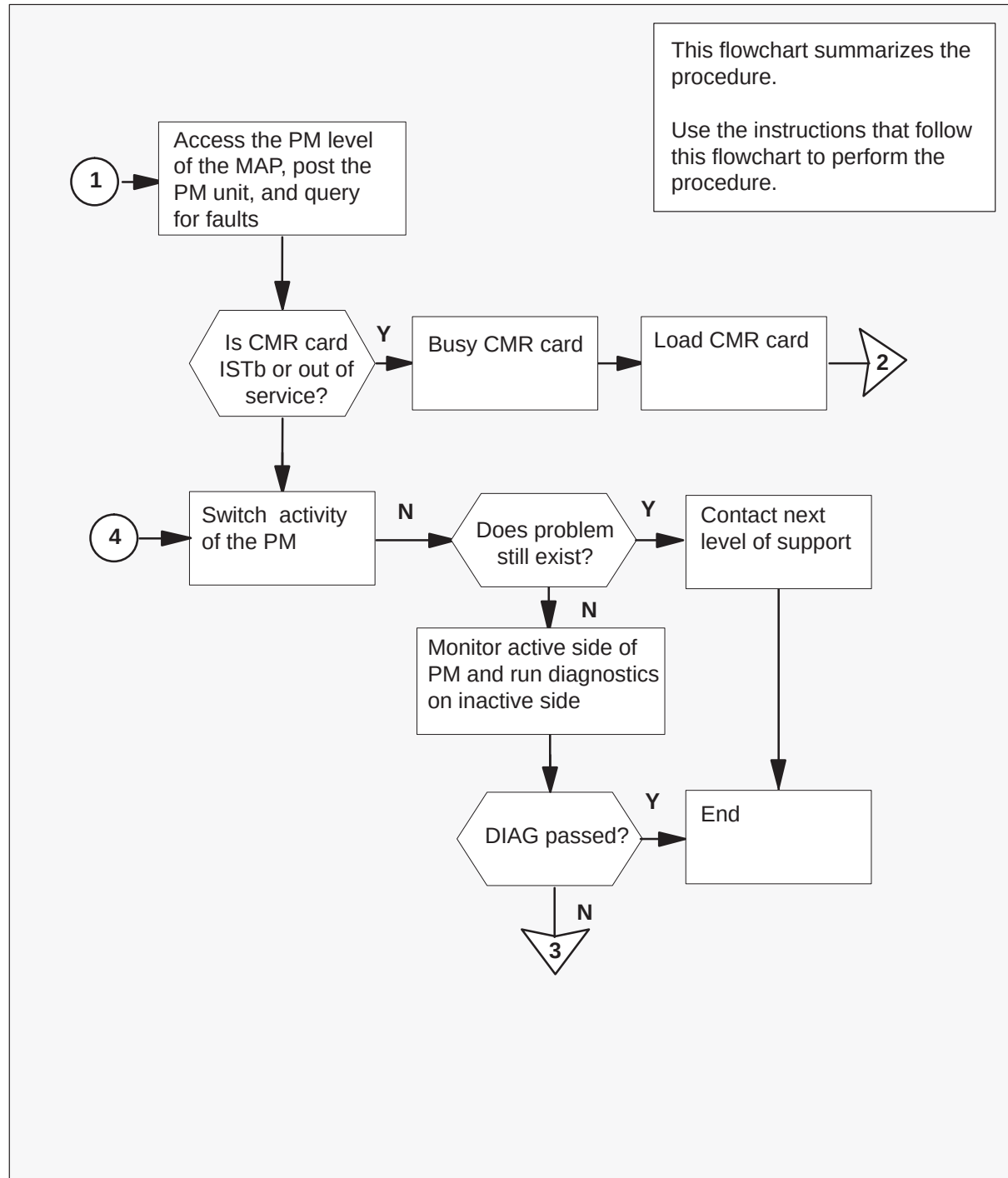
DSCWID/SCWID subscriber, no notification of waiting call (continued)

Summary of DSCWID/SCWID subscriber, no notification of waiting call



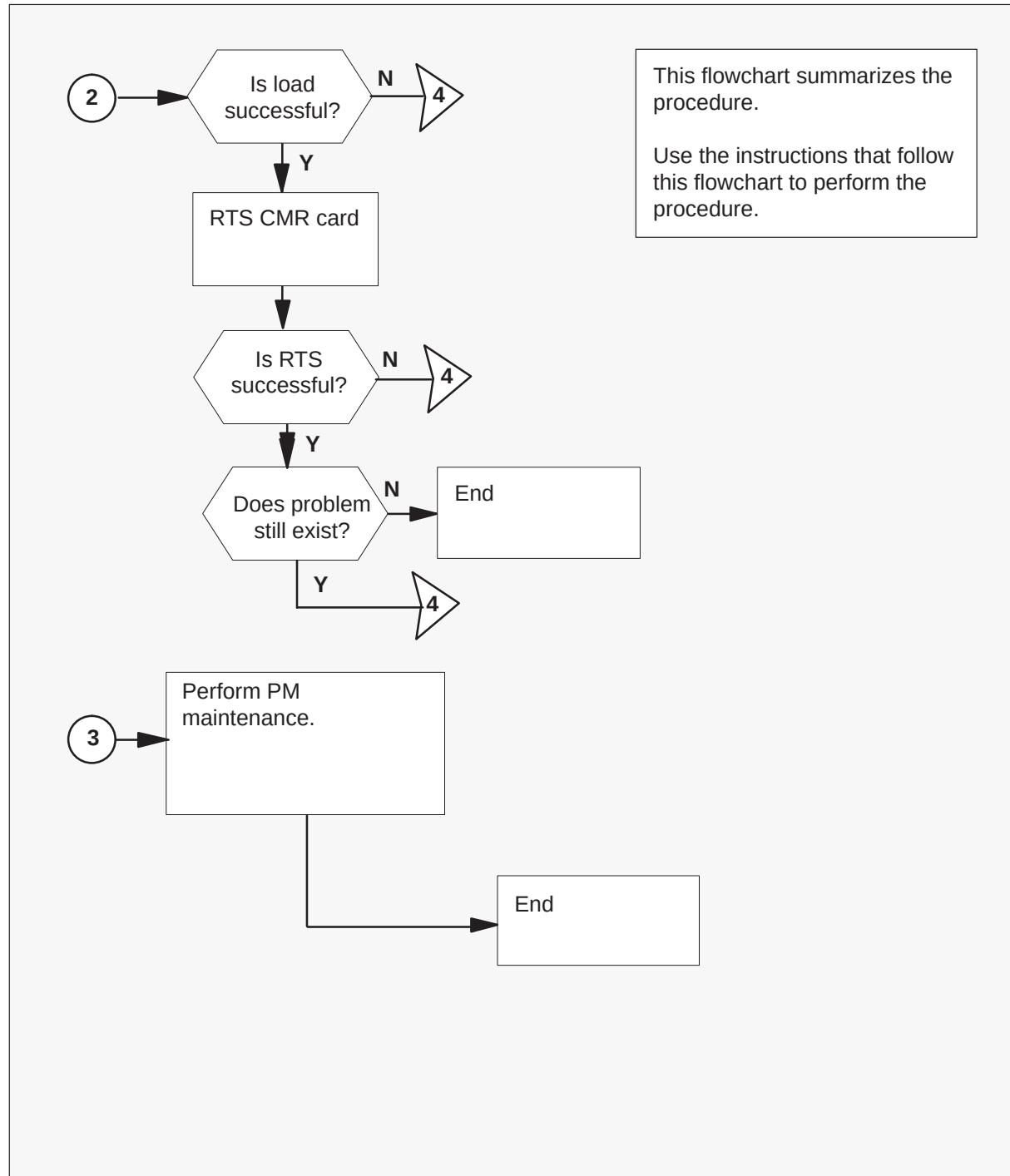
DSCWID/SCWID subscriber, no notification of waiting call (continued)

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.

If	Do
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)

DSCWID/SCWID subscriber, no notification of waiting call (continued)

- 7 To check for fault indicators, type

>QUERYPM FLT

and press the Enter key.

If CMR card	Do
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

and press the Enter key.

If problem	Do
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.



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

DSCWID/SCWID subscriber, no notification of waiting call (continued)

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.

If response	Do
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 Note: 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

DSCWID/SCWID subscriber, no notification of waiting call (continued)

- 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.

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 RTS	Do
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.

DSCWID/SCWID subscriber, no notification of waiting call (end)

- 18** Monitor the active side of the PM. Run diagnostics on the inactive side.

If DIAG	Do
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

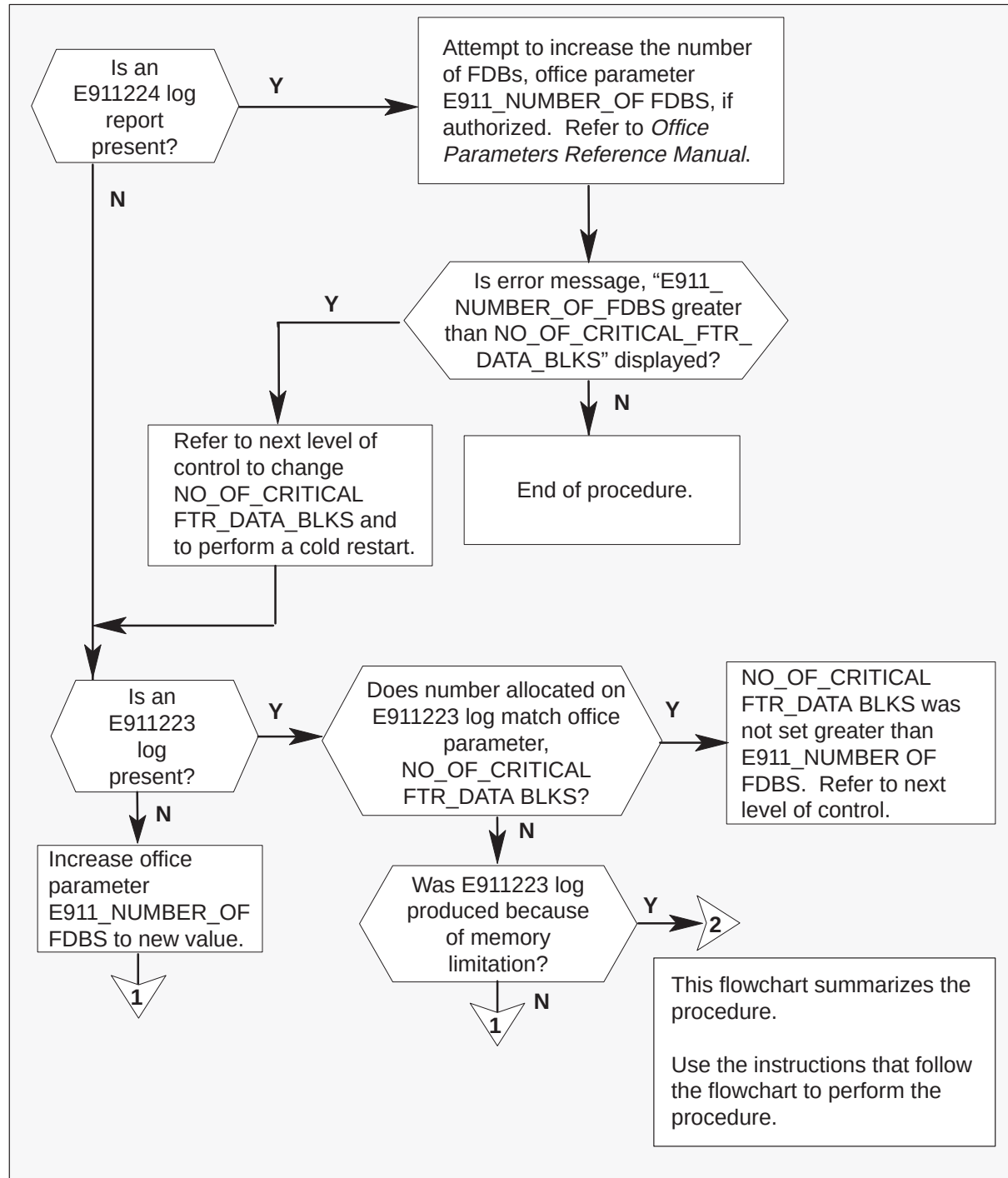
There are no common procedures.

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.

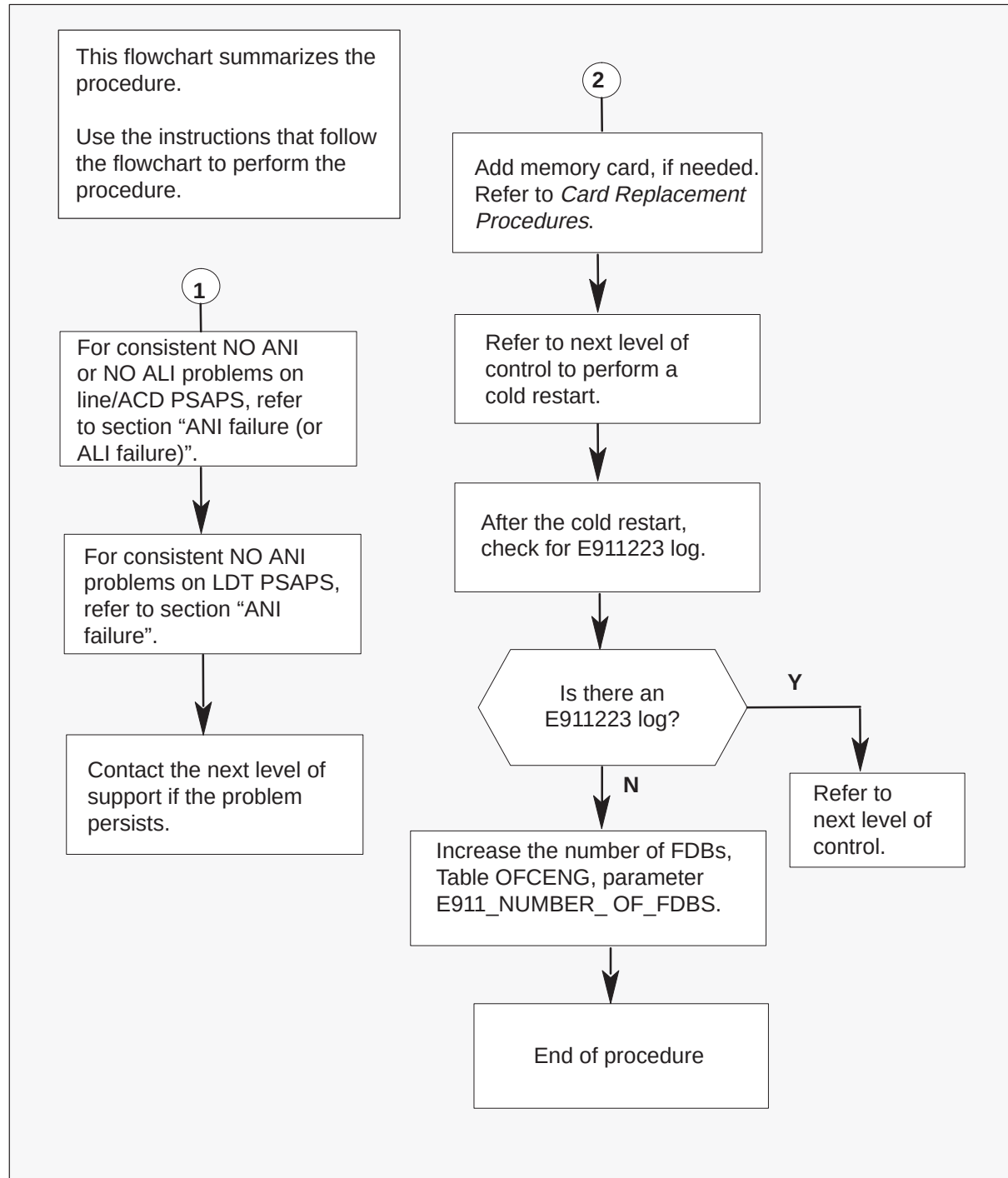
E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

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.

E911 LDT and Line/ACD PSAP complaint

Occasional failure of some E911 functions (continued)

- 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.

- 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.

E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (continued)

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.



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

E911 LDT and Line/ACD PSAP complaint

Occasional failure of some E911 functions (continued)

- 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
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_FDBS 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)".

E911 LDT and Line/ACD PSAP complaint Occasional failure of some E911 functions (end)

- 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.

If E911223 and E911224 log reports	Do
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.
- 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.

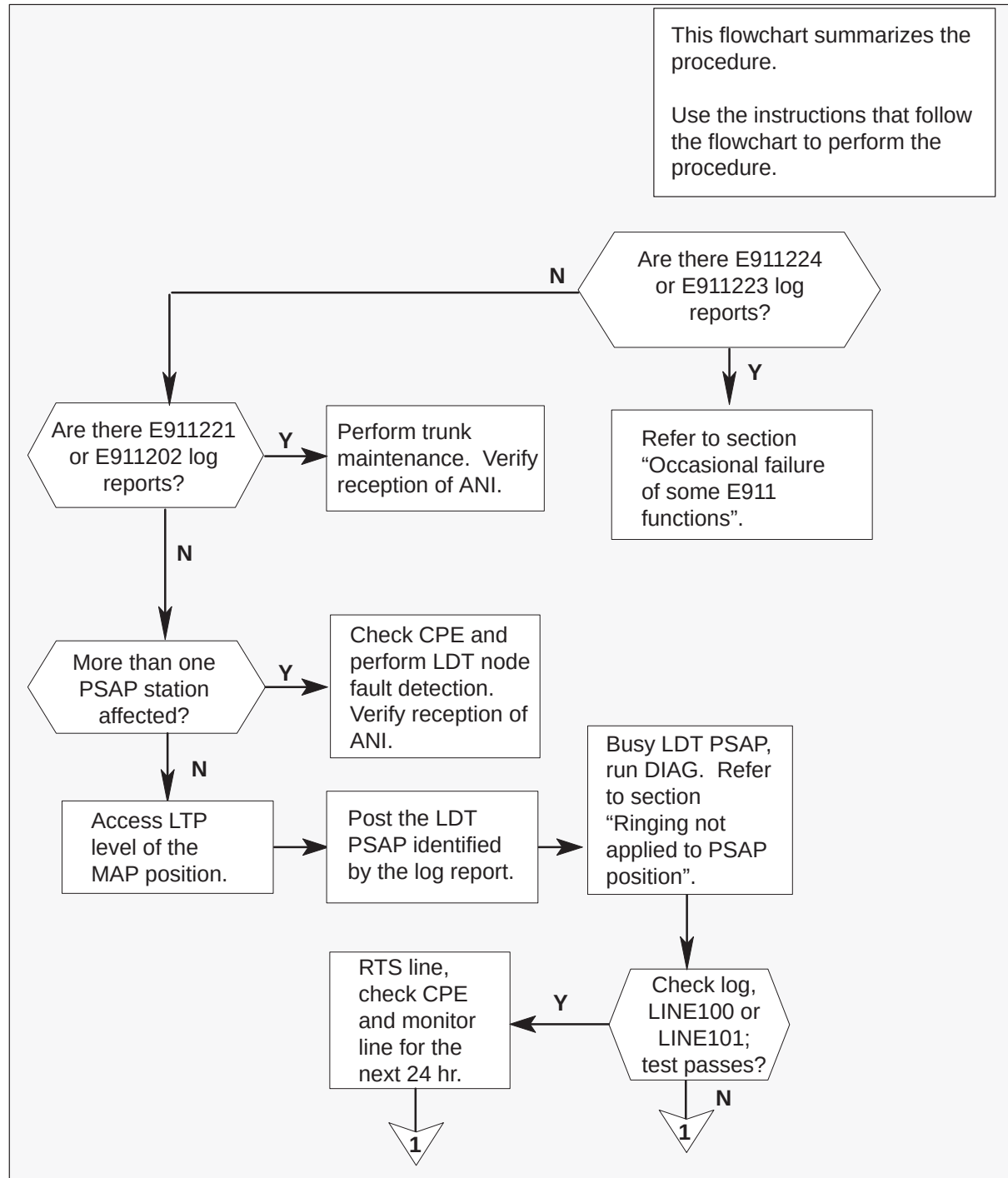
E911 LDT PSAP complaint ANI failure (continued)

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.

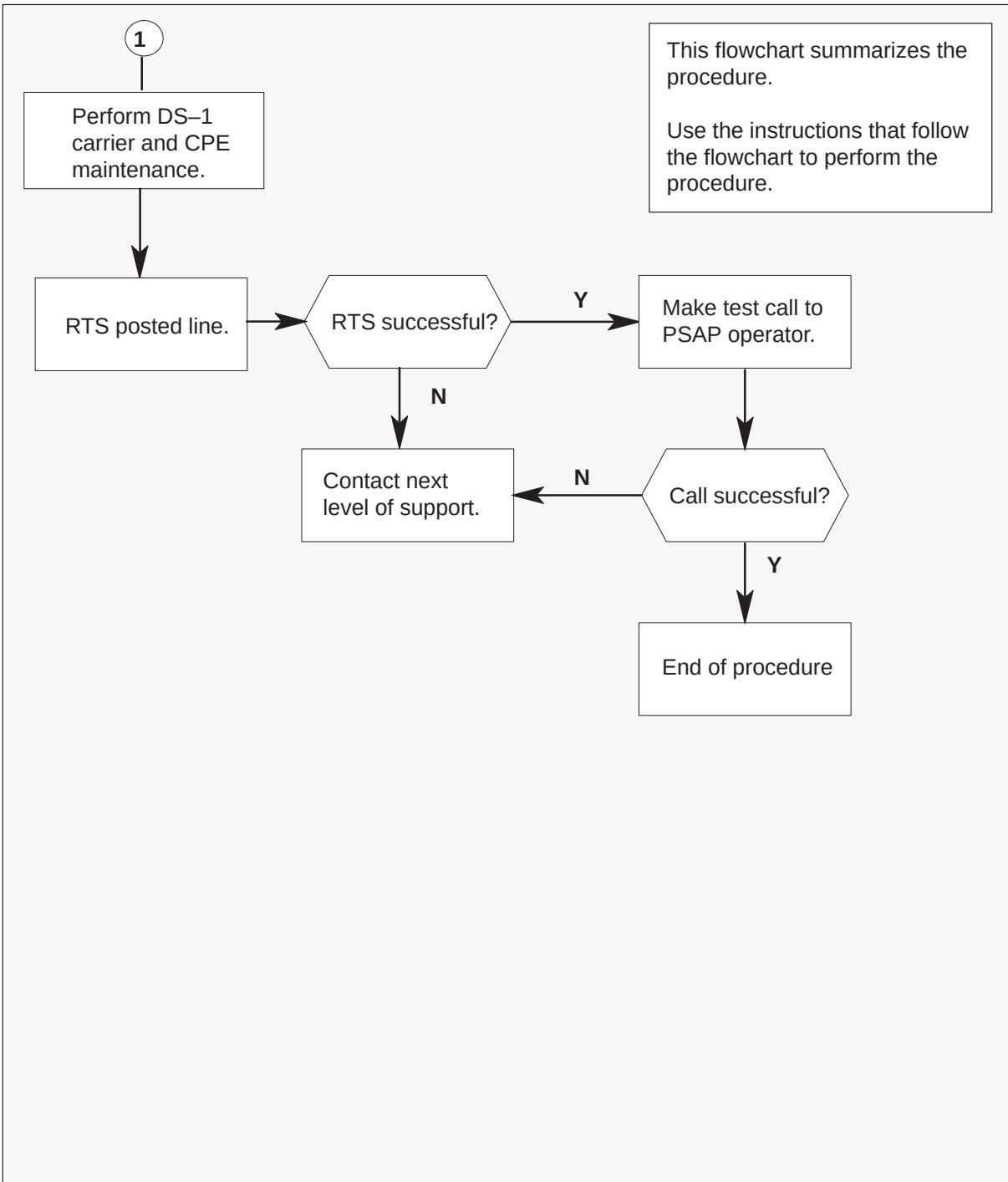
E911 LDT PSAP complaint ANI failure (continued)

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.

E911 LDT PSAP complaint ANI failure (continued)

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
```

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.

E911 LDT PSAP complaint ANI failure (continued)

- 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.
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.

E911 LDT PSAP complaint ANI failure (continued)

- 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:

```
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 DIAG	Do
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.

E911 LDT PSAP complaint ANI failure (continued)

- 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** and press the Enter key.

If RTS	Do
succeeds	Go to step 12.
fails	Go to step 13.

E911 LDT PSAP complaint ANI failure (end)

- 12** Call the PSAP operator to test ANI information reception.

If the call	Do
goes through and the operator receives ANI	Go to step 14.
goes through and the operator doe not receive ANI	Go to step 13.

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

- 14** 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.

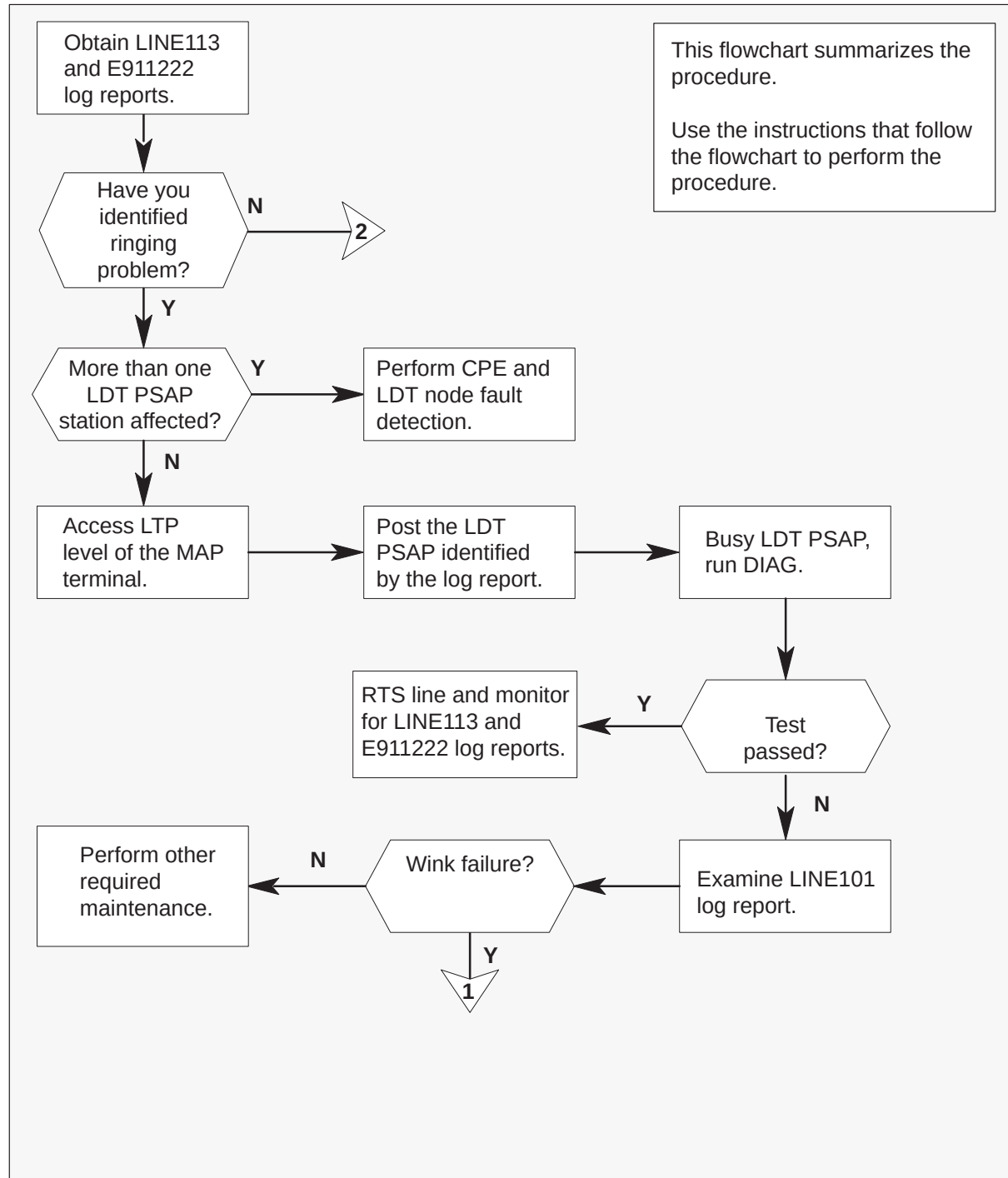
Action

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

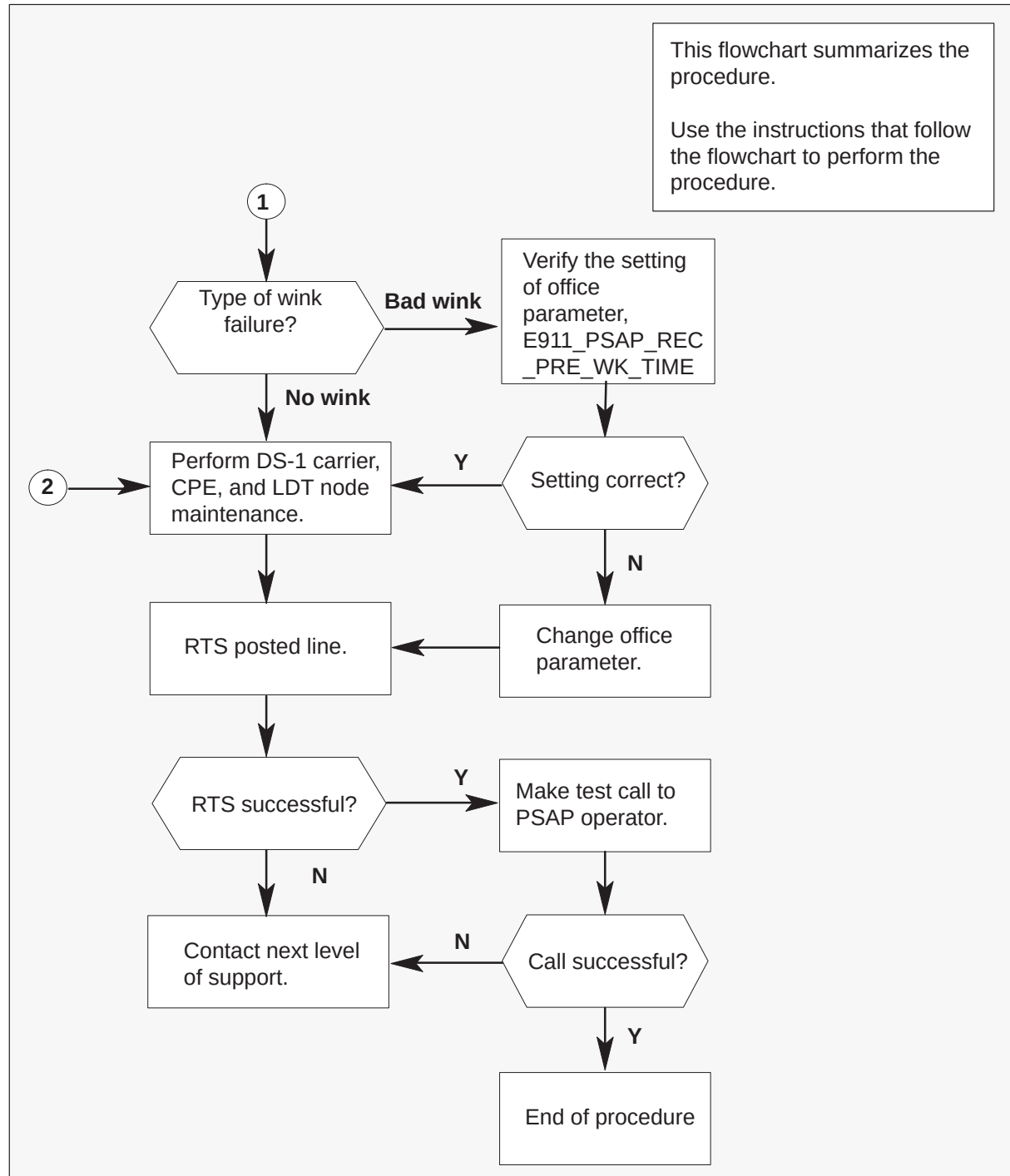
Ringing not being applied to PSAP position (continued)

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.

E911 LDT PSAP Operator Complaint

Ringing not being applied to PSAP position (continued)

- 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 PSAP PSAP WINK FAIL	Go to step 5
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

- 4 To exit the LOGUTIL log report system, type

>QUIT

and press the Enter key.

E911 LDT PSAP Operator Complaint

Ringing not being applied to PSAP position (continued)

- 5 To access the LTP level of the MAP terminal, type

>MAPCI; MTC; LNS; LTP

and press the Enter key.

- 6 To post the line identified in the LINE113 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 ANI SPILL (line card code PSAPWA). The maintenance trunk module must contain a transmission test unit to support a line test.

E911 LDT PSAP Operator Complaint

Ringling not being applied to PSAP position (continued)

The following is a normal message displayed at the MAP terminal:

```
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 posted line	Do
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

- 9 Examine the LINE101 log report for the test failure displayed at the MAP terminal.

If the DIAGNOSTIC RESULT line of the log	Do
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.

E911 LDT PSAP Operator Complaint

Ringing not being applied to PSAP position (continued)

- 10 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:

- the call goes to the next idle unit in the hunt group
- A LINE113 log report generates

If you have to, you can increase the parameter for calls sent to the PSAP position.

If parameter setting	Do
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.
is correct	Go to step 11

- 11 Perform DS-1 carrier maintenance. Refer to *Subscriber Carrier Module-100 Urban Maintenance Manual*, 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 *Alarm Clearing and Performance Monitoring Procedures* 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.

E911 LDT PSAP Operator Complaint
Ringing not being applied to PSAP position (end)

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

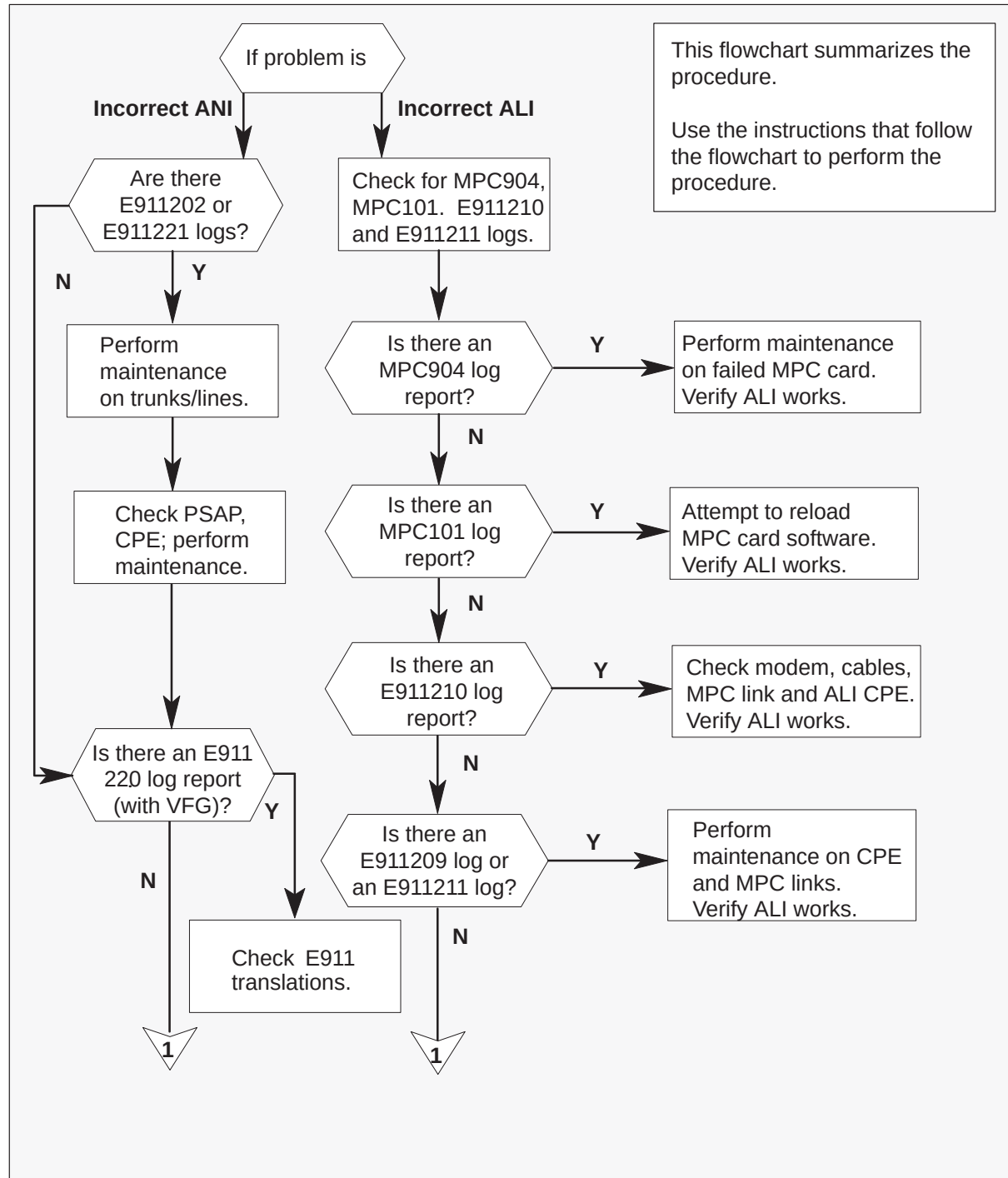
There are no common procedures.

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.

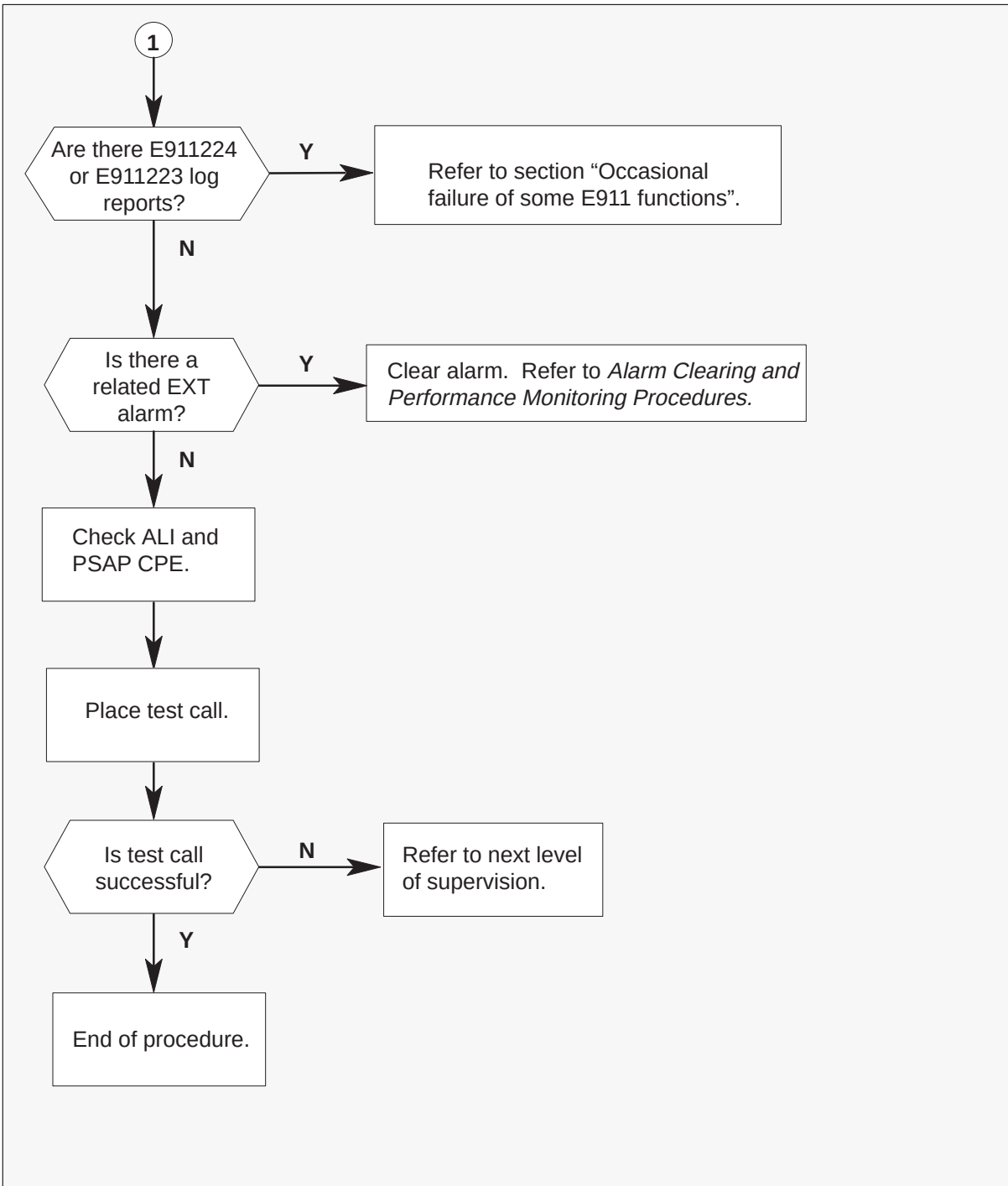
E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

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, NTP58AA, must be present in the software at your site.

E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

- 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 log report to generate.

In this occurrence, type the following:

>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.
- 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 log report 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.

E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

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.



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.

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.

E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (continued)

- 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 MPCLINK. 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.
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.
—end—	

E911 Line and ACD PSAP complaint ANI failure (or ALI failure) (end)

- 11 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.

If	Do
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.

- 12 If the problem continues, contact the next level of support.
- 13 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

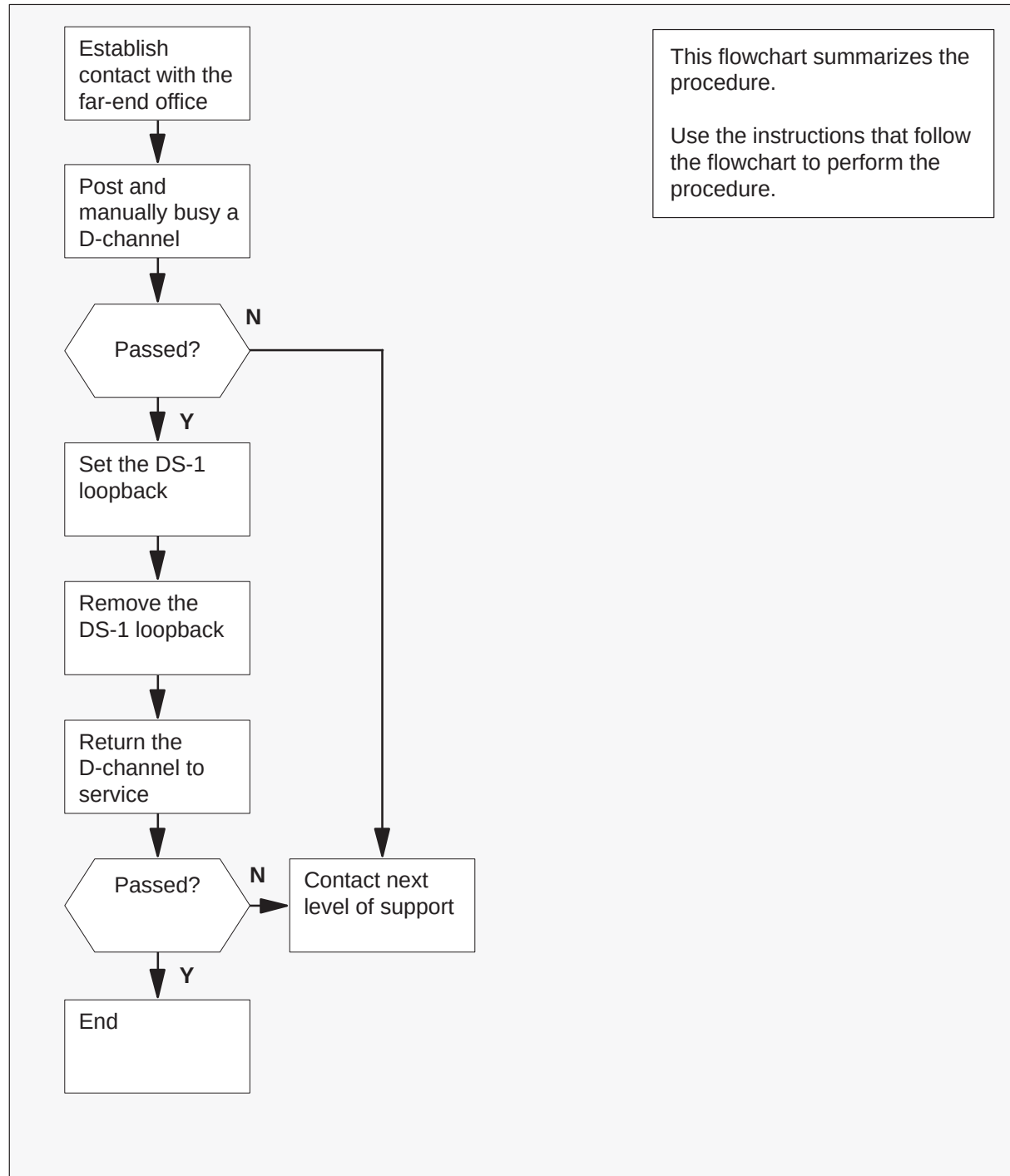
There are no common procedures.

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.



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

Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (continued)

- 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:

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_channel

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

Establishing a DS-1 loopback for a far-end office ISDN PRI primary and backup D-channels (end)

- 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

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.
- 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

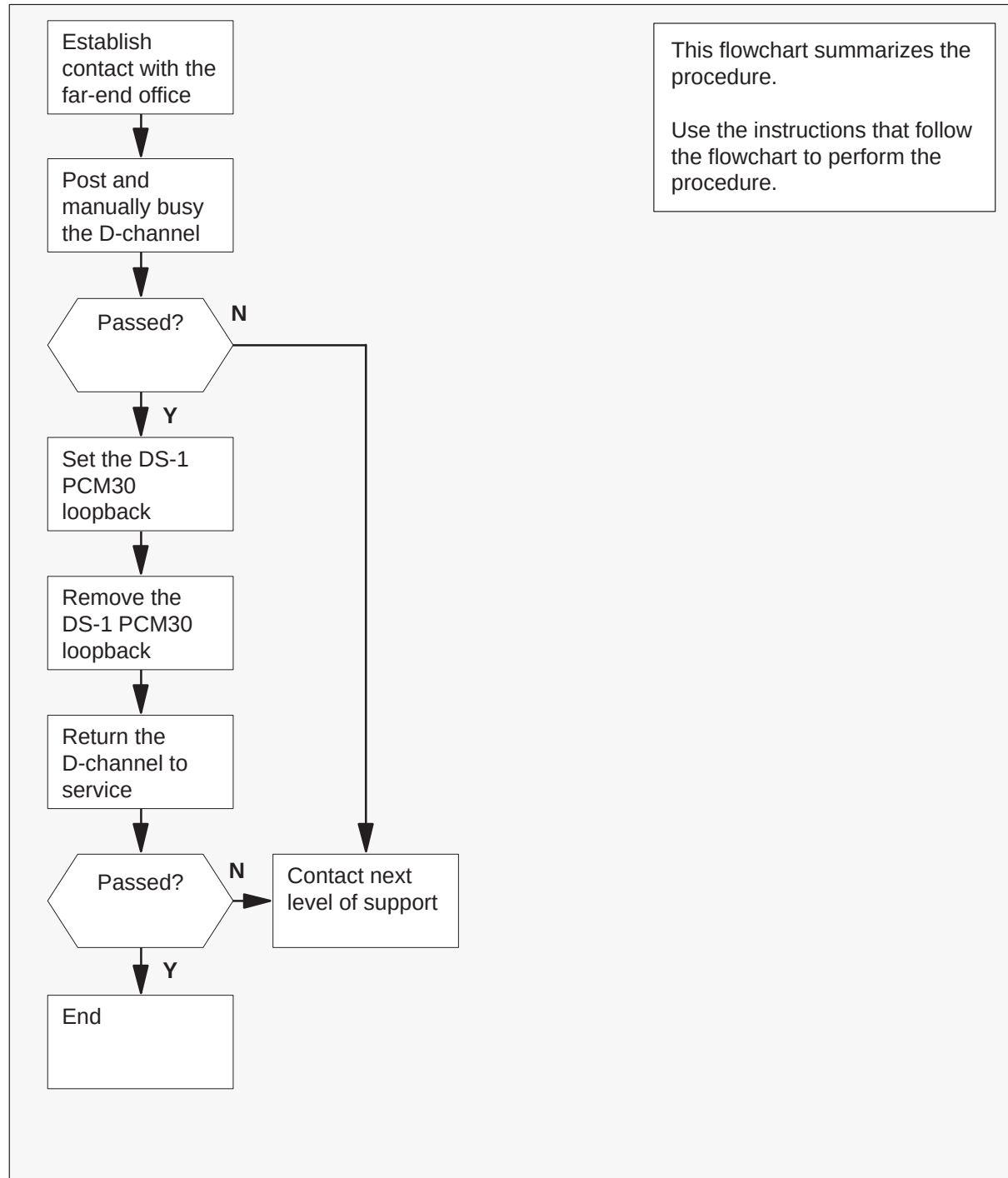
There are no common procedures.

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-1PCM30 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 DTCTI 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

Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (continued)

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.



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

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

Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (continued)

- 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
failed	step 10

Establishing a DS-1 PCM30 loopback for a far-end office ISDN PRI single D-channel (end)

- 9 To return the D-channel to service, type

>RTS

and press the Enter key.

Example of a MAP response:

STATE CHANGED

Note: The state of the D-channel is to the right side of the DCHL header on the MAP display.

If the RTS command	Do
passed (INS state)	step 11
failed	step 10

- 10 For additional help, contact the next level of support.
- 11 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

link_no is the number of a link (0 to 7) 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
```

Estimating signaling link occupancy (end)

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.
- 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 a 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.

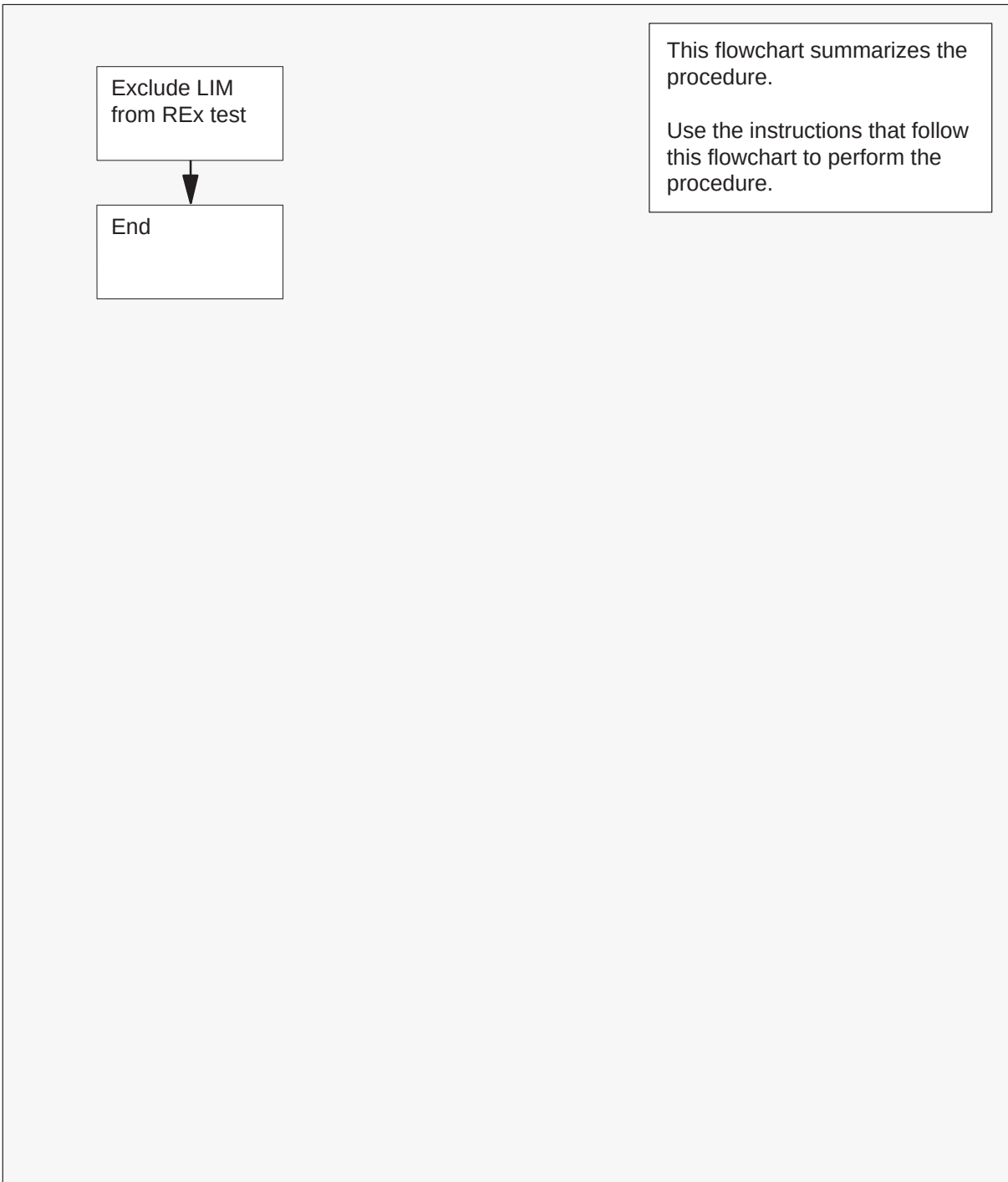
Action

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 a LIM from an automatic REx test schedule

(continued)

Summary of Excluding a LIM from an automatic REx test schedule



Excluding a LIM from an automatic REx test schedule (end)

Excluding a 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.
- 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

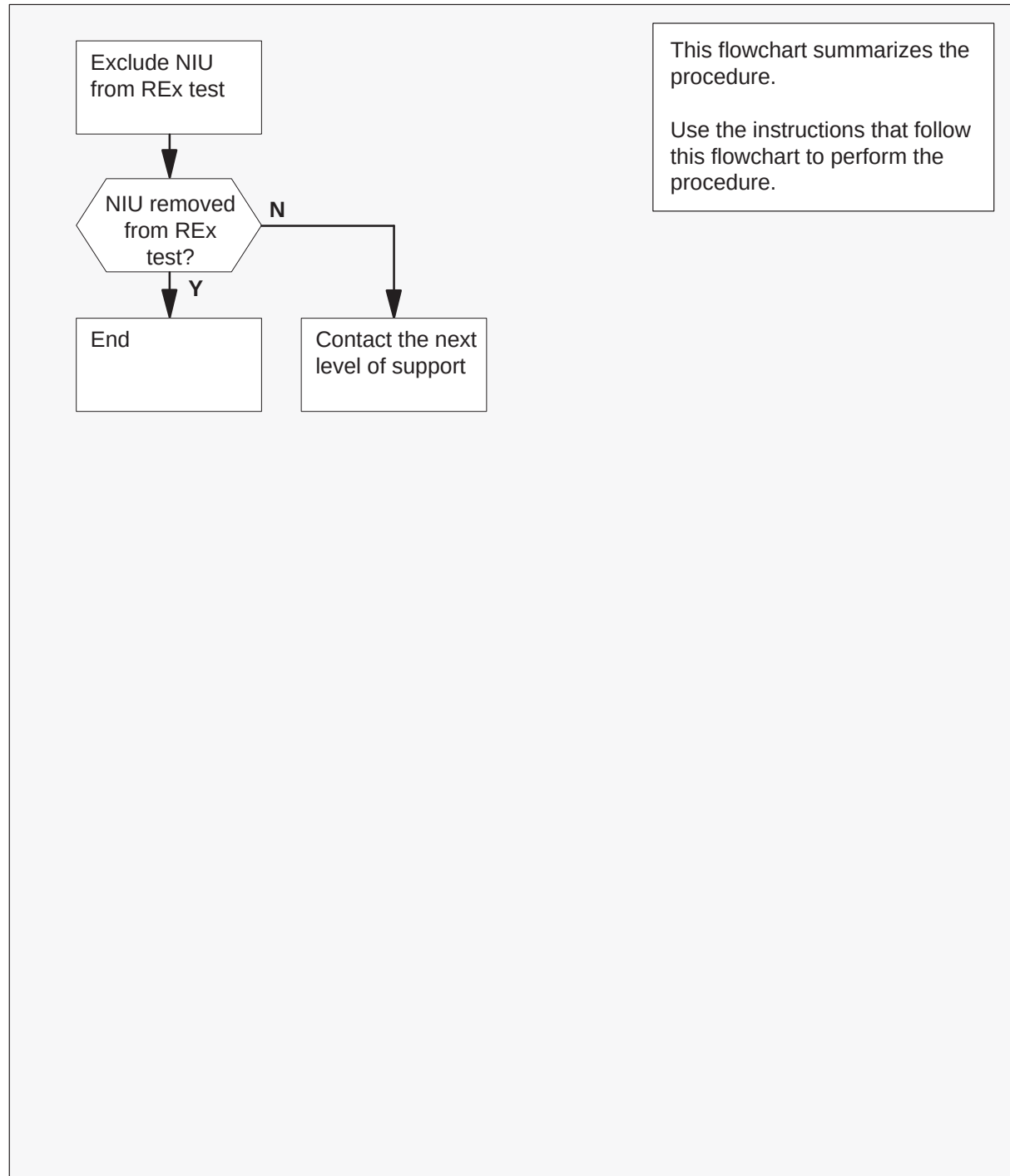
There are no common procedures.

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

Excluding an NIU from an automatic REx test schedule (continued)

- 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
is NIU n cannot be removed from the REx schedule.	step 5
is Command rejected. The PM is offline.	step 6

- 5 Determine if this time is the first or second time you are attempting to remove the NIU from the REx test schedule.

If this	Do
is the first attempt	step 4
is the second attempt	step 9

- 6 Determine from office records or from operating company personnel why the NIU is offline.

If you	Do
are permitted to return the NIU to service	step 7
are not permitted to return the NIU to service	step 10

- 7 To manually busy the posted NIU, type

>BSY PM

and press the Enter key.

Excluding an NIU from an automatic REx test schedule (end)

- 8 To return the the posted NIU to service, type
>RTS PM
and press the Enter key.

If the RTS command	Do
passes	step 4
fails	step 9

- 9 For additional help, contact the next level of support.
- 10 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

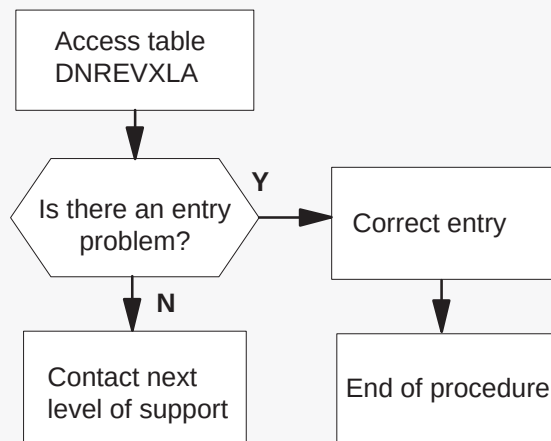
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

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 DNREVLXA and check the entries.

If entries	Do
are correct	step 3
are wrong	step 2

- 2** Correct the table DNREVLXA 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.

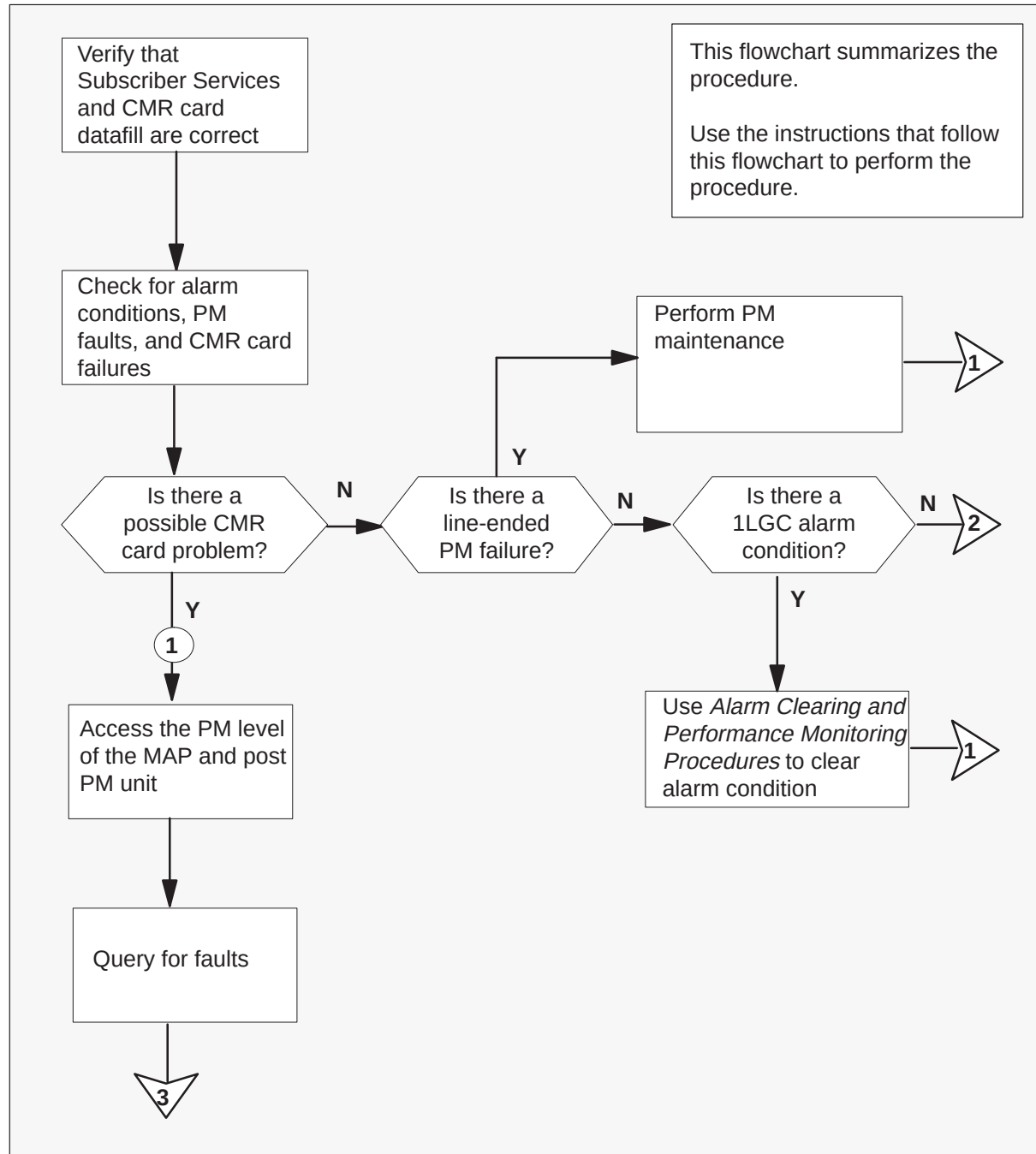
Action

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.

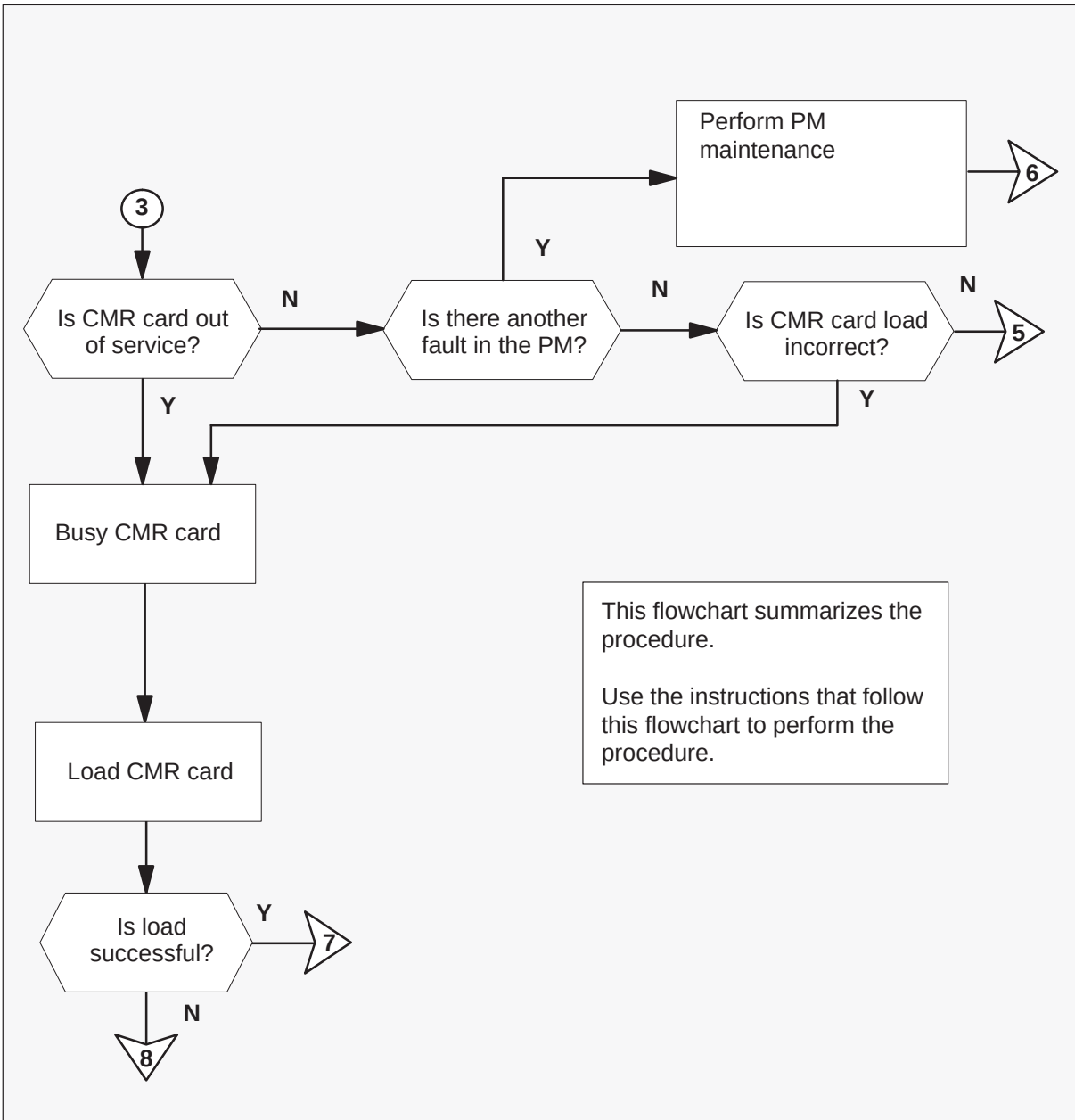
Incorrect or no displayed calling party name or DN (continued)

Summary of Incorrect or no displayed calling party name or DN



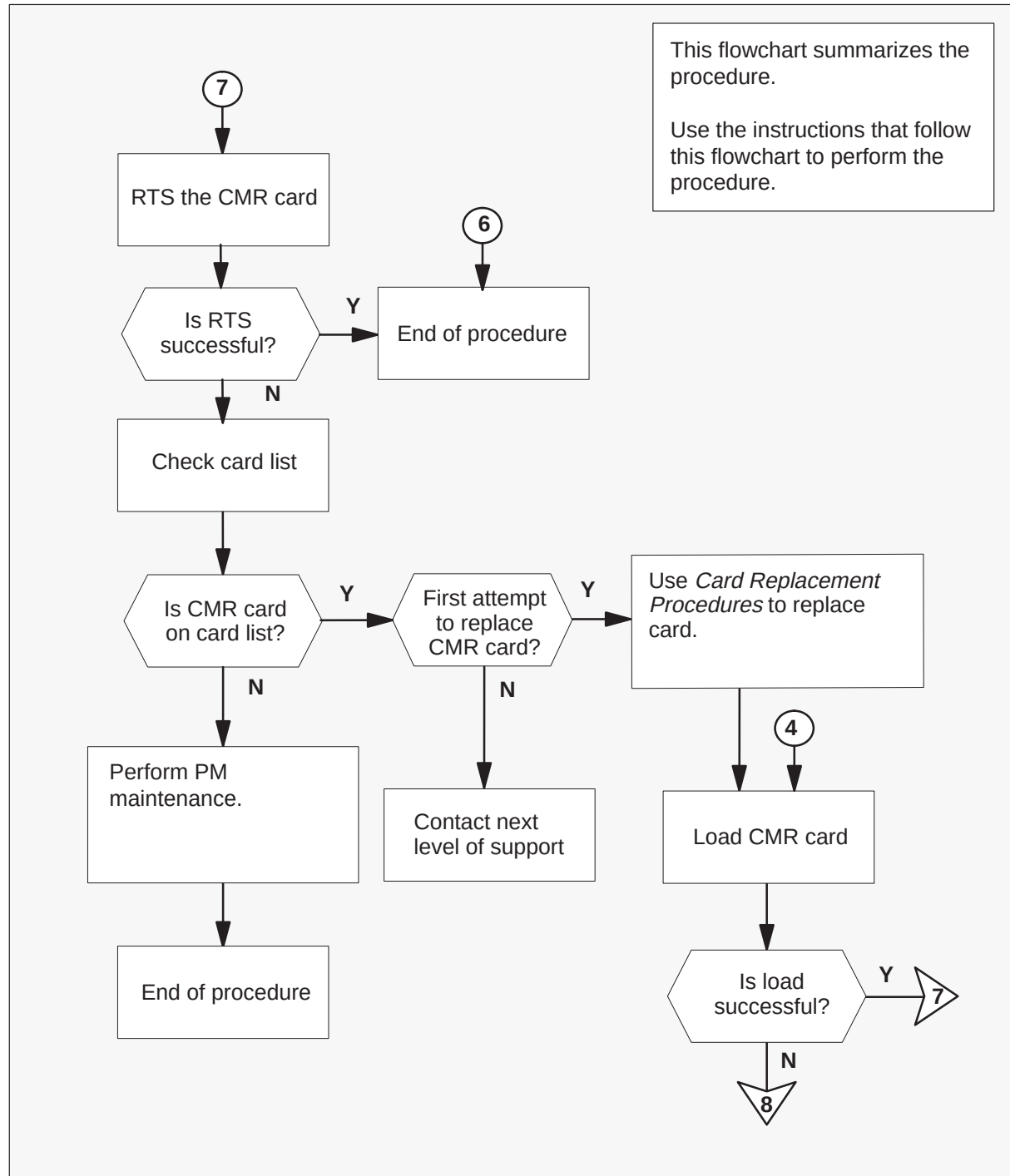
Incorrect or no displayed calling party name or DN (continued)

Summary of Incorrect or no displayed calling party name or DN (continued)



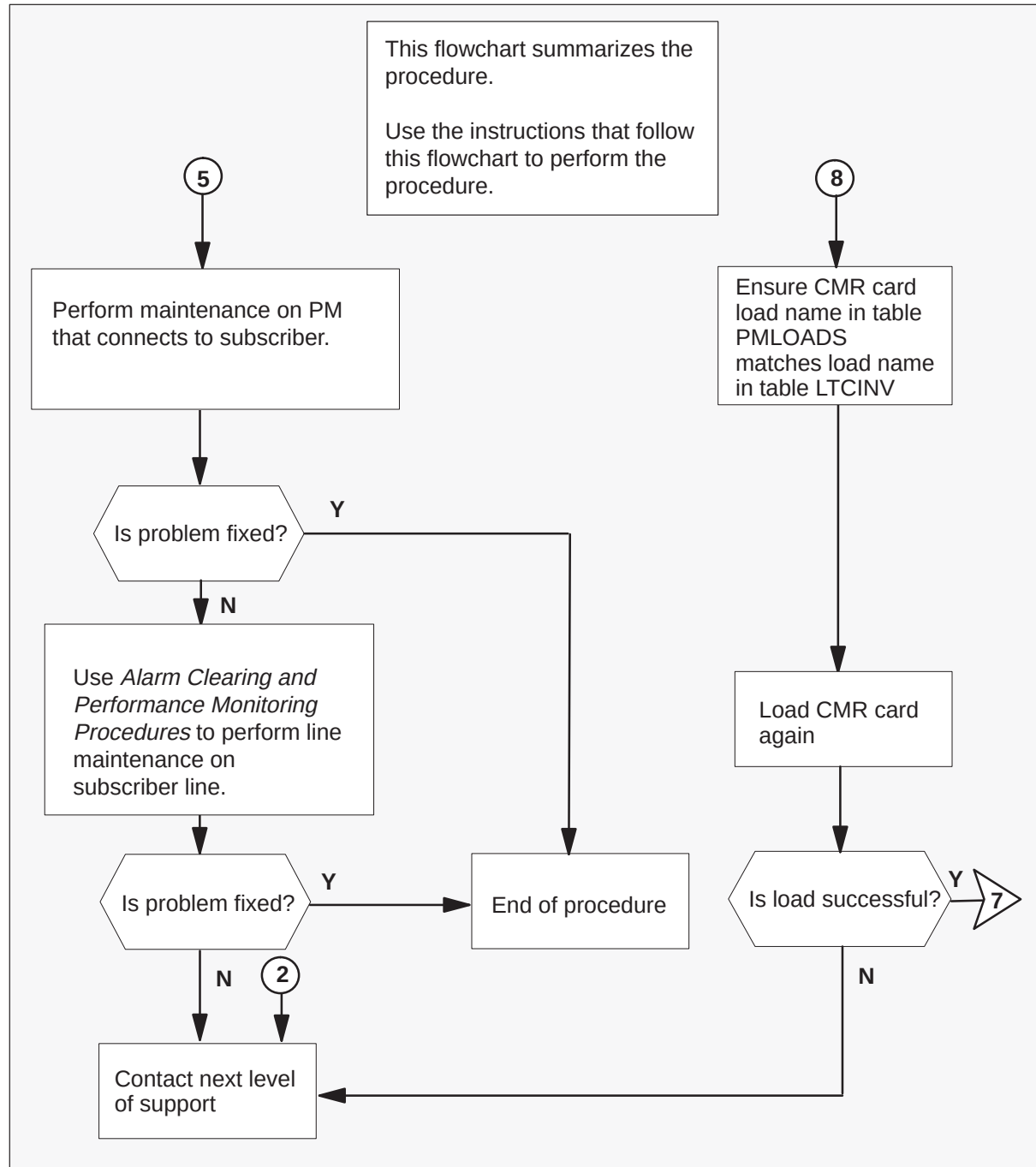
Incorrect or no displayed calling party name or DN (continued)

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.

Incorrect or no displayed calling party name or DN (continued)

- 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

and press the Enter key.

If response	Do
is CLASS MODEM RESOURCE CARD NT6X78 OUT OF SERVICE	step 14
is another message that associates with the CMR card	step 17
is CMR load mismatch with Inventory table	step 17
is another card in the PM has a fault	step 10
is no fault	step 12

- 10 Perform PM maintenance on the PM posted, and return to this point.

- 11 Go to step 32.

- 12 Perform PM maintenance on the PM connected to the subscriber.

If problem	Do
continues to be present	step 13
is not present	step 32

Incorrect or no displayed calling party name or DN (continued)

- 13 Refer to *Alarm Clearing and Performance Monitoring Procedures* to perform line maintenance on subscriber line.

If problem	Do
continues to be present	step 31
is not present	step 32

- 14 Note the unit of the PM that has the out-of-service CMR card.

- 15 Go to step 17.

- 16 Note the unit of the PM that has the suspect CMR card.

- 17 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.

- 18 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.

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

Incorrect or no displayed calling party name or DN
(continued)

- 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
is CMR FAILED TO LOAD. TASK ABORTED WHILE LOADING CMR.	step 24
—continued—	

Incorrect or no displayed calling party name or DN (continued)

If response	Do
is CMR FILE CMRXXXXX NOT FOUND ON DEVICE INDICATED IN TABLE PMLOADS	step 24
Note: CMRXXXXX is the CMR load name	
is FAILED TO OPEN successfully	step 24
—end—	

- 24** 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: NLG32BU
ROM Load: XPMRKA02
CMR LOAD: CMR33AI5
CMR DEFINERS: 12
MP: 6X45BA/BB
SP: 6X45BA/BB
Unit 1:
RAM Load: NLG32BU
ROM Load: XPMRKA03
CMR LOAD: CMR33AI5
CMR DEFINERS: 12
MP: 6X45BA/BB
SP: 6X45BA/BB

```

Note: In this example, the CMR load name is CMR33AI5.

- 25** Make sure that the CMR card load name in table PMLOADS matches the load name specified in table LTCINV or table RCCINV.

Incorrect or no displayed calling party name or DN (continued)

- 26 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
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
```

If RTS	Do
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

Incorrect or no displayed calling party name or DN (end)

- 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.

If the replacement of the CMR card	Do
is occurring for the first time	step 22
is complete	step 31

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

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

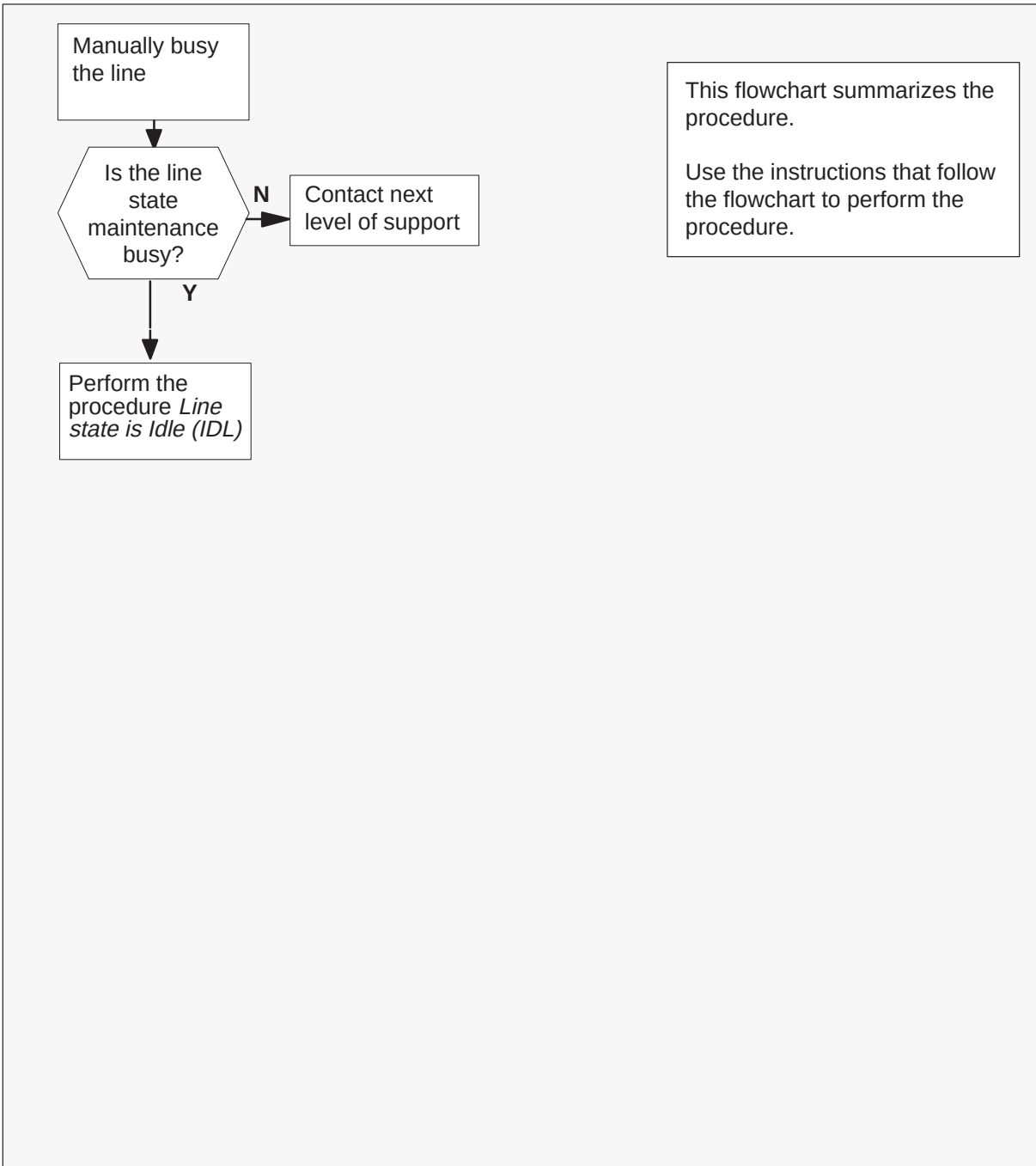
There are no common procedures.

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) (continued)

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.



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.
- 2 Determine the state of the line.

If the state of the line	Do
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

**Line state is
Call processing busy (CPB) (end)**

- 3 Wait 5 min. Determine the state of the line.

If the state of the line	Do
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

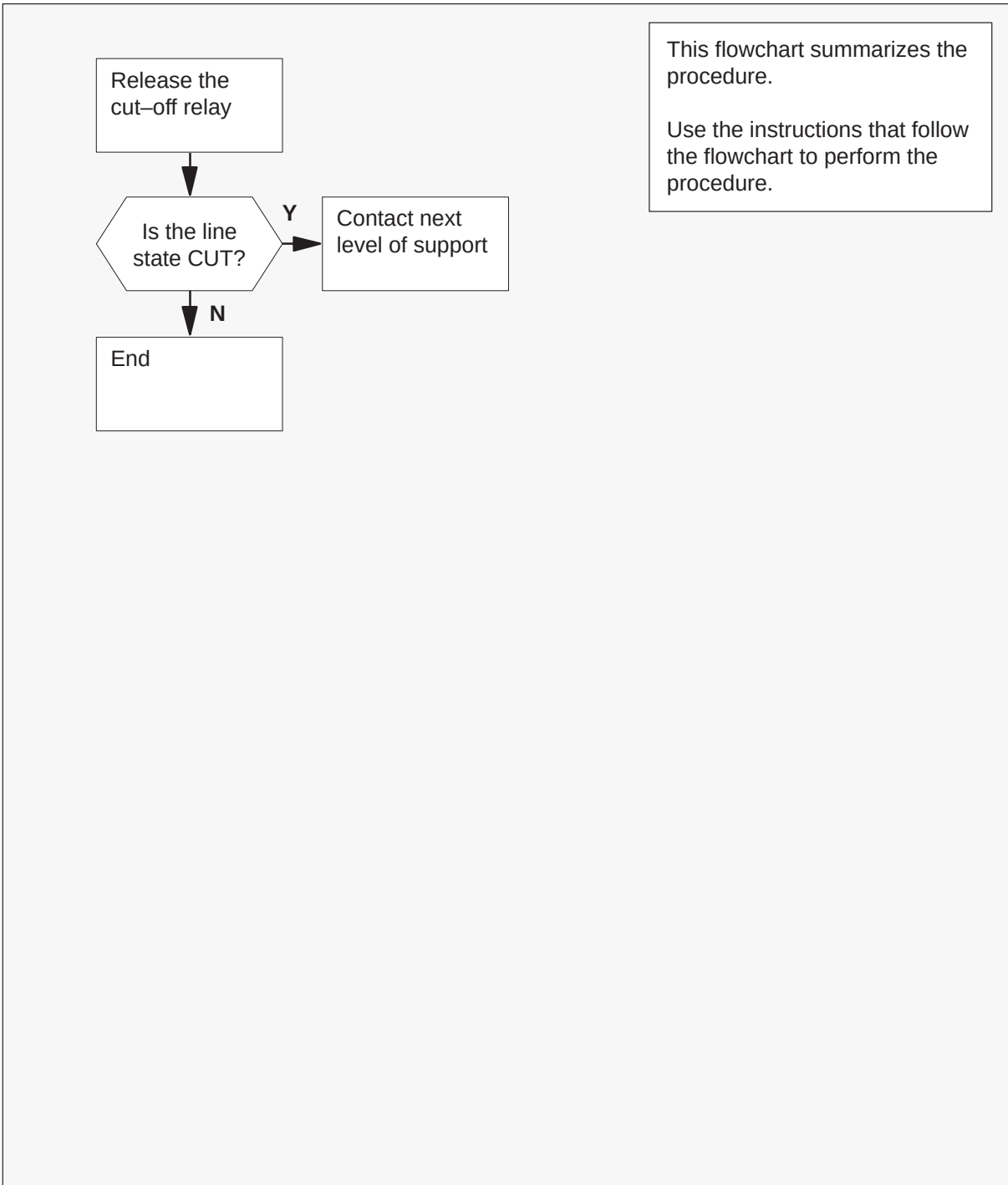
There are no common procedures.

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.

Line state is Cut (CUT) (continued)

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.



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.

If the state of the line	Do
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 babblers (DMB inverse video and I fail flag).
- The ISDN service group (ISG) channel is out of service.

Note: Call processing for the generic services framework (GSF) supports the EDCH, but not the DCH.

Common procedures

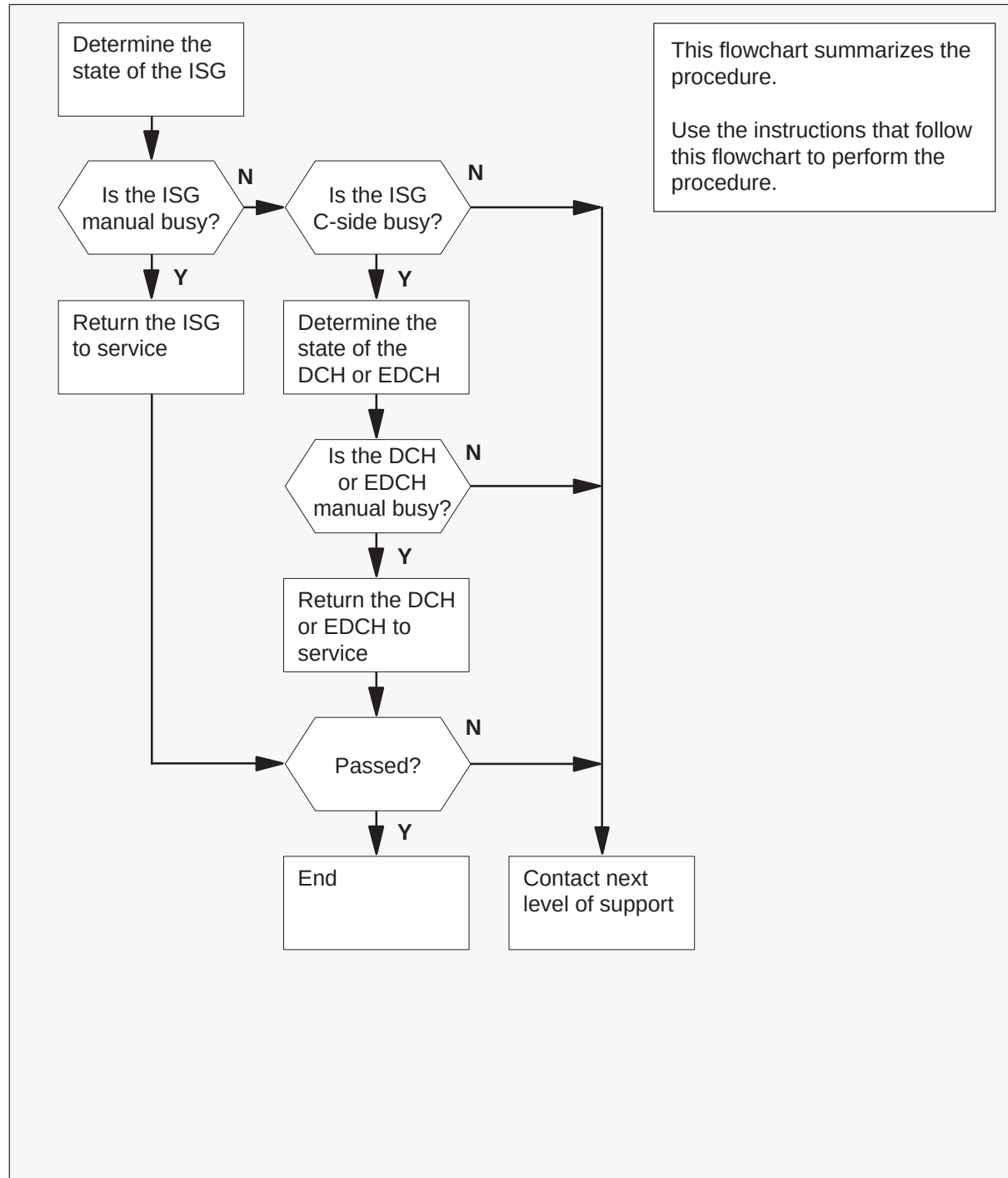
There are no common procedures.

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)

At the MAP terminal

1



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.



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.

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
```

Note: GSF call processing supports the EDCH, but not the DCH.

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

Line state is D-channel maintenance busy (DMB) (continued)

- 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

- 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:

Line state is D-channel maintenance busy (DMB) (continued)

```
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

- 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

Line state is D-channel maintenance busy (DMB) (continued)

- 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

- 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.

Line state is D-channel maintenance busy (DMB) (end)

- 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
failed	step 19

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

- 20 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

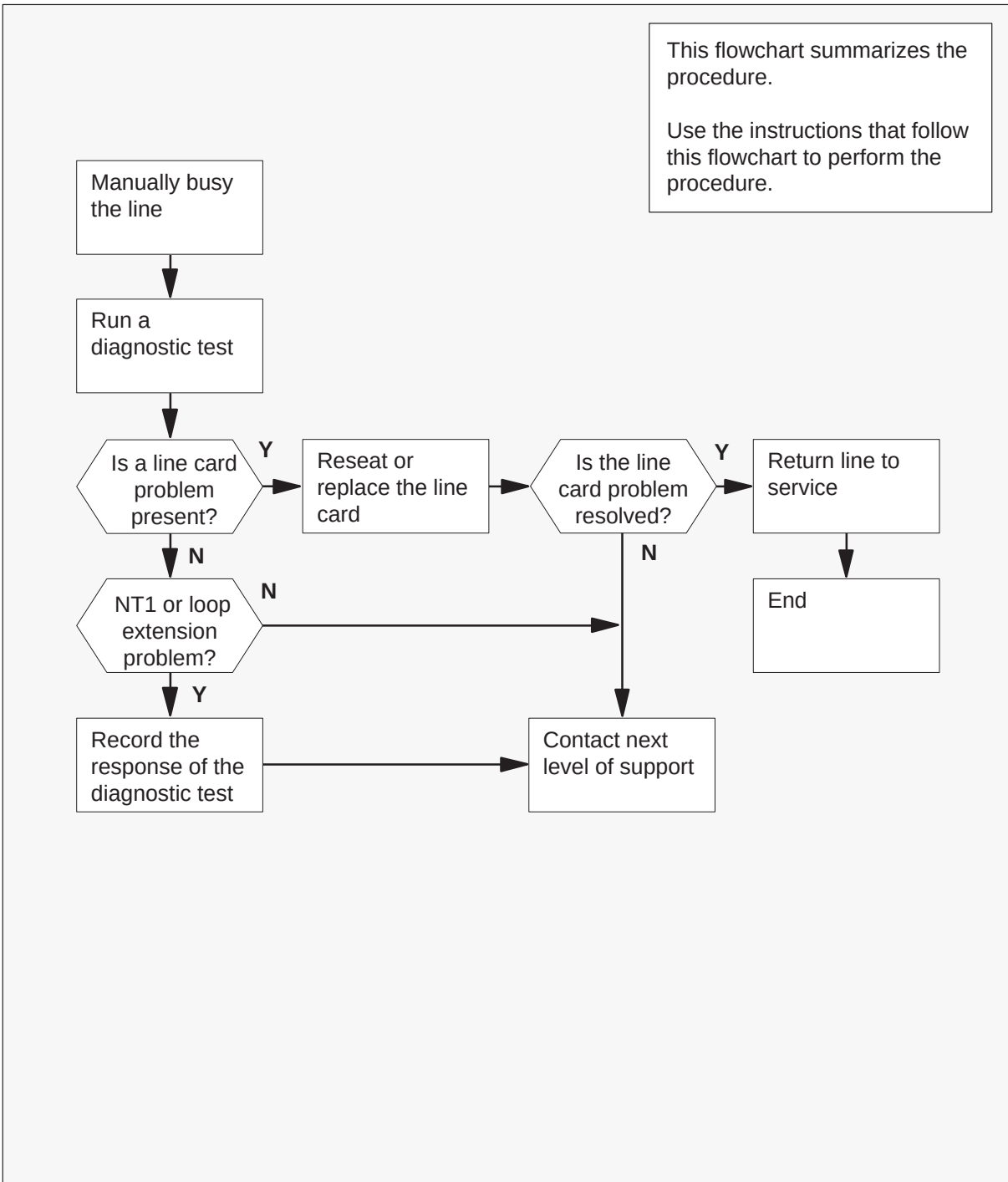
This procedure refers to *Reseating a line card*. This procedure also refers to *Replacing a line card*, and *Replacing a point-of-use power supply card*.

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.



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.

Line state is Idle (IDL) (continued)

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.

- 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

Line state is Idle (IDL) (continued)

- 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.

If the results	Do
display a line 100 log, indicated by PASS LN_DIAG	step 30
display a line 101 log, indicated by FAIL LN_DIAG	step 12
display other than listed here	step 12

Line state is Idle (IDL) (continued)

- 12 Record the MAP response from the diagnostic test.

If the response	Do
is PUPS failure detected.	step 21
is FEBE detection test failed.	step 29
is Communications failed to NT1.	step 25
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

- 13 Perform the procedure *Reseating a line card*. Complete the procedure and return to this point.

- 14 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"):

- 15 To confirm the command, type

>YES

and press the Enter key.

Line state is Idle (IDL) (continued)

- 16 Your next step depends on the results of the diagnostic test.

If the results display	Do
display a line 100 log, indicated by PASS LN_DIAG	step 30
display a line 101 log, indicated by FAIL LN_DIAG	step 17
display other than listed here	step 17

- 17 Perform the procedure *Replacing a line card*. Complete the procedure and return to this point.

- 18 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"):

- 19 To confirm the command, type

>YES

and press the Enter key.

- 20 Your next step depends on the results of the diagnostic test.

If the results	Do
display a line 100 log, indicated by PASS LN_DIAG	step 30
display a line 101 log, indicated by FAIL LN_DIAG	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.

Line state is Idle (IDL) (continued)

- 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.

If the results	Do
display a line 100 log, indicated by PASS LN_DIAG	step 30
display a line 101 log, indicated by FAIL LN_DIAG	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.

If the MAP response	Do
included an ISDN mp-eoc status	step 26
did not include an ISDN mp-eoc status	step 29

- 26 Determine the status of the ISDN mp-eoc units.

If the ISDN mp-eoc status	Do
is . (active) for the line units	step 29
is – (inactive) for the line units	step 27

Line state is Idle (IDL) (continued)

- 27** 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.

- 28** 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
Status      -  -
```

If the ISDN mp-eoc status	Do
is . (active) for the line units and active for the NT1	step 30
is – (inactive) for the line units	step 31
is . (active) for the line units and – (inactive) for the NT1	step 29

- 29** An NT1 problem exists. Refer to the MAP response recorded in step 12. Go to step 32.

**Line state is
Idle (IDL) (end)**

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

If the RTS	Do
failed	step 32
passed	step 33

- 31** For additional help, contact the operating company personnel responsible for the maintenance of the line units.
- 32** For additional help, contact the next level of support.
- 33** 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

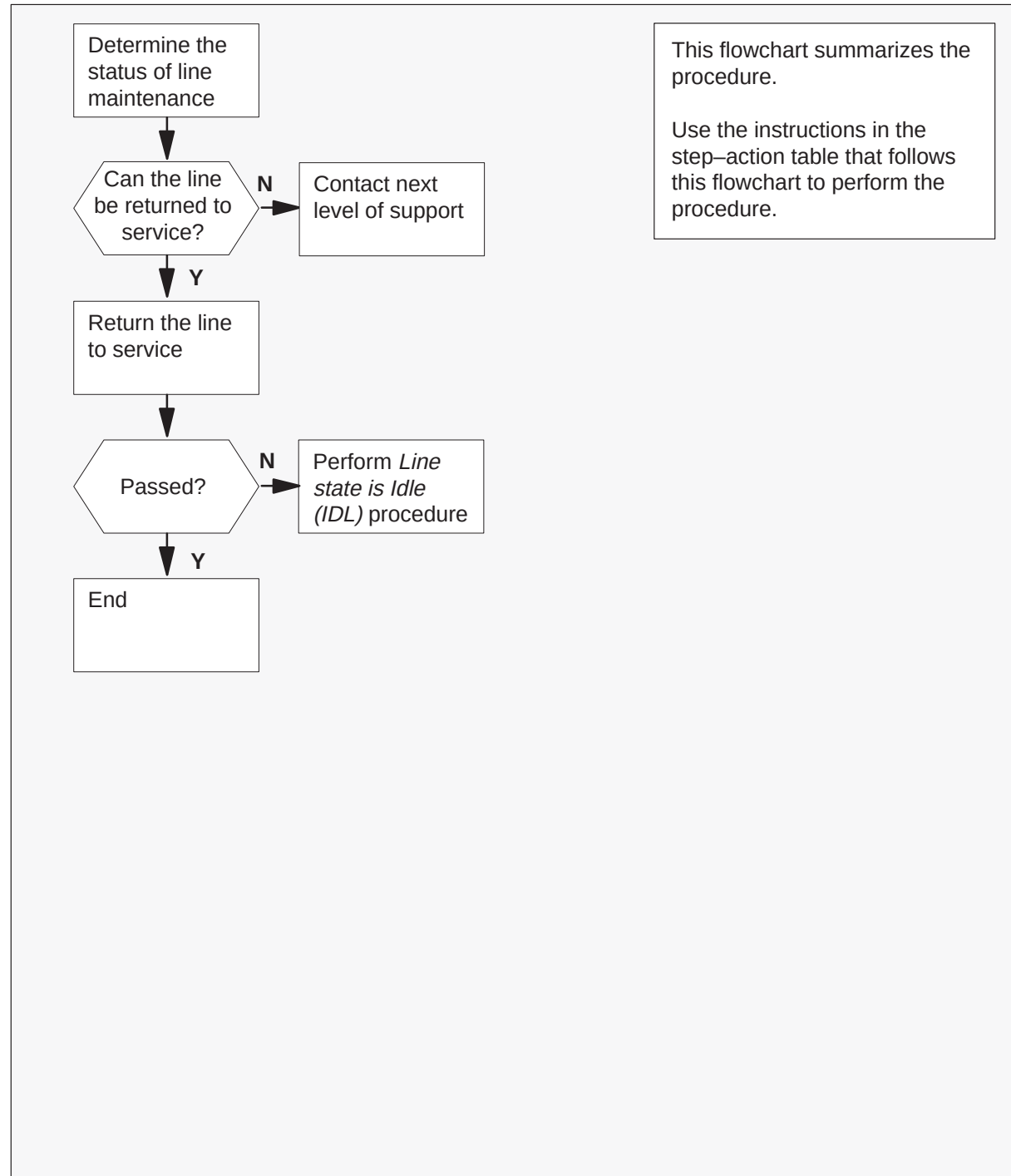
There are no common procedures.

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) (continued)

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.



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
MB (maintenance busy)	step 3
other than listed here	step 5

Line state is Installation busy (INB) (end)

- 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

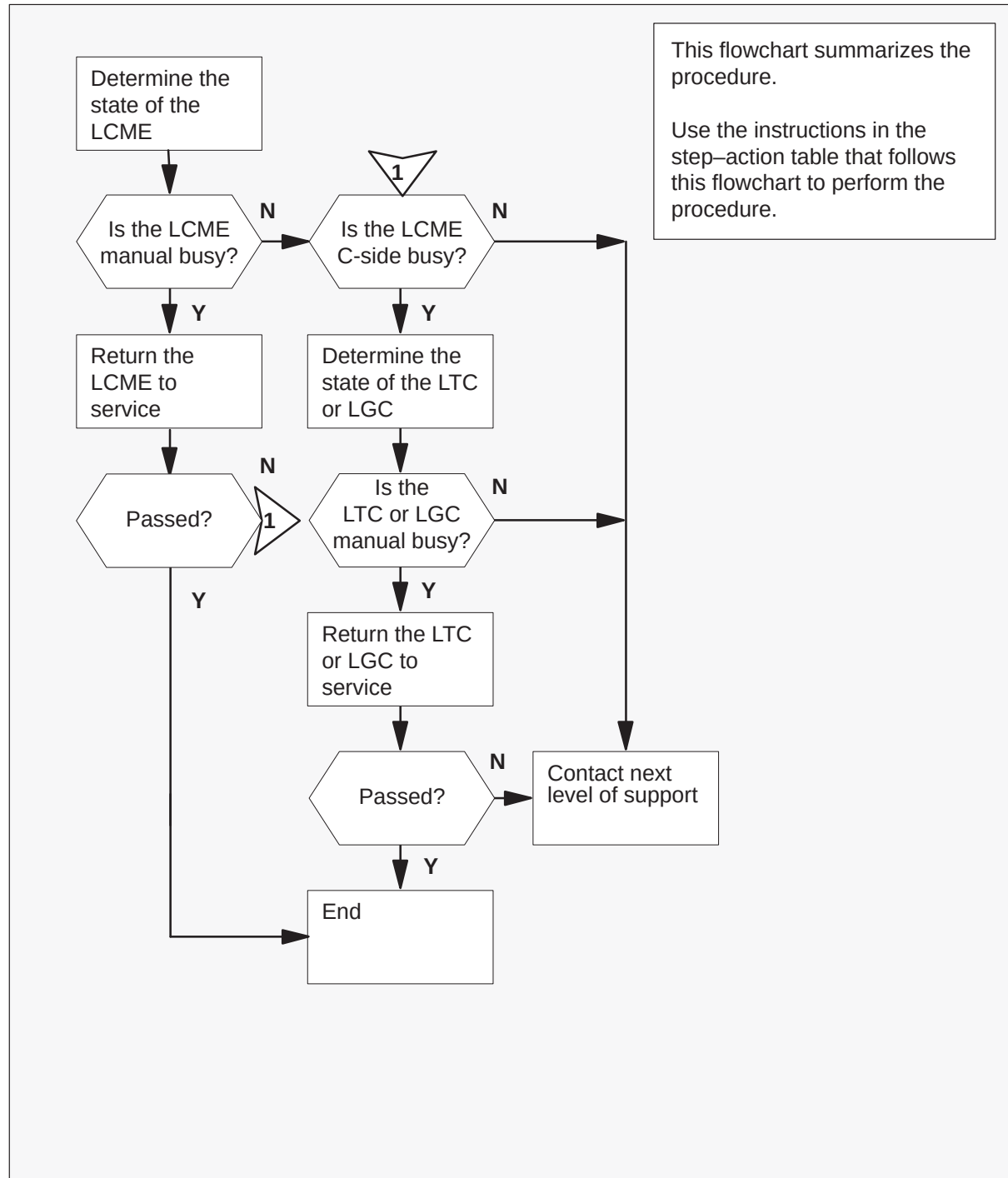
There are no common procedures.

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.



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.

**Line state is
Line module busy (LMB) (continued)**

- 3 From the CKTLOC information displayed in step 1, determine the state of the LCME.

If the state of the LCME	Do
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.

If the LCME	Do
can return to service	step 5
cannot return to service	step 13

- 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 00S: Cside  0
Unit0: SysB
Unit1: SysB
Drwr:  01  23  45  67  89  11  11  11  RG: Uneq
      ..  ..  ..  ..  ..  ..  ..  ..
```


Line state is Line module busy (LMB) (continued)

- 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

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:

Line state is Line module busy (LMB) (end)

```
LTC      1 ISTb  Links_00S: 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

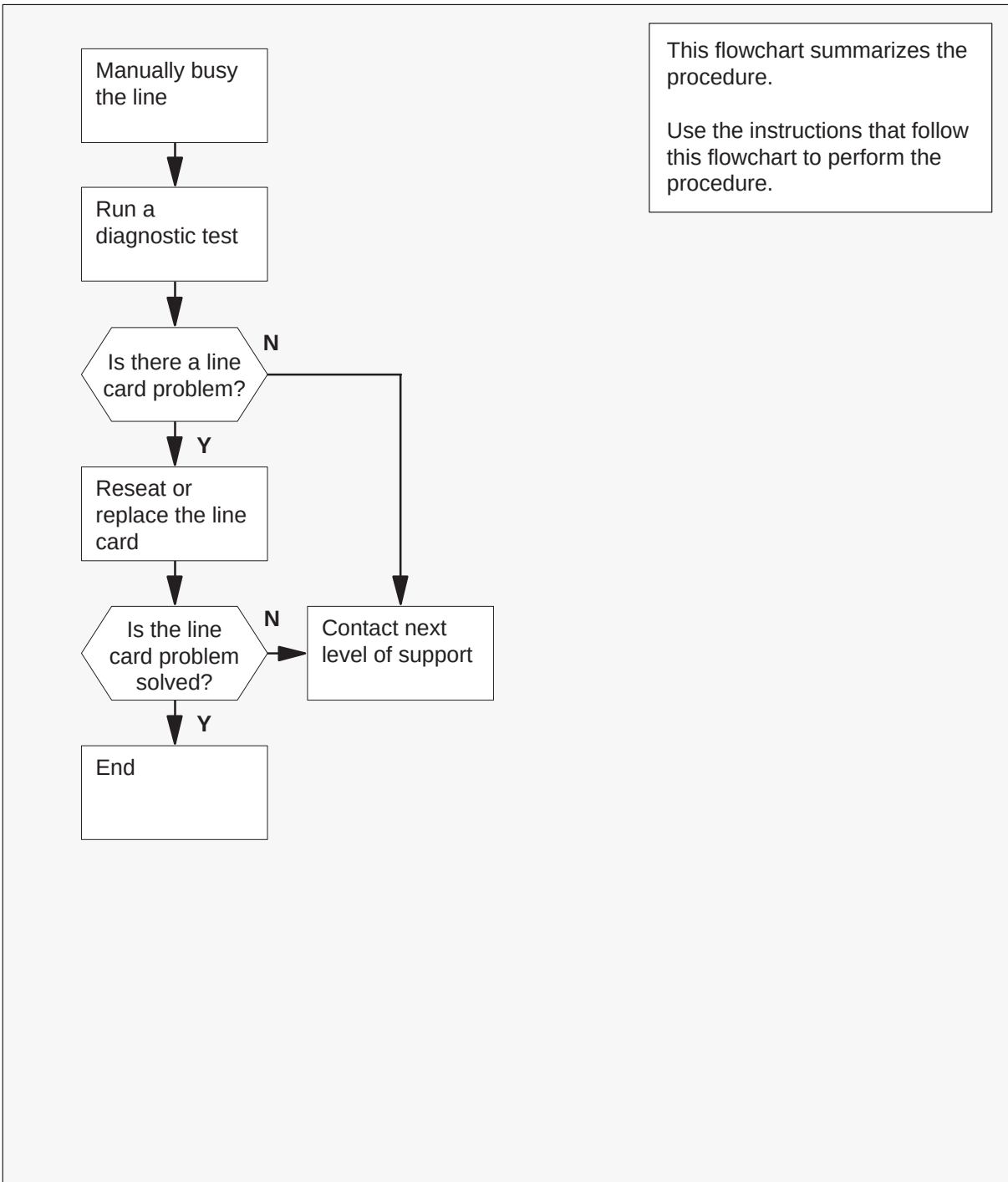
This procedure makes references to *Reseating a line card* and *Replacing a line card*.

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.



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.

Line state is Lock out (LO) (continued)

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 – 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.

Line state is Lock out (LO) (continued)

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 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:

```
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.

Line state is Lock out (LO) (continued)

- 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.

- 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.

Line state is Lock out (LO) (continued)

- 14 Your next step depends on the results of the diagnostic test.

If the results	Do
display a line 100 log, indicated by PASS LN_DIAG	step 24
display a line 101 log, indicated by FAIL LN_DIAG	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.

If the results	Do
display a line 100 log, indicated by PASS LN_DIAG	step 24
display a line 101 log, indicated by FAIL LN_DIAG	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.

Line state is Lock out (LO) (continued)

- 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
Status - -

If the ISDN mp-eoc status	Do
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

- 23** An NT1 problem exists. Refer to the MAP response recorded in step 10.
Go to step 26.

Line state is Lock out (LO) (end)

- 24 To return the line to service, type
>RTS
and press the Enter key.

If the RTS command	Do
passed	step 27
failed	step 26

- 25 For additional help, contact the person responsible for the maintenance of the line units.
- 26 For additional help, contact the next level of support.
- 27 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

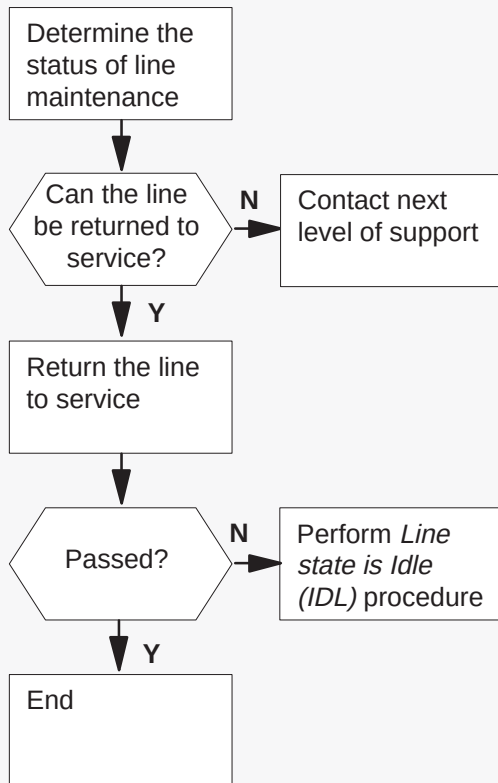
There are no common procedures.

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)



This flowchart summarizes the procedure.

Use the instructions in the step-action table that follows this flowchart to perform the procedure.

Line state is Maintenance busy (MB) (continued)

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.



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.

**Line state is
Maintenance busy (MB) (end)**

- 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

You cannot post the dn at the LTP menu level for GSF lines. You cannot perform queries about the dn at the CI level. To determine the dn, use the maintenance manager (MMI).

DCH support is not available for GSF lines.

Common procedures

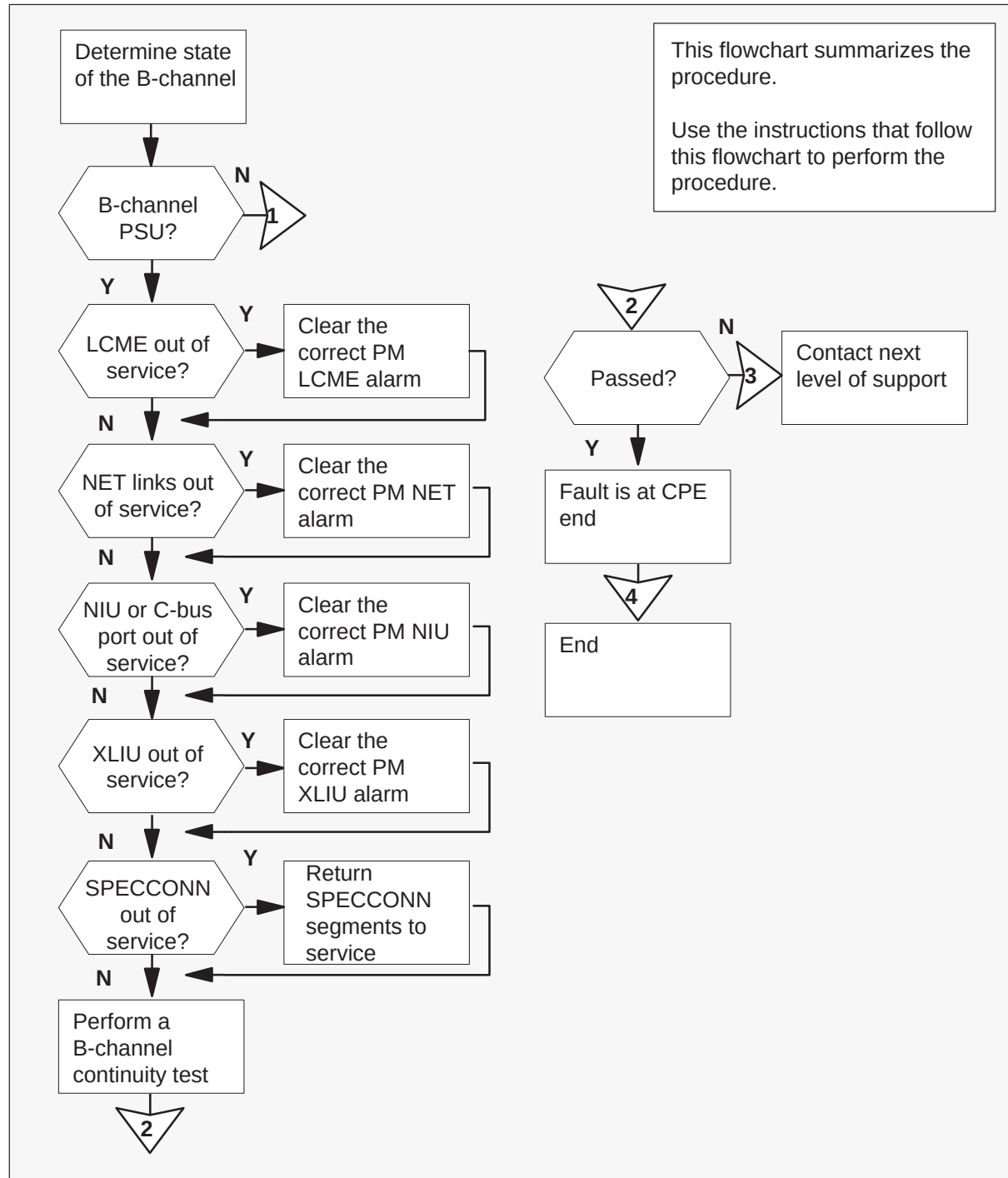
There are no common procedures.

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.

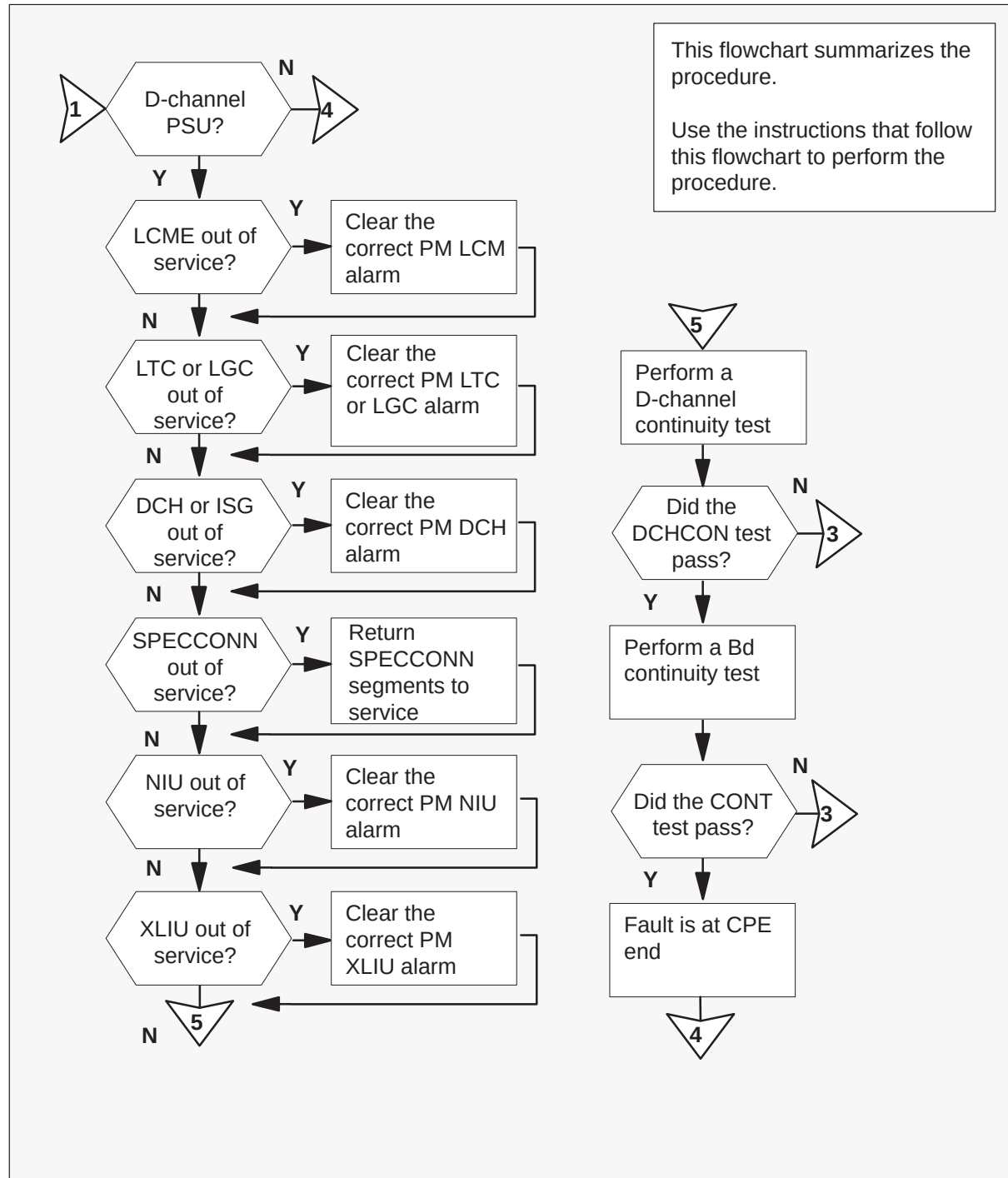
Line state is Packet service unavailable (continued)

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.



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					

Line state is Packet service unavailable (continued)

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

- 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

Line state is Packet service unavailable (continued)

If	Do
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

- 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

Line state is Packet service unavailable (continued)

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 NIU segment is inactive. The response indicates either a XLIU has faults or a NIU has faults.

If the bad segment	Do
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.

**Line state is
Packet service unavailable** (continued)

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

If	Do
status of the SPECCON segments is Act	step 2
status of the SPECCON segments is other than listed here	step 78

Line state is Packet service unavailable (continued)

- 13** 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 input:

>MAPCI;MTC;PM;POST LCME 7 1

Example of a MAP:

```
LCME HOST 7 1   SysB   Links 00S: Cside  5
Unit0: SysB
Unit1: SysB
Drwr:  01  23  45  67  89  01  23  45  11  11  11  RG: Uneq
      ..  ..  ..  ..  ..  ..  ..  ..
```

If	Do
the LCME is out of service	step 14
the LCME is in service	step 2

- 14** Perform the correct LCME alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.
- 15** Go to step 2.

**Line state is
Packet service unavailable** (continued)

- 16 To post the NET links that have faults, type
- >MAPCI;MTC;NET;LINKS link_no**
- and press the Enter key.
- where*
- link_no is the link number (0 to 31) determined in step 2 on the line of the response that follows NET

Example of a MAP:

```
Net          11111  11111  22222  22222  33
Plane 01234  56789  01234  56789  01234  56789  01
0      ....
1      ....
Net  3  Links          11  1111  1111  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.

Line state is Packet service unavailable (continued)

- 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:

```
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.

Line state is
Packet service unavailable (continued)

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:  Istb
Unit 0:  Act    Istb
Unit 1:  InAct  Istb
          Net Links
          0 1 2 3          CBUS ports 00S
PB 0     . . S .          1
PB 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.

Line state is Packet service unavailable (continued)

- 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:

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"):

**Line state is
Packet service unavailable** (continued)

- 29 To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

B1 Bb cont failed, invalid XLIU state

B1 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

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.

If	Do
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.

Line state is Packet service unavailable (continued)

- 32** You cannot post the dn at the LTP menu level for GSF lines. To determine the dn state, use the maintenance manager (MMI).

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.

If	Do
the DN state is PSU	step 34
the DN state is IDL	step 79
the DN state is other than listed here	step 33

- 33** Perform the correct trouble locating procedure.

Line state is Packet service unavailable (continued)

- 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.

DCH support is not available for GSF lines.

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.

DCH support is not available for GSF lines.

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 PMBusy	step 37
the SPECCONN status is Maintenance	step 38
the SPECCONN status is NoInteg	step 39
the SPECCONN status is InActive	step 39
all of the above are in service	step 59

Line state is Packet service unavailable (continued)

- 37** 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 SPECCON status remains PMBusy	step 39
the SPECCON status changes	step 34

- 38** The connection performs a maintenance action. Wait for the maintenance action to finish.

Note: Wait approximately two minutes.

If	Do
the SPECCONN status remains Maintenance	step 39
the SPECCONN status changes	step 34

Line state is Packet service unavailable (continued)

- 39 You cannot query the dn at the CI level for GSF lines. To query dn information, use the maintenance manager (MMI).

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
```

- 40 Record the XSG and channel numbers for the DN.

Line state is Packet service unavailable (continued)

- 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.

DCH support is not available for GSF lines.

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

Line state is Packet service unavailable (continued)

- 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

Example of a MAP:

LTC 1 ISTb Links_00S: 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.

**Line state is
Packet service unavailable** (continued)

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 00S: 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.

Line state is Packet service unavailable (continued)

- 53** To post the DCH that has faults, type

DCH support is not available for GSF lines.

>MAPCI;MTC;PM;POST pm pm_unit_no;DCH;POST dch_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

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_00S: 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.

DCH support is not available for GSF lines.

- 55** Go to step 34.

Line state is Packet service unavailable (continued)

- 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:

LTC 1 ISTb Links_00S: 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.

DCH support is not available for GSF lines.

- 58** Go to step 34.

Line state is Packet service unavailable (continued)

- 59** You cannot query the dn at the CI level for GSF lines. To query the dn information, use the maintenance manager (MMI).

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     ODTC:  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

```

- 60** Record the XSG and channel numbers from the response in step 59 for the DN.

Line state is Packet service unavailable (continued)

- 61 You cannot be query the dn at the CI level for GSF lines. To query the dn information, use the maintenance manager (MMI).

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.

Line state is Packet service unavailable (continued)

- 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
is out of service	step 68

- 68 Perform the correct XLIU alarm clearing procedure in *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

- 69 DCH support is not available for GSF lines.

To perform a D-channel continuity test between the DCH and the line card of the posted loop, type

>MAPCI;MTC;LNS;LTP;LTPISDN;DCHCON

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"):

- 70 To confirm the response, type

>YES

and press the Enter key.

Example of a MAP response:

DCH continuity test passed

If the DCHCON test	Do
passed	step 71
failed	step 78

Line state is Packet service unavailable (continued)

71 DCH support is not available for GSF lines.

To post the ISG recorded in step 35, 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:

```
LTC      1 ISTb  Links_00S: 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
```

Line state is Packet service unavailable (continued)

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
CARDCODE: 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.

73 Record the Bd channel number below the BCH/ISG Bd header in the response in step 72.

Line state is Packet service unavailable (continued)

- 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

Line state is
Packet service unavailable (end)

- 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

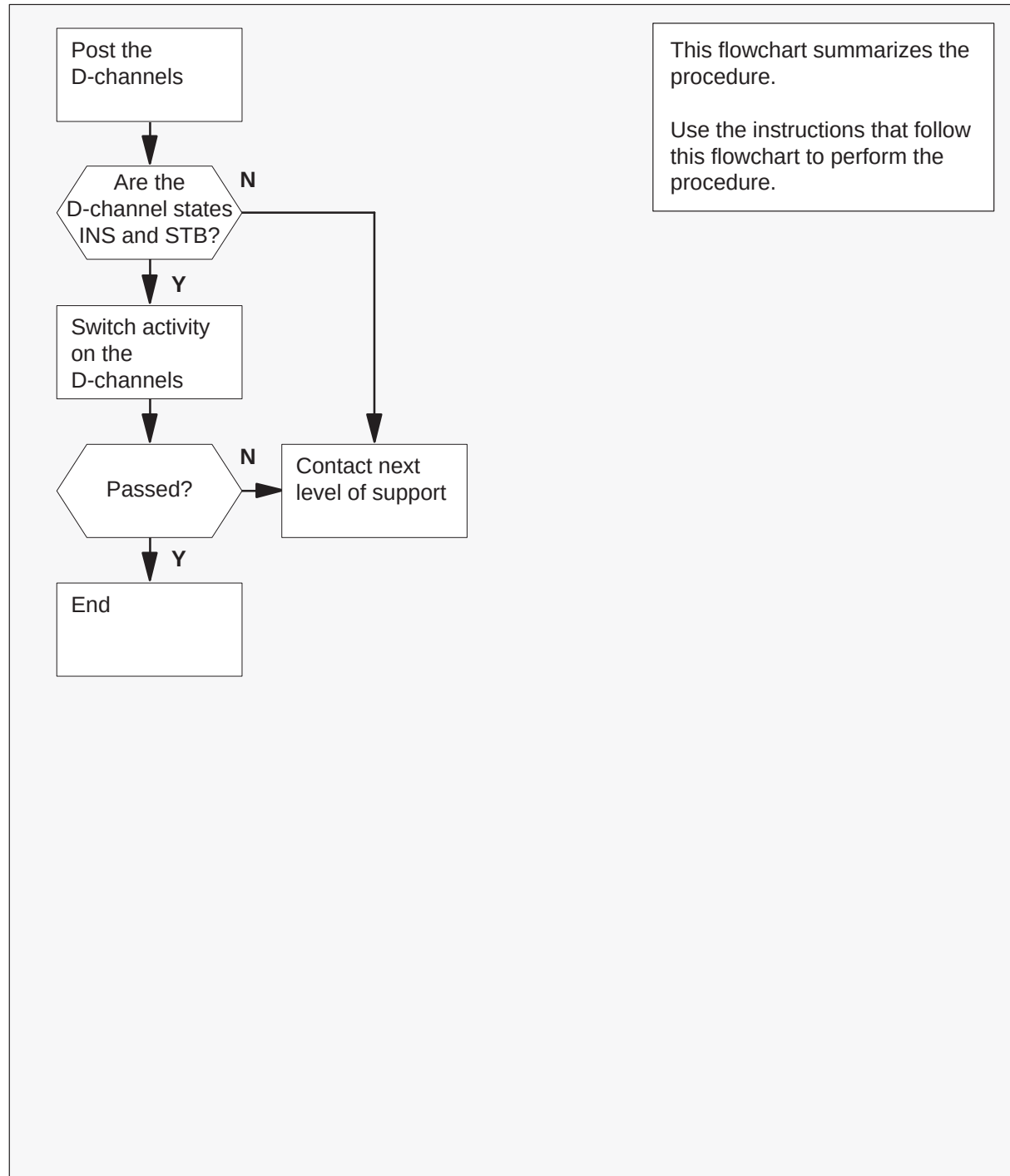
There are no common procedures.

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.

If	Do
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.



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.

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

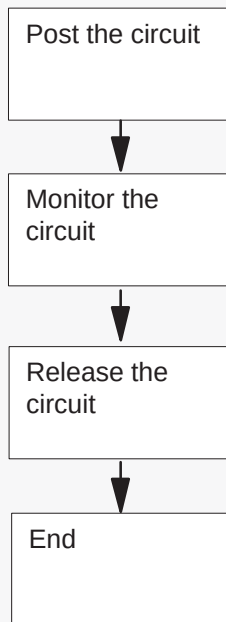
There are no common procedures.

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.

Monitoring call processing busy trunk circuits (continued)

Summary of Monitoring call processing busy trunk circuits



This flowchart summarizes the procedure.

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

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

```

Monitoring call processing busy trunk circuits (continued)

- 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

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>] [<T0>]

<TS_NO>

Monitoring call processing busy trunk circuits (continued)

- 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:

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.

Monitoring call processing busy trunk circuits (end)

- 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 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

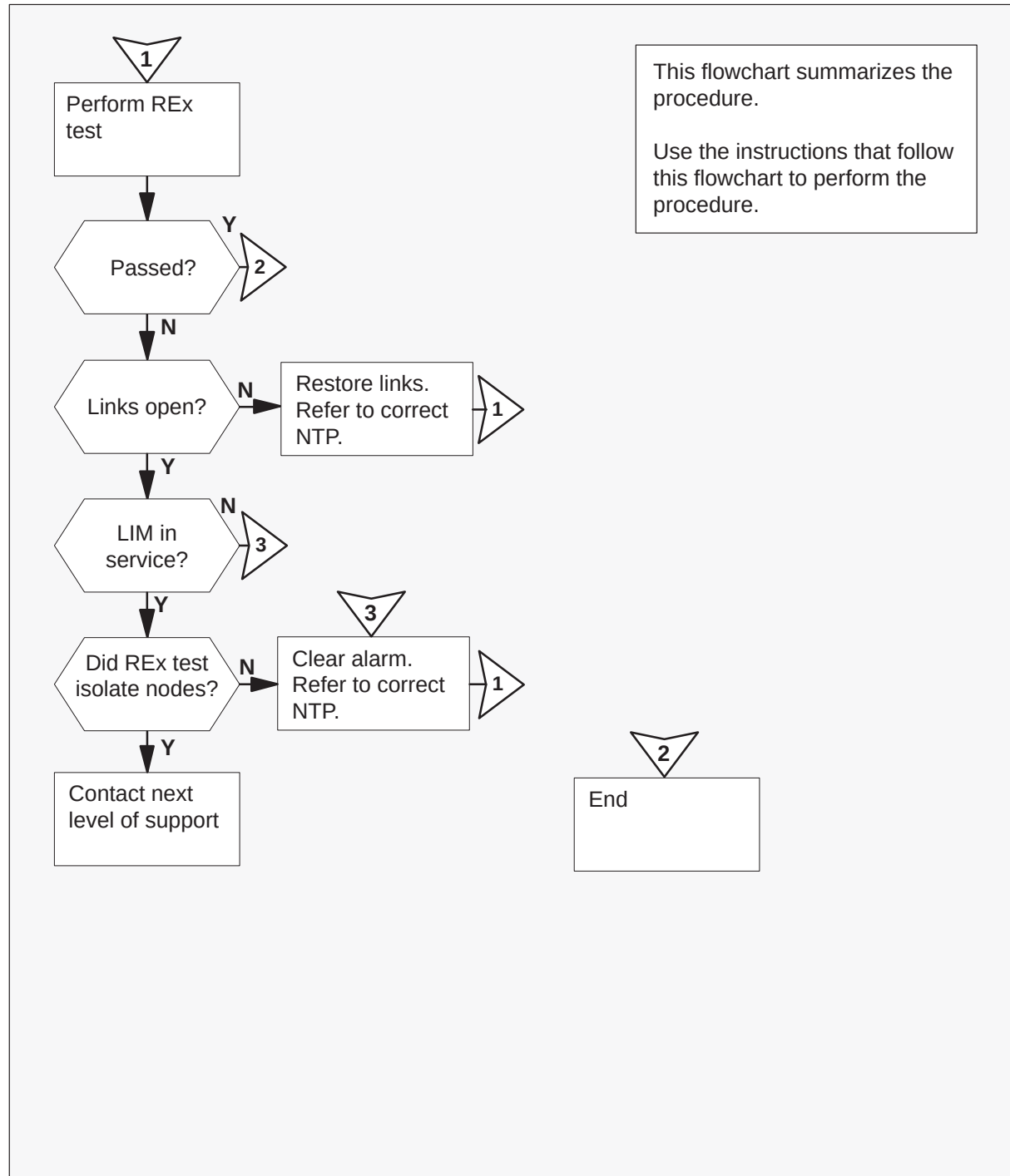
There are no common procedures.

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.



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.

PM	SysB	ManB	OffL	CBsy	ISTb	InSv
	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		
			Links_00S	Taps_00S
Unit0:	OffL		6	3
Unit1:	OffL		6	3

Performing a manual REx test on an LIM

(continued)

- 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
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.

Performing a manual REx test on an LIM

(end)

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.

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.

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

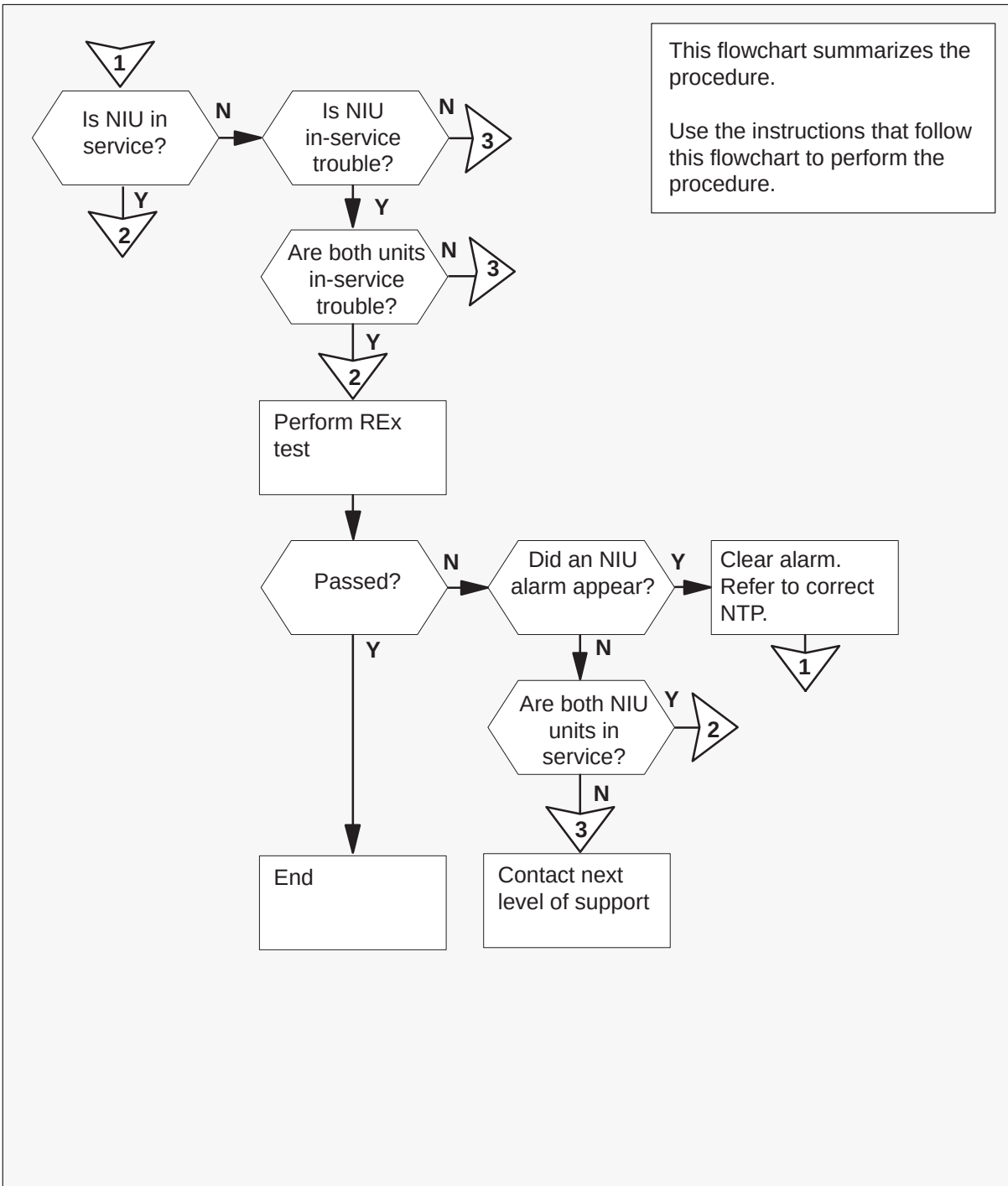
There are no common procedures.

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.



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

Performing a manual REx test on an NIU

(continued)

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

- 4 Determine the state of the units of the ISTb NIU.

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 *Clearing a PM NIU minor alarm* in the *Alarm and Performance Monitoring Procedures*. When you have completed the procedure, return to this point.

- 6 Go to step 1.

- 7 To perform a REx test on the posted NIU, type

>TST REX NOW

and press the Enter key.

Example of a MAP response:

Warning: Unit states will change and a SwAct will be performed during REx test. Please confirm ("YES", "Y", "NO", or "N"):

If the response is	Do

Performing a manual REx test on an NIU

(continued)

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 To confirm the command, type
>YES
and press the Enter key.

Performing a manual REx test on an NIU

(continued)

- 11** Determine the required action.

If the response	Do
is Command passed.	step 19
is Command rejected. Permission to run REx was not given by the node.	step 12
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

- 12** Perform the procedure *Clearing a PM NIU minor alarm in Alarm and Performance Monitoring Procedures*. Complete the procedure and return to this point.

- 13** Go to step 3.

- 14** Determine if the manual REx test on the NIU is on the first or second attempt.

If the REx test	Do
is the first attempt	step 15
is the second or subsequent attempt	step 18

- 15** Wait 10 min before you use the TST REX command.
Go to step 7.

Performing a manual REx test on an NIU

(end)

- 16 Determine if both units of the NIU are in service.

If the two NIU units	Do
are InSv or ISTb	step 17
are not InSv and not ISTb	step 18

- 17 Determine if the manual REx test on the NIU is on the first or second attempt.

If the REx test	Do
is the first attempt	step 7
is the second or subsequent attempt	step 18

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

- 19 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

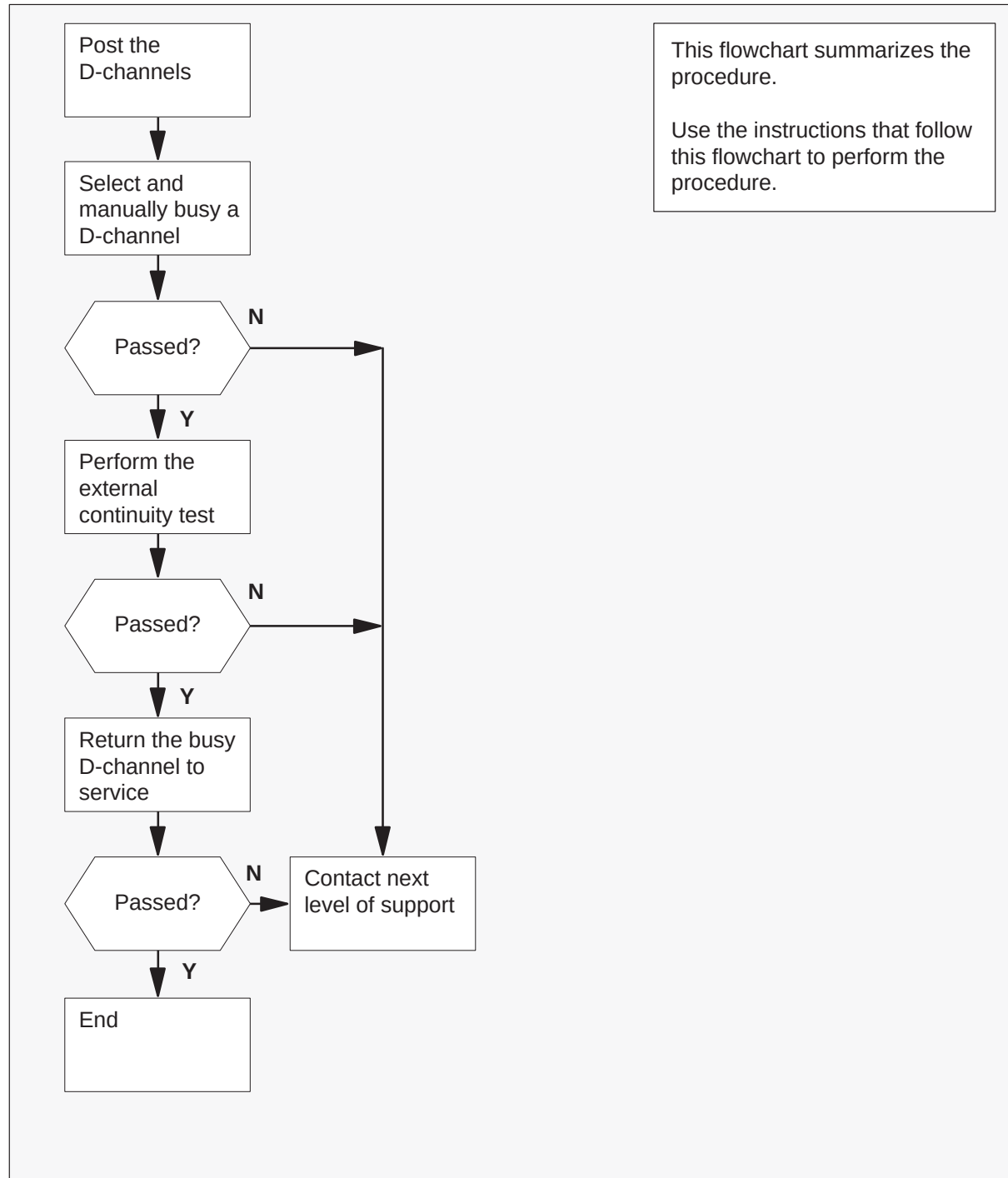
There are no common procedures.

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.



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

Performing an external continuity test on a DS-1 link ISDN PRI primary and backup D-channels (continued)

- 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

d_channel is the D-channel identifier (D1 or D2)

Example of a MAP response:

```
EXTERNAL CONTINUITY TEST STARTED
D2: EXTERNAL CONTINUITY TEST PASSED
```

If the external continuity test	Do
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
```

If the RTS command	Do
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.

**Performing an external continuity test on a DS-1 link
ISDN PRI primary and backup D-channels (end)**

- 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

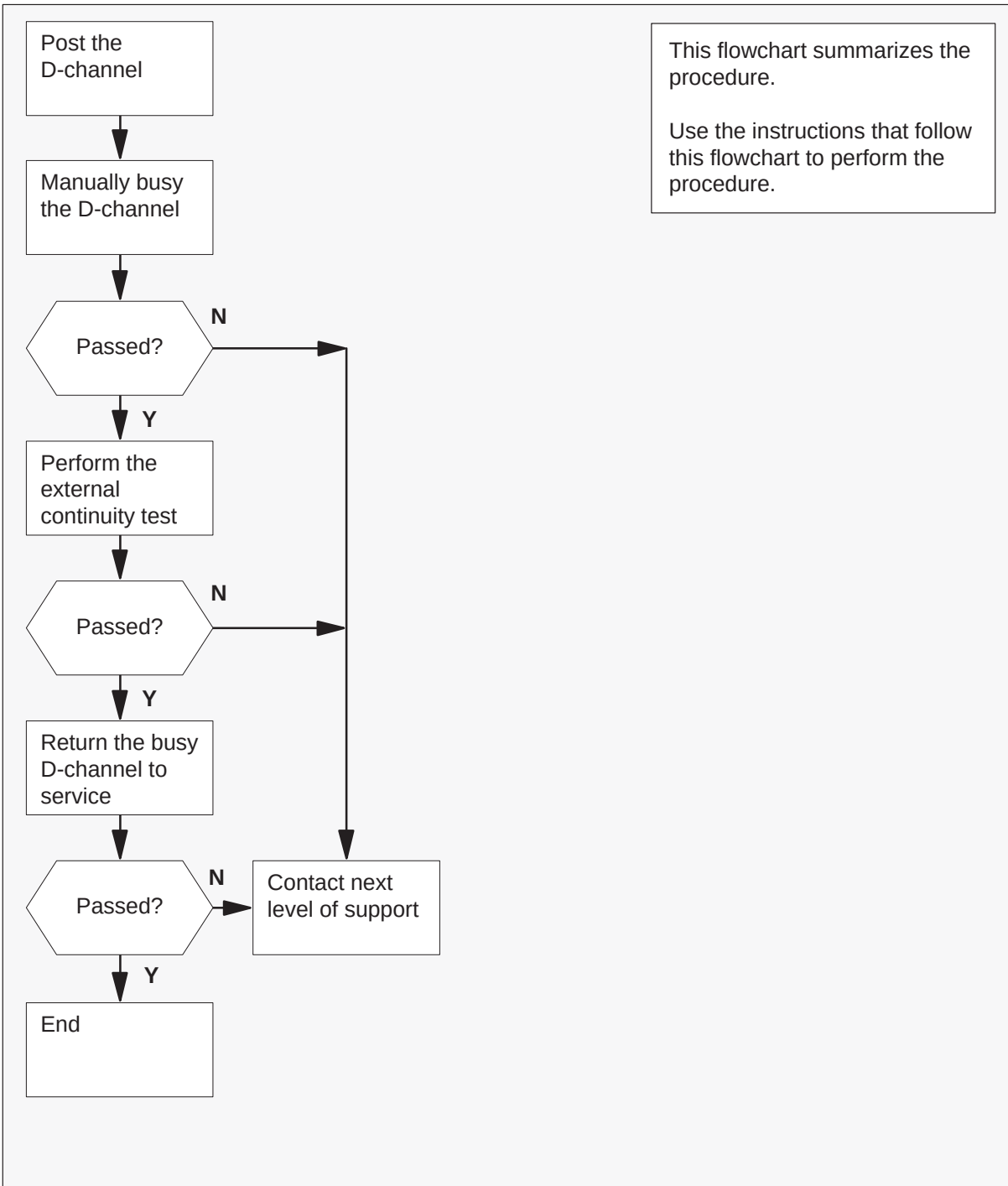
There are no common procedures.

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
```

Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel (continued)

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.



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

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

Performing an external continuity test on a DS-1 or PCM30 link ISDN PRI single D-channel (end)

- 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:

```
STATE CHANGED
```

If the RTS command	Do
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

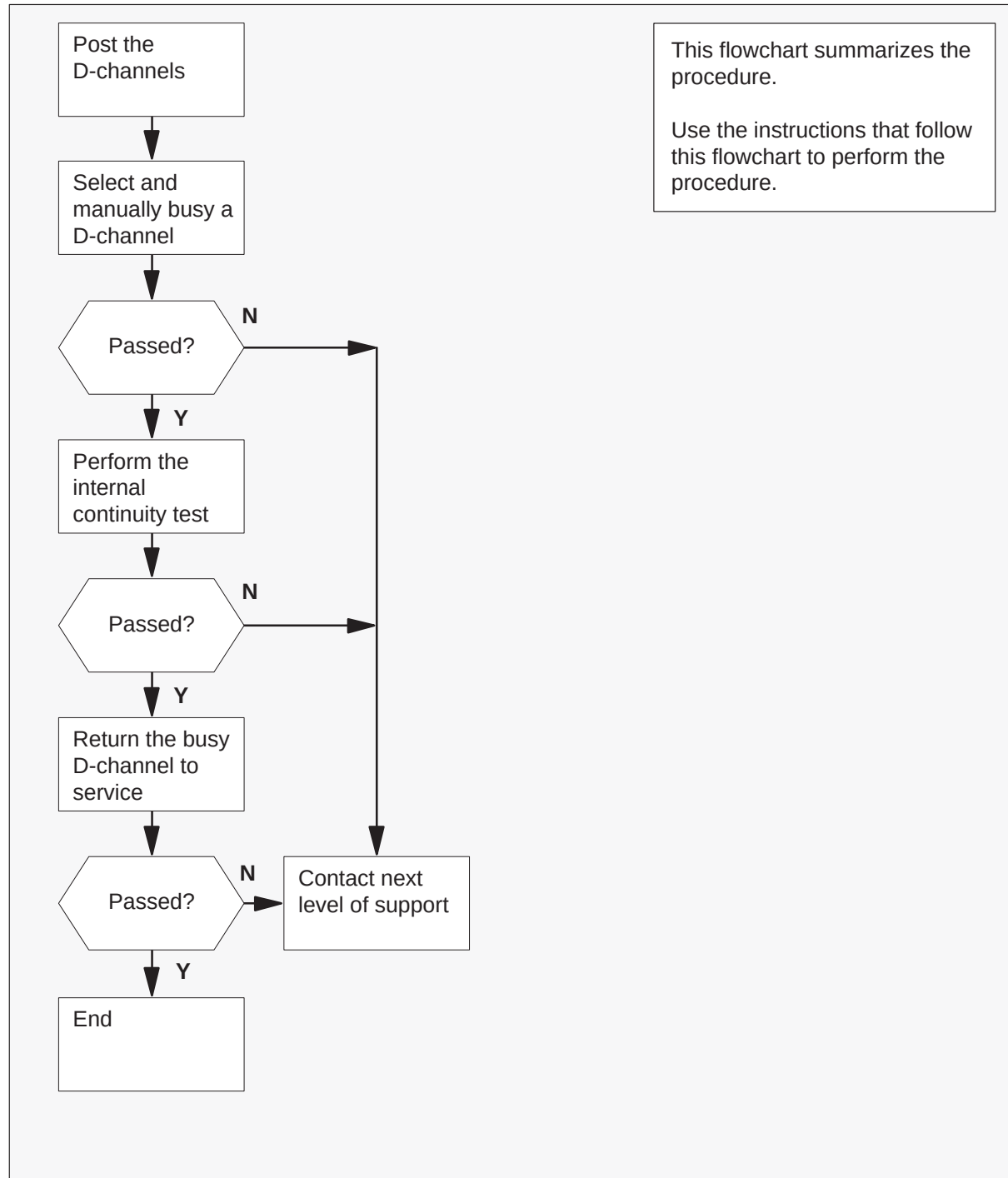
There are no common procedures.

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.



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

Performing an internal continuity test on a DS30 link ISDN PRI primary and backup D-channels (end)

- 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:

```
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_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
```

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

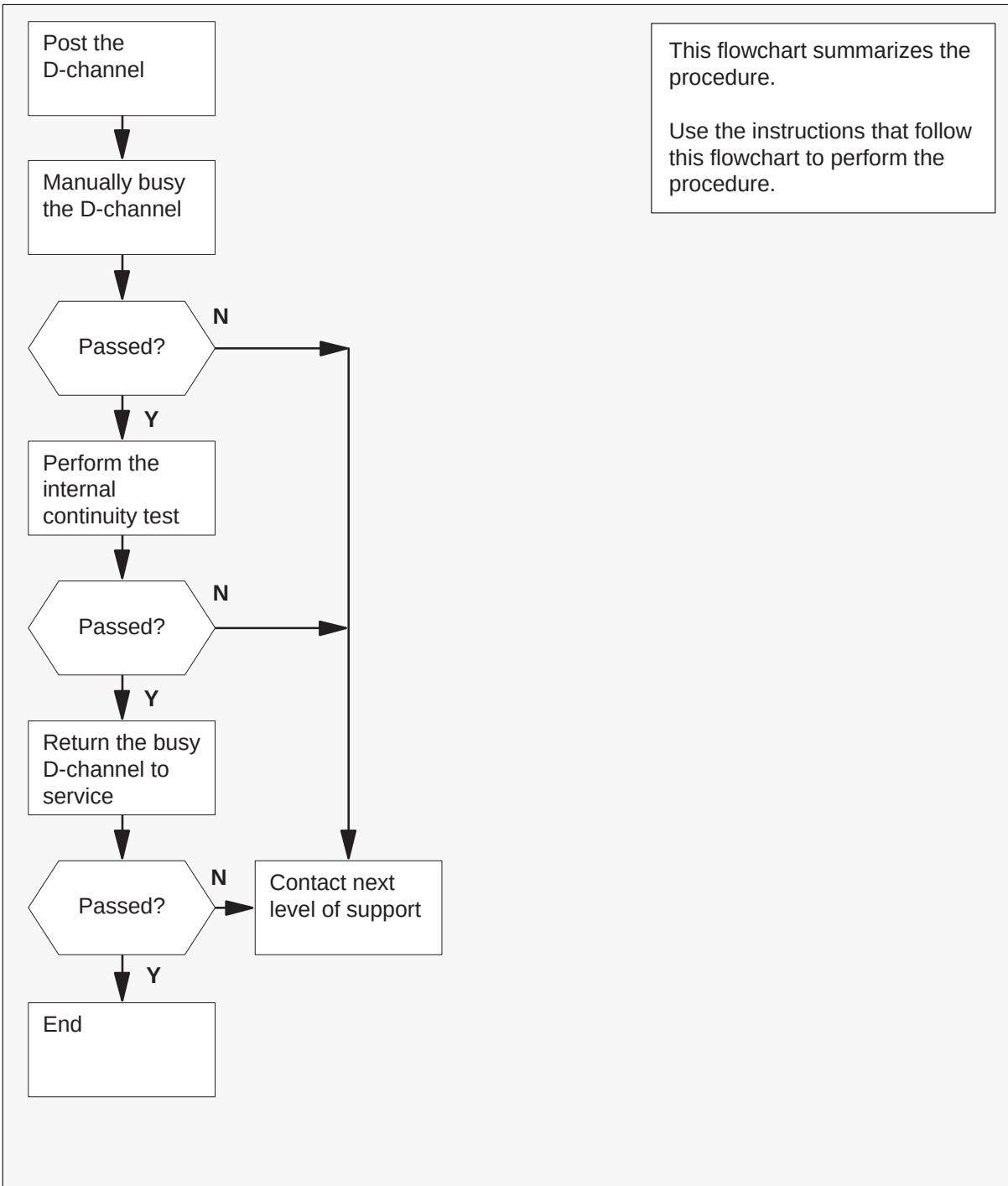
There are no common procedures.

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
```

Performing an internal continuity test on a DS30 link ISDN PRI single D-channel (continued)

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.



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

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

Performing an internal continuity test on a DS30 link ISDN PRI single D-channel (end)

- 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

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

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)
- 11 SEAS_SysB (SEAS system busy minor)
- 12 SEAS_ISTb (SEAS in-service trouble minor)
- 13 SEAS_ManB (SEAS manual busy minor)

Do not change the order of alarm classes. Critical has the highest value, and minor has the lowest value.

Common procedures

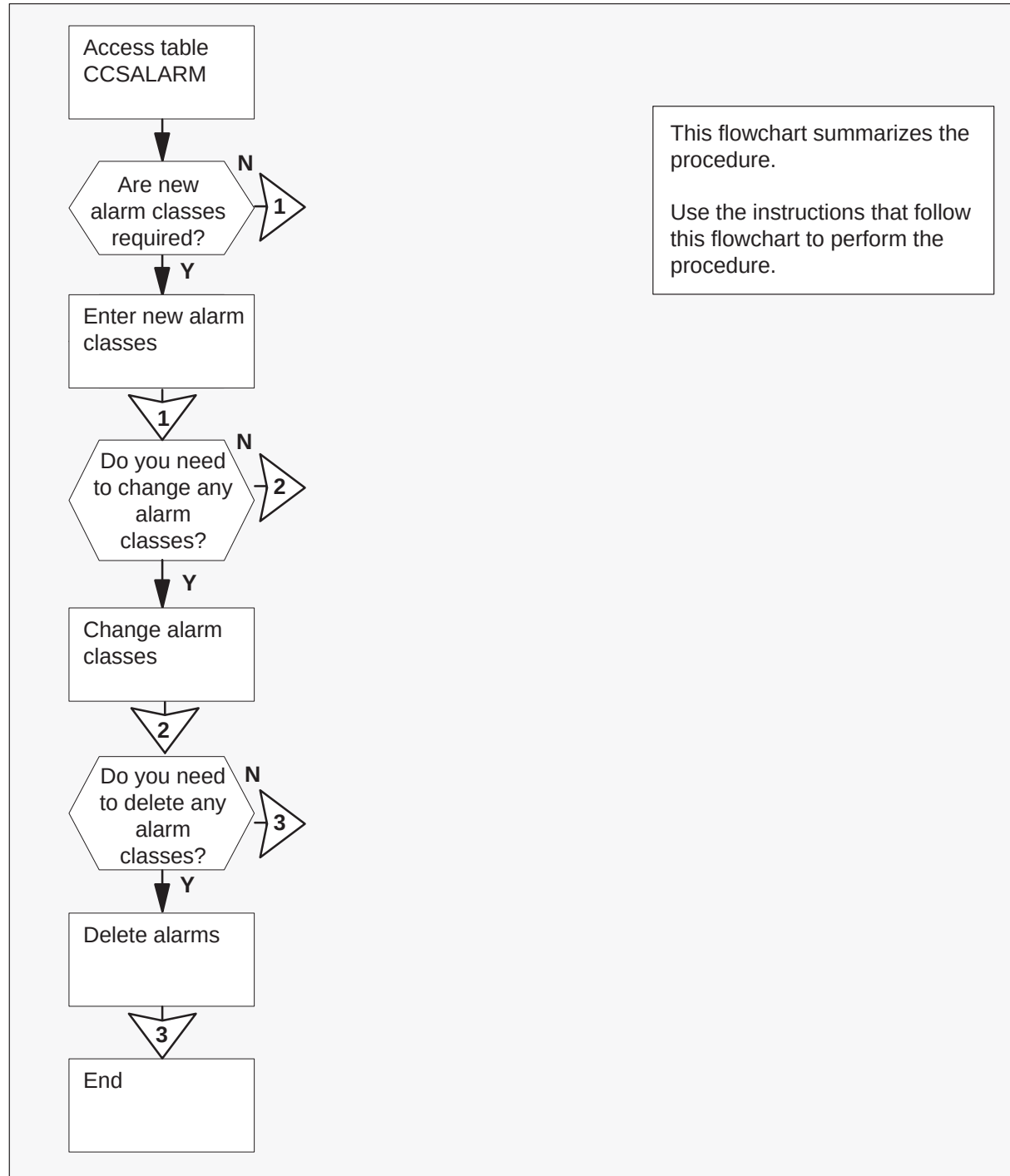
There are no common procedures.

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 (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:

Prioritizing CCS alarms (continued)

- 5 To enter an alarm key, type

>alarm_key

and press the Enter key.

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 :

Prioritizing CCS alarms

(continued)

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.



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),
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 SEAS (Signaling, Engineering, and Administration System)

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:
0   CCS7 CRITICAL ( LSS) (RTESET) ( RSS) ( PC)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```


Prioritizing CCS alarms (continued)

- 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

Note: The current value of each field appears on the right side of the CCSTYPE header in the MAP response.

Prioritizing CCS alarms

(continued)

- 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

Prioritizing CCS alarms (continued)

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.



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), or SEAS (Signaling, Engineering, and Administration System)

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.
```

Prioritizing CCS alarms

(continued)

- 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:

TUPLE DELETED

Go to step 2.

Prioritizing CCS alarms (end)

- 23 To quit the table level, type
>QUIT
and press the Enter key.
- 24 The procedure is complete.

Recovering a stuck HLIU or HSLR

Application

Use this procedure to recover a stuck high-speed link interface unit (HLIU) or a high-speed link router (HSLR).

Definition

An HLIU or HSLR is stuck when both F-bus taps of the individual HLIU or HSLR are not accessible (NA).

Common procedures

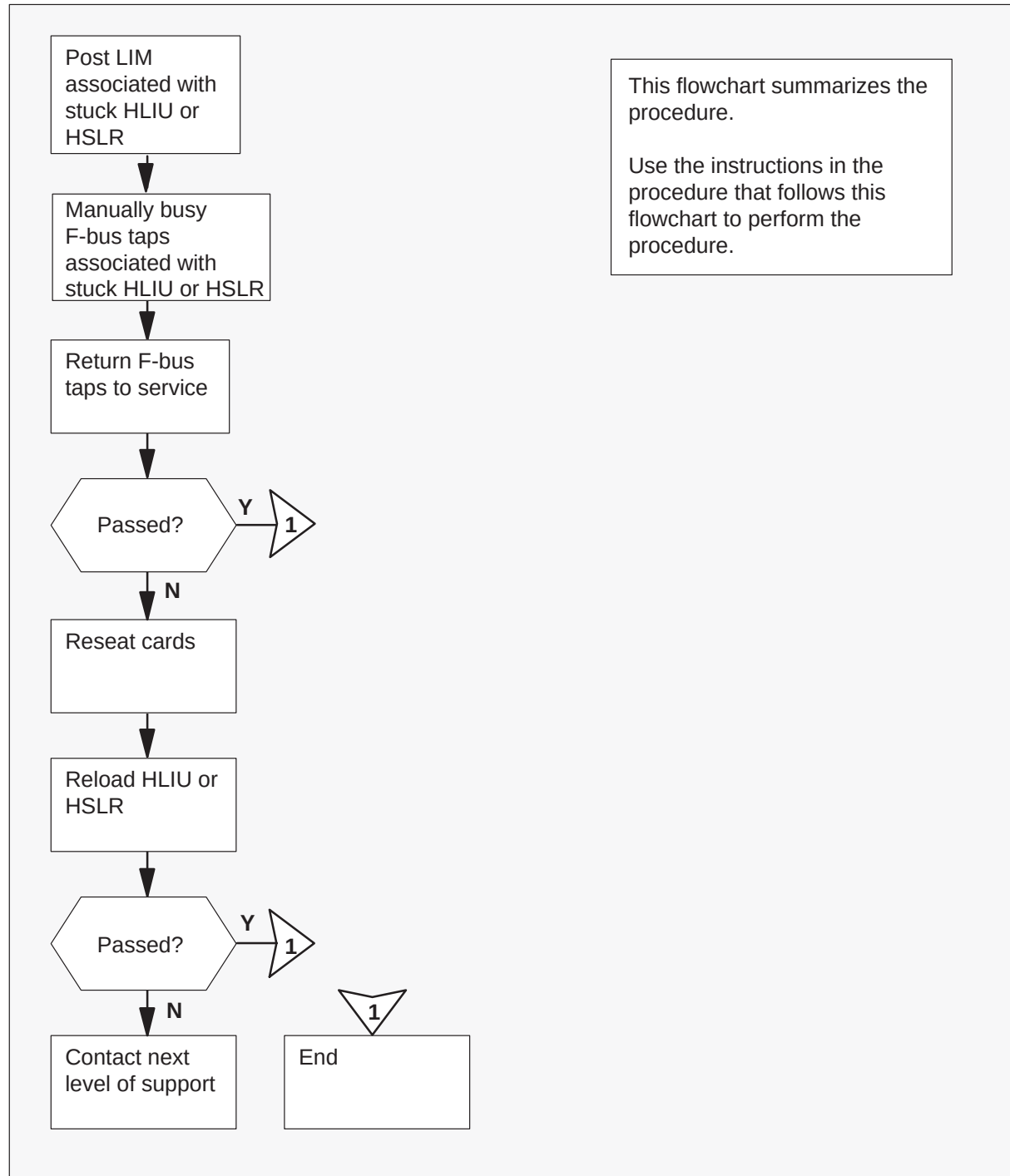
None

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.

Recovering a stuck HLIU or HSLR (continued)

Summary of Recovering a stuck HLIU or HSLR



Recovering a stuck HLIU or HSLR

(continued)

Recovering a stuck HLIU or HSLR

At the MAP terminal

1



WARNING

Contact your next level of support

Do not attempt this procedure before contacting your next level of support.

Access the PM level of the MAP display by typing

>MAPCI;MTC;PM

and pressing the Enter key.

2 Post the system-busy not accessible HLIU or HSLR by typing

>POST HLIU SYSB

and pressing the Enter key.

or

>POST HSLR SYSB

and pressing the Enter key.

If the state of the HLIU or HSLR is	Do
SysB (NA)	step 5
SysB	step 3

3 Display the next system-busy HLIU or HSLR by typing

>NEXT

and pressing the Enter key.

4 Repeat step 3 until you find the system-busy not accessible (NA) HLIU or HSLR.

Recovering a stuck HLIU or HSLR (continued)

- 5 Determine the LIM associated with the stuck HLIU or HSLR by typing

>QUERYPM

and pressing the Enter key.

Example of a MAP response:

```
QueryPM
PM type:  HLIU      PM NO.: 0      Status: SysB
LIM: 0  Shelf: 1  Slot: 8      LIU FTA  4240 1000
Default Load:  HCA11AV
Running Load:  HCA11AV
Potential service affecting conditions:
    Msg Channel #1  NA
    TAP #0  OOS/NA
    TAP #1  OOS/NA
LMS States   :  InSv      InSv
Auditing     :  No        No
Msg Channels:  Acc        No
TAP 0        :  I (NA)    S (NA)
Reserved HLIU forms part of CCS7 Linkset :HSL172001000
SLC:0
LIU is not allocated
```

- 6 Post the LIM associated with the stuck HLIU or HSLR by typing

>POST LIM lim_no

and pressing the Enter key.

where

lim_no is the number of the LIM (0 to 16)

- 7 Post the LIS associated with the stuck HLIU or HSLR by typing

>POST LIS lis_no

and pressing the Enter key.

where

lis_no is the number of the shelf (1 to 3)

Recovering a stuck HLIU or HSLR

(continued)

- 8 Determine which F-bus taps are associated with the stuck HLIU or HSLR by typing

>TRNSL fbus_no

and pressing the Enter key.

where

fbus_no is the number of the FBus (0 or 1)

Example of a MAP response for HLIU:

LIM 8 LIS 2 FBus 0 Tap 0 is unequipped.

LIM 8 LIS 2 FBus 0 Tap 1 is unequipped

LIM 8 LIS 2 FBus 0 Tap 2 is on HLIU 1

LIM 8 LIS 2 FBus 0 Tap 3 is on HSLR 1

LIM 8 LIS 2 FBus 0 Tap 4 is unequipped

- 9 Manually busy the F-bus taps associated with the stuck HLIU or HSLR by typing

>BSY FBUS fbus_no tap_no

and pressing the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 11)

Perform this step for both F-bus taps associated with the stuck HLIU or HSLR.

Recovering a stuck HLIU or HSLR (continued)

- 10 Return the F-bus taps associated with the stuck HLIU or HSLR to service by typing

>RTS FBUS fbus_no tap_no

and pressing the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 11)

Perform this step for both F-bus taps associated with the stuck HLIU or HSLR.

Example of a MAP response:

```
LIM lim_no FBus fbus_no Tap tap_no Return to Service
initiated.
```

If the RTS command	Do
passed	step 28
failed	step 11

- 11 Access the PM level of the MAP display by typing

>PM

and pressing the Enter key.

- 12 Post the stuck HLIU or HSLR by typing

>POST HLIU liu_no

and pressing the Enter key.

or

>POST HSLR liu_no

and pressing the Enter key.

where

liu_no is the number of the stuck HLIU or HSLR (0 to 511)

- 13 Manually busy the HLIU or HSLR by typing

>BSY

and pressing the Enter key.

- 14 Confirm the command by typing

>YES

and pressing the Enter key.

Recovering a stuck HLIU or HSLR (continued)

- 15 Prepare to unseat and reseat the cards belonging to the stuck HLIU or HSLR.

At the ELPP

16

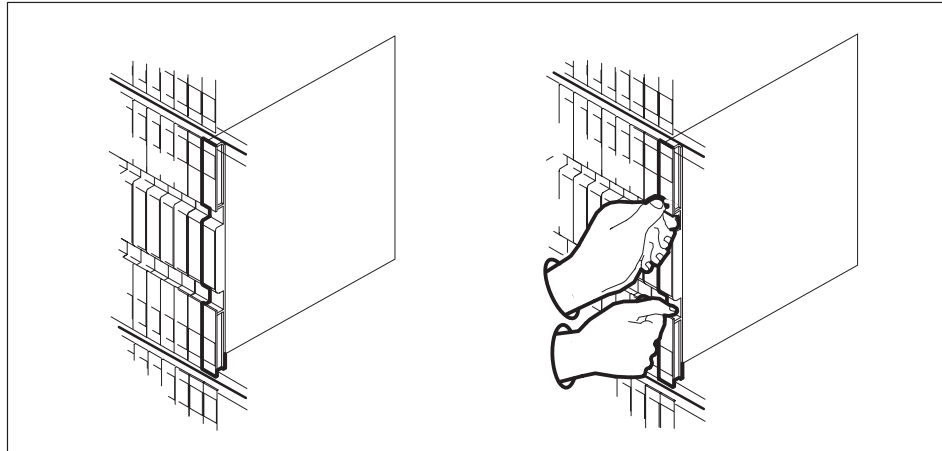


WARNING

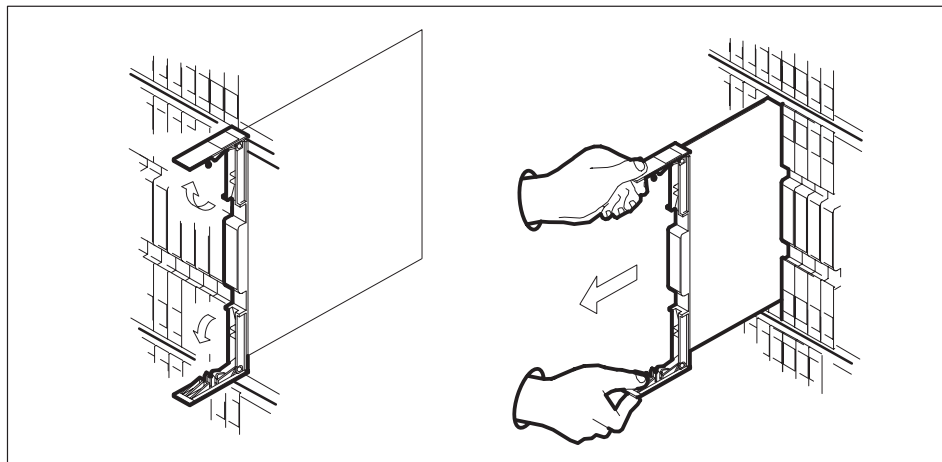
Static electricity damage

Wear a wrist strap connected to the wrist-strap grounding point of a frame supervisory panel (FSP) while handling cards. This method protects the cards against damage caused by static electricity.

Locate the NTEX22 card belonging to the stuck HLIU or HSLR.



- 17 Carefully pull the card 25 mm (1 in.) toward you.

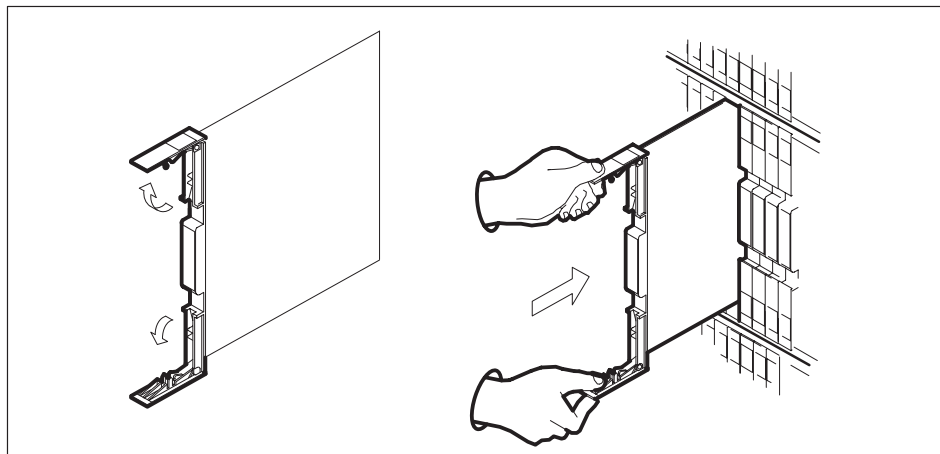


Recovering a stuck HLIU or HSLR (continued)

- 18 Leave the NTEX22 sitting in its slot on the link interface shelf (LIS).
- 19 Verify the type of PM.

If the PM is an	Do
HLIU	step 20
HSLR	step 21

- 20 Repeat steps 16, 17, 18, and 19 for the NTEX76 card belonging to the stuck HLIU. If you have already unseated the NTEX76 card, go to step 21.
- 21 Carefully slide the NTEX22 card back into the LIS.

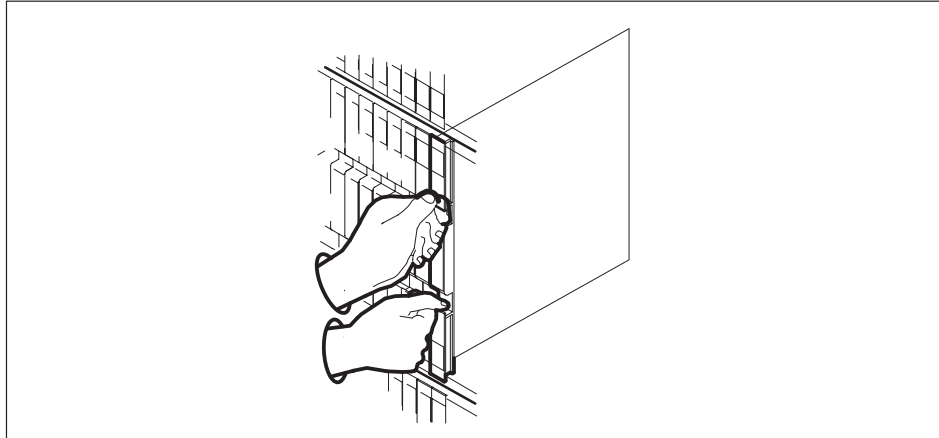


Recovering a stuck HLIU or HSLR

(continued)

22 Seat and lock the card, as follows:

- a. Using your fingers or thumbs, push on the upper and lower edges of the faceplate to ensure that the card is in the shelf.
- b. Close the locking levers.



23 Verify the type of PM.

If the PM is an	Do
HLIU	step 24
HSLR	step 25

24 Repeat steps 21, 22, and 23 for the NTEX76 card that belongs to the stuck HLIU. If you have already reseated both cards, go to step 25.

At the MAP terminal

25 Reload the HLIU or HSLR by typing
>LOADPM
and pressing the Enter key.

If the LOADPM command	Do
passed	step 26
failed	step 27

Recovering a stuck HLIU or HSLR

(end)

- 26 Return the HLIU or HSLR to service by typing

>RTS

and pressing the Enter key.

If the RTS command	Do
passed	step 28
failed	step 27

- 27 For further assistance, contact the personnel responsible for the next level of support.
- 28 You have completed this procedure.

Recovering a stuck LIU7

Application

Use this procedure to recover a stuck CCS7 link interface unit (LIU7). This procedure applies only to three-slot LIU7s.

Definition

An LIU7 is stuck when both of its frame transport bus (F-bus) taps are not in service.

Common procedures

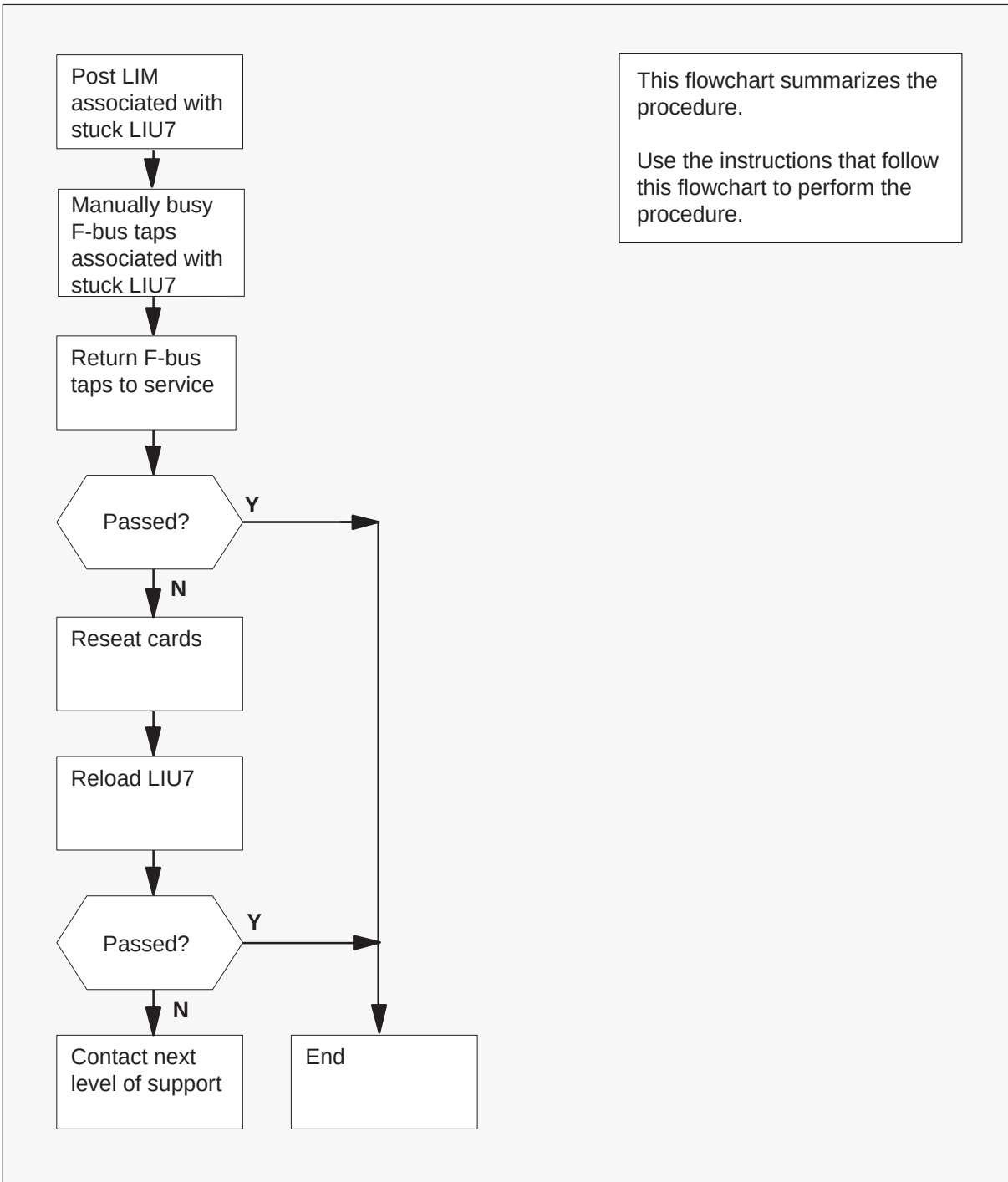
There are no common procedures.

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.

Recovering a stuck LIU7 (continued)

Summary of Recovering a stuck LIU7



Recovering a stuck LIU7

(continued)

Recovering a stuck LIU7

At the MAP terminal

1



WARNING

Contact your next level of support

Do not attempt this procedure before you contact the next level of support.



WARNING

Contact your next level of support

Do not attempt this procedure before you contact the next level of support.

To access the PM level of the MAP display, type

>MAPCI;MTC;PM

and press the Enter key.

2 To post the system busy not available LIU7, type

>POST LIU7 SYSB

and press the Enter key.

If the LIU7 shown	Do
is SysB (NA)	step 9
is SysB	step 3

3 To display the next system-busy LIU7, type

>NEXT

and press the Enter key.

4 Repeat step 3 until you find the system-busy LIU7 that is not available.

Recovering a stuck LIU7 (continued)

- 5 Determine the location of the LIU7.

If the LIU7	Do
is in an SuperNode combined core (SCC) shelf in a SuperNode SE	step 6
is in an LPP	step 9

- 6 To access the MS CARD level of the MAP display, type

>MAPCI;MTC;MS;CARD 12

and press the Enter key.

Note 1: Card 12 is the NT9X73 T-bus to F-bus interface card.

Note 2: In the example, the state of the tap appears under the F-Bus Tap: header.

Example of a MAP display:

```

                                1 1 1 1
Card  1 2 3 4 5 6 7 8 9 0 1 2 3
Chain          |
MS 0  . . . . . - . . . . .
MS 1  . . . . . - . . . . .

Card 12          FBus Tap: 0          11 12  16  20
MS 0  .          .          .          . S... ....
MS 1  .          .          .          . .... ....
```

- 7 To manually busy the tap, type

>BSY ms_num TAP tap_num

and press the Enter key.

where

ms_num is the number of the message switch (0 or 1)

tap_num is the number of the tap (0 to 23)

Recovering a stuck LIU7

(continued)

- 8 To return the tap to service, type
- >RTS ms_num TAP tap_num**
- and press the Enter key.
- where*
- ms_num is the number of the message switch (0 or 1)
- tap_num is the number of the tap (0 to 23)

If the RTS command	Do
passed	step 30
failed	step 15

- 9 To determine the LIM for the stuck LIU7, type
- >QUERYPM**
- and press the Enter key.
- 10 To post the LIM for the stuck LIU7, type
- >POST LIM lim_no**
- and press the Enter key.
- where*
- lim_no is the number of the LIM (0 or 1)
- 11 To access the F-bus level of the MAP display, type
- >FBUS**
- and press the Enter key.

Example of a MAP response:

```

                                     11111111112222
                                012345678901234567890123
FBus 0  ISTb (NA)  ...M....SSSS.....
FBus 1   InSv     .....S.....
```

Note: In the example, S indicates that F-bus taps are system busy.

Recovering a stuck LIU7 (continued)

- 12 To determine the F-bus taps for the stuck LIU7, type

>TRNSL fbus_no

and press the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

Example of a MAP response:

LIM lim_no FBus fbus_no Tap tap_no is unequipped.

LIMlim_no FBus fbus_no Tap tap_no is on LIU7 liu_no.

LIM lim_no FBus fbus_no Tap tap_no is on LIU7 liu_no.

- 13 To manually busy the F-bus taps for the stuck LIU7, type,

>BSY FBUS fbus_no tap_no

and press the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 23)

- 14 To return to service the F-bus taps for the stuck LIU7, type

>RTS FBUS fbus_no tap_no

and press the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 23)

Example of a MAP response:

LIM lim_no FBus fbus_no Tap tap_no Return to Service initiated.

If the RTS command	Do
passed	step 30
failed	step 15

- 15 To access the PM level of the MAP, type

>PM

and press the Enter key.

Recovering a stuck LIU7

(continued)

- 16 To post the stuck LIU7, type
>POST LIU7 liu_no
and press the Enter key.
where
liu_no is the number of the stuck LIU7 (0 to 215)
- 17 To manually busy the LIU7, type
>BSY
and press the Enter key.
- 18 To confirm the command, type
>YES
and press the Enter key.
- 19 Prepare to unseat and reseat the cards that belong to the stuck LIU7.

Recovering a stuck LIU7 (continued)

At the LPP

20



WARNING

Static electricity damage

When you handle cards, wear a wrist-strap that connects to a wrist-strap grounding point. A grounding point will be on a frame supervisory panel (FSP). This wrist-strap protects the cards against static electricity damage.

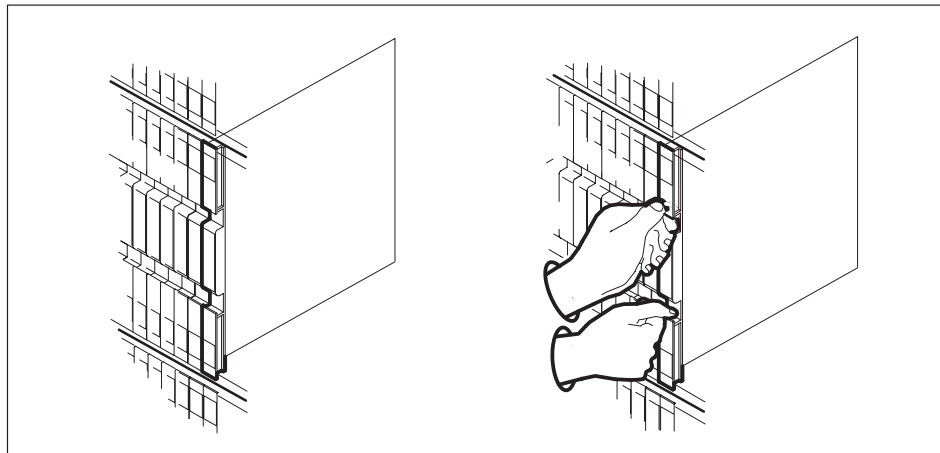


WARNING

Static electricity damage

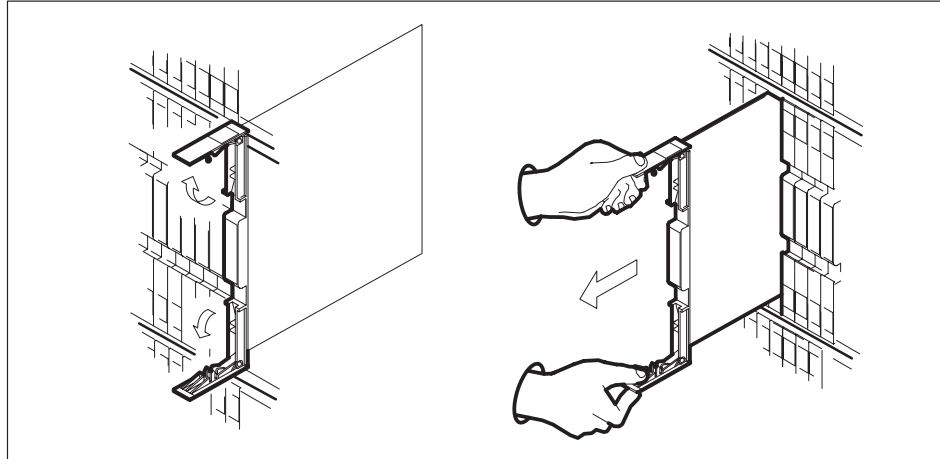
When you handle cards, wear a wrist-strap that connects to a wrist-strap grounding point. A grounding point will be on a frame supervisory panel (FSP). This wrist-strap protects the cards against static electricity damage.

Locate the NT9X75 card that belongs to the stuck LIU7.

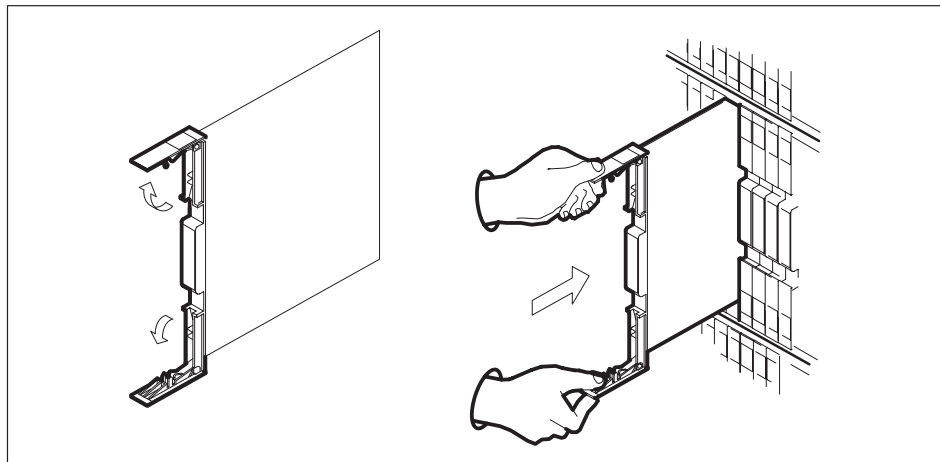


Recovering a stuck LIU7 (continued)

- 21 Carefully pull the card toward you 25 mm (1 in.).



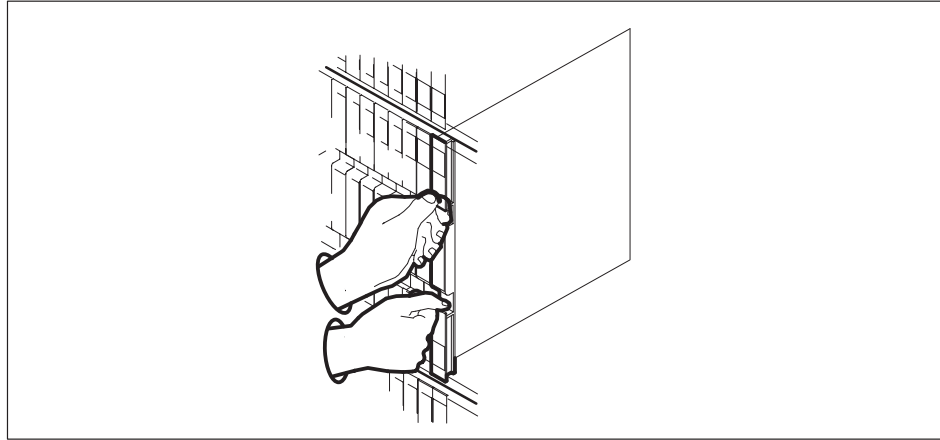
- 22 Leave the NT9X75 card in its slot on the link interface shelf (LIS).
- 23 Repeat steps 20, 21, and 22 for the NT9X76 and the NT9X13 cards that belong to the stuck LIU7.
- 24 Carefully slide the NT9X13 card back into the LIS.



Recovering a stuck LIU7 (continued)

25 Seat and lock the card as follows:

- a. Use your fingers to push on the upper and lower edges of the faceplate. Ensure that the card sits completely in the shelf.
- b. Close the locking levers.



26 Repeat steps 24 and 25 for the NT9X76 and NT9X75 card that belong to the stuck LIU7.

At the MAP terminal

27 To reload the LIU7, type

>LOADPM

and press the Enter key.

If the LOADPM command	Do
passed	step 28
failed	step 29

Recovering a stuck LIU7

(end)

28 To return the LIU7 to service, type

>RTS

and press the Enter key.

If the RTS command	Do
passed	step 30
failed	step 29

29 For additional help, contact the next level of support.

30 The procedure is complete.

Recovering a stuck two-slot LIU7

Application

Use this procedure to recover a stuck CCS7 link interface unit (LIU7). This procedure applies only to two-slot LIU7s.

Definition

An LIU7 is stuck when both of its F-bus taps are not accessible (NA).

Common procedures

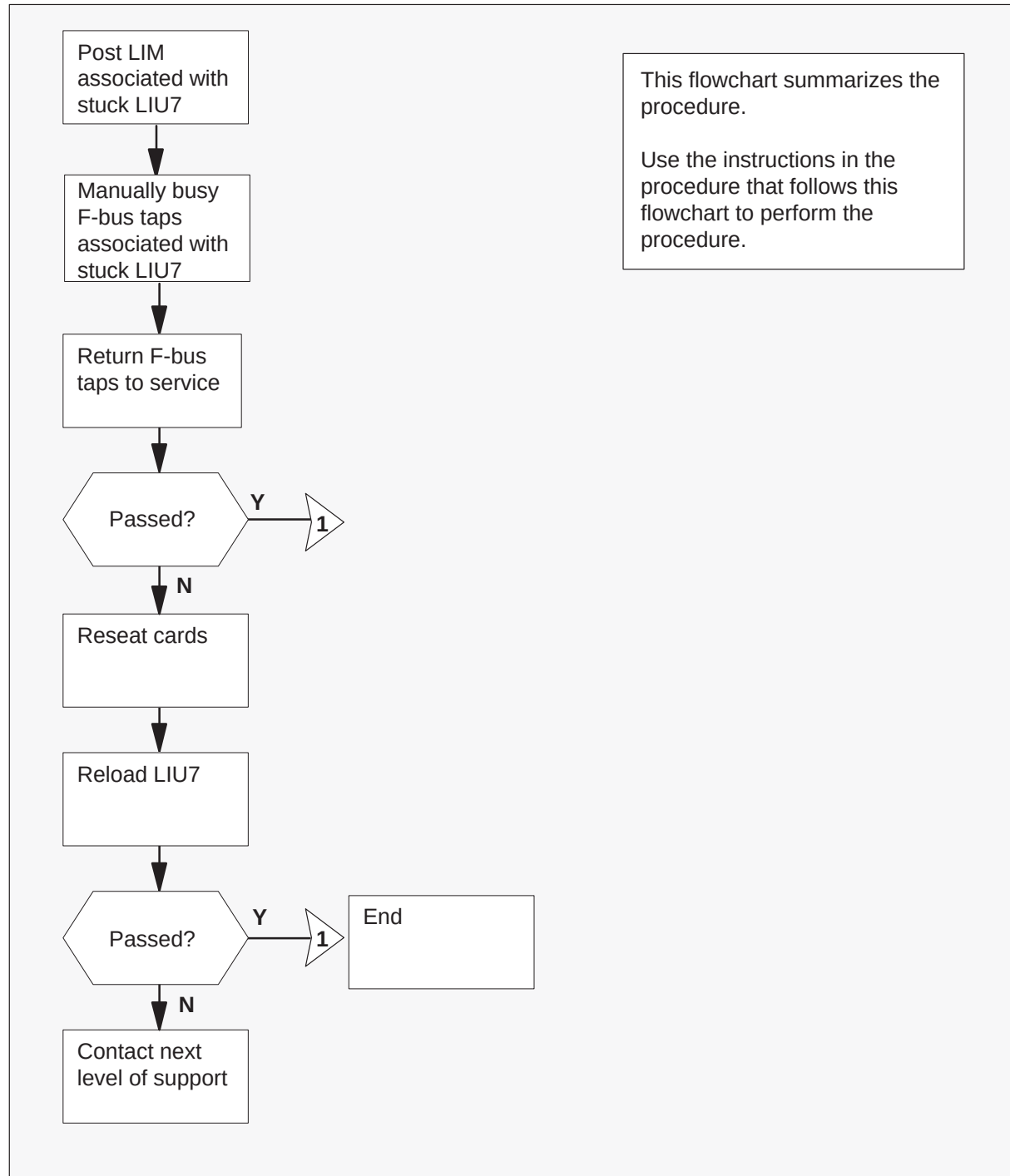
None

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.

Recovering a stuck two-slot LIU7 (continued)

Summary of Recovering a stuck two-slot LIU7



Recovering a stuck two-slot LIU7 (continued)

Recovering a stuck two-slot LIU7

At the MAP terminal

1



WARNING

Contact your next level of support

Do not attempt this procedure before contacting your next level of support.

Access the PM level of the MAP display by typing

>MAPCI;MTC;PM

and pressing the Enter key.

2 Post the system-busy not accessible LIU7 by typing

>POST LIU7 SYSB

and pressing the Enter key.

If the state of the LIU7 is	Do
SysB (NA)	step 6
SysB	step 3

3 Display the next system-busy LIU7 by typing

>NEXT

and pressing the Enter key.

4 Repeat step 3 to find the system-busy not accessible LIU7.

5 Determine the location of the LIU7.

6 Determine the LIM associated with the stuck LIU7 by typing

>QUERYPM

and pressing the Enter key.

7 Post the LIM associated with the stuck LIU7 by typing

>POST LIM lim_no

and pressing the Enter key.

where

lim_no is the number of the LIM (0 or 1)

Recovering a stuck two-slot LIU7 (continued)

- 8 Access the F-bus level of the MAP display by typing

>FBUS

and pressing the Enter key.

Example of a MAP display:

```
Tap:           0    4    8   12   16   20   24   28   32
FBus0:ISTb(NA)  ....  ....  ...S  ....  ....  ....  ....  ....
..-..
FBus1:InSv     ....  ....  ...S  ....  ....  ....  ....  ....
..-..
```

Note: In the example, S means that F-bus taps are system busy.

- 9 Determine which F-bus taps are associated with the stuck LIU7 by typing

>TRNSL fbus_no

and pressing the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

Example of a MAP response:

```
LIM lim_no FBus fbus_no Tap tap_no is unequipped.
LIM lim_no FBus fbus_no Tap tap_no is on LIU7 liu_no.
LIM lim_no FBus fbus_no Tap tap_no is on LIU7 liu_no.
```

- 10 Manually busy the F-bus taps associated with the stuck LIU7 by typing

>BSY FBUS fbus_no tap_no

and pressing the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 35)

Perform this step for both F-bus taps associated with the stuck LIU7.

Recovering a stuck two-slot LIU7 (continued)

- 11 Return the F-bus taps associated with the stuck LIU7 to service by typing

>RTS FBUS fbus_no tap_no

and pressing the Enter key.

where

fbus_no is the number of the F-bus (0 or 1)

tap_no is the number of the F-bus tap (0 to 35)

Perform this step for both F-bus taps associated with the stuck LIU7.

Example of a MAP response:

```
LIM lim_no FBus fbus_no Tap tap_no Return to Service
initiated.
```

If the RTS command	Do
passed	step 27
failed	step 12

- 12 Access the PM level of the MAP display by typing

>PM

and pressing the Enter key.

- 13 Post the stuck LIU7 by typing

>POST LIU7 liu_no

and pressing the Enter key.

where

liu_no is the number of the stuck LIU7 (0 to 511)

- 14 Manually busy the LIU7 by typing

>BSY

and pressing the Enter key.

- 15 Confirm the command by typing

>YES

and pressing the Enter key.

- 16 Prepare to unseat and reseat the cards that belong to the stuck LIU7.

Recovering a stuck two-slot LIU7 (continued)

At the LPP

17

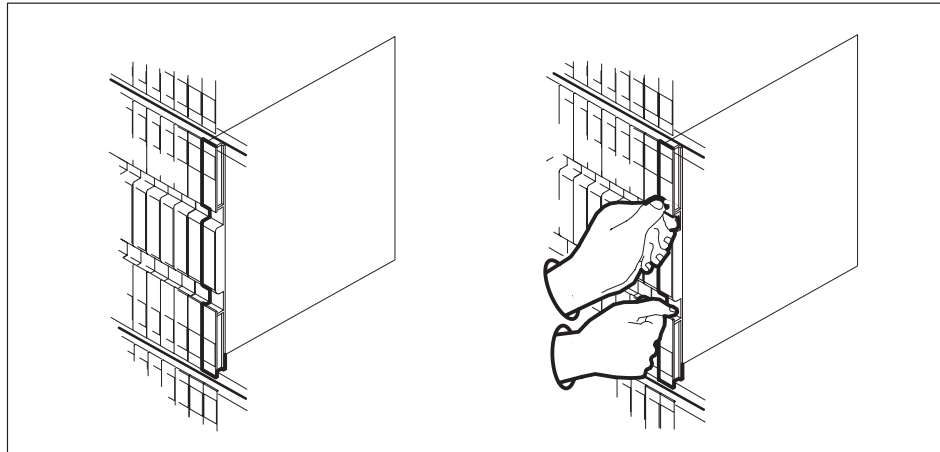


WARNING

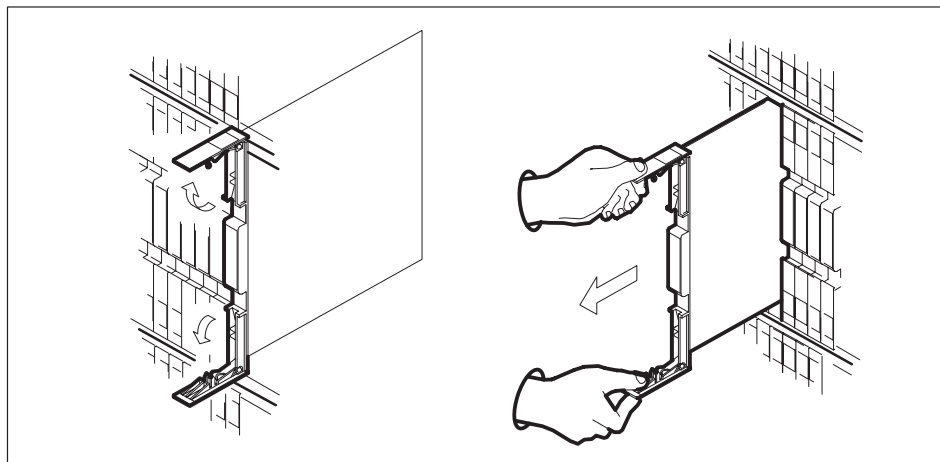
Static electricity damage

Wear a wrist strap connected to the wrist-strap grounding point of a frame supervisory panel (FSP) while handling cards. This protects the cards against damage caused by static electricity.

Locate the NTEX22 card that belongs to the stuck LIU7.

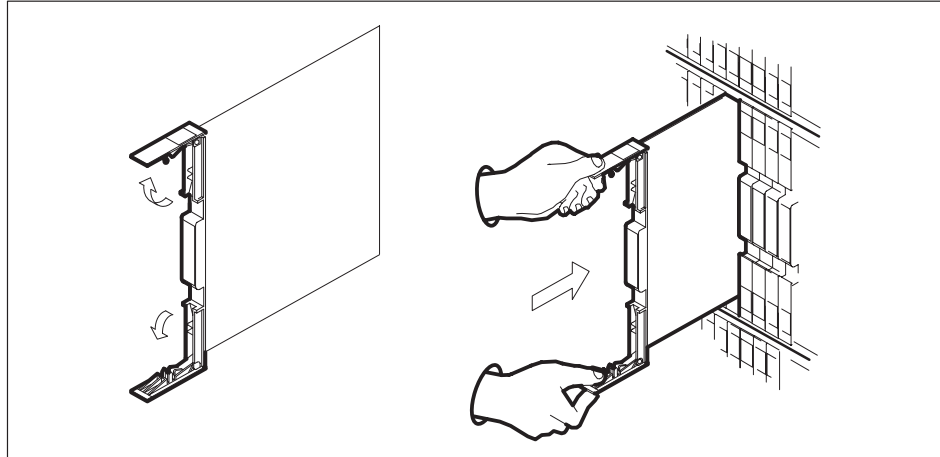


18 Carefully pull the card 25 mm (1 in.) toward you.

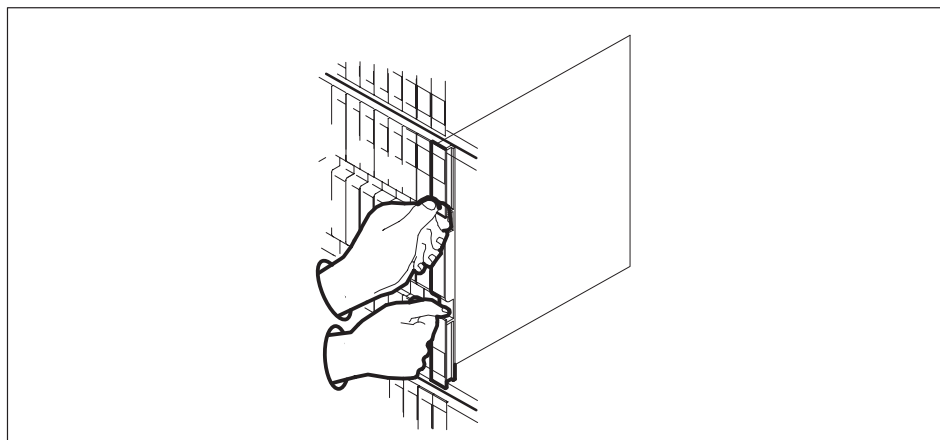


Recovering a stuck two-slot LIU7 (continued)

- 19 Leave the NTEX22 sitting in its slot on the link interface shelf (LIS).
- 20 Repeat steps 17, 18, and 19 for the NT9X76 card that belongs to the stuck LIU7.
- 21 Carefully slide the NTEX22 card back into the LIS.



- 22 Seat and lock the card, as follows:
 - a. Using your fingers or thumbs, push on the upper and lower edges of the faceplate to ensure that the card is in the shelf.
 - b. Close the locking levers.



- 23 Repeat steps 21 and 22 for the NT9X76 card that belongs to the stuck LIU7.

Recovering a stuck two-slot LIU7 (end)

At the MAP terminal

- 24** Reload the LIU7 by typing
>LOADPM
and pressing the Enter key.

If the LOADPM command	Do
passed	step 25
failed	step 26

- 25** Return the LIU7 to service by typing
>RTS
and pressing the Enter key.

If the RTS command	Do
passed	step 27
failed	step 26

- 26** For further assistance, contact the personnel responsible for the next level of support.
- 27** You have completed this procedure.

Repairing FAN faults on an LCEI frame; cooling unit replacement

Application

Use this procedure to identify and to correct faults that can cause a FAN FAIL alarm. The alarm can occur when you install an NTB63AA cooling unit in an ISDN line concentrating equipment (LCEI) frame. The LCEI frame has enhanced line concentrating module (LCME) or ISDN line concentrating module (LCMI) modules.

A FAN FAIL fault in an LCEI frame results from one of the following:

- a dirty filter
- a blown fuse in the front panel of the cooling unit
- a cooling unit has faults

Definition

The FAN FAIL alarm highlights problems in the frame cooling system.

Common procedures

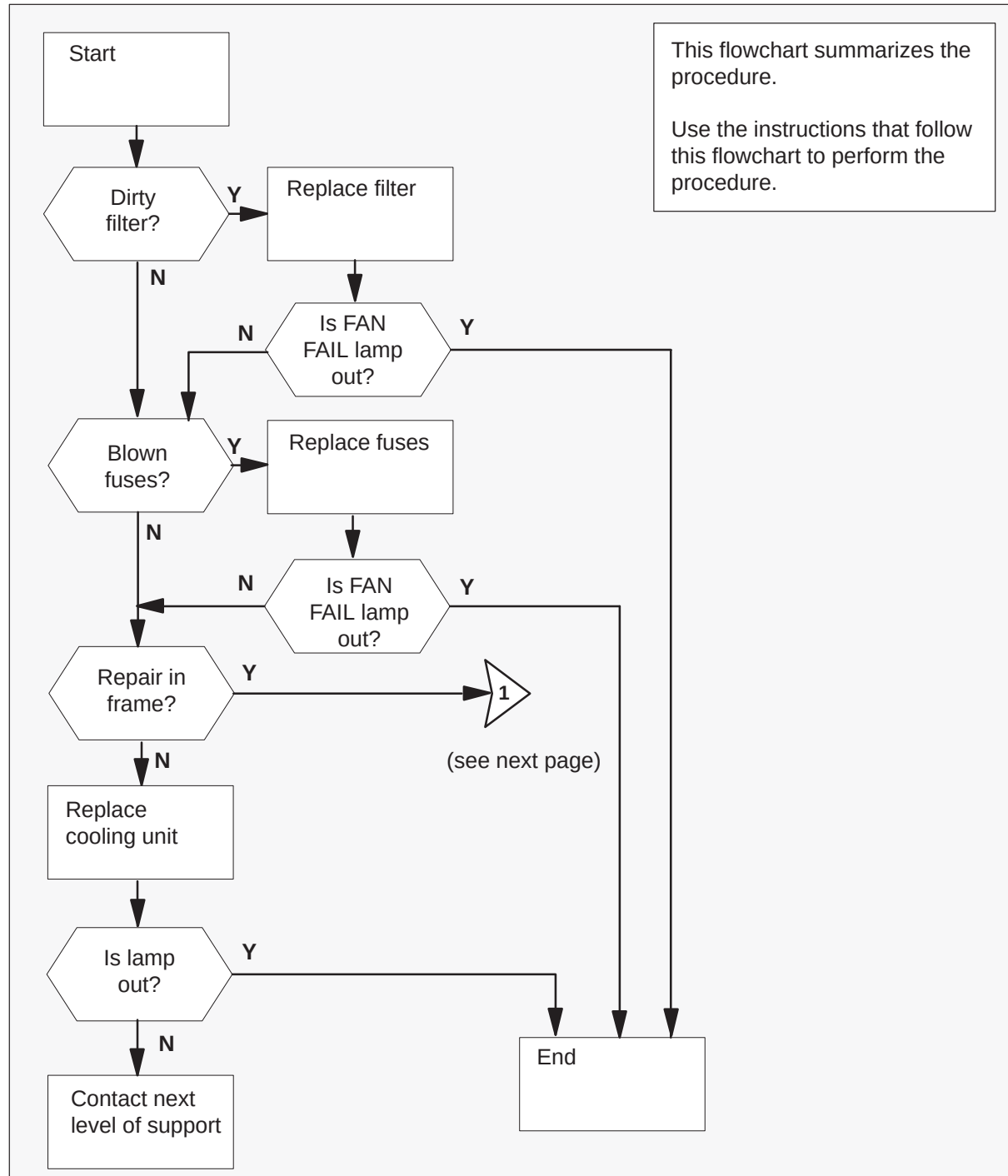
There are no common procedures.

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.

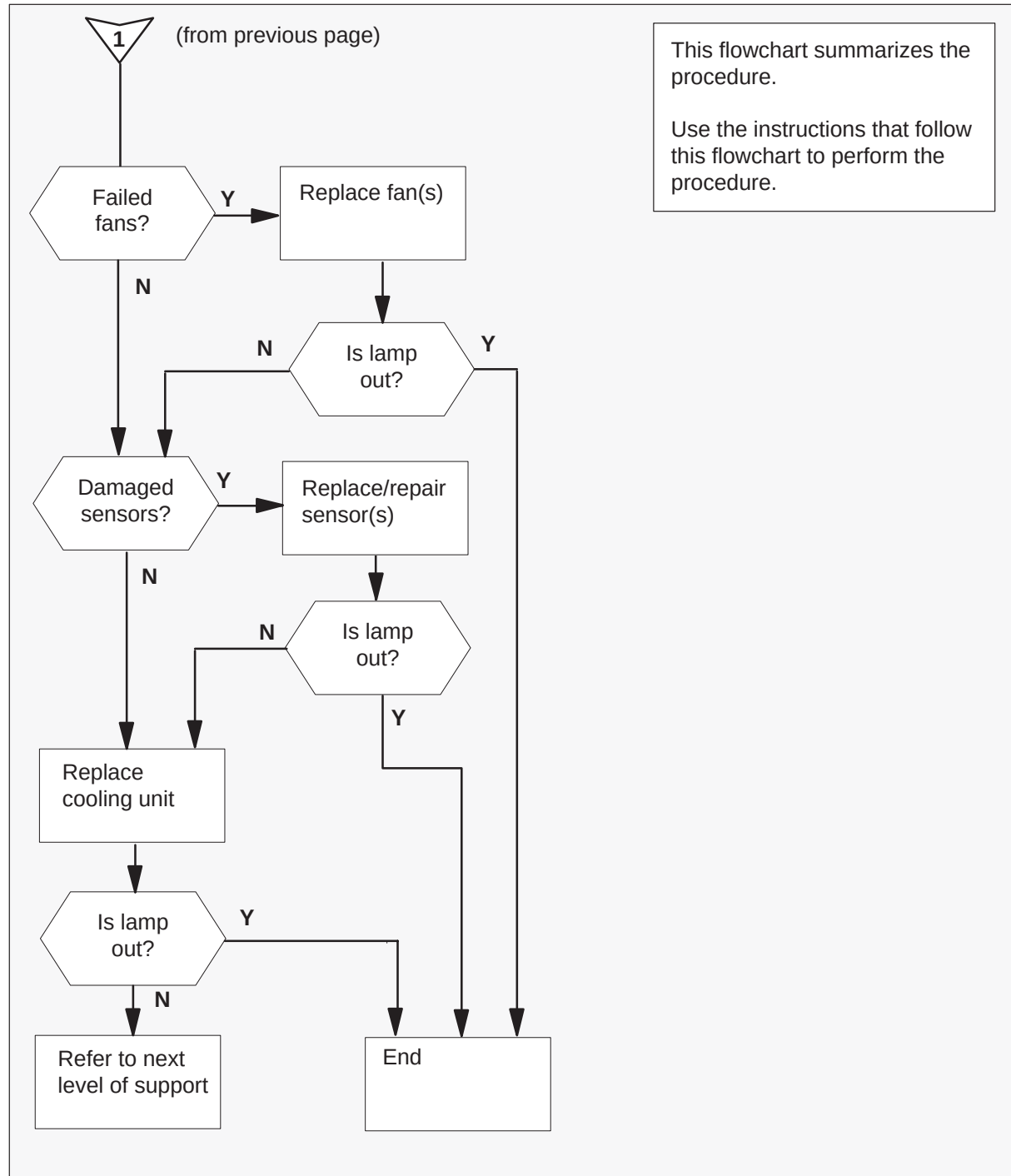
Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

Summary of Repairing FAN FAIL faults on an LCEI frame



Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

Summary of Repairing FAN FAIL faults on an LCEI frame (continued)



Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

Repairing FAN FAIL faults in an LCEI frame

At the front of the frame

1



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.

Determine the location of the problem LCEI frame on the switch.

- 2 Check for the lit FRAME and FAN FAIL lamps on the frame supervisory panel (FSP).
- 3 Remove the filter and faceplate assembly NTB6012 at the bottom of the frame. Inspect the filter.
- 4 Determine if the FAN FAIL lamp turned off when you removed the filter.

If the FAN FAIL lamp	Do
turned off	step 5
remained on	step 7

Note: If the FAN FAIL lamp turns off when you remove the filter, replacement of the filter is necessary.

- 5 Slide a replacement filter and faceplate assembly NTB6012 into the frame. Secure the filter and faceplate in position.
- 6 Go to step 52.

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

- 7 Replace the filter and faceplate assembly into the bottom of the frame.

8



DANGER
Risk of personal injury
 Electricity can arc when you remove fan unit fuses.
 Wear eye protection.



DANGER
Risk of personal injury
 Electricity can arc when you remove fan unit fuses.
 Wear eye protection.



WARNING
Incorrect fuse values
 Always use replacement fuses of the correct rating, or damage to the equipment can result.



WARNING
Incorrect fuse values
 Always use replacement fuses of the correct rating, or damage to the equipment can result.

Check the fuses in positions one to five at the front of the cooling unit. Replace any blown fuses. The cooling unit is at shelf position 33.

- 9 Did step 8 clear the FRAME and FAN FAIL alarm lamps?

If alarm lamps	Do
clears	step 52
did not clear	step 10

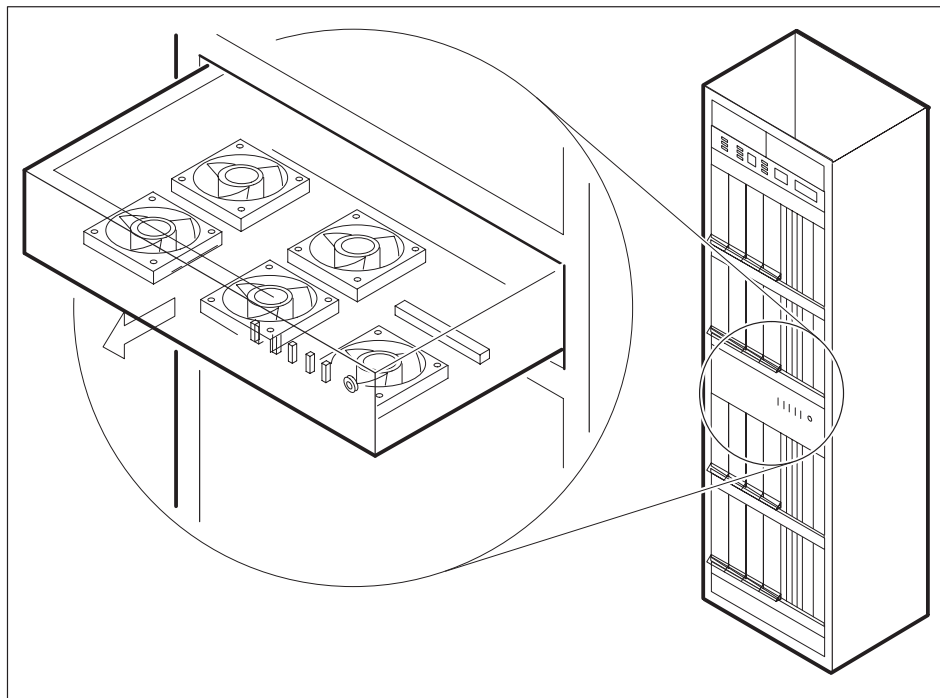
Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

At the front of the frame

- 10 To remove the two side trims on the LCE frame, remove the top and bottom screws that secure the trim.
- 11 Remove the four 5/16-inch bolts that secure the cooling unit brackets (two per side). Ensure that you remove the two center bolts from each side.

At the back of the frame

- 12 Remove the three mounting screws from the back center of the cooling unit.



At the front of the frame

- 13 Slide out the line drawer above the cooling unit.

At the back of the frame

- 14 Look into the frame of the cooling unit. Note the position of any failed or slow fans.

Note: The fault can lie in one of the front three fans, or in the air flow sensors on the fans. If this fault occurs, you can repair the cooling unit without the removal of the unit from the frame. If the fault lies with the two back fans or sensors, you must remove the cooling unit. You must remove the unit because the back fans and sensors are not available while the unit is in the frame. Refer to your company procedures to see if you can attempt repairs. Your company procedures can require you to replace the unit with a new one.

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

- 15 Push the line drawer that you pulled out in step 13 back into position.
- 16 Do you want to repair the cooling unit while the unit is in the frame?

If you	Do
want to repair the cooling unit while the unit is in the frame	step 31
you do not want to repair the cooling unit while the unit is in the frame	step 17

At the front of the frame

- 17 Locate the fan fuses in the front of the cooling unit. Remove the 0.5-amp fuses, (numbered 1 through 5).

At the PDC

- 18 Remove the cooling unit fuses (cooling unit 0 or 1).

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

At the back of the frame

19



WARNING

Damage to the cooling unit

Instead of a plug, the cooling unit can have leads that end on a terminal strip. If the cooling unit has leads, label the leads before you disconnect them. If you reconnect the leads to the wrong connector, damage to the cooling unit can result.



WARNING

Damage to the cooling unit

Instead of a plug, the cooling unit can have leads that end on a terminal strip. If the cooling unit has leads, label the leads before you disconnect them. If you reconnect the leads to the wrong connector, damage to the cooling unit can result.



WARNING

Loss of frame cooling

Disconnection of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.



WARNING

Loss of frame cooling

Disconnection of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.

Disconnect the power plug or power leads at the back of the cooling unit.

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

At the front of the frame

- 20 Remove the cooling unit from the frame.
- 21 Obtain a replacement NTB63AA cooling unit. Refer to company procedures on repairs to damaged units. The company procedures can direct you to repair the damaged cooling unit in-house. Refer to procedure *Repairing a NTB63AA cooling unit* in this document.
- 22 Push the replacement cooling unit into the frame.

At the back of the frame

- 23 Replace the three mounting screws at the back center of the cooling unit removed in step 12. Secure the screws in position.

At the front of the frame

- 24 Replace the four 5/16-inch bolts that secure the cooling unit side brackets (two per side) that you removed in step 11. Secure the brackets in position.

At the back of the frame

- 25 At the back of the cooling unit, reconnect the power plug or power leads disconnected in step 19.

At the PDC

- 26 Reinstall the two fuses (cooling unit 0 or 1) removed in step 18.

At the front of the frame

27



DANGER

Risk of personal injury

Electricity can arc when you replace fan unit fuses.
Wear eye protection.



DANGER

Risk of personal injury

Electricity can arc when you replace fan unit fuses.
Wear eye protection.

At the front of the cooling unit, reinstall the five 0.5-amp fan fuses (numbered 1 through 5) removed in step 17.

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

- 28 Check the FAN FAIL lamp on the front panel of the cooling unit.

If the FAN FAIL lamp	Do
is off	step 29
is on	step 46

- 29 Reinstall the side trim and secure with the top and bottom screws removed in step 10.

- 30 Go to step 52.

At the front of the frame

- 31 Pull the cooling unit part way out of the frame. The power cord can be too short to gain access to the front three fans. If the cord is too short, repair the unit on a bench top.

If the power cord	Do
is too short	step 17
is long enough	step 32

- 32 Determine if any of the front three fans decreased in speed or failed.

If	Do
one or more damaged fans are present	step 33
no damaged fans are present	step 42

Note: Determine if all fans run, and the FAN FAIL lamp on the front of the cooling unit is on. If the fans run, and the FAN FAIL lamp is on, the problem can be a defective air flow sensor switch.

At the front of the cooling unit

- 33 Remove the fuse associated with the defective fan from the front panel.
- 34 Disconnect the power supply wiring to the defective fan.
- 35 Note the position of the sensor switch on the defective fan.

Repairing FAN faults on an LCEI frame; cooling unit replacement (continued)

- 36 Remove the four screws that secure the fan and the screw that secures the sensor switch.
- 37 Mount the new fan. Position the fan so that air flows toward the top, as the fan label indicates.
- 38 Replace the sensor switch. Secure the switch with the mounting screw.
- 39 Connect the power supply to the new fan.
- 40 Replace the fuse that you removed in step 33.
- 41 If necessary, repeat steps 33 to 40 for other damaged fans.

If the FAN FAIL lamp	Do
is off	step 48
is on	step 42

- 42 Inspect the sails of the air flow sensors. Adjust or replace any sails that appear defective.

If the FAN FAIL lamp	Do
turns off	step 48
remains on	step 42

- 43 Disconnect the wiring from one of the sensor switches. Note which wire connects to each terminal.

If the FAN FAIL lamp	Do
turns off	step 44
remains on	step 45

Note: A FAN FAIL lamp that turns off indicates a defective sensor switch.

Repairing FAN faults on an LCEI frame; cooling unit replacement (end)

- 44 Remove the mounting screw from the air flow sensor. Remove and replace the sensor with a new sensor. Connect the wiring to the new sensor.

If the FAN FAIL lamp	Do
turns off	step 48
remains on	step 45

- 45 Repeat steps 42 to 44 until you checked all three accessible sensors, or until the FAN FAIL lamp turns off.

If the FAN FAIL lamp is	Do
off	step 48
on	step 17

Note: If the FAN FAIL lamp remains ON, the fault can lie in the two back fans or air flow sensors. In this event, remove the cooling unit from the frame and replace the unit with a new unit. If your company procedures direct you to repair damaged units in-house, refer to "Repairing a NTB63AA cooling unit" in this document.

- 46 Contact the next level of support.
- 47 Go to step 52.
- 48 Push the cooling unit back into the frame.

At the back of the frame

- 49 Replace the three mounting screws at the back center of the cooling unit removed in step 12. Secure the screws in position.

At the front of the frame

- 50 Replace the four 5/16-inch bolts that secure the cooling unit brackets (two per side) removed in step 11. Secure the bolts in position.
- 51 Reinstall the side trim and secure the trim with the top and bottom screws removed in step 10.
- 52 The procedure is complete.

Repairing an NTB63AA cooling unit on the bench top

Application

Use this procedure to repair an NTB63AA cooling unit on the bench top. Check for a fault with any of the front three fans. Do the check while the unit remains in the ISDN line concentrating equipment (LCEI) frame. If a fault exists, you can repair the unit while the unit remains in the frame. Check the air flow sensors on the front three fans while the unit remains in the frame.

A fault in a NTB63AA cooling unit results from one of the following:

- a loose or broken wiring harness
- a fan motor has faults
- a switch of the air flow sensor has faults

Definition

The cooling unit provides forced air to cool the cards in the line card drawer.

Common procedures

There are no common procedures.

Action

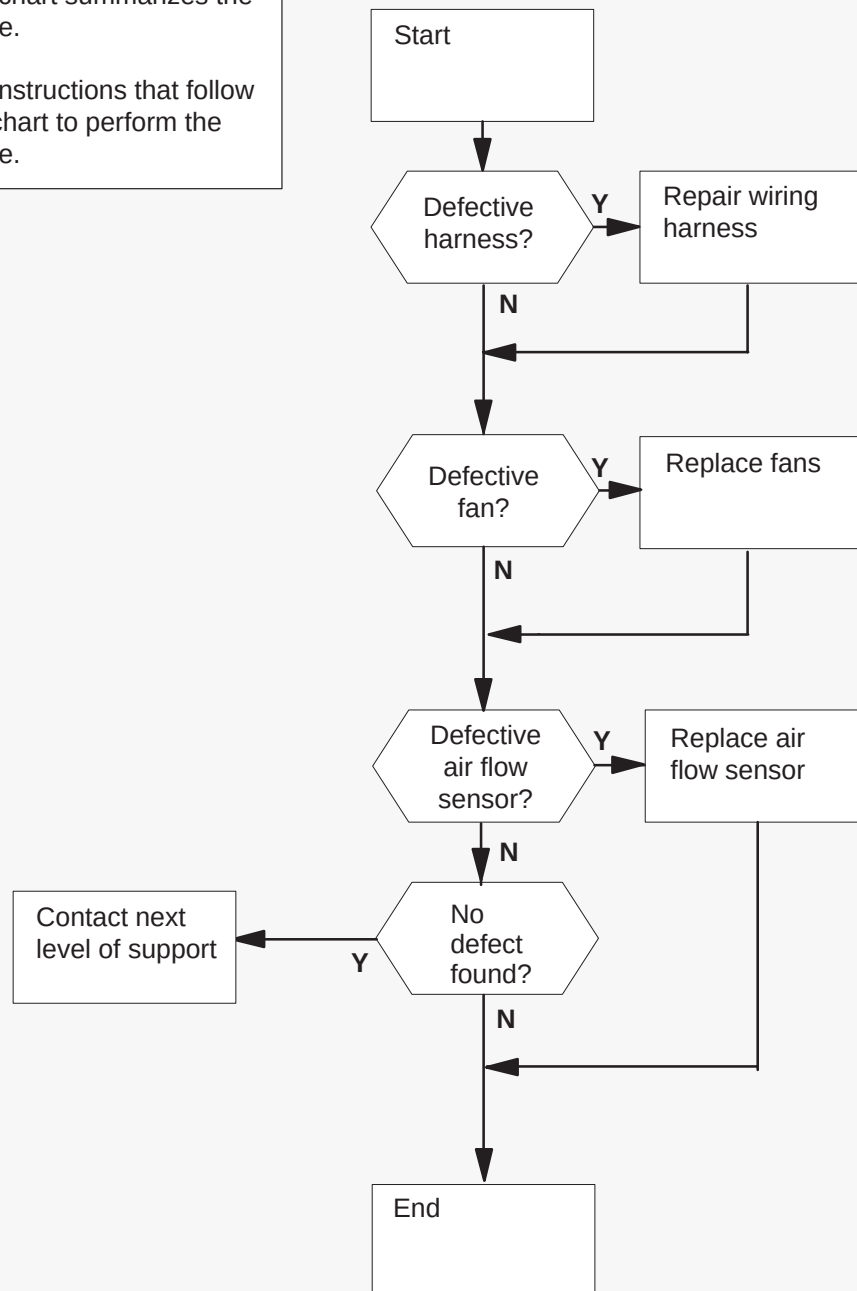
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Repairing an NTB63AA cooling unit on the bench top (continued)

Summary of Repairing an NTB63AA cooling unit on the bench top

This flowchart summarizes the procedure.

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



Repairing an NTB63AA cooling unit on the bench top (continued)

Repairing an NTB63AA cooling unit on the bench top

At your current location

1

ATTENTION

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.

Place the NTB63AA cooling unit that has faults on a bench.

2



WARNING

Incorrect fuse values

Always use replacement fuses of the correct rating, or damage to the equipment can result.



DANGER

Incorrect fuse values

Always use replacement fuses of the correct rating, or damage to the equipment can result.

Check the five fuses at the front of the unit and replace any blown fuses.

3



WARNING

Temporary power supply

Ensure that you have an acceptable power supply to run the unit without damage.



DANGER

Temporary power supply

Ensure that you have an acceptable power supply to run the unit without damage.

Connect the unit to an acceptable 48 V dc power supply.

Repairing an NTB63AA cooling unit on the bench top (continued)

- 4 Inspect the fan operation.

If the fans	Do
work correctly	step 21
do not work correctly	step 5

- 5 Inspect the unit wiring harness for damage or loose switch connections.

If the harness	Do
is damaged or loose	step 6
is not damaged or loose	step 6

- 6 Disconnect the power supply.
- 7 Replace or repair the harness that has faults. Tighten the loose connections.
- 8 Reconnect the 48 V dc power supply.
- 9 Inspect the fan operation.

If the fans	Do
work correctly	step 35
do not work correctly	step 10

- 10 Note the fans that do not work correctly.
- 11 Disconnect the power supply.
- 12 Disconnect the power supply wiring to the fan (or fans) that has faults noted in step 10.
- 13 Note the position of the sensor switch on the fan that has faults.
- 14 Remove the four screws that secure the fan and the screw that secures the sensor switch.
- 15 Mount the new fan so that air flows toward the top, as indicated on the label.

Repairing an NTB63AA cooling unit on the bench top (continued)

- 16 Replace the sensor switch of the last installation. Secure the sensor with the mounting screw.
- 17 Reconnect the power supply to the new fan.
- 18 If necessary, repeat steps 12 to 17 for other fans that have faults.
- 19 Turn ON the power switch on the unit.
- 20 Inspect the fan operation.

If the fans	Do
work correctly	step 35
do not work correctly	step 34

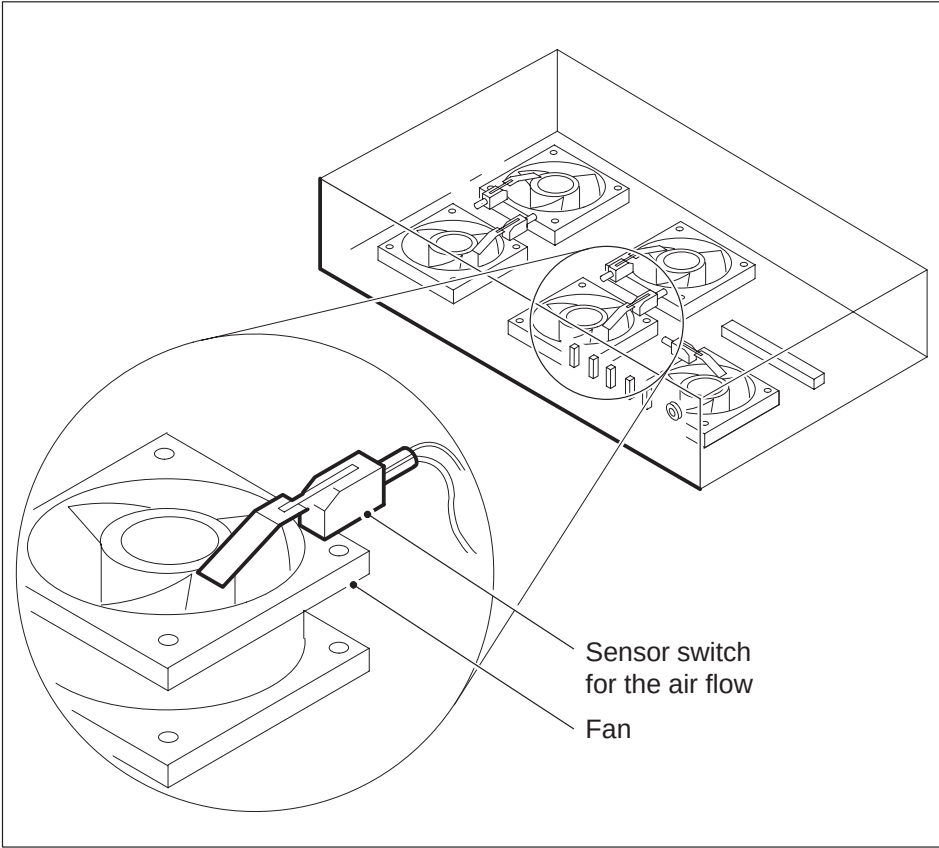
- 21 Inspect the sensor sails and adjust or replace any sails that appear to have faults.
- 22 Disconnect the wiring from one of the sensor switches. Note which wire connects to each terminal.
- 23 Connect an ohm meter to the two connected terminals of the sensor switch.
- 24 Lift the sail of the air flow sensor.

If the ohm meter	Do
indicates a closed sensor switch	step 25
indicates an open sensor switch	step 26

- 25 An ohm meter that has a closed circuit with the sail in the up position indicates a sensor has faults. Note the sensor and go to step 27.
- 26 An ohm meter that has an open circuit with the sail in the up position indicates a sensor operates correctly. Reconnect the wiring to the sensor switch.
- 27 Repeat steps 22 to 26 to test all sensor switches.
- 28 Disconnect power to the unit.
- 29 Locate any sensor switch (or switches) that has faults, as determined in steps 24 to 27. Note the position of the switch (or switches).

Repairing an NTB63AA cooling unit on the bench top
(continued)

- 30 Remove the sensor switch that has faults from the switch bracket.
- 31 Attach the replacement sensor switch to the switch bracket. Secure the sensor in position with screws, nuts, and washers.
- 32 Reconnect the wiring to the sensor switch, as noted in step 22.
- 33 Repeat steps 29 to 32 for each sensor switch. Replace any switches that have faults.



- 34 Contact the next level of support.

If you	Do
found no problems with the unit, or that repair to the unit was not possible	step 34
found and repaired the problems	step 35

Repairing an NTB63AA cooling unit on the bench top (end)

- 35** Disconnect the power supply from the cooling unit and store the unit for future use.
- 36** The procedure is complete.

Repair and replacing NT3X90AA cooling units

Application

Use this procedure to repair or replace NT3X90AA cooling units in the following frames:

- LGE, DTE, LTE and SME
- ILGE and IDTE
- DSNE
- MS7E, ST6E and ST7E
- SNPC
- CPEI

A fault in a NT3X90AA cooling unit results from one of the following:

- a dirty filter
- a loose or broken wiring harness
- a blown fuse for inverter on PDC frame
- an inverter has faults
- an air flow sensor switch has faults
- a fan motor has faults

Definition

The cooling unit provides forced air to cool the equipment and cards in the frames.

Common procedures

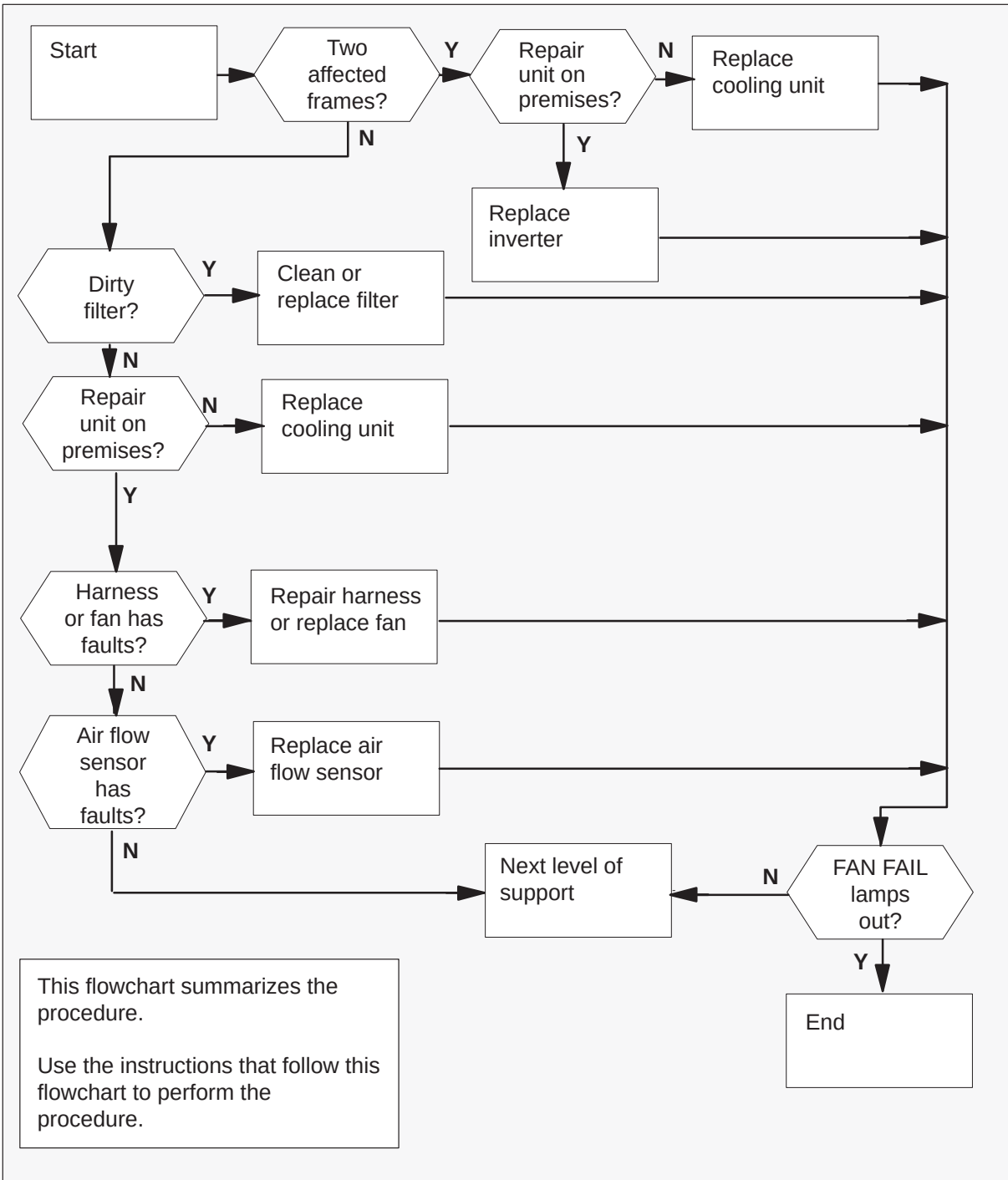
There are no common procedures.

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.

Repair and replacing NT3X90AA cooling units (continued)

Summary of Repairing and replacing NT3X90AA cooling units



Repair and replacing NT3X90AA cooling units (continued)

Repairing and replacing NT3X90AA cooling units

At the FSP

1

ATTENTION

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.

Identify the frame, or the pair of frames, where the lit FAN FAIL lamp is on the Frame Supervisory Panel (FSP).

Note: NT3X90AA power supplies for the cooling unit connect in pairs. A problem in one unit on a pair can cause an interruption in the operation of both units of the pair. Frames that are near each other will house the pairs.

- 2 To silence the alarm, turn ON the FAN FAIL OVERRIDE switch (or switches).

If the lit FAN FAIL lamp	Do
is on only one frame	step 3
is on two frames	step 39

At the frame

- 3 Remove the air intake grill and filter assembly from the front of the affected cooling unit.
- 4 Determine if the FAN FAIL lamp darkened on the Frame Supervisory Panel (FSP) when you removed the filter.

If the FAN FAIL lamp	Do
darkened	step 5
remained on	step 8

- 5 Remove the filter and intake grill to a location away from the switchroom. To clean the fan air intake, use a dust cloth and vacuum.
- 6 Vacuum or wash the filter in soap and water, according to the filter type.
- 7 Replace the filter in the grill and reinstall the grill at the front of the cooling unit.

Repair and replacing NT3X90AA cooling units (continued)

- 8** Turn OFF the FAN FAIL OVERRIDE switch.
Go to step 86.

If your company procedures	Do
direct you to do repairs	step 9
do not direct you to do repairs	step 71

At the front of the cooling unit

- 9** Remove the screws that secure the side rail covers to the frame.
- 10** Remove the eight screws that secure the brackets to the sides of the cooling unit. To remove the screws, use a 5/16-inch ratchet and extension.

11



WARNING
Loss of frame cooling
 Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.



WARNING
Loss of frame cooling
 Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.

Ease the cooling unit toward you until it is half-way out of the frame.

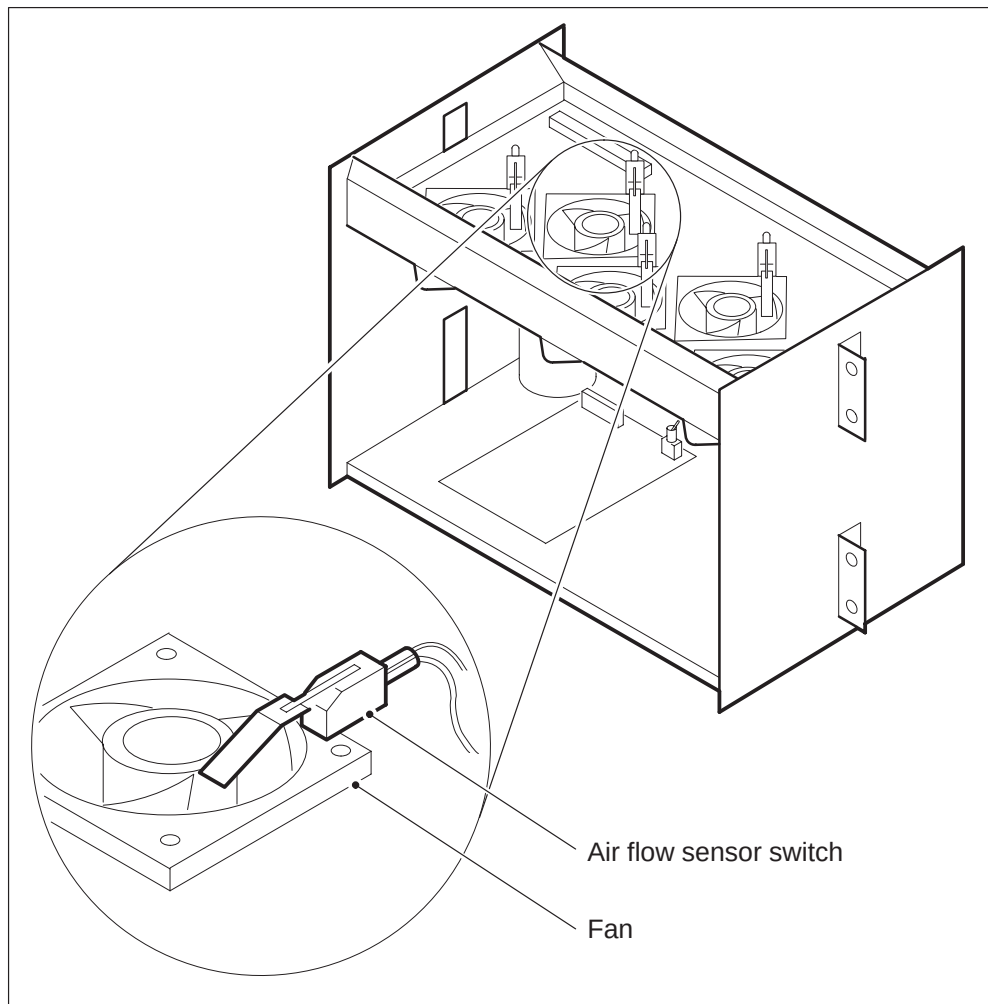
- 12** Inspect the fans in the cooling unit. Note any fans that do not work.

If	Do
fans work correctly but FAN FAIL lamp remains on	step 33
one fan does not work	step 13
other than listed above	step 85

Repair and replacing NT3X90AA cooling units (continued)

Note 1: A fan that does not work indicates a wiring harness, loose connections, or a fan that requires replacement.

Note 2: The operation of all fans with a lit FAN FAIL lamp indicates a air flow sensor that has faults.



- 13 Inspect the wiring harness for the cooling unit. Look for damage and/or a loose connection at the fans or terminal blocks.

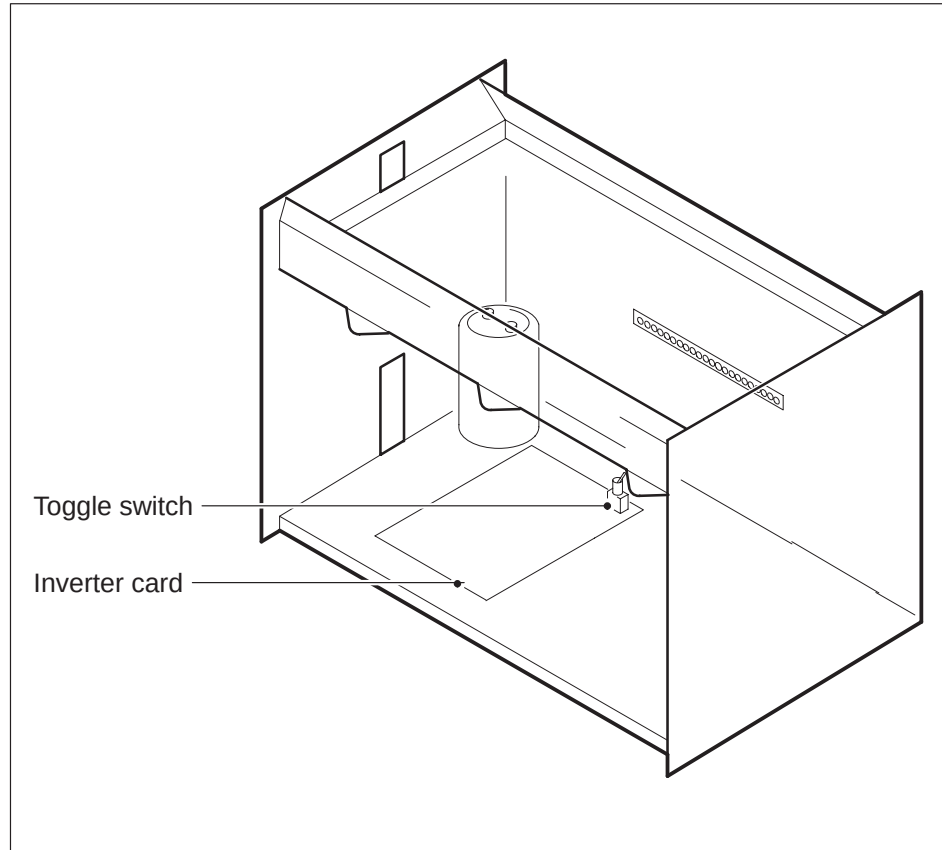
At the back of the frame

- 14 Unplug the connector at the back of the unit.

Repair and replacing NT3X90AA cooling units (continued)

At the cooling unit

- 15** A harness requires replacement. Tighten any loose connections.



At the back of the frame

- 16** Reconnect the connector at the back of the unit.

At the front of the cooling unit

- 17** Inspect the fan operation.

If the fan	Do
works correctly, but did not work in step 12	step 62
did not work correctly, and did not work in step 12	step 18

Repair and replacing NT3X90AA cooling units

(continued)

At the back of the cooling unit

- 18 Unplug the connector at the back of the unit.

At the cooling unit

- 19 Disconnect the wiring to the airflow sensor switch from the fan. Note the position and color of the wires.
- 20 Note the position of the air flow switch on the fan.
- 21 Remove the sensor switch from the switch bracket. Lay the switch to one side.
- 22 Cut the two tie wraps that secure the power cord to the fan.
- 23 Remove the four screws, spacers, nuts, and washers that secure the fan to the cooling unit.
- 24 Disconnect the power cord at the fan terminals.
- 25 Remove the fan.
- 26 Plug a new fan into the power cord.
- 27 Mount the new fan. Ensure that you install the fan to allow air to flow toward the top, as indicated on the label. Secure with screws, spacers, nuts and washers.
- 28 Secure the power cord to the fan with new tie wraps.
- 29 Reinstall the wiring to the sensor switch, as noted in step 19.
- 30 Reinstall the sensor switch to the switch bracket. Secure the sensor in position with screws, nuts, and washers.

At the back of the frame

- 31 Reconnect the connector at the back of the cooling unit.
- 32 Inspect the fan operation.

If the fan	Do
works correctly, but did not work in step 12	step 62
did not work correctly, and did not work in step 12	step 85

Repair and replacing NT3X90AA cooling units (continued)

- 33** Inspect the sails of the air flow sensors. Replace or repair any sails that appear to have faults.
- 34** Disconnect the wiring to one of the sensor switches. Note the position and color of the wires.

If the FAN FAIL lamp	Do
remained on when you disconnected the wiring to the air flow sensor	step 37
did not remain on when you disconnected the wiring to the air flow sensor	step 35

Note: A FAN FAIL lamp that turns OFF when you disconnect the wiring to the sensor indicates a sensor switch that has faults.

- 35** Remove the sensor switch.
- 36** Attach the replacement sensor switch to the switch bracket. Secure the switch in position with screws, nuts, and washers.
- 37** Reconnect the wiring to the sensor switch, as noted in step 34.
- 38** Repeat steps 34 to 37 to check all sensor switches.

If the FAN FAIL lamp	Do
is off	step 62
is on	step 85

Repair and replacing NT3X90AA cooling units
(continued)

At the PDC frame

39



DANGER
Possible arcing
Electricity can arc when you remove cooling unit fuses. Wear eye protection.



DANGER
Possible arcing
Electricity can arc when you remove cooling unit fuses. Wear eye protection.

Remove the fuses that power the inverters.

40 Do you have a blown fuse?

If a fuse	Do
is blown	step 41
is not blown	step 44

Repair and replacing NT3X90AA cooling units

(continued)

41



WARNING

Incorrect fuse values

Use replacement fuses of the correct rating, or damage to the equipment may result.



WARNING

Incorrect fuse values

Use replacement fuses of the correct rating, or damage to the equipment may result.

Replace the fuses in the PDC. Replace the blown fuse with a new fuse.

If FAN FAIL lamps at the FSPs	Do
are dark	step 42
are lit	step 44

At the FSPs

42 Turn OFF the FAN FAIL OVERRIDE switches.

43 Go to step 86.

44 Remove the air intake grill and filter assembly from the front of both cooling units.

45 Inspect the fans in both cooling units.

If	Do
a complete row of fans do not work in each cooling unit	step 46
other than listed here	step 85

Repair and replacing NT3X90AA cooling units (continued)

- 46 Locate the toggle switches at the back right corner of each inverter.

Note: The toggle switches are the ON/OFF power switches for the inverters.

- 47 Cycle the toggle switches on both inverters to find the inverter that powers the rows of fans that do not work.

If company procedures	Do
direct you to do repairs	step 50
do not direct you to do repairs	step 48

Note: Each inverter powers the row of three fans. The front of the cooling unit houses the row of fans. Each inverter also powers the row of two fans at the back of the paired unit.

- 48 Identify the cooling unit with the inverter that powers the fans that do not operate. Replace this cooling unit.

- 49 Go to step 71.

- 50 Turn OFF the inverter that powers the row of fans that have faults.

At the PDC frame

- 51 Remove the fuse for the inverter that powers the fans.

At the frame

- 52 Disconnect the connector at the back left corner of the inverter.

- 53 Use a pair of needle-nosed pliers to remove the four plastic mounting pins that hold the inverter card.

- 54 Lift the inverter out of the cooling unit. Replace the inverter with a new inverter.

- 55 Mount the new inverter on the four plastic mounting pins.

- 56 Attach the connector at the back left corner of the new inverter.

At the PDC frame

- 57 Check the fuse to the inverter. A blown fuse requires a replacement. Replace the fuse in the PDC.

Repair and replacing NT3X90AA cooling units (continued)

At the frame

- 58** Turn ON the toggle switch of the new inverter.

If	Do
the fans work correctly and the FAN FAIL lamp is not on	step 59
other than listed here	step 85

- 59** Install the air intake grill and filter assembly at the front of the cooling unit.

At the FSP

- 60** Turn OFF the FAN FAIL OVERRIDE switch (or switches).
- 61** Go to step 86.
- 62** Ease the cooling unit back completely into the frame.
- 63** Insert the eight screws that secure the brackets to the sides of the cooling unit. To insert the screws, use a 5/16-inch ratchet and extension.
- 64** Reinstall the side rail on the front of the frame.

At the PDC frame

- 65** If you removed the fuse (or fuses) that powers the inverter card (or cards), reinstall it.
- 66** Locate the toggle switch near the back right side of the inverter card (or cards).
- 67** If the switches operated during this procedure, ensure that you turn back ON the switches.
- 68** Reinstall the air intake grill and filter assembly at the at the front of the cooling unit.
- 69** Turn OFF the FAN FAIL OVERRIDE switch on the FSP.
- 70** Go to step 86.

At the PDC frame

- 71** Remove the fuses that power the inverter cards on the cooling unit that requires replacement.

At the back of the cooling unit

- 72** Disconnect the plug that connects the wiring to the cooling unit.

Repair and replacing NT3X90AA cooling units

(continued)

At the front of the cooling unit

- 73 Remove the screws that secure the side rail covers to the frame.
- 74 Remove the eight screws that secure the brackets to the sides of the cooling unit. To remove the screws, use a 5/16-inch ratchet and extension.
- 75 Ease the cooling unit toward you and out of the frame.
- 76 Ease the replacement cooling unit into the frame.
- 77 Insert the eight screws that secure the brackets to the sides of the cooling unit. To insert the Use a 5/16-inch ratchet and extension.
- 78 Reinstall the side rail on the front of the frame.

At the back of the cooling unit

- 79 Reconnect the plug that connects the wiring to the cooling unit.

At the PDC frame

- 80 Reinstall the fuses that power the inverter cards.

At the front of the cooling unit

- 81 Locate the toggle switches near the back right side of the inverter cards.
- 82 Ensure that you turn ON the toggle switches.
- 83 Reinstall the air intake grill and filter assembly at the at the front of the cooling unit.
- 84 Turn OFF the FAN FAIL OVERRIDE switch (or switches) on the FSP (or FSPs).

Repair and replacing NT3X90AA cooling units (end)

85



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the cooling unit immediately, go to step 71. Follow the necessary parts of the procedure to replace the unit with one that work correctly.



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the cooling unit immediately, go to step 71. Follow the necessary parts of the procedure to replace the unit with one that work correctly.

For additional help, contact the next level of support.

86 The procedure is complete.

Repairing and replacing NT3X90AB cooling units

Application

Use this procedure to repair or replace NT3X90AB cooling units in the following frames:

- LGE, DTE, LTE and SME
- ILGE and IDTE
- DSNE
- PMTC
- MS7E, ST6E and ST7E
- RCE
- CPEI

A fault in a NT3X90AB cooling unit results from one of the following:

- a dirty filter
- a loose or broken wiring harness
- a blown fuse for inverter on PDC frame
- a inverter has faults
- a air flow sensor switch has faults
- a fan motor has faults

Definition

The cooling unit provides forced air to cool the equipment and cards in the frames.

Common procedures

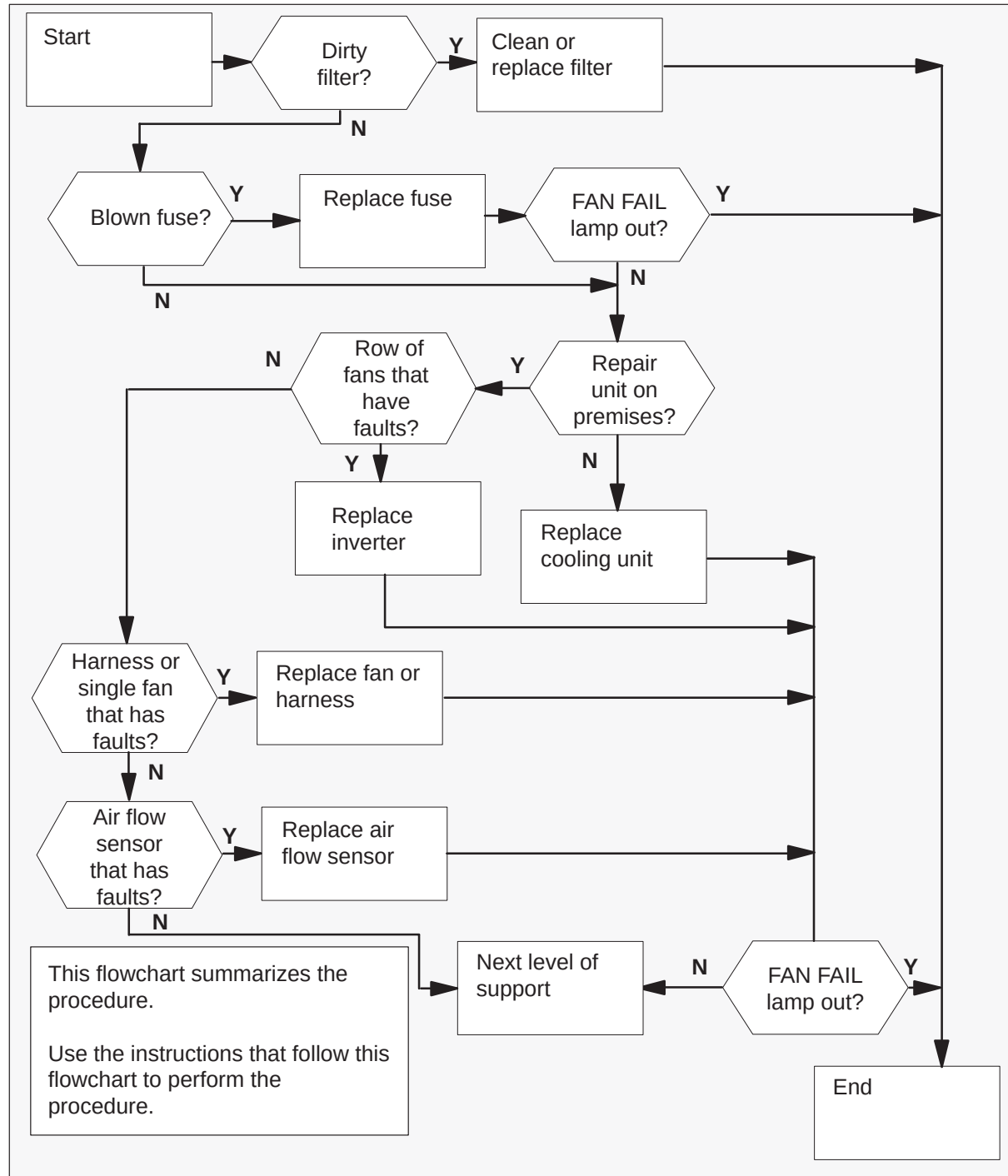
There are no common procedures.

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.

Repairing and replacing NT3X90AB cooling units (continued)

Summary of Repairing and replacing NT3X90AB cooling units



Repairing and replacing NT3X90AB cooling units (continued)

Repairing and replacing NT3X90AB cooling units

At the FSP

1



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.

To silence the alarm, turn ON the FAN FAIL OVERRIDE switch.

At the frame

- 2 Remove the air intake grill and filter assembly from the front of the cooling unit.
- 3 Determine if the FAN FAIL lamp darkened on the frame supervisory panel (FSP) when you removed the filter.

If the FAN FAIL lamp	Do
darkened	step 4
remained on	step 9

- 4 Remove the filter and grill to a location away from the switchroom. Use a dust cloth and vacuum to clean the fan air intake.
- 5 Vacuum or wash the filter in soap and water, according to the filter type.
- 6 Replace the filter in the grill and reinstall the filter in the cooling unit.
- 7 Turn OFF the FAN FAIL OVERRIDE switch.
- 8 Go to step 79.

Repairing and replacing NT3X90AB cooling units (continued)

At the PDC frame

9



DANGER

Possible arcing

Electricity can arc when you remove cooling unit fuses. Wear eye protection.



DANGER

Possible arcing

Electricity can arc when you remove cooling unit fuses. Wear eye protection.

Remove the fuses that power the inverters.

10 Do you have a blown fuse?

If	Do
yes	step 11
no	step13

At the PDC frame

11



WARNING

Incorrect fuse values

Use replacement fuses of the correct rating, or damage to the equipment can result.



WARNING

Incorrect fuse values

Use replacement fuses of the correct rating, or damage to the equipment can result.

Replace the fuse in the PDC with a new one.

Repairing and replacing NT3X90AB cooling units (continued)

- 12 Replace the filter in the grill.

If the FAN FAIL lamp is	Do
off	step12
on	step13

- 13 Turn OFF the FAN FAIL OVERRIDE switch.
Go to step 79.

If your company procedures	Do
direct you to do repairs	step 14
do not direct you to do repairs	step 64

At the front of the frame

- 14 Remove the screws that secure the side rail covers to the frame.
- 15 Remove the eight screws that secure the brackets to the sides of the cooling unit. To remove the screws, use a 5/16-inch ratchet and extension.
- 16



WARNING

Loss of frame cooling

Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.



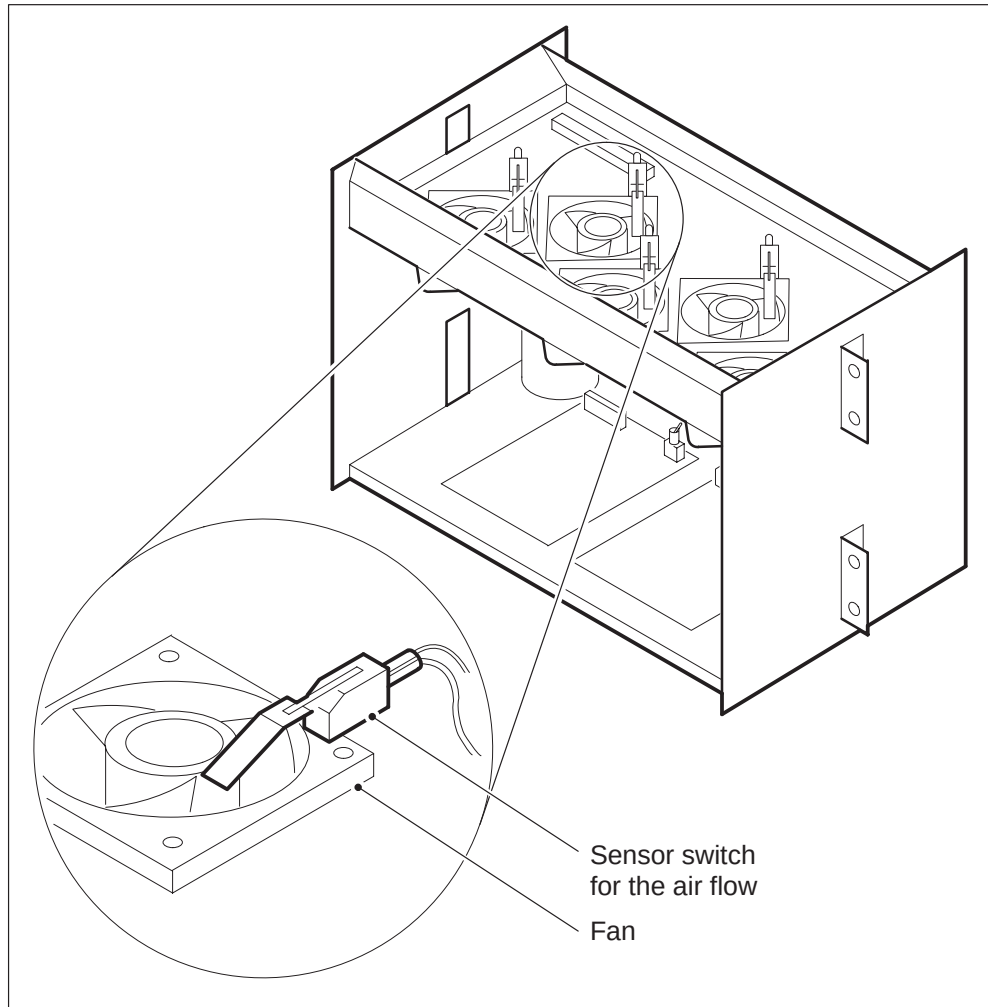
WARNING

Loss of frame cooling

Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.

Ease the cooling unit toward you until it is half-way out of the frame.

Repairing and replacing NT3X90AB cooling units (continued)



Repairing and replacing NT3X90AB cooling units

(continued)

- 17 Inspect the fans in the cooling unit. Determine how many fans work.

If	Do
fans work correctly but FAN FAIL lamp remains on	step 49
one fan does not work	step 29
both fans in the back row or all three fans in the front row do not work	step 18

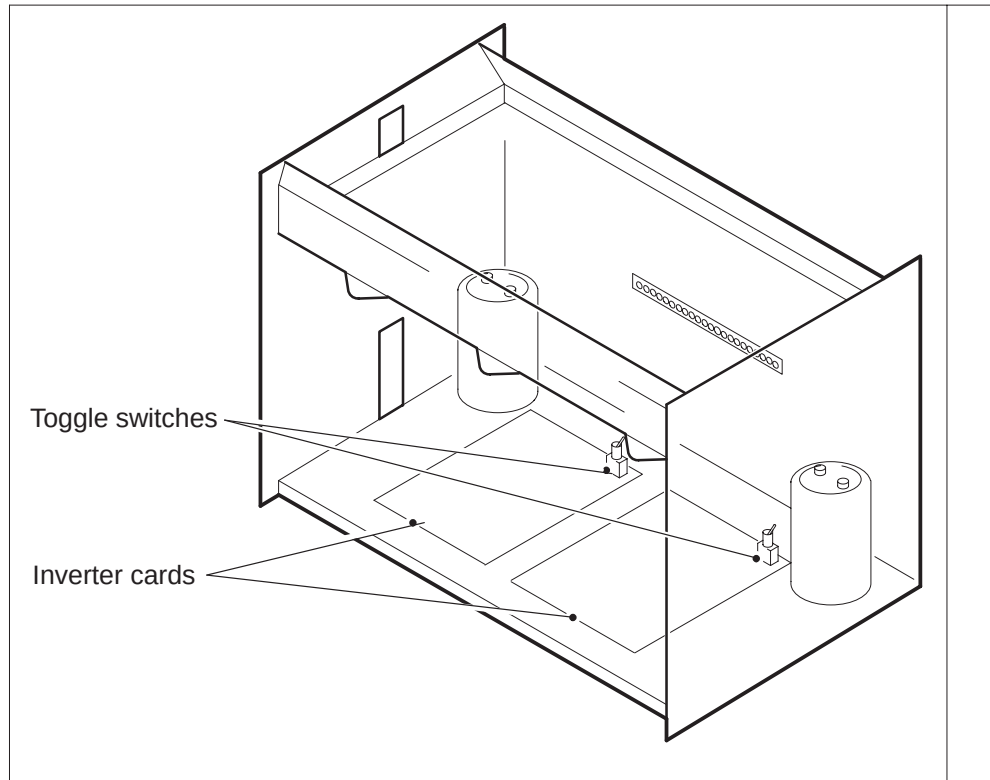
Note 1: A complete row of fans that have faults indicates an inverter that powers the row is at fault. The row of fans that have faults also indicates a blown fuse on the PDC frame for the inverter that has faults.

Note 2: One fan that does not operate indicates a damaged wiring harness, loose connections, or a fan that requires replacement.

Note 3: All fans that operate normally with a lit FAN FAIL lamp indicate a air flow sensor that has faults.

Repairing and replacing NT3X90AB cooling units (continued)

- 18 Locate the toggle switches at the back right corner of each inverter.



Note: The toggle switches are the ON/OFF power switches for the inverters.

- 19 Cycle the toggle switches on both inverters until you find the inverter that powers the row of fans that have faults.
- 20 Switch OFF the inverter that provides power to the row of fans that have faults.

At the PDC frame

- 21 Remove the fuse for the damaged inverter.

At the frame

- 22 Disconnect the connector at the back left corner of the inverter.
- 23 Use a pair of needle-nosed pliers to disconnect the four plastic mounting pins.
- 24 Lift the old inverter out of the cooling unit. Replace the old inverter with a new inverter.
- 25 Mount the new inverter on the four plastic mounting pins.

Repairing and replacing NT3X90AB cooling units (continued)

- 26 Plug the connector into the back left corner of the inverter.

At the PDC frame

- 27 Examine the fuse to the inverter. If the fuse is a blown fuse, obtain a new fuse. Replace the fuse in the PDC.

At the frame

- 28 Turn ON the toggle switch of the new inverter.

If	Do
the fans work normally and the FAN FAIL lamp does not turn on	step 55
other than listed here	step 78

- 29 To turn OFF the inverters, use the toggle switches at the back right corner of the inverters.
- 30 Inspect the cooling unit wiring harness for damage and/or a loose connection at the fans or terminal blocks.
- 31 Replace a defective harness. Tighten any loose connections.
- 32 To turn ON the inverters, use the toggle switches at the back right corner of the inverters.
- 33 Inspect the fan operation.

If the fan	Do
works correctly, but did not work in step 17	step 55
does not work correctly, and did not work in step 17	step 34

- 34 To turn OFF the inverters, use the toggle switches at the back right corner of the inverters.
- 35 Disconnect the wiring to the sensor switch from the fan that has faults. Note the position and color of the wires.
- 36 Note the position of the air flow switch on the fan (or fans) that has faults.

Repairing and replacing NT3X90AB cooling units (continued)

- 37** Remove the sensor switch from the switch bracket. Lay the switch to one side.
- 38** Cut the two tie wraps that secure the power cord to the fan.
- 39** Remove the four screws, spacers, nuts, and washers that secure the fan to the cooling unit.
- 40** Disconnect the power cord at the fan terminals.
- 41** Remove the fan.
- 42** Plug a new fan into the power cord.
- 43** Mount the new fan. Install the fan so that air flows toward the top, as indicated on the label. Secure the fan with screws, spacers, nuts, and washers.
- 44** Use new tie wraps to secure the power cord to the fan.
- 45** Reconnect the wiring to the sensor switch, as noted in step 35.
- 46** Attach the sensor switch to the switch bracket. Secure the switch in position with screws, nuts, and washers.
- 47** To switch ON the inverters, use the toggle switches at the back right corner of the inverters.
- 48** Inspect the fan operation.

If the fan	Do
works correctly, but did not work in step 17	step 55
did not work correctly, and did not work in step 17	step 78

- 49** Inspect the sails of the air flow sensors. Replace or repair any that appear to have faults.

Repairing and replacing NT3X90AB cooling units (continued)

- 50 Disconnect the wiring to one of the sensor switches. Note the position and color of the wires.

If the FAN FAIL lamp	Do
remained on when you disconnected the sensor wiring for the air flow	step 53
did not remain on when you disconnected the sensor wiring for the air flow	step 51

Note: A FAN FAIL lamp that turned OFF when you disconnected the sensor wiring indicates a sensor switch that has faults.

- 51 Remove the defective sensor switch.
- 52 Attach the replacement sensor switch to the switch bracket. Secure the new sensor in position with screws, nuts, and washers.
- 53 Reconnect the wiring to the sensor switch, as noted in step 50.
- 54 Repeat steps 50 to 53 to check all sensor switches.

If the FAN FAIL lamp	Do
turns off	step 55
remains on	step 78

- 55 Ease the cooling unit completely back into the frame.
- 56 Insert the eight screws that secure the brackets to the sides of the cooling unit. To insert the screws, use a 5/16-inch ratchet and extension.
- 57 Reinstall the side rail on the front of the frame.
- 58 Locate the toggle switch near the back right corner of each inverter card.
- 59 If the switches worked during this procedure, turn back ON the switches.
- At the PDC frame**
- 60 Inspect the fuses that power the inverter cards. Replace any blown fuses.

Repairing and replacing NT3X90AB cooling units (continued)

At the FSP

- 61** Replace the air intake grill and filter assembly at the front of the cooling unit.

If the FAN FAIL lamp	Do
is off	step 61
is on	step 78

- 62** Turn OFF the FAN FAIL OVERRIDE switch on the FSP.

- 63** Go to step 79.

At the PDC frame

- 64** Remove the fuses that power the inverter cards.

At the back of the cooling unit

- 65** Disconnect the plug that connects the wiring to the cooling unit.

At the front of the cooling unit

- 66** Remove the screws that secure the side rail covers to the frame.
- 67** Remove the eight screws that secure the brackets to the sides of the cooling unit. To remove the screws, use a 5/16-inch ratchet and extension.
- 68** Ease the cooling unit toward you and out of the frame.
- 69** Ease the replacement cooling unit into the frame.
- 70** Secure the brackets to the sides of the cooling unit. To secure the brackets, use a 5/16-inch ratchet and extension.
- 71** Reinstall the side rail on the front of the frame.

At the back of the cooling unit

- 72** Reconnect the plug that connects the wiring to the cooling unit.

At the PDC frame

- 73** Insert the fuses that power the inverter cards.

At the front of the cooling unit

- 74** Locate the toggle switches near the back right corner of the inverter cards.
- 75** Make sure you turn ON the toggle switches.
- 76** Reinstall the air intake grill and filter assembly at the front of the cooling unit.

Repairing and replacing NT3X90AB cooling units (end)

77 Turn ON the FAN FAIL OVERRIDE switch on the FSP.

78



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the cooling unit immediately, replace it with a cooling unit that works correctly. Go to step 64 and follow the necessary parts of the procedure.



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the cooling unit immediately, replace it with a cooling unit that works correctly. Go to step 64 and follow the necessary parts of the procedure.

For additional help, contact the next level of support.

79 The procedure is complete.

Repairing and replacing NT3X90AC cooling units

Application

Use this procedure to replace NT3X90AC cooling unit components in the following frames:

- LGE, DTE, LTE and SME
- LGEI, DTEI, and LTEI
- ILGE and IDTE
- DSNE
- MS6E, MS7E, ST6E and ST7E
- RCE and RCEI
- DSNE
- CPEI

A problem in a NT3X90AC cooling unit results from one of the following:

- a dirty filter
- a loose or broken wiring harness
- a blown fuse in the front panel of the cooling unit
- a switch of the air flow sensor has faults
- a fan motor has faults

Definition

The cooling unit provides forced air to cool the equipment and cards in the frames.

Common procedures

There are no common procedures.

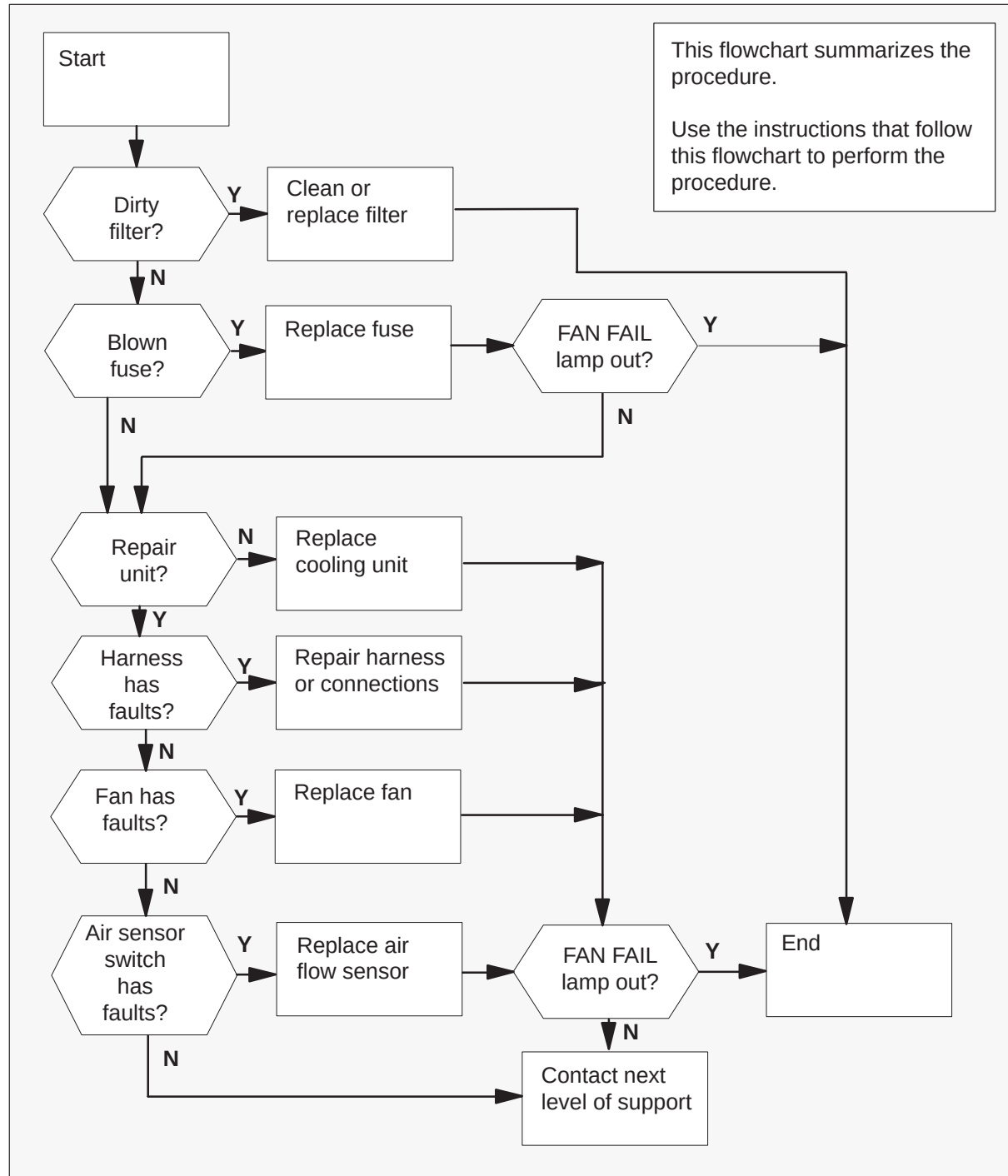
Action

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.

Repairing and replacing NT3X90AC cooling units

(continued)

Summary of Repairing and replacing NT3X90AC cooling units



Repairing and replacing NT3X90AC cooling units (continued)

Repairing and replacing NT3X90AC cooling units

At the FSP

1



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.



WARNING

Next level of support

The cooling unit configuration in the frame can differ from the following description. If you encounter an important difference, contact your next level of support.

To silence the alarm, turn ON the FAN FAIL OVERRIDE switch.

At the frame

- 2** Remove the air intake grill and filter assembly from the front of the cooling unit.
- 3** Determine if the FAN FAIL lamp darkened on the frame supervisory panel (FSP) when you removed the filter.

If the FAN FAIL lamp	Do
darkened	step 4
remained on	step 9

- 4** Remove the filter and grill to a location away from the switch room. Use a dust cloth and vacuum to clean the fan air intake.
- 5** Vacuum or wash the filter in soap and water, according to the filter type.
- 6** Replace the filter in the grill.

At the FSP

- 7** Turn OFF the FAN FAIL OVERRIDE switch.

Repairing and replacing NT3X90AC cooling units (continued)

- 8 Go to step 59.
- 9 Locate the seven fuses at the front of the cooling unit and check each one.

10



WARNING
Incorrect fuse values
Use replacement fuses of the correct rating, or damage to the equipment can result.



WARNING
Incorrect fuse values
Use replacement fuses of the correct rating, or damage to the equipment can result.

If one or more fuses blow, replace the blown fuses with new fuses.

- 11 Replace the air intake grill and filter assembly at the front of the cooling unit.

If the FAN FAIL lamp	Do
darkened when you replaced the fuses	step 11
remained on when you replaced the fuses	step 13

At the FSP

- 12 Turn OFF the FAN FAIL OVERRIDE switch.
- 13 Go to step 59.

If your company procedures	Do
direct you to do repairs	step 25
direct you to not do repairs	step 14

At the back of the cooling unit

- 14 Disconnect the plug that connects the wiring to the cooling unit.

Repairing and replacing NT3X90AC cooling units (continued)

At the front of the cooling unit

- 15 Remove the screws that secure the side rail covers to the frame.
- 16 Remove the eight screws that secure the brackets to the sides of the cooling unit. To remove the screws, use a 5/16–inch ratchet and extension.
- 17 Ease the cooling unit toward you and out of the frame.
- 18 Ease the replacement cooling unit into the frame.
- 19 Insert the eight screws that secure the brackets to the sides of the cooling unit. To insert the screws, use a 5/16–inch ratchet and extension.
- 20 Reinstall the side rail on the front of the frame.

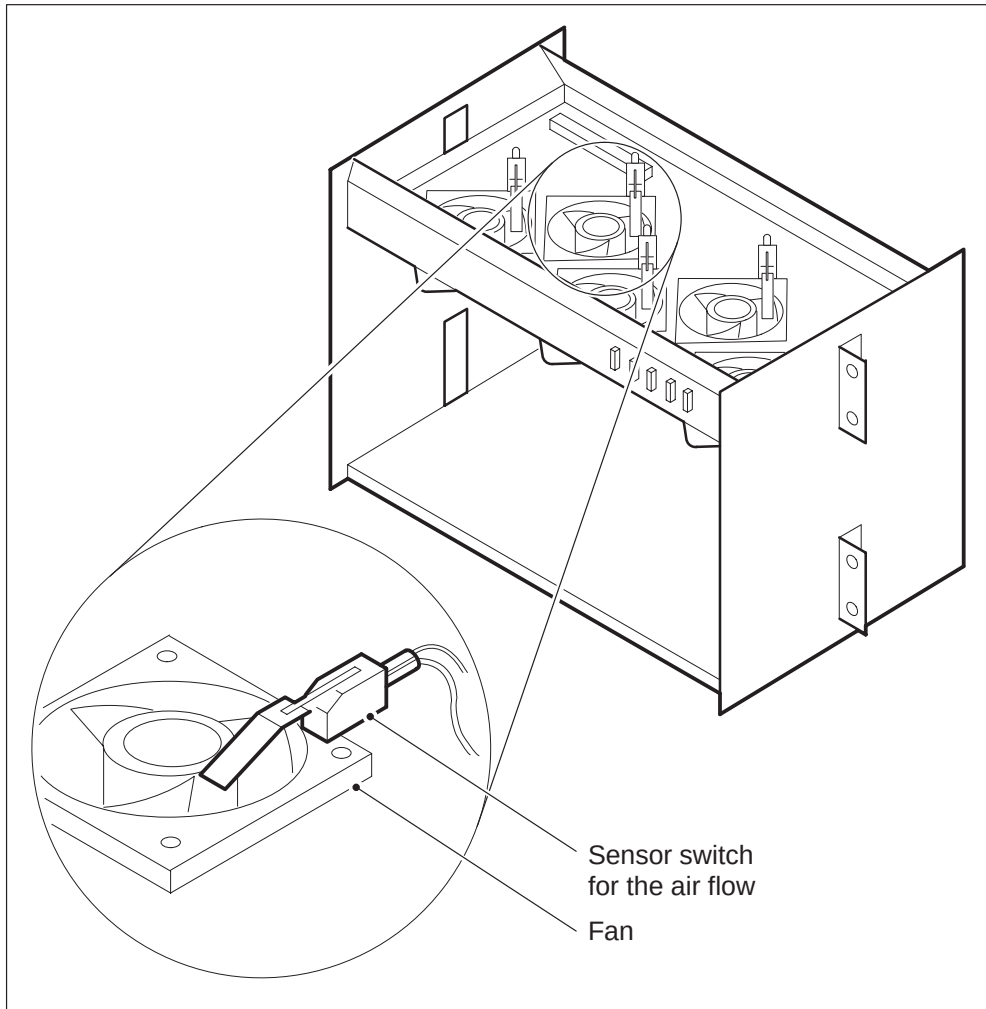
At the back of the cooling unit

- 21 Reconnect the plug that connects the wiring to the cooling unit.

At the front of the cooling unit

- 22 Locate the air intake grill and filter at the at the front of the unit.

Repairing and replacing NT3X90AC cooling units (continued)



At the FSP

- 23** Turn OFF the FAN FAIL OVERRIDE switch.
- 24** Go to step 58.

At the front of the cooling unit

- 25** Remove the screws that secure the side rail covers to the frame.
- 26** Remove the eight screws that secure the side brackets to the sides of the cooling unit. To remove the screws, use a 5/16-inch ratchet and extension.

Repairing and replacing NT3X90AC cooling units (continued)

27



WARNING

Loss of frame cooling

Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.



WARNING

Loss of frame cooling

Removal of the cooling unit for an extended period of time can cause the equipment in the frame to overheat.

Ease the cooling unit toward you until the unit is half way out of the frame.

28 Inspect the fans in the cooling unit and determine how many fans work.

If	Do
all fans work correctly but the FAN FAIL lamp remains on	step 46
one or more fans do not work	step 29

Note 1: The failure of one or more fans to work indicates a wiring harness that has faults or loose connections. The failure of one or more fans to operate can indicate one or more fans that require replacement.

Note 2: All fans can operate correctly but the FAN FAIL lamp remains on. This occurrence indicates an air flow sensor that has faults.

29 Remove the fuses from the front of the cooling unit.

30 Inspect the wiring harness of the cooling unit for damaged and/or a loose connection at the fans or terminal blocks.

31 If you find a bad harness, replace the harness. Tighten any loose connections.

Repairing and replacing NT3X90AC cooling units

(continued)

- 32 Replace the fuses at the front of the cooling unit.

If	Do
all fans work correctly and the FAN FAIL lamp is off	step 52
one or more fans do not work	step 33

- 33 Disconnect the wiring to the sensor switch from the fan that has faults. Note the position and color of the wires.
- 34 Note the position of the sensor switch on the fan that has faults.
- 35 Remove the sensor switch from the switch bracket and lay the sensor to one side.
- 36 Cut the two tie wraps that secure the power cord to the fan.
- 37 Remove the four screws, spacers, nuts, and washers that secure the fan to the cooling unit.
- 38 Disconnect the power cord at the fan terminals.
- 39 Remove the fan that has faults.
- 40 Connect a new fan to the power cord.
- 41 Mount the new fan. Install the fan so that air flows toward the top, as indicated on the label. Secure the new fan with screws, spacers, nuts, and washers.
- 42 Use new tie wraps to secure the power cord to the fan.
- 43 Reattach the wiring to the sensor switch as noted in step 33.
- 44 Reconnect the sensor switch to the switch bracket. Secure the switch in position with screws, nuts, and washers.
- 45 Inspect the fan operation.

If all fans	Do
work correctly	step 52
do not work correctly	step 58

Repairing and replacing NT3X90AC cooling units (continued)

- 46 Inspect the sails of the air flow sensors and replace or repair any sails that appear defective.
- 47 Disconnect the wiring to one of the sensor switches. Note the position and color of the wires.

If the FAN FAIL lamp	Do
remained on when you disconnected the wiring of the air flow sensor	step 50
did not remain on when you disconnected the wiring of the air flow sensor	step 48

Note: A FAN FAIL lamp that did not remain on when you disconnected the wiring indicates a sensor switch that has faults.

- 48 Remove the sensor switch that has faults.
- 49 Attach the replacement of the sensor switch to the switch bracket. Secure the new sensor in position with screws, nuts, and washers.
- 50 Reconnect the wiring to the sensor switch, as noted in step 47.
- 51 Repeat steps 47 to 50 to check all sensor switches.

If the FAN FAIL lamp	Do
is off	step 52
is on	step 58

- 52 Ease the cooling unit completely into the frame.
- 53 Insert the eight screws that secure the brackets to the sides of the cooling unit. To insert the screws, use a 5/16-inch ratchet and extension.

Repairing and replacing NT3X90AC cooling units (end)

- 54 Reinstall the side rail on the front of the frame.

If the FAN FAIL lamp	Do
is off	step 55
is on	step 58

- 55 Reinstall the air intake grill and filter assembly at the front of the cooling unit.

- 56 Turn OFF the FAN FAIL OVERRIDE switch on the FSP.

- 57 Go to step 59.

58



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the bad cooling unit immediately, replace it with a unit that operates correctly. Go to step 14 and follow the necessary parts of the procedure.



WARNING

Loss of frame cooling

Do not leave a cooling unit that has faults in the frame. If you cannot repair the bad cooling unit immediately, replace it with a unit that operates correctly. Go to step 14 and follow the necessary parts of the procedure.

For additional help, contact the next level of support.

- 59 The procedure is complete.

Replacing a 3.5 in. disk drive unit NTFX32BA

Application

Use this procedure to replace a 3.5 in. (89-mm) disk drive unit (DDU) NTFX32BA.

Contact the next level of support before you start this procedure.

Definition

The DDU is a data storage device on the storage media card NTFX32AA in the input/output module (IOM). The integrated services module (ISM) shelf contains the IOM. Replace any DDU that has a fault. Do not copy files from a DDU that has a fault; backup files are available on the parallel device.

Common procedures

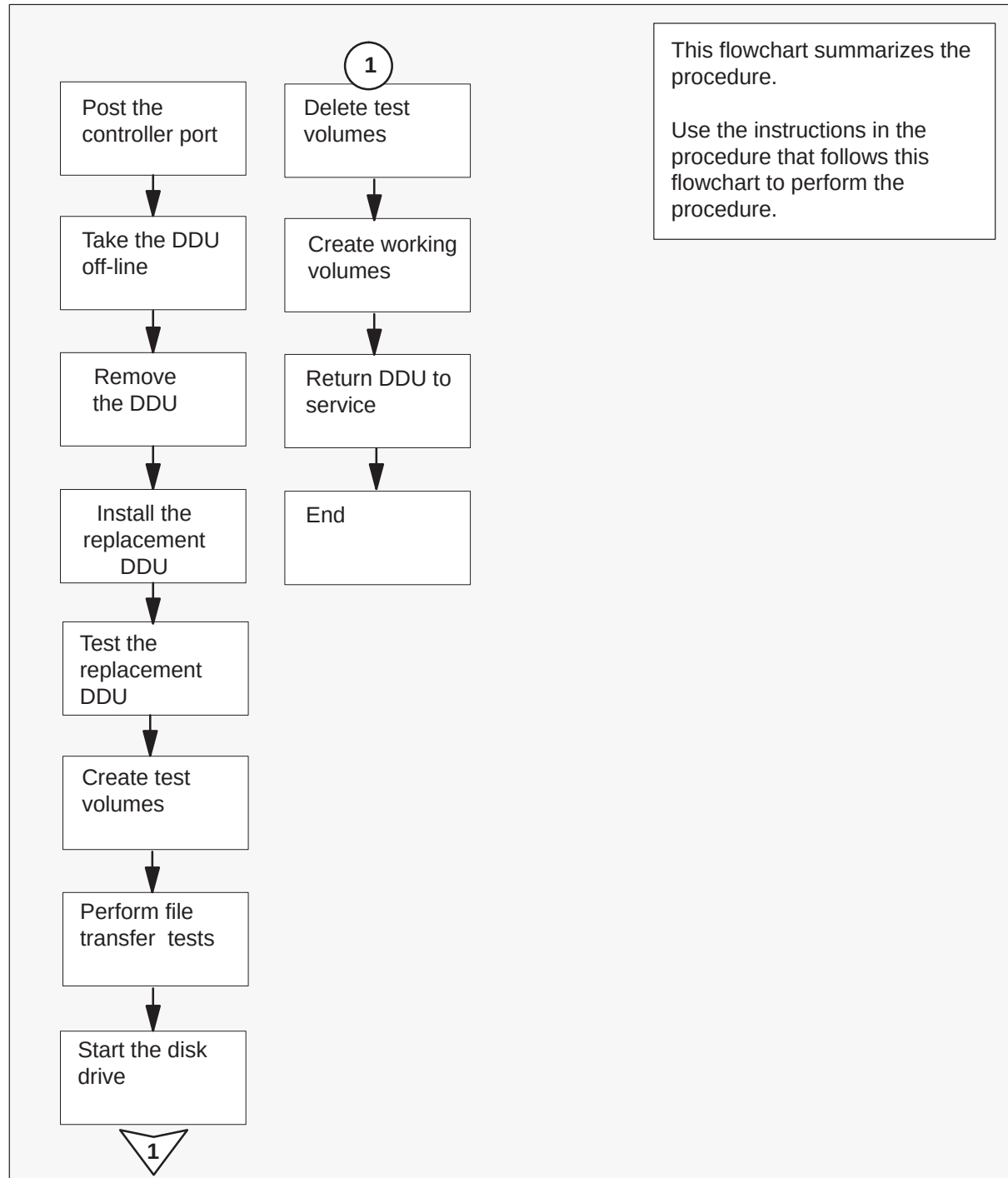
There are no common procedures.

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.

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

Summary of Replacing a 3.5 in. disk drive unit NTFX32BA



Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

Replacing a 3.5 in. disk drive unit NTFX32BA

At the MAP terminal

1



CAUTION

Loss of service

Disk allocation is difficult and dangerous errors are possible. Contact the next level of support before you perform this procedure.



CAUTION

Loss of service

Disk allocation is difficult and dangerous errors are possible. Contact the next level of support before you perform this procedure.

Obtain the following items:

- replacement DDU
- flat-blade screwdriver with 1/4-in. (3-mm) blade

Obtain a shipping carton for the replaced DDUs. When possible, use the carton of the new DDUs.

To access the IOD level of the MAP display, type

>MAPCI;MTC;IOD

and press Enter.

Example of a MAP display:

```
IOD
IOC  0  1  2  3
STAT .  .  .  S
```

```
DIRP: SMDR B XFER: .   SLM : .   NPO: .   NX25: .
MLP : .   DPPP: .   DPPU: .   SCAI :
```

Replacing a 3.5 in. disk drive unit
NTFX32BA (continued)

- 2 To post the input/output module (IOM) controller for the replaced DDU, type
>IOC ioc_no
and press Enter.

where

ioc_no is the number of the affected IOM

Example of a IOM MAP display:

IOC	PORT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(IOM)	STAT	.	.	.	-	.	.	-	-	-	.	-	-	-	-	-	-	-	-
0	TYPE	C	C	C		C	M				M							S	S
		O	O	O		O	T				P							C	C
		N	N	N		N	D				C							S	S

- 3 To post the port for the replaced DDU, type
>PORT port_no
and press Enter.

where

port_no is the port number of the DDU device

Example of a IOM MAP display:

Port 16	Unit	0	
(SCSI)	User	system	Drive_State
	Status	Ready	On_line

- 4 Record the unit number of the replaced DDU.
Note: In the example in step 3, the number of the DDU is 0.
- 5 Determine the state of the DDU.
Note: The state of the disk drive is under the Drive_State header on the MAP display.

If the DDU is in	Do
an allocated state	step 6
other than listed here	step 38

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 6 To determine if open files exist on the DDU, type

>ALLOC

and press Enter.

Example of a MAP display:

VOLID	VOL_NAME	SERIAL_NO	BLOCKS	ADDR	TYPE	R/O	FILES_OPEN
0	IMAGE	2800	45000	D000	0	NO	0
1	XPMLOADS	2801	35000	D000	0	NO	0
2	RTMLOADS	2802	20000	D000	0	NO	0
.							
.							
.							
7	SMDR	2807	5000	D000	0	NO	0
8	AMA1	2808	5000	D000	0	NO	0
9	TST	2809	50	D000	0	NO	0
10	AMA2	280A	500	D000	0	NO	0

If open files	Do
are present	step 37
are not present	step 7

- 7 Record the name and size (in blocks) of all disk volumes.

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 8 To test the DDU, type

>TST

and press Enter.

Example of a MAP display:

Process may take up to 3 min

Failed

Drive is disconnected

```
.  
Site  Flr  RPos  Bay-Id  Shf  Description  Slot  EqPec  
HOST  01    A00  ISME 03  32  IOC 0 DDU    04  FX30AA  
HOST  01    A00  ISME 03  32  IOC 0 DDU    04  FX31AA
```

If the test	Do
passes	step 32
fails	step 9

- 9 From the MAP response in step 8, record the location (floor, row, bay, and shelf) of the replaced DDU.
- 10 Notify all users that there will be an interruption of service for the device. Wait until all users stop use of the device before you proceed to the next step.
- 11 To manually busy the DDU, type

>BSY

and press Enter.

Example of a MAP display:

bsy

OK

If the BSY command	Do
passed	step 12
failed	step 38

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 12 To manually stop the DDU, type

>STOP

and press Enter.

Example of a MAP display:

Disk stop successful

Note: When the DDU spins down, proceed to step 13. The status code appears under the Drive_State on the MAP display.

If the STOP command	Do
passed	step 13
failed	step 38

- 13 To take the DDU off-line, type

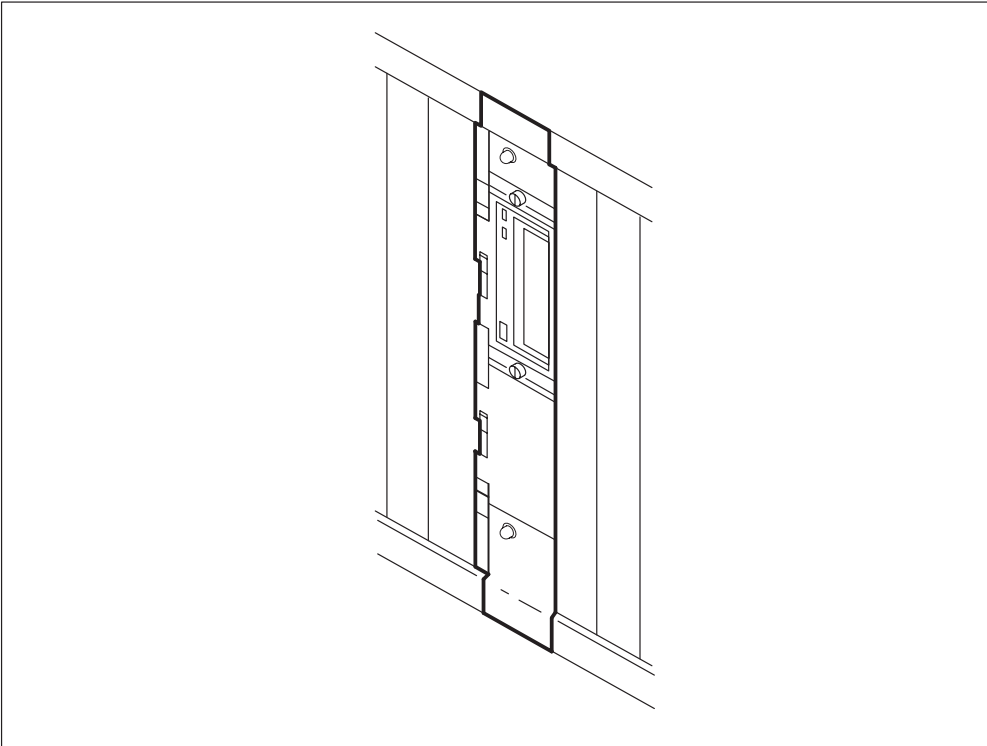
>OFFL

and press Enter.

Replacing a 3.5 in. disk drive unit
NTFX32BA (continued)

At the ISM shelf

- 14** Locate the NTFX32BA DDU that has a fault in the IOM storage media card NTFX32AA in slot 4 of the ISM shelf.



Check the LED on the media card faceplate.

If the LED	Do
is lit	step16
is not lit	step15

- 15** Perform the correct procedure in *Card Replacement Procedures* to replace the media card NTFX32.

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

16



WARNING

Static electricity damage

To handle the DDU, wear a wrist-strap that connects to the wrist-strap grounding point on the modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.



CAUTION FOR ESDS

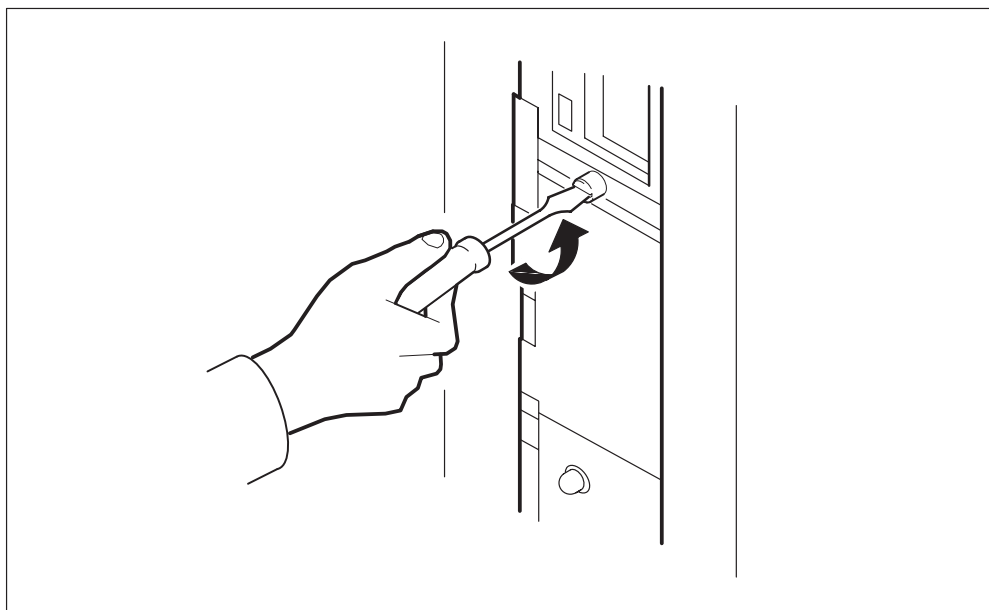
Static electricity damage

To handle the DDU, wear a wrist-strap that connects to the wrist-strap grounding point on the modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.

Unscrew the spring loaded lock mechanism on the faceplate of the disk carrier. The disk carrier electrically connects the DDU to the media card.

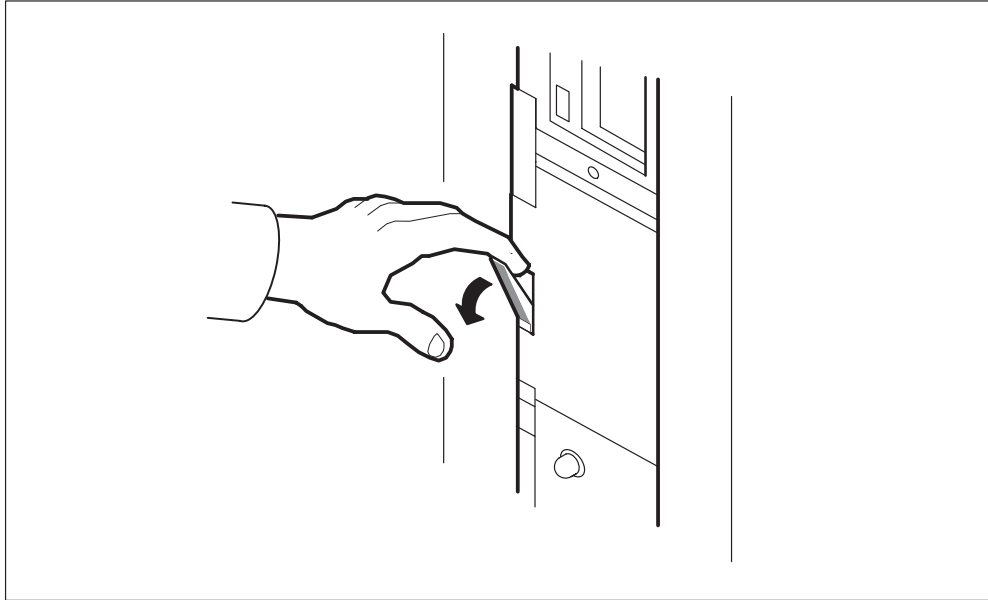
After the drive disconnects, the red LED will be ON and the green LED will be OFF.

Note: Unscrew the lock mechanism to its complete limit before you use the ejector to remove the unit.



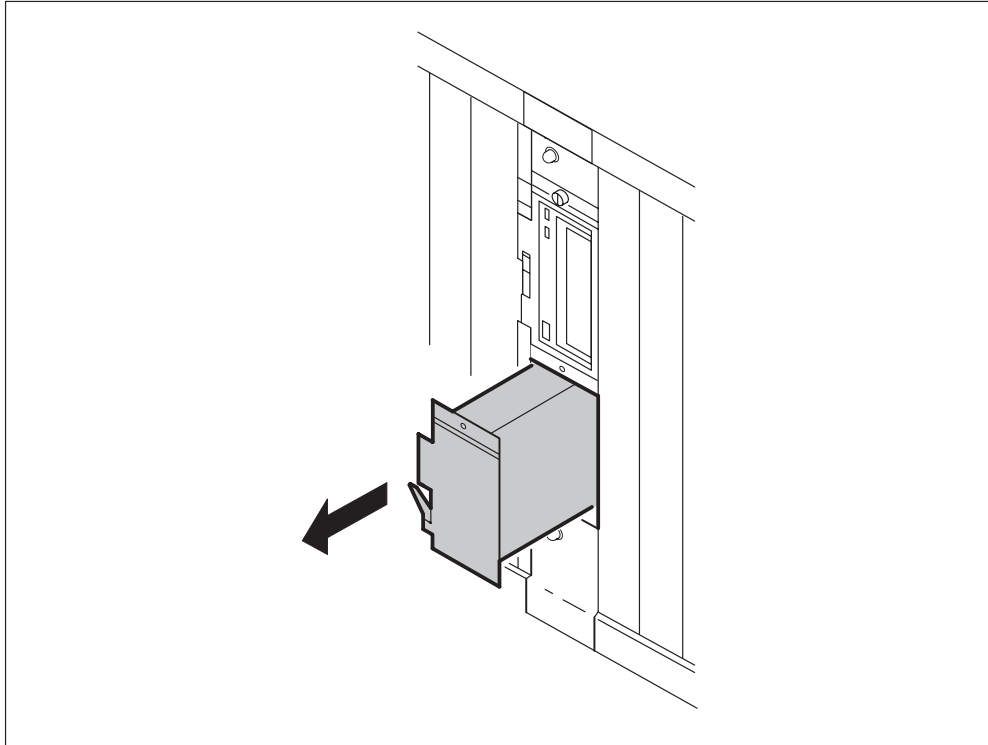
Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 17 Pull down on the ejector to push the DDU carrier away from the media card.



Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 18** Remove the DDU and the carrier. Pull the DDU and the carrier straight out of the media card.



Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

19



WARNING

Ejector arm damage

Ensure that the ejector arm is flat and in the up position on the faceplate. Insert the DDU in the media card faceplate. Complete this procedure to avoid damage to the ejector arm.



WARNING

Ejector arm damage

Ensure that the ejector arm is flat and in the up position on the faceplate. Insert the DDU in the media card faceplate. Complete this procedure to avoid damage to the ejector arm.

Insert the new DDU through the aperture in the media card faceplate. Ensure that the connector at the end of the unit will plug into the receptacle on the card.

Reconnect the DDU electrically with the media card. Turn the spring-loaded lock mechanism to the right to make the connection between the new DDU and the media card.

After the drive connects, the green LED will be ON and the red LED will remain OFF.

At the MAP terminal

20 To manually busy the DDU, type

>BSY

and press Enter.

Example of a MAP display:

bsy
OK

If the BSY command	Do
passed	step 21
failed	step 38

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 21** To start the DDU, type

>START

and press Enter.

Example of a MAP response:

Disk start successful

- 22** To test the DDU, type

>TST

and press Enter.

Example of a MAP display:

Process may take up to 3 minutes.

Test OK

If the TST command	Do
passed	step 23
failed	step 38

- 23** To perform volume allocation tests, follow the procedure *Allocating test volumes on 8-in., 5.25-in., or 3.5 in. DDUs* in *Routine Maintenance Procedures*. When the procedure is complete, return to this point.
- 24** To perform interference and file transfer tests, follow the procedure *Performing DDU interference and file transfer tests* in *Routine Maintenance Procedures*. When the procedure is complete, return to this point.

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 25 To access the CI level of the MAP display, type
>QUIT ALL
and press Enter.
- 26 To access the allocation utility, type
>DSKALLOC ddu_no
and press Enter.
where
ddu_no is the recorded DDU number in step 4.
- 27 To confirm the command, type
>YES
and press Enter.
- 28 To add a volume to the DDU, type
>ADD vol_name vol_size; DIRADD vol_name
and press Enter.
where
vol_name is the recorded volume name in step 7.
vol_size is the recorded volume size in step 7.
- 29 Repeat step 28 for each disk volume that remains.

Replacing a 3.5 in. disk drive unit NTFX32BA (continued)

- 30 To enforce the allocation of the volumes, type

>UPDATE

and press Enter.

Example of a MAP response:

```
WARNING:      A break HX of this process may cause severe
               corruption on the disk that may require it to
               be reformatted.
```

```
Writing label of volume IMAGE
```

```
Successful
```

```
Starting initialization of volume IMAGE
```

```
A break HX of this process may cause severe corruption on
this volume that may require reinitialization of all
non-initialized volumes.
```

```
Number of bad blocks=0
```

```
Successful
```

```
Update done
```

- 31 To quit the allocation utility, type

>QUIT

and press Enter.

- 32 To post the IOM controller port for the DDU, type

>MAPCI;MTC;IOD;IOC ioc_no;PORT port_no

and press Enter.

where

ioc_no is the number of the input/output controller (IOC)

port_no is the number of the DDU port

Replacing a 3.5 in. disk drive unit NTFX32BA (end)

- 33 To return the DDU to service, type

>RTS

and press Enter.

Example of a MAP display:

Port 16	Unit	0	
(SCSI)	User	system	Drive_State
	Status	BSY	Online

If the RTS command	Do
passed	step 34
failed	step 38

- 34 Pack the replaced DDU in a carton and send it to the correct repair location.

Note: For additional information on the return of equipment, refer to the correct procedure in this document.

- 35 Record the following information in your office records:

- the date of replacement of the damaged DDU
- the serial number of the damaged DDU
- the indications that prompted the DDU replacement

- 36 A major or minor alarm can rise under the IOD header of the MAP display at the start of this procedure. Determine if the alarm cleared.

If the alarm	Do
cleared	step 39
did not clear	step 38

- 37 You cannot busy the IOM controller card when files are open. If you busy the card, loss of billing data can result. For additional help, contact the person responsible for the next level of support.

- 38 For additional help, contact the person responsible for the next level of support.

- 39 The procedure is complete.

Replacing an 8-in. or a 5.25-in. disk drive unit

Application

Use this procedure to replace an 8-in. (203-mm) or a 5.25-in. (133-mm) disk drive unit (DDU).

Contact the next level of support before you start this procedure.

Definition

The DDU is a data storage device on the DMS-100 switch. Replace a DDU when faults occur and the device cannot record. Do not copy the files from a DDU that has a fault. Backup files are available on the parallel device.

Common procedures

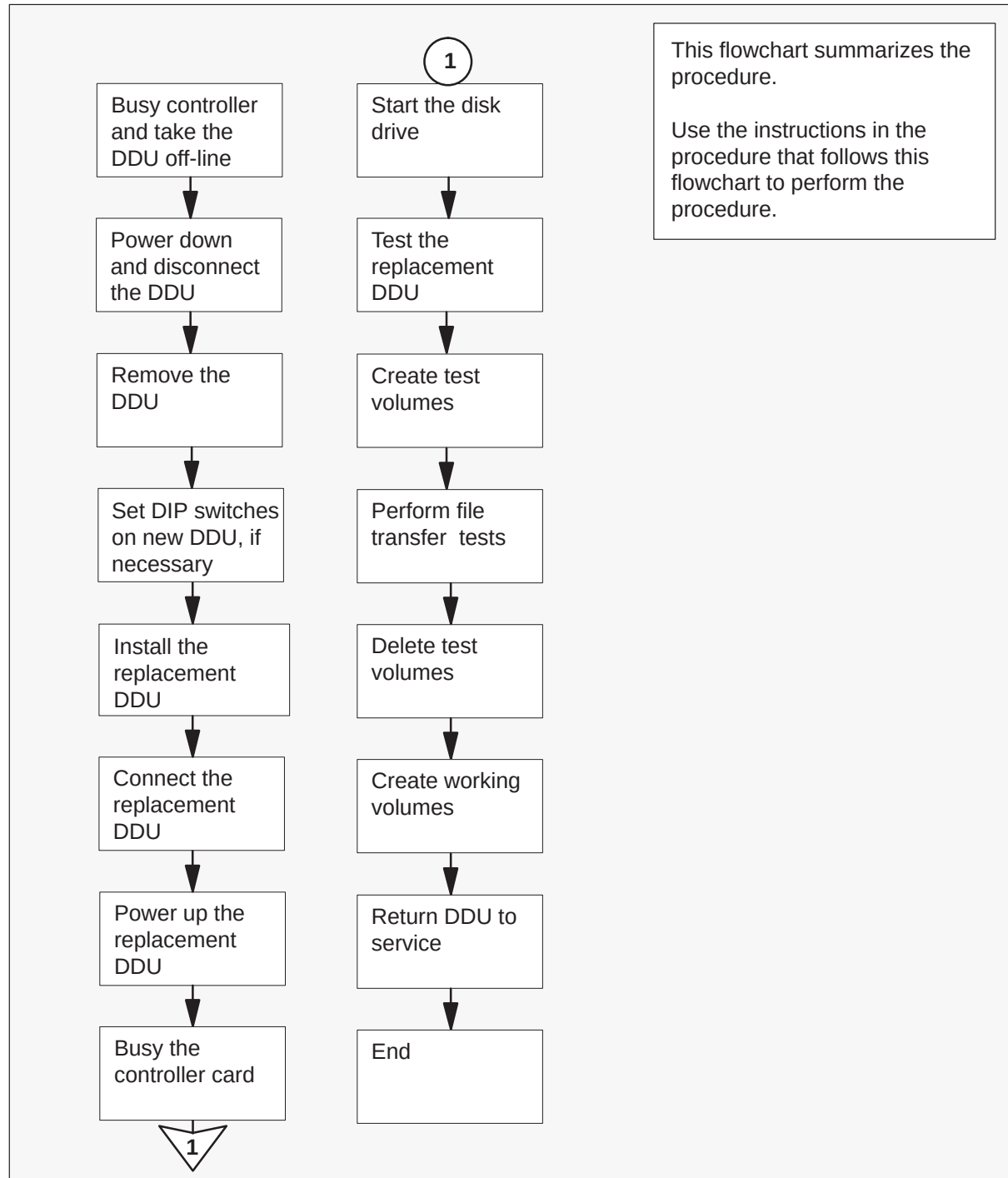
There are no common procedures.

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.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

Summary of Replacing an 8-in. or a 5.25-in. disk drive unit



Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

Replacing an 8-in. or a 5.25-in. disk drive unit

At the MAP terminal

1



CAUTION

Loss of service

Disk allocation is difficult and dangerous errors are a possibility. Contact the next level of support before you perform this procedure.



CAUTION

Loss of service

Disk allocation is difficult and dangerous errors are a possibility. Contact the next level of support before you perform this procedure.

Obtain the following items:

- replacement DDU
- flat-bladed screwdriver with 1/4-in. (3-mm) blade
- 5/16-in. (7-mm) Allen wrench

- 2** Obtain a strong shipping carton for the DDU you will replace. If possible, use the carton of the new DDU.

To access the IOD level of the MAP display, type

>MAPCI;MTC;IOD

and press Enter.

Example of a MAP display:

```
IOD
IOC      0    1
STAT     L    .
```

Replacing an 8-in. or a 5.25-in. disk drive unit

(continued)

- 3 To post the IOC for the replaced DDU, type

>IOC ioc_no
and press Enter.

where

ioc_no is the number of the input/output controller (IOC) that holds the
 controller card for the DDU (0 to 9)

Example of a MAP display:

IOC CARD	0	1	2	3	4	5	6	7	8
2 PORT	0123	0123	0123	0123	0123	0123	0123	0123	0123
STAT			----	----	----	P----	----	----	----
TYPE	CONS	CONS		MPC		MPC		MPC	DDU

- 4 To post the controller card for the DDU, type

>CARD card_no
and press Enter.

where

card_no is the number of the controller card (0 to 8)

Note: In the example in step 3, the number of the controller card is 8.

Example of a MAP display:

Card 8	Unit	0
	User	SYSTEM
	Status	BSY
		Drive_State
		spinning

- 5 Record the number of the replaced DDU.

Note: In the example in step 4, the number of the DDU is 0.

- 6 Determine the state of the disk drive.

Note: The Drive_State header displays the state of the disk drive on the MAP display.

If the disk drive	Do
is being allocated	step 69
is other than listed here	step 9

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 7 To determine if any files are open on the DDU, type

>ALLOC

and press Enter.

Example of a MAP response:

VOLID	VOL_NAME	SERIAL_NO	BLOCKS	ADDR	TYPE	R/O	FILES_OPEN
0	IMAGE	2800	45000	D000	0	NO	0
1	XPMLOADs	2801	35000	D000	0	NO	0
2	RTMLOADS	2802	20000	D000	0	NO	0
.	.	.	.	.	.	.	.
7	SMDR	2807	5000	D000	0	NO	0
8	AMA1	2808	5000	D000	0	NO	0
9	TST	2809	50	D000	0	NO	0
10	AMA2	280A	500	D000	0	NO	0

If open files	Do
are present	step 68
are not present	step 8

- 8 Record the name and size (in blocks) of each disk volume.

- 9 To test the disk drive, type

>TST

and press Enter.

Example of a MAP response:

Process may take up to 3 minutes.

Failed

Drive is disconnected

Site	Flr	RPos	Bay-id	Shf	Description	Slot	EqPec
HOST	01	A00	IOE 00	04	IOC 0 DDU	02	1X62
HOST	01	A00	IOE 00	04	IOC 0 DDU	22	0X67

- 10 From the MAP response in step 9, record the area (floor, row, bay, and shelf) of the DDU that requires replacement.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 11 To manually busy the controller, type

>BSY

and press Enter.

If the BSY command	Do
passed	step 12
failed	step 68

- 12 To stop the DDU manually, type

>STOP

and press Enter.

Note: Wait until the DDU spins down before you proceed to step 13. The status code spun_down appears under the Drive_State header on the MAP display.

If the STOP command	Do
passed	step 13
failed	step 69

- 13 To off-line the disk drive, type

>OFFL

and press Enter.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

At the front of the DDU shelf

14



WARNING

Static electricity damage

To handle the DDU, wear a wrist-strap that connects to a grounding point. Grounding points are on the frame supervisory panel (FSP) or a modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.



CAUTION FOR ESDS

Static electricity damage

To handle the DDU, wear a wrist-strap that connects to a grounding point. Grounding points are on the frame supervisory panel (FSP) or a modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.

Set the power switch on the power converter to the OFF position.

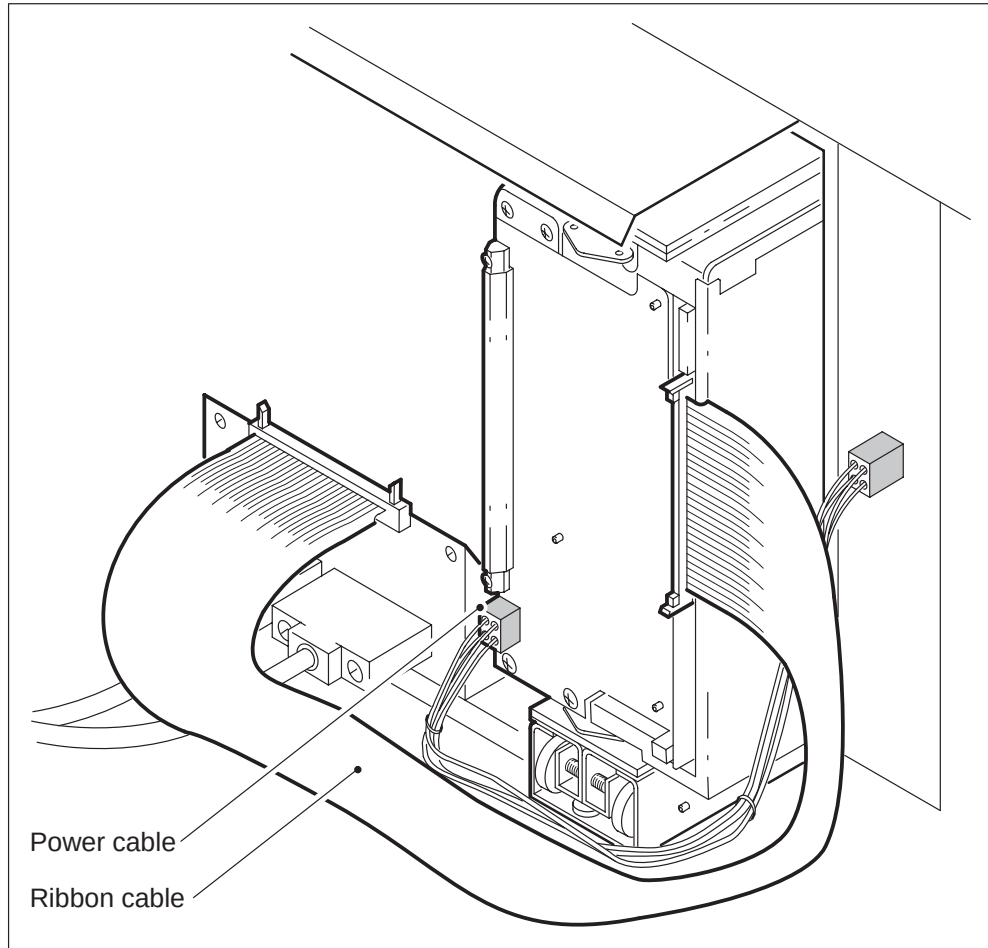
- 15 Ensure that the converter fail LED on the power converter card lights. The lit fail LED of the power converter card indicates that the power is OFF.
- 16 Remove the four mounting screws to remove the panel in front of the DDU.
- 17 The next action depends on the mounting configuration for the DDU.

If the DDU	Do
mounts vertically on tracks	step 18
mounts horizontally on a 14-in. DDU drawer frame	step 38

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

At the back of the DDU shelf

- 18** Disconnect the power cable from the back of the DDU.



Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

19



WARNING

Equipment damage

Retaining clips holds the ribbon cable in place, and the cable disconnects when the clips release. Do not pull on the cable to disconnect it because you might rip the connector socket away from the disk drive unit.



WARNING

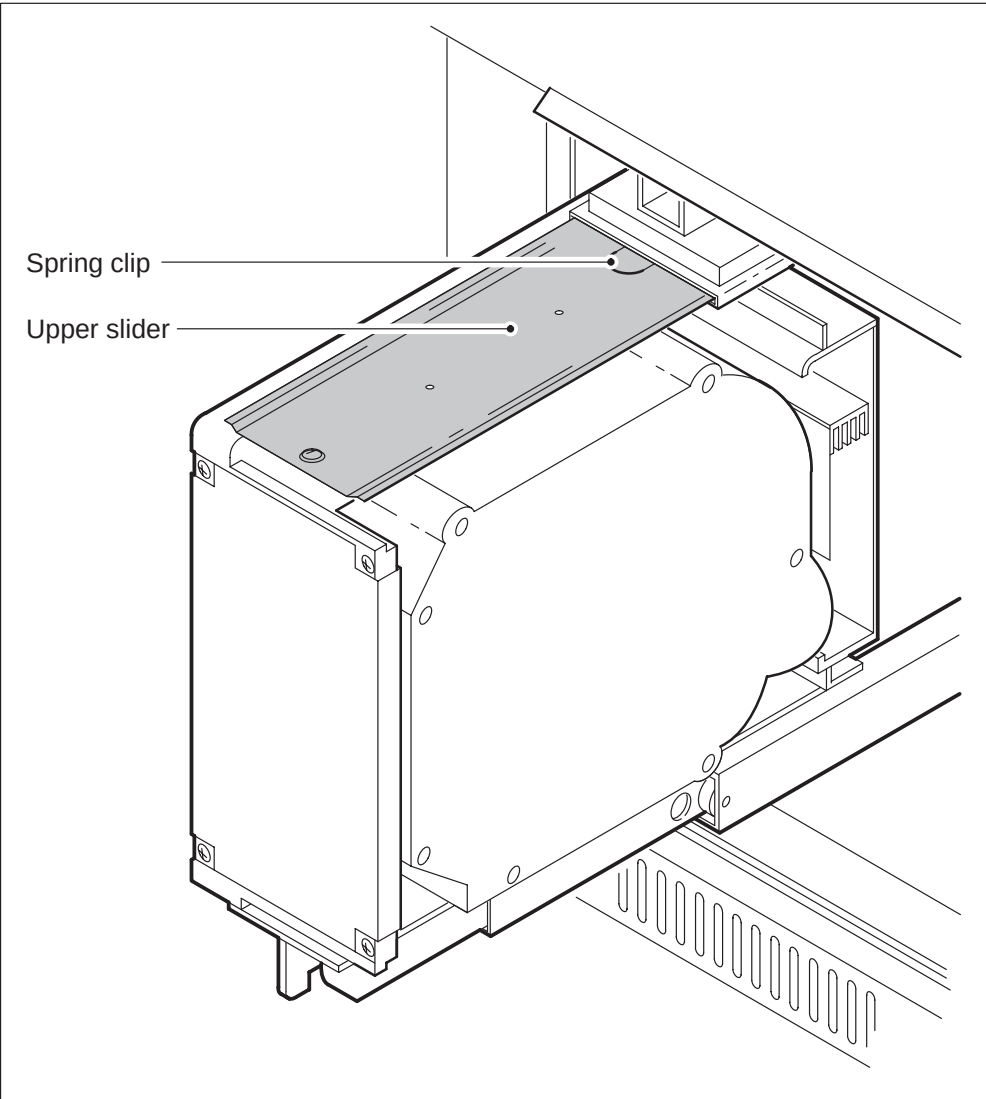
Equipment damage

Retaining clips holds the ribbon cable in place, and the cable disconnects when the clips release. Do not pull on the cable to disconnect it because you might rip the connector socket away from the disk drive unit.

Release the retaining clips to unplug the connector. This action disconnects the DDU end of the ribbon cable. Refer to the diagram in step 18.

Replacing an 8-in. or a 5.25-in. disk drive unit
(continued)

- 20 Carefully slide the DDU from the frame until the spring clip on the upper slider causes the DDU to stop.



- 21 Determine if Allen screws are present.

If Allen screws	Do
are present	step 22
are not present	step 23

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

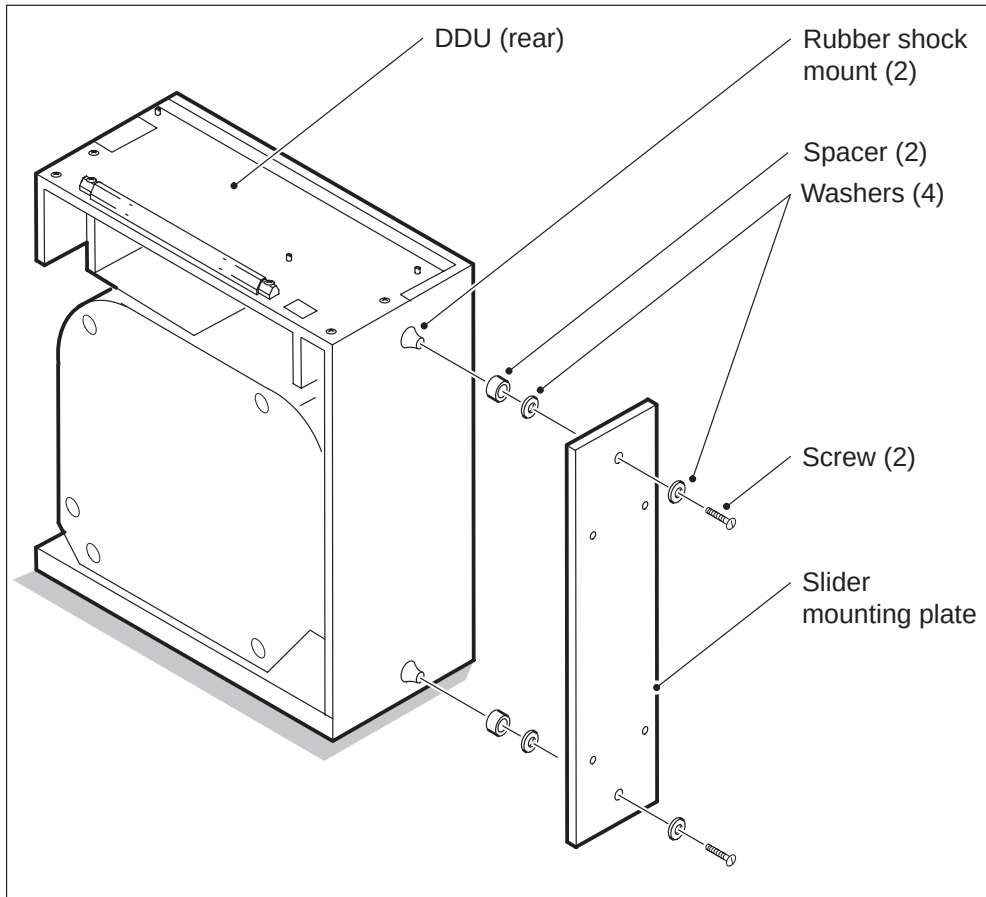
- 22 Remove Allen screws with an Allen wrench.
- 23 Press the spring clip and pull the DDU free of the frame.

At a work table

- 24 Place the DDU on its front end on a flat surface where room is available to work on two DDUs.
Note: The front end of the DDU is opposite the end that has the power and ribbon cable connectors.
- 25 Complete a return label and secure it to the removed DDU.
Note: For additional information on the return equipment, refer to the correct procedure in this document.
- 26 Remove the replacement DDU from the box. Place the DDU on its front end on a flat surface.
- 27 The replacement DDU can have dip switches. Ensure that you set the dip switches to the same settings as the dip switches on the removed DDU.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

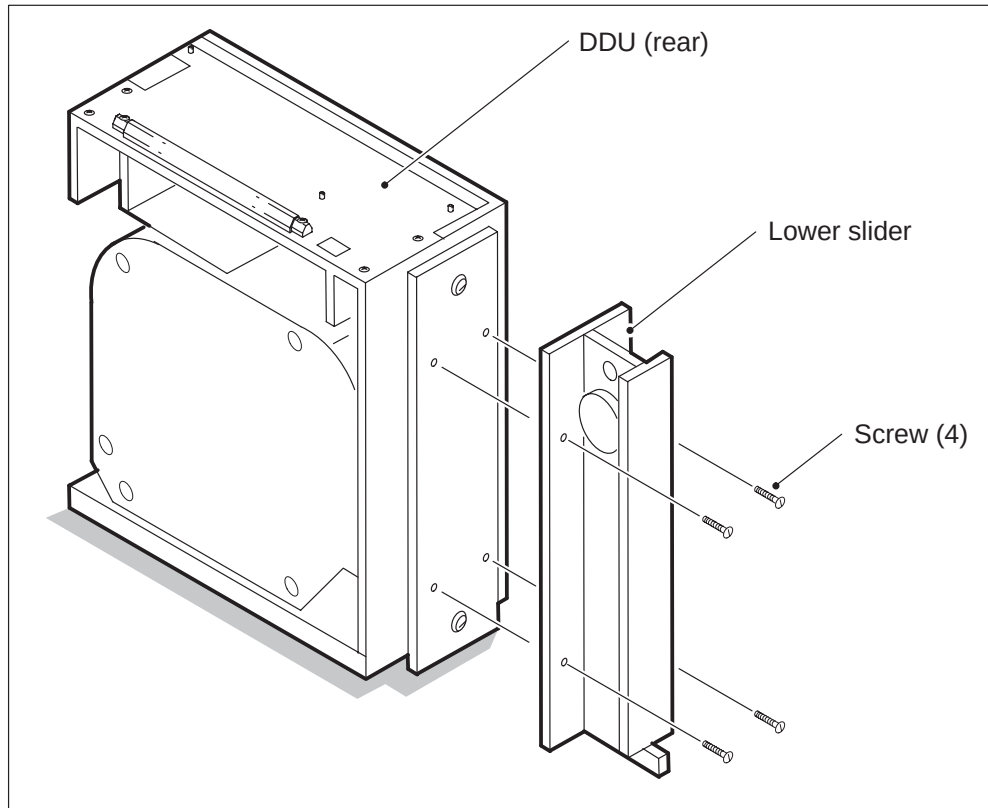
- 28 To remove the upper slider from the removed DDU, remove the two screws that hold the slider in place.



- 29 Attach the upper slider to the top of the replacement DDU.

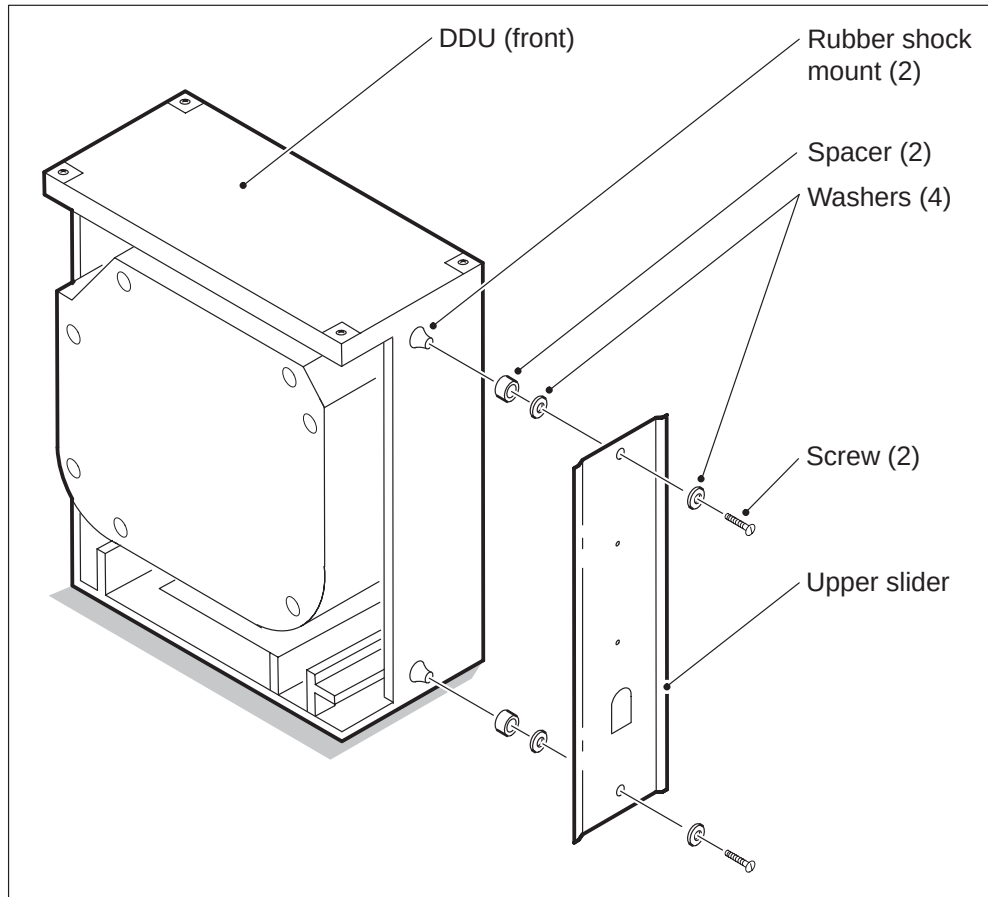
Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 30 To remove the lower slider assembly from the removed DDU, remove the four screws that hold the slider assembly in place.



Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 31 To remove the rectangle-shaped slider mounting plate from the removed DDU, remove the two screws that hold the plate in place.



- 32 Attach the slider mounting plate to the bottom of the replacement DDU. Refer to the diagram in step 30.
- 33 Attach the lower slider assembly to mounting plate. Refer to the diagram in step 28.

At the front of the DDU shelf

- 34 Slide the replacement DDU into the tracks on the frame. Slide the DDU until the spring clip on the upper slider causes the DDU to stop. Refer to the diagram in step 20.
- 35 Press the spring clip and slide the DDU the rest of the way into the frame.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

At the rear of the DDU shelf

36



CAUTION

Loss of data

Do not twist the ribbon cable. Failure to route the ribbon cable correctly can result in signal interference, which can cause a loss of data.



CAUTION

Loss of data

Do not twist the ribbon cable. Failure to route the ribbon cable correctly can result in signal interference, which can cause a loss of data.

To reconnect the ribbon cable, hold the connector in place and snap the retainer clips into place. Refer to the diagram in step 18.

37 Connect the power cable into the back of the DDU.

Go to step 47.

38 Disconnect the power cable from the back of the DDU.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

39



WARNING

Equipment damage

The retaining clips hold the ribbon cable in place, and the cable disconnects when the clips release. Do not pull on the cable to disconnect it because you might rip the connector socket away from the disk drive unit.



WARNING

Equipment damage

The retaining clips hold the ribbon cable in place, and the cable disconnects when the clips release. Do not pull on the cable to disconnect it because you might rip the connector socket away from the disk drive unit.

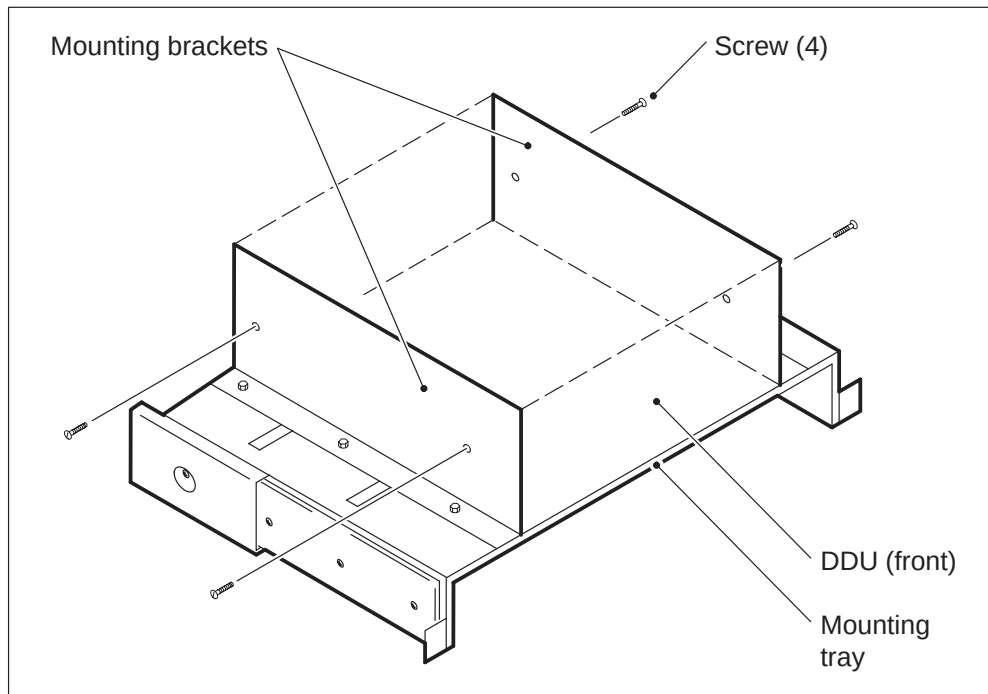
To disconnect the DDU end of the ribbon cable, release the retaining clips to unplug the connector.

At the front of the DDU shelf

- 40 Carefully slide the DDU out of the frame. Slide the DDU until the spring clips on the sides of sliders cause the DDU to stop.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 41 Remove the four screws that mount the DDU to the two mounting brackets on the drawer.



- 42 Remove the DDU from the drawer.
- 43 Place the replacement DDU in position between the mounting brackets.
- Note:** Position the DDU so that the ribbon cable connector is near the top edge of the DDU. Position the DDU so that the connector is at the back of the DDU shelf.
- 44 Attach the DDU to the mounting brackets. Refer to the diagram in step 41.
- 45 Press the spring clips on the sliders and slide the DDU back into the frame.
- 46 Connect the ribbon and power cables.
- At the front of the frame**
- 47 Reset the power converter:
- Set the power switch on the converter to ON.
 - Press and hold the RESET button on the power converter.
 - When the CONVERTER FAIL lamp turns off, release the RESET button.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

At the MAP terminal

- 48 To manually busy the controller, type
>BSY
and press Enter.

If the BSY command	Do
passed	step 49
failed	step 69

- 49 To start the disk drive motor, type
>START
and press Enter.
MAP response:
Disk Start Successful

- 50 To test the disk drive, type
>TST
and press Enter.

Example of a MAP display:

```
Card 8  Unit    0
        User    SYSTEM  Drive_State
        Status  BSY     spinning
```

If the TST command	Do
passed	step 52
failed	step 51

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 51 To test the disk drive, type

>TST

and press Enter.

Example of a MAP display:

```
Card 8  Unit    0
        User    SYSTEM  Drive_State
        Status  BSY     spinning
```

If the TST command	Do
passed	step 52
failed	step 69

- 52 To perform volume selection tests, follow the procedure, *Allocating test volumes on 8-in., 5.25-in., or 2.5-in. DDUs in Routine Maintenance Procedures*. When the procedure is complete, return to this point.
- 53 To perform interference and file transfer tests, follow the procedure *Performing DDU interference and file transfer tests in Routine Maintenance Procedures*. When the procedure is complete, return to this point.
- 54 To access the CI level of the MAP display, type
- >QUIT ALL**
and press Enter.
- 55 To access the selection utility, type
- ALLOC ddu_no**
and press Enter.
- where*
- ddu_no is the DDU number (0 to 9) recorded in step 5
- 56 To confirm the command, type
- >YES**
and press Enter.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 57 To add a volume to the disk, type

>ADD vol_name vol_size
and press Enter.

where

vol_name is the volume name recorded in step 8
vol_size is the volume size recorded in step 8

- 58 To add the volume to the root directory, type

DIRADD vol_name
and press Enter.

where

vol_name is the volume name recorded in step 8

- 59 Repeat steps 55 and 58 for each of the remaining disk volumes.

- 60 To enforce the allocation of the volumes, type

>UPDATE
and press Enter.

Example of a MAP response:

```
WARNING:  A break HX of this process may cause
          severe corruption on the disk that may
          require it to be reformatted.
Writing label of Volume IMAGE
Successful
Starting Initialization of Volume IMAGE
A break HX of this process may cause severe corruption
on this volume that may require reinitialization of all
non initialized volumes.
Number of Bad Blocks = 0
Successful
Update Done
```

- 61 To quit the allocation utility, type

>QUIT
and press Enter.

Replacing an 8-in. or a 5.25-in. disk drive unit (continued)

- 62 To post the controller card for the DDU, type

>MAPCI;MTC;IOD;IOC ioc_no;CARD card_no
and press Enter.

where

ioc_no is the number of the input/output controller (IOC) that holds the controller card for the DDU (0 to 9)

card_no is the number of the controller card (0 to 8)

- 63 To return the disk drive to service, type

>RTS
and press Enter.

Example of a MAP display:

```
Card 8  Unit    0
        User    SYSTEM  Drive_State
        Status  BSY     on-line
```

If the RTS command	Do
passed	step 64
failed	step 69

At the front of the DDU shelf

- 64 Reinstall the panel in front of the DDU.

At the back of the DDU shelf

- 65 Pack the DDU that you put in a carton. Send the carton to the correct repair location.

Note: For additional information on the return of equipment, refer to the correct procedure in this document.

- 66 Record the information below in your office records:

- the date of DDU replacement
- the serial number of the new DDU
- the problems that prompted the DDU replacement

Replacing an 8-in. or a 5.25-in. disk drive unit (end)

- 67** A major or minor alarm can rise under the IOD header of the MAP display at the start of this procedure. If an alarm rises, determine if the alarm cleared.

If the alarm	Do
cleared	step 70
did not clear	step 69

- 68** You cannot busy the controller card if files are open. This action can result in loss of billing data.
- 69** For additional help, contact the person responsible for the next level of support.
- 70** The procedure is complete.

Replacing a 14-in. disk drive unit

Application

Use this procedure to remove a 14-in. (355-cm) disk drive unit (DDU) and replace it with another 14-in. DDU. Contact your next level of support before you perform this procedure.

Definition

The DDU is a storage device on the DMS-100 switch. Replace a DDU that has faults and cannot record. Do not copy the files from a DDU that has faults. Backup files are available on the parallel device.

Common procedures

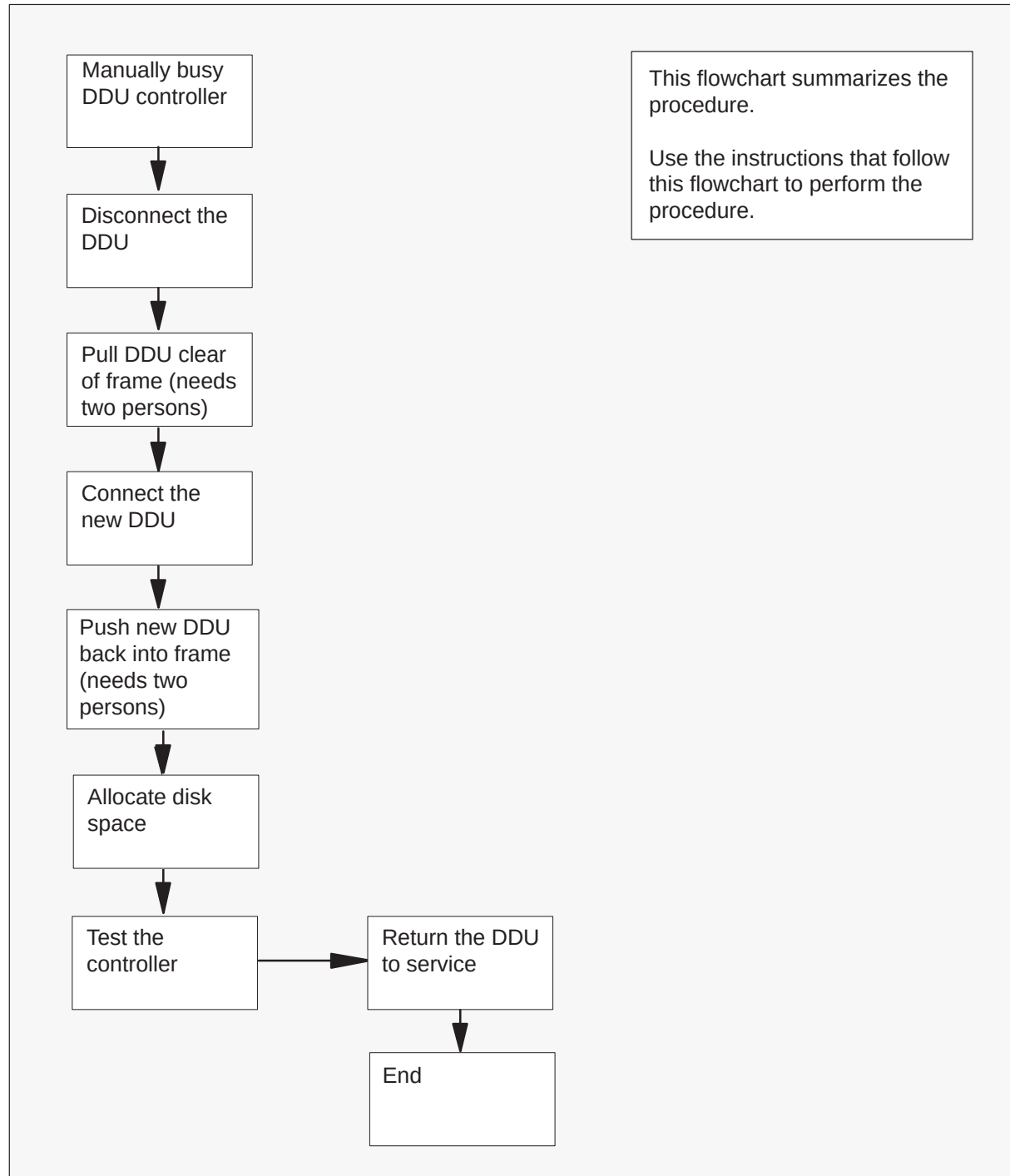
There are no common procedures.

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.

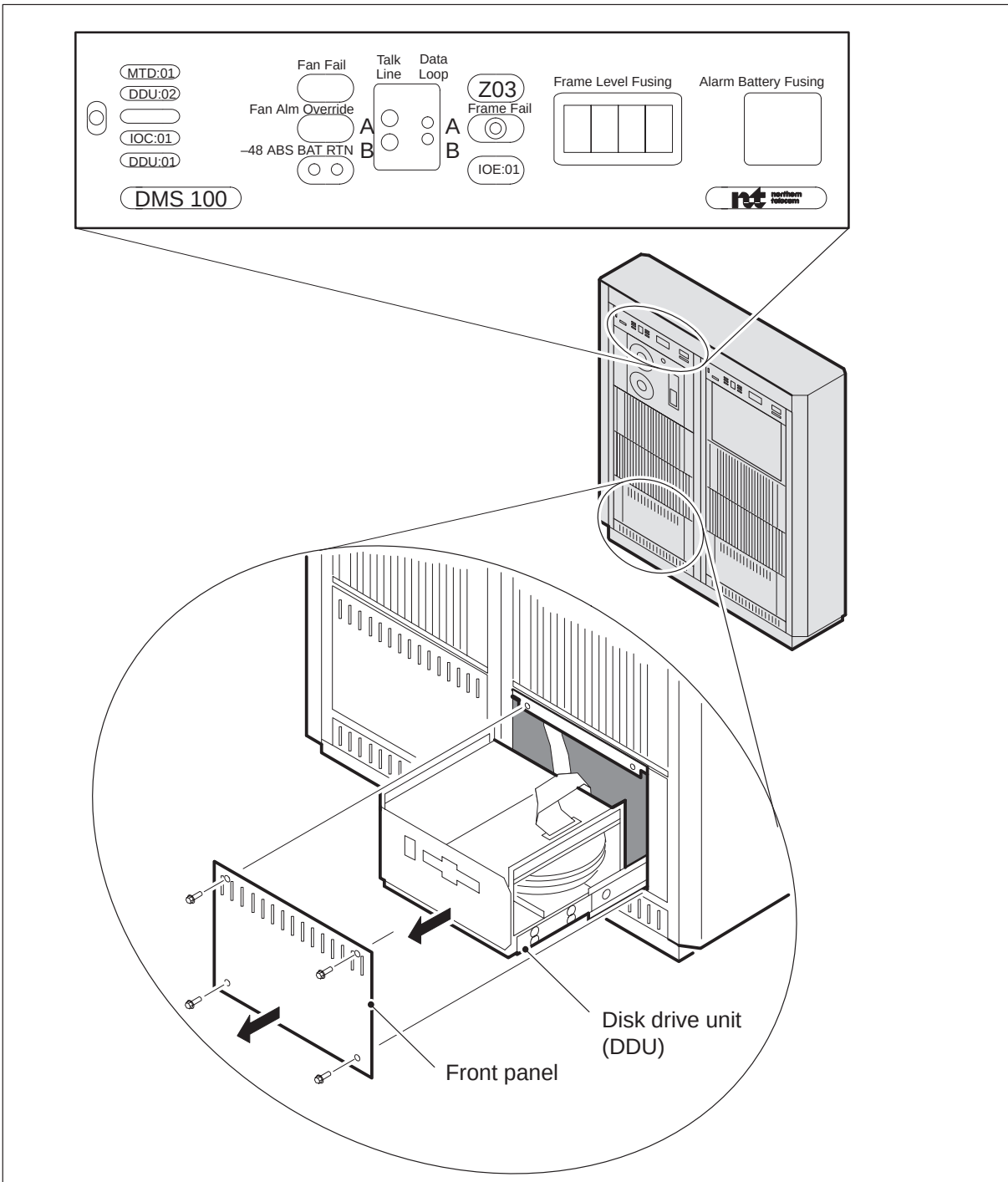
Replacing a 14-in. disk drive unit (continued)

Summary of Replacing a 14-in. disk drive unit



Replacing a 14-in. disk drive unit (continued)

14-in. disk drive unit



Replacing a 14-in. disk drive unit (continued)

Replacing a 14-in. disk drive unit

At your current position

1



CAUTION

Loss of service

Disk allocation is difficult and the possibility for a severe error exists. Contact the next level of support before you perform this procedure.



CAUTION

Loss of service

Disk allocation is difficult and the possibility for a severe error exists. Contact the next level of support before you perform this procedure.

Obtain the following items:

- a light source
- a mirror
- a set of nut driver
- a 1/4-in. flat-bladed screwdriver
- side cutters
- cable ties

- 2 Obtain a shipping carton for the DDU that has faults and you will replace. If possible, use the carton that stores the new DDU.

At the MAP terminal

- 3 To access the IOD level of the MAP display, type
>MAPCI;MTC;IOD

and press the Enter key.

Example of a MAP display:

```
IOD
IOC      0    1
STAT     L    .
```

- 4 Note any alarm under the IOD header and the type of alarm.

Replacing a 14-in. disk drive unit (continued)

- 5 To post the IOC for the DDU that has faults, type

>IOC ioc_no

and press the Enter key.

where

ioc_no is the number of the input/output controller (IOC) that holds the controller card for the DDU (0 to 19)

Example of a MAP display:

```

IOC CARD   0    1    2    3    4    5    6    7    8
2  PORT  0123 0123 0123 0123 0123 0123 0123 0123 0123
   STAT   ....  ....  ----  ----  ----  P----  ----  ----  ----
   TYPE  CONS CONS      MPC      MPC      MPC  DDU

```

- 6 Record the number of the controller card for the DDU replacement.

- 7 To post the controller card for the DDU, type

>CARD card_no

and press the Enter key.

where

card_no is the number of the controller card recorded in step 6

Example of a MAP display:

```

Card 8  Unit    0
        User    SYSTEM  Drive_State
        Status  BSY     spinning

```

- 8 Record the number of the DDU in use.

Note: In the display example in step 7, the number of the DDU is 0.

- 9 Find the state of the disk drive recorded in step 8.

If the state of the disk drive	Do
is being allocated	step 81
is other than listed here	step 10

Replacing a 14-in. disk drive unit (continued)

- 10 To determine if open files exist on the DDU, type

>ALLOC

and press the Enter key.

Example of a MAP response:

If files	Do
are open	step 80
are not open	step 11

- 11 Record the name and size (in blocks) of each volume on the disk.
- 12 Determine if an alarm is under the IOD header of the alarm banner.

If the IOD header	Do
displays a minor alarm	step 13
displays a major alarm	step 19

- 13 To test the disk drive controller, type

>TST

and press the Enter key.

Example of a MAP response:

Process may take up to 3 minutes.

Failed

Drive is disconnected

Site	Flr	RPos	Bay-id	Shf	Description	Slot	EqPec
HOST	01	A00	IOE 00 04	IOC 0	DDU	02	1X62
HOST	01	A00	IOE 00 04	IOC 0	DDU	22	0X67

- 14 From the MAP response in step 13, record the bay, shelf, and number of the DDU that you will replace.

Replacing a 14-in. disk drive unit (continued)

- 15** To manually busy the controller card, type

>BSY

and press the Enter key.

Note: Wait until the DDU spins down before you proceed to the next step. When the DDU spins down, the Drive_state header on the MAP display will show spun_down .

If the BSY command	Do
passed	step 16
failed	step 81

- 16** To offline the disk drive, type

>OFFL

and press the Enter key.

Replacing a 14-in. disk drive unit
(continued)

At the front of the DDU shelf

17



WARNING
Static electricity damage
When you handle the DDU, wear a wrist strap that connects to a wrist-strap grounding point. A grounding point will be on the frame supervisory panel (FSP) or a modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.



CAUTION FOR ESDS
Static electricity damage
When you handle the DDU, wear a wrist strap that connects to a wrist-strap grounding point. A grounding point will be on the frame supervisory panel (FSP) or a modular supervisory panel (MSP). The wrist-strap protects against static electricity damage.

Find the DDU.

If the DDU	Do
is in a packaged-core power module (PCPM) or packaged-core maintenance module (PCMM) frame of a switch package	step 19
is in other than listed here	step 18

- 18 Turn OFF the power switch on the power converter next to the DDU. Ensure that the LED on the power converter is on. A lit LED indicates that the power switch is OFF.

Replacing a 14-in. disk drive unit (continued)

19



WARNING

Remove the correct fuse.

Make sure that you remove the correct fuse. If you remove the wrong fuse, loss of service or a shutdown of MAP terminals and printers can result. Loss of recording space for billing information can occur.



WARNING

Remove the correct fuse.

Make sure that you remove the correct fuse. If you remove the wrong fuse, loss of service or a shutdown of MAP terminals and printers can result. Loss of recording space for billing information can occur.

Remove the fuse that powers the DDU.

Note: The fuse that powers the DDU is on the frame supervisory panel.

If the DDU	Do
is not a DMS-100P and the DDU is on shelf 04	step 20
is not a DMS-100P and the DDU is on shelf 18	step 21
is not a DMS-100P and the DDU is on shelf 32	step 22
is in a packaged core power module (PCPM) or a packaged core memory module (PCMM) frame on a DMS-100P switch package	step 23

20 Remove fuse F03.

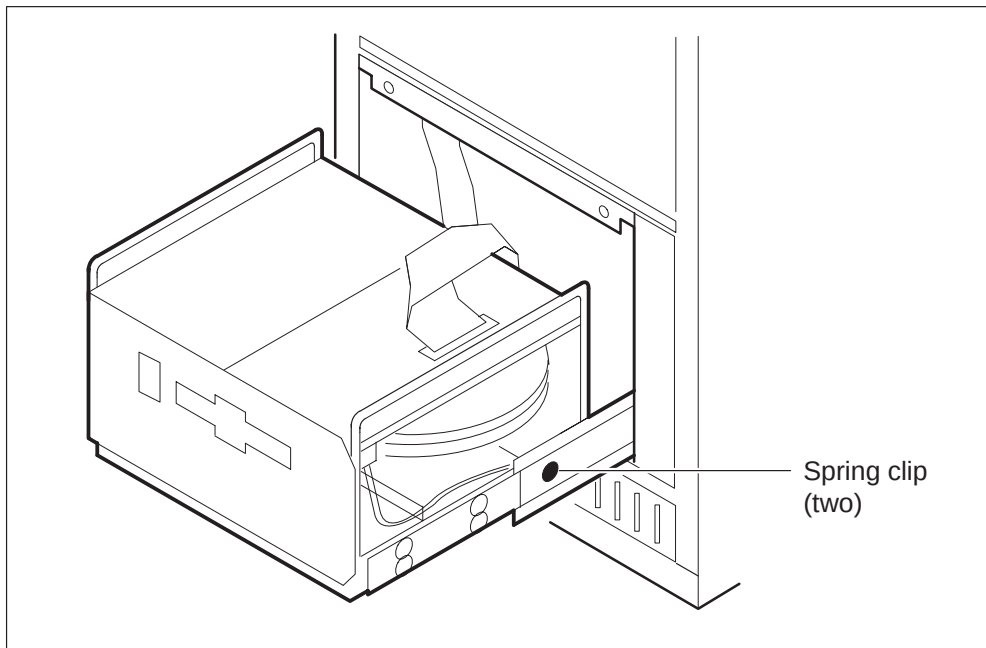
Go to step 25.

21 Remove fuse F02.

Go to step 25.

Replacing a 14-in. disk drive unit (continued)

- 22 Remove fuse F01.
Go to step 25.
- 23 Contact your next level of support to obtain the correct fuse numbers.
- 24 Remove the FSP fuse from the PCPM or PCMM.
- 25 Remove the panel that covers the DDU. To locate the mounting screws, refer to the diagram at the beginning of these instructions.
- 26 Carefully slide the DDU out of the frame until the DDU stops. Spring clips on the sides of the slide rails cause the DDU to stop.



Replacing a 14-in. disk drive unit (continued)

27



DANGER

Risk of personal injury

Do not touch the parts that rotate on the bottom of the DDU.



DANGER

Risk of personal injury

Do not touch the parts that rotate on the bottom of the DDU.

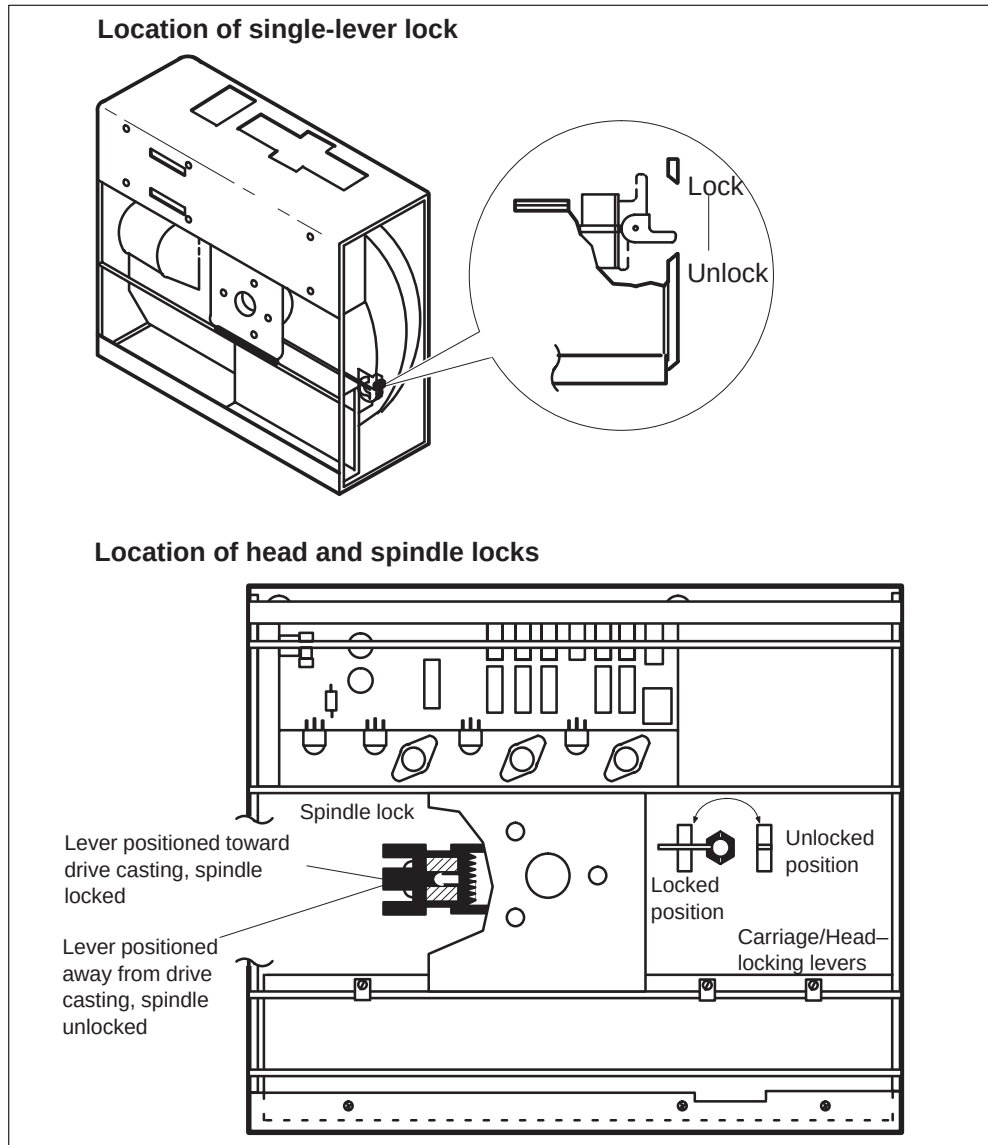
Use the flashlight and the mirror. Look under the DDU to determine if the disk rotation continues.

If disk rotation	Do
stops	step 29
continues	step 28

28 Wait until the disk rotation stops.

Replacing a 14-in. disk drive unit (continued)

- 29 To locate the carriage and head-locking levers of the DDU, refer to the following diagrams.



Replacing a 14-in. disk drive unit (continued)

30



WARNING

Damage to the DDU

Make sure that the disk rotation stopped before you lock the carriage and heads. If the disk continues to rotate, damage occurs to the locking mechanism.



WARNING

Damage to the DDU

Make sure that the disk rotation stopped before you lock the carriage and heads. If the disk continues to rotate, damage occurs to the locking mechanism.

Set the lever (or levers) so that the carriage and heads lock.

31 Disconnect the power cable from the DDU.

Replacing a 14-in. disk drive unit
(continued)

32



WARNING

Possible equipment damage

Retainer clips hold the ribbon cable in place. The ribbon cable connector releases when the retainer clips release. Do not pull on the ribbon cable to release it. If you pull the cable, you can damage the ribbon cable or the ribbon cable socket on the DDU.



WARNING

Possible equipment damage

Retainer clips hold the ribbon cable in place. The ribbon cable connector releases when the retainer clips release. Do not pull on the ribbon cable to release it. If you pull the cable, you can damage the ribbon cable or the ribbon cable socket on the DDU.

To disconnect the DDU end of the ribbon cable, squeeze the retainer clips.

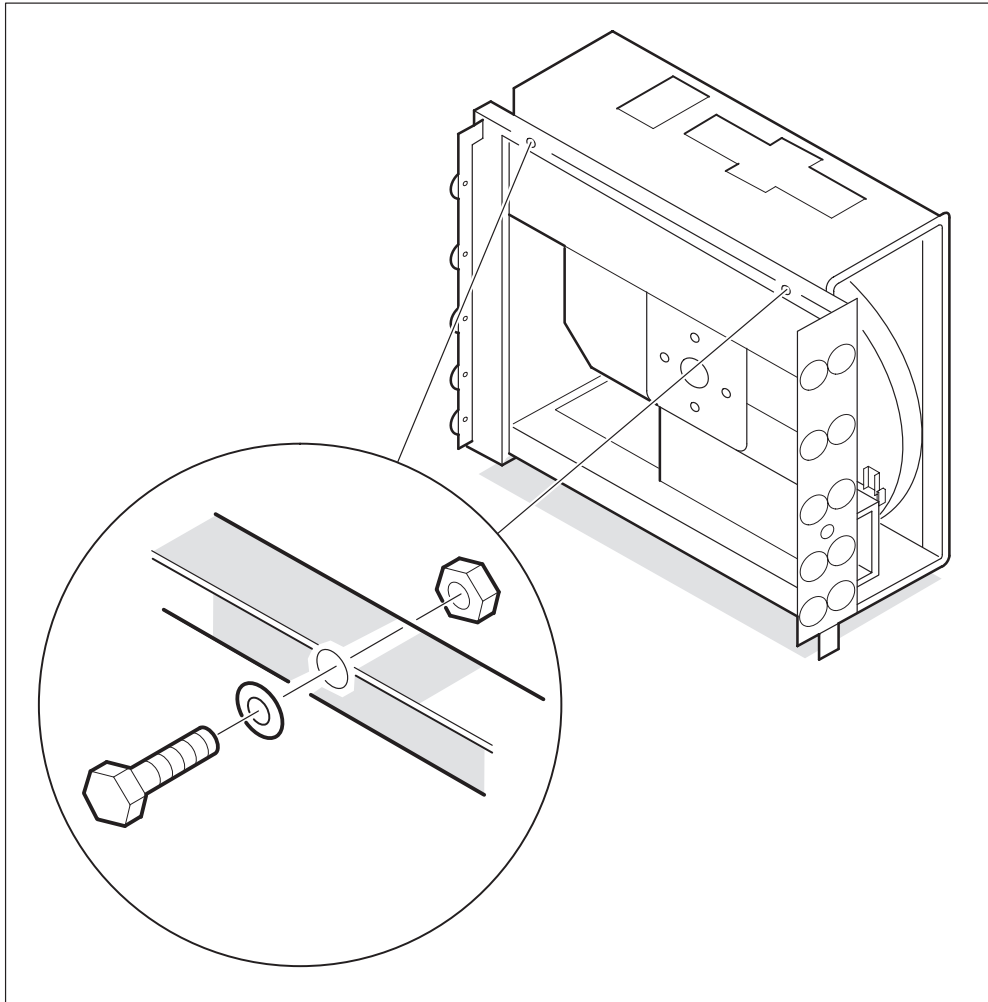
- 33** Verify that the power cable on the switch is compatible with the power connector on the replacement DDU.

If the power cable	Do
is compatible	step 35
is not compatible	step 34

- 34** Obtain an adapter from office stores.

Replacing a 14-in. disk drive unit (continued)

- 35** Remove the two retaining screws that secure the DDU to the slide rails.



- 36** You need two persons to perform this step. One person stands at the front of the frame, and the other person stands at the back of the frame.

The person at the front grasps the rails of the DDU. The front person tilts the front of the DDU to a 45-degree angle and lifts the DDU forward. The front person slowly pulls the DDU clear of the frame. The person at the back ensures that the hardware in the frame does not catch the cables.

Replacing a 14-in. disk drive unit (continued)

At a work table

37



WARNING

Damage to printed circuit board

If you place the DDU on its sides or its top, you can damage the printed circuit board.



WARNING

Damage to printed circuit board

If you place the DDU on its sides or its top, you can damage the printed circuit board.

Place the DDU in a vertical position on a flat surface.

- 38 Obtain a label in order to return the DDU that has faults for repair. Secure the label to the DDU that has faults.

- 39 Unpack the replacement DDU.

Note: Store the DDU that has faults in the box from the new DDU. The other option is to store the DDU that has faults in the box found in step 2.

Replacing a 14-in. disk drive unit (continued)

- 40** Use the old DDU as a guide to set the top DIP switches on the new DDU. Match the DIP switches on the new DDU to the DIP switches on the old DDU. The other option is to set the top DIP switches on the new DDU to the settings that follow:

DDU: single-PCB 10K Model 6650-10
 split-PCB 1J Model 15450-10

Switch #	Function	Setting
1	unit select 1	on
2	unit select 2	off
3	unit select 3	off
4	unit select 4	off
5	skip defect protection	on
6	write enable	on
7	clock transmit	on
8	clock phase	on

DDU: single-PCB 11K Model 6650-10
 split-PCB 9F Model 15450-10

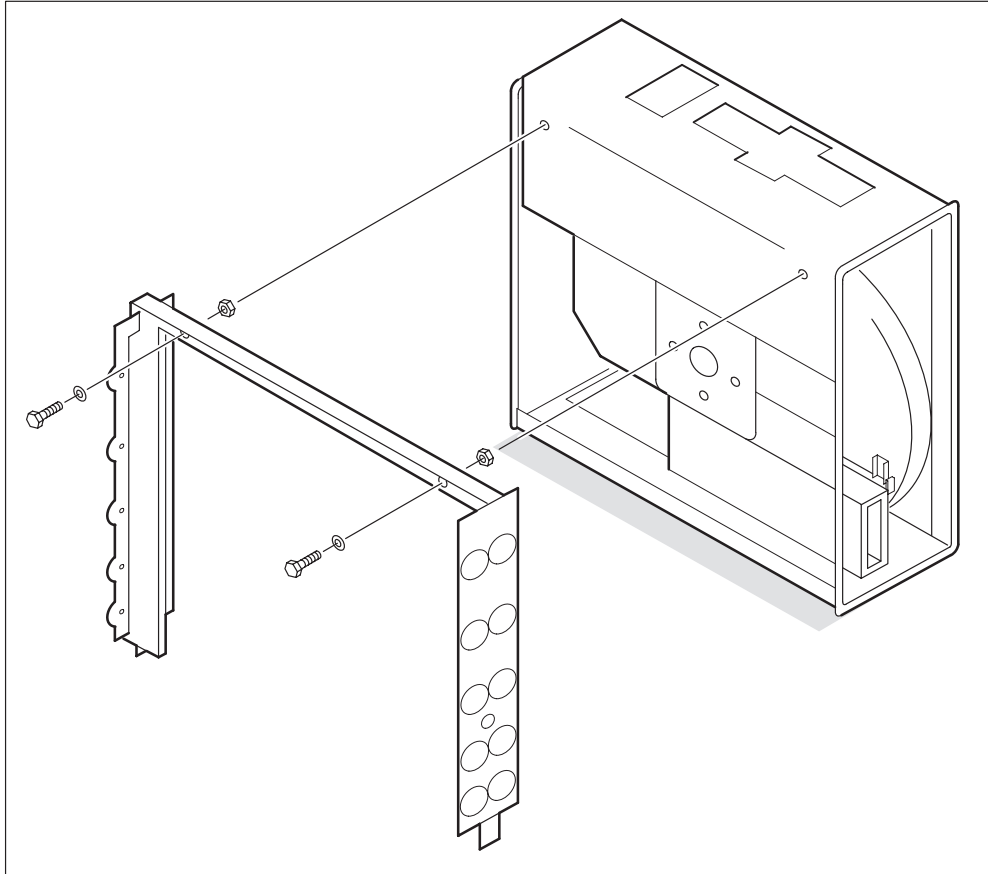
Switch #	Function	Setting
1	1 selector/track	off
2	2 selectors/track	on
3	4 selectors/track	off
4	8 selectors/track	off
5	16 selectors/track	on
6	32 selectors/track	off
7	64 selectors/track	off
8	reserved	

- 41** Completely extend the DDU slide rails.
- 42** You need two persons to perform this step. One person stands at the front of the frame and the other person stands at the back of the frame.

The person at the front tilts the front of the DDU to a 45-degree angle. The person at the back lifts the DDU into place on the slide rails. The back of the DDU frame must butt against the stops of the slide rails.
- 43** Insert and secure the two retaining screws that hold the front cover of the DDU to the frame.

Replacing a 14-in. disk drive unit (continued)

- 44** To remove the slider assembly from the DDU that has faults, remove the two screws that secure the slider assembly in place.



- 45** To mount the slider assembly to the replacement DDU, secure the two mounting screws.
- 46** Connect the power cable from the power converter to the replacement DDU. To make the connection, plug the end of the power cable with the free ground lead to connector J3. Connector J3 is on the bottom of the main PCB on the DDU.
- 47** Secure the ground lead to the PCB with the provided hardware.
- 48** Route the cable toward the back of the DDU. Route the cable along the upper rail of the DDU frame on the converter side of the DDU.
- 49** Use three evenly-spaced plastic cable ties to secure the cable to the upper rail of the DDU.

Replacing a 14-in. disk drive unit (continued)

- 50** Make sure that you position the cable to avoid interference with the frame hardware or converter when the DDU drawer closes.
- 51** Plug the converter end of the DDU power cable into connector C04 on the back of the power converter.
- 52** Obtain the model number of the DDU from the label on the inside red of the DDU.

If the model number	Do
is 15450	step 53
is other than listed here	step 54

- 53** Make sure that you remove the strap at location W3 on the main PCB of the DDU.
- 54** You need two persons to perform this step. One person stands at the front of the frame and the other person stands at the back of the frame.

The person at the front of the frame presses the release buttons on the DDU slide rails. The front person slowly slides the DDU until it closes. The person at the back makes sure that the hardware in the frame does not catch the cables.

Replacing a 14-in. disk drive unit (continued)

At the back of the frame

55



CAUTION

Make sure that the ribbon cable is routed correctly. Route the ribbon cable as shown in the figure that follows. Failure to route the cable correctly can result in loss of information caused by signal interference.

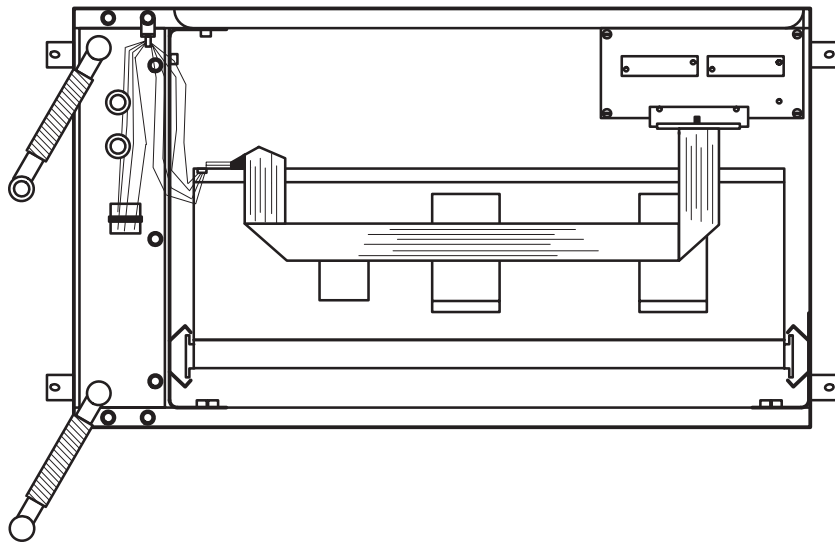


CAUTION

Make sure that the ribbon cable is routed correctly. Route the ribbon cable as shown in the figure that follows. Failure to route the cable correctly can result in loss of information caused by signal interference.

Route the ribbon cable as shown in the following figure.

Position of the ribbon cable



56 Release the carriage and head-locking levers.

57 Insert the fuse removed from the FSP in step 19.

Replacing a 14-in. disk drive unit (continued)

58 Reset the power converter as follows:

- a. Press and hold the RESET button on the power converter.
- b. Turn ON the power switch on the converter.
- c. Release the RESET button.

At the MAP terminal

59 To manually busy the controller card, type

>BSY

and press the Enter key.

If the BSY command	Do
reads passed	step 60
reads failed	step 81

60 To start the disk drive motor, type

>START

and press the Enter key.

MAP response:

DISK START SUCCESSFUL

61 To test the disk drive controller, type

>TST

and press the Enter key.

Note: The test will fail. Ignore the results.

62 To allocate disk space, type

>DSKALLOC ddu_no

and press the Enter key.

where

ddu_no is the number of the DDU

63 To confirm the command, type

>YES

and press the Enter key.

Replacing a 14-in. disk drive unit

(continued)

- 64 To perform volume allocation tests, perform the procedure *Allocating test volumes on 14-inch DDUs* in the *Routine Maintenance Procedures*. Complete the procedure and return to this point.
- 65 Perform interference and transfer tests. To perform these tests, perform the procedure *Performing DDU interference and file transfer tests* in the *Routine Maintenance Procedures*. Complete the procedure and return to this point.
- 66 Obtain the office records. Determine the names and sizes of the volumes that you will create on the DDU.
- 67 To add a volume to the disk, type
>ADD volname blocks
and press the Enter key.
where
volname is the name of the additional volume
blocks is the number of blocks in the volume
- 68 Determine if you need to add any more volumes.

If you	Do
need to add more volumes	step 67
do not need to add more volumes	step 69

- 69 To add the names of the volumes to the directory, type
>DIRADD
and press the Enter key.
- 70 Determine if you need to add more volumes to the directory.

If you	Do
need to add more volumes	step 69
do not need to add more volumes	step 71

Replacing a 14-in. disk drive unit (continued)

- 71 To enforce the allocation of the volumes, type

>UPDATE

and press the Enter key.

Example of a MAP response:

WARNING: A break HX of this process may cause severe corruption on the disk that may require it to be reformatted.

Writing label of Volume IMAGE

Successful

Starting Initialization of Volume IMAGE

A break HX of this process may cause severe corruption on this volume that may require reinitialization of all non initialized volumes.

Number of Bad Blocks = 0

Successful

Update Done

- 72 To quit the software utility for disk allocation, type

>QUIT

and press the Enter key.

- 73 To test the DDU controller, type

>TST

and press the Enter key.

If the TST command	Do
passed	step 74
failed	step 81

- 74 To return the DDU to service, type

>RTS

and press the Enter key.

If the RTS command	Do
passed	step 75
failed	step 81

Replacing a 14-in. disk drive unit (end)

- 75 Determine if an IOD alarm is present.

If an IOD alarm	Do
is present	step 81
is not present	step 76

At the front of the frame

- 76 Use the screwdriver to replace the four screws that secure the DDU faceplate to the frame. To locate the mounting screws, refer to the diagram at the beginning of these instructions.

- 77 Record the information that follows in your office records:

- The date that you replaced the DDU.
- The serial number of the DDU.
- The problems that prompted the DDU replacement.

- 78 Return the DDU that has faults to the correct office for repair.

Note: For additional information on the return of equipment, refer to the card return procedure for the correct country in this document.

- 79 Go to step 82.

- 80 You cannot busy the controller card if files are open. If you busy the card while files are open, a loss of billing data can result.

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

- 82 The procedure is complete.

Replacing a bulkhead gasket

Application

Use this procedure to replace a defective bulkhead gasket on model C28 (28-in.) and C42 (42-in.) cabinets.

On a model C28 cabinet, use the bulkhead gasket with the product code P0739662. On a model C42 cabinet, use the bulkhead gasket with the product code P0739662.

Definition

Perform this procedure on a gasket that has faults.

Common procedures

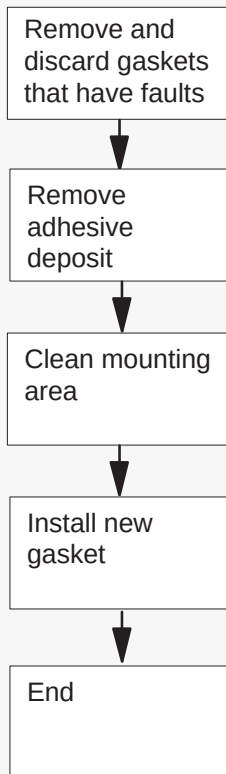
There are no common procedures.

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.

Replacing a bulkhead gasket (continued)

Summary of Replacing a bulkhead gasket



This flowchart summarizes the procedure.

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

Replacing a bulkhead gasket (end)

Replacing a bulkhead gasket

At the front of the cabinet

- 1 Remove and discard the gasket that has faults.
- 2 Remove the adhesive deposit from the mounting surface of the bulkhead.
Note: Apply a petroleum-based cleaner with a lint-free industrial wiper.
- 3 Use a lint-free industrial wiper to clean the mounting area with a degreasing solvent (for example, isopropyl alcohol).
Note: Let the surface dry before you install the new gasket.
- 4 Peel the release tape from the adhesive backing of the gasket. Install the gasket base in the groove.
Note 1: Press the gasket down to ensure that it adheres correctly to the surface of the bulkhead.
Note 2: Cut off any excess gasket.
- 5 Close the doors carefully. Allow the adhesive to cure for 24 hours.
- 6 The procedure is complete.

Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323

Application

Use this procedure to replace a cooling unit assembly. The cooling unit assembly must have one of the following common product codes (CPC), in a 42-in. (1.07-m) cabinet:

- A0377580
- A0382102
- A0383322
- A0383323

Note: The product engineering codes for a 42-in. cabinet are NT9X95AA, NT9X95BA, NT9X95CU, and NT9X95GU.

The A0383323 version of the cooling unit can replace the A0377580 unit.

Definition

A cooling unit assembly cools the cabinet components.

Common procedures

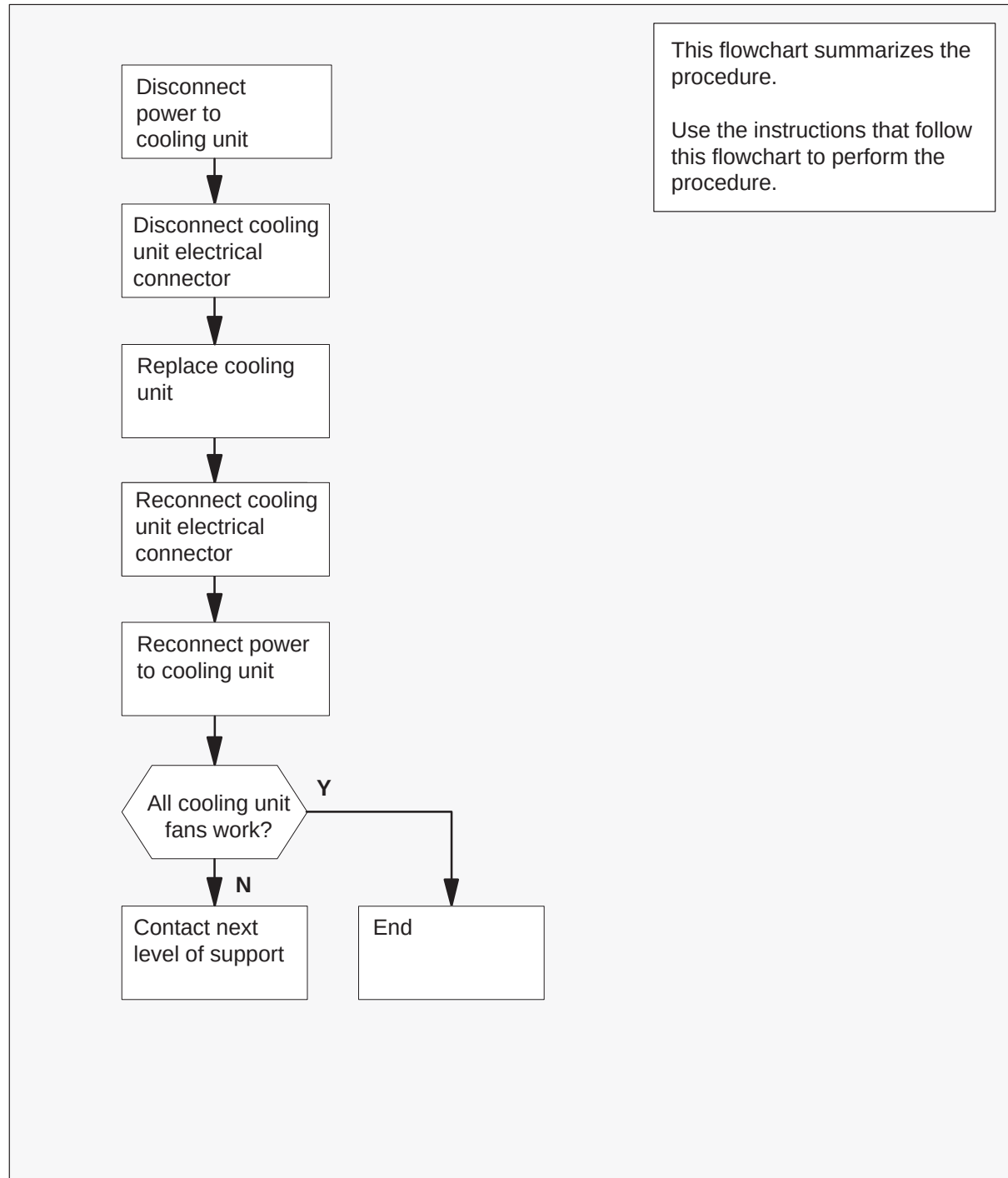
There are no common procedures.

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.

Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

Summary of Replacing a cooling unit assembly in a 42-in. cabinet



Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

Replacing a cooling unit assembly in a 42-in. cabinet

At your current location:

1



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended power removal can cause the equipment to overheat and cause damage.



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended power removal can cause the equipment to overheat and cause damage.

Obtain a replacement for the cooling unit assembly.

At the front of the cabinet

2 Record the cabinet number.

Note: Locate the cabinet number (for example, D00) above the doors on the front of the cabinet.

Replacing a cooling unit assembly in a 42-in. cabinet
CPC A0377580, A0382102, A0383322, A0383323 (continued)

- 3 Consult office records or operating company personnel. Determine if power to the cooling unit connects through a power distribution center (PDC) or a cabinetized PDC (CPDC).

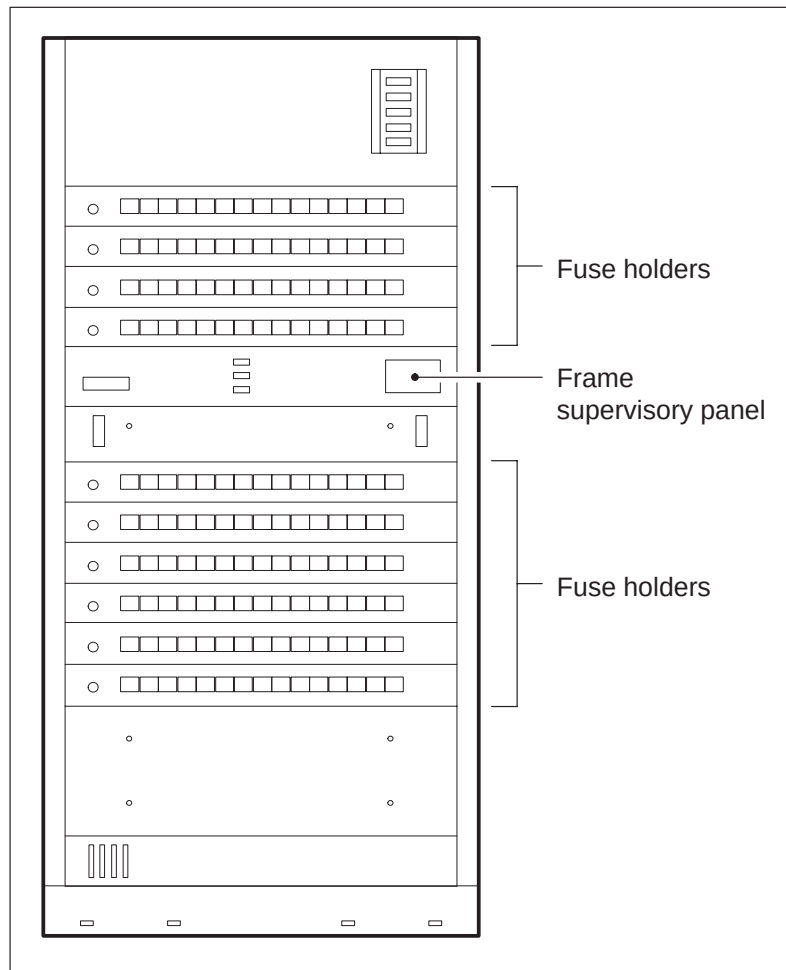
If power to the cooling unit	Do
connects through a PDC	step 4
connects through a CPDC	step 6

Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

At the front of the PDC

- 4 Locate the cooling unit fuses.

Note: The cooling unit fuse cartridges are on the front panel of the PDC. The fuse cartridges contain two cooling unit fuses. One fuse cartridge is for the side A power feed. The other fuse cartridge is for the side B power feed. The cabinet number (recorded in step 2) is above each fuse cartridge. The letters SN CU (SuperNode cooling unit) are below each fuse cartridge.



Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

5



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge.
Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge. Wear eye protection.



CAUTION

Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

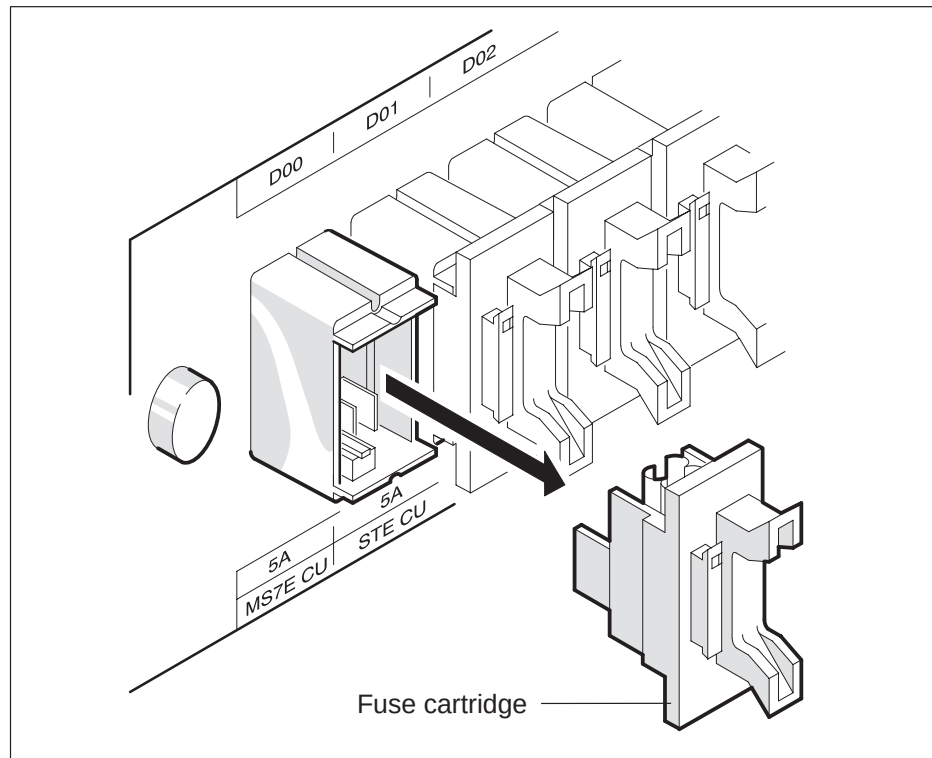
Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.

To remove the cooling unit fuses, pull the fuse cartridges straight out from the front panel of the PDC.

Note: When you remove the fuse cartridges, you remove power from the cooling unit. Removal of power from the cooling unit causes the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

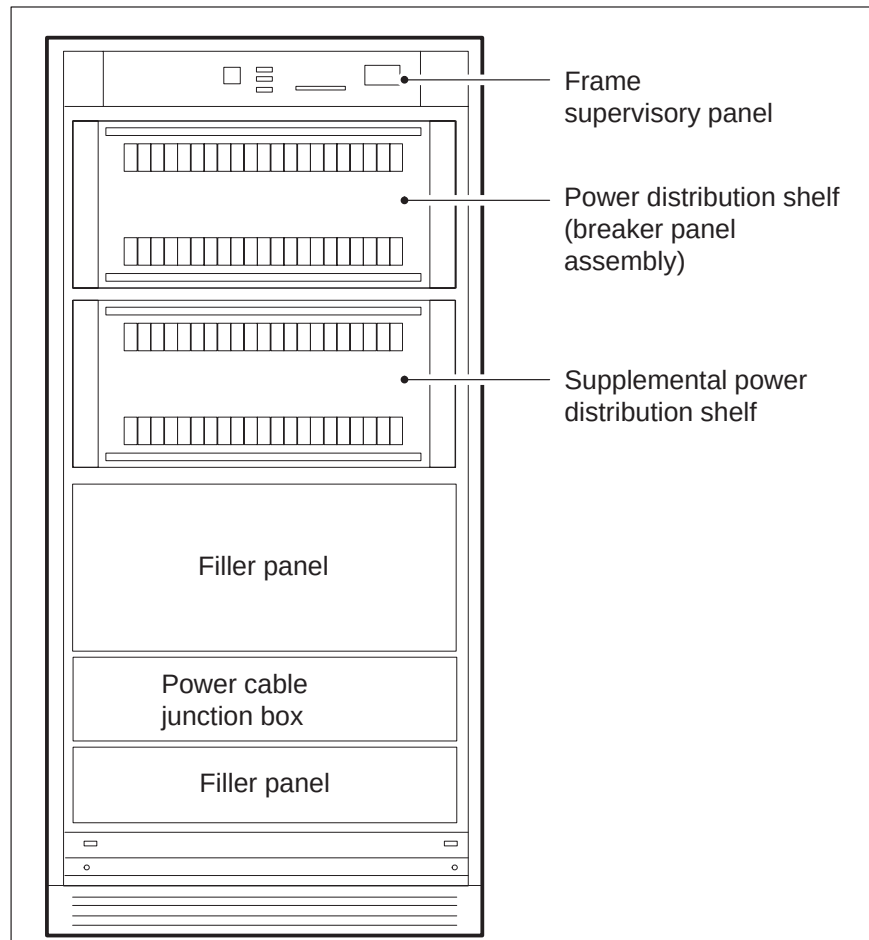


Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

At the front of the CPDC

- 6 Locate the circuit breaker for the cooling unit.

Note: The two cooling unit circuit breakers are on the front panel of the CPDC. One circuit breaker is for the side A power feed. The other circuit breaker is for the side B power feed. The cabinet number (recorded in step 2) is above each breaker. The letters SN CU (SuperNode cooling unit) are below each breaker.



Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

7



DANGER

Risk of injury

Electricity can arc when you throw the cooling unit breaker. Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw the cooling unit breaker. Wear eye protection.



CAUTION

Possible loss of service

Ensure that you disconnect power to the cooling unit before you throw the cooling unit breaker. If you throw the wrong breaker, you can disconnect power to a critical hardware component and cause loss of service.



CAUTION

Possible loss of service

Ensure that you disconnect power to the cooling unit before you throw the cooling unit breaker. If you throw the wrong breaker, you can disconnect power to a critical hardware component and cause loss of service.

Throw the circuit breakers for the cooling unit.

Note: When you throw the circuit breakers, you remove power from the cooling unit. Removal of power from the cooling unit causes the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

At the back of the cabinet

8 Open the cabinet doors.

Replacing a cooling unit assembly in a 42-in. cabinet
CPC A0377580, A0382102, A0383322, A0383323 (continued)

9



DANGER

Risk of electrocution

Do not touch the cabinet wiring. Contact with wiring can result in electric shock.



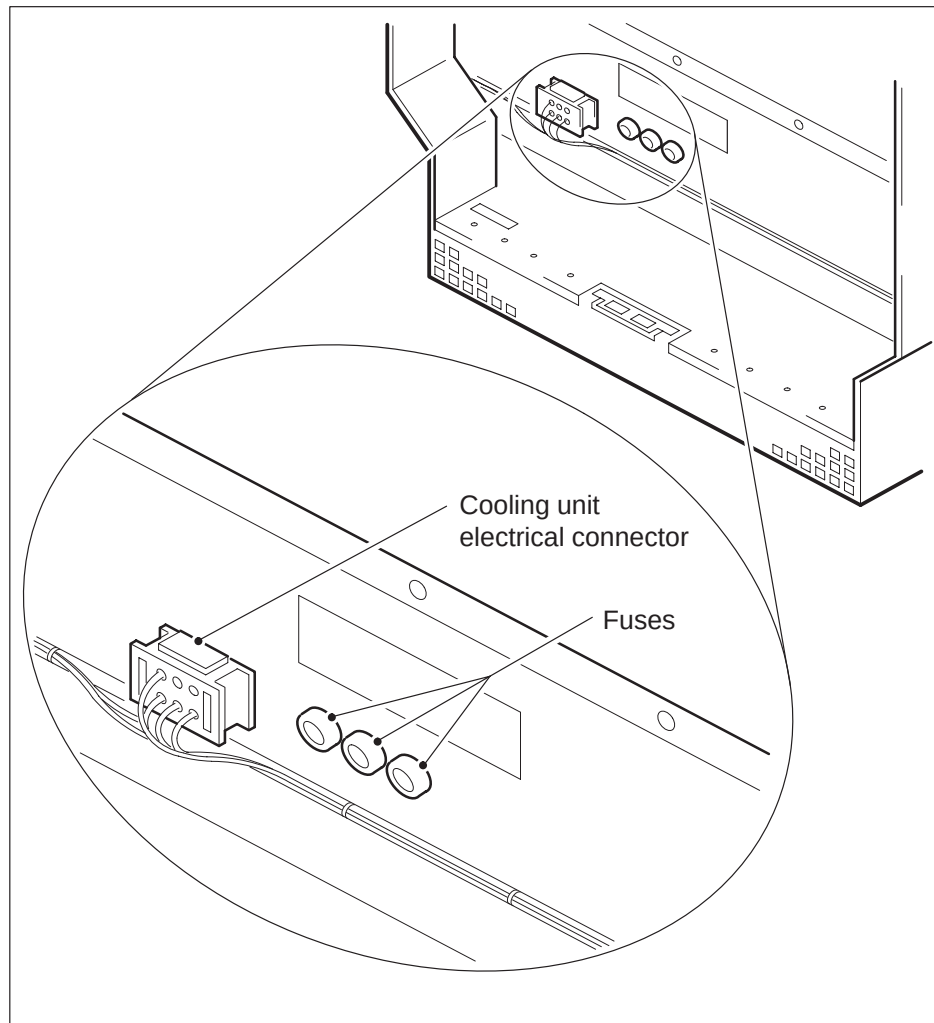
DANGER OF ELECTRIC SHOCK

Risk of electrocution

Do not touch the cabinet wiring. Contact with wiring can result in electric shock.

Pull out the electrical connector of the cooling unit at the bottom of the cabinet.

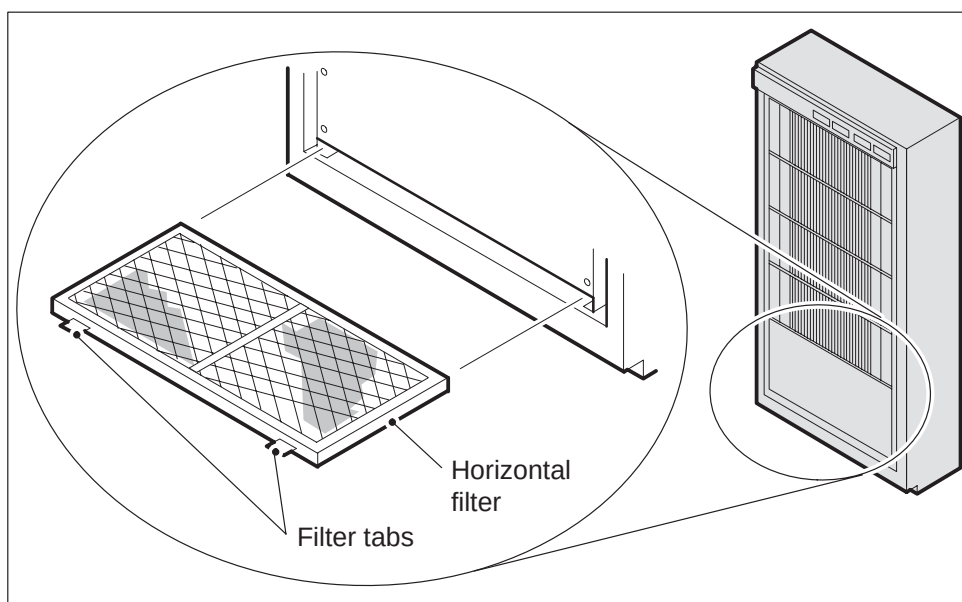
Replacing a cooling unit assembly in a 42-in. cabinet
CPC A0377580, A0382102, A0383322, A0383323 (continued)



Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

At the front of the cabinet

- 10 Open the cabinet doors.
- 11 To remove the filter, pull on the two filter tabs.



Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

12



DANGER

Risk of injury

The cooling unit weighs approximately 41 kg (90 lbs). To remove or insert the cooling unit requires two or more persons.

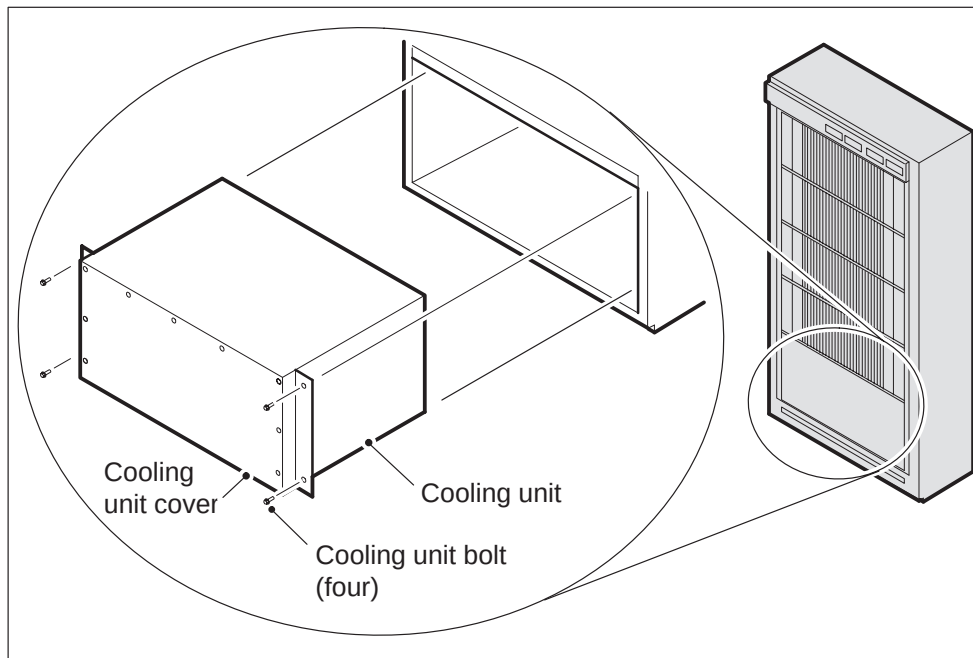


DANGER

Risk of injury

The cooling unit weighs approximately 41 kg (90 lbs). To remove or insert the cooling unit requires two or more persons.

Remove the four bolts that fasten the cooling unit assembly to the cabinet.



13 Slide the cooling unit assembly out of the cabinet.

14 Slide the replacement for the cooling unit assembly into the cabinet.

Replacing a cooling unit assembly in a 42-in. cabinet CPC A0377580, A0382102, A0383322, A0383323 (continued)

At the back of the cabinet

- 15 Reconnect the electrical connector of the cooling unit.

Note: Step 9 shows the location of the connector.

- 16 Close the cabinet doors.

At the front of the cabinet

- 17 Use the four mounting bolts to fasten the cooling unit assembly to the cabinet.

Note: Step 12 shows the location of the mounting bolts.

- 18 Insert the filter, that you removed in step 11, into the replacement cooling unit.

Note: Insert the filter with the arrows on the front that point up.

- 19 Determine if the power to the cooling unit connects through a PDC or a CPDC.

If the power to the cooling unit	Do
connects through a PDC	step 20
connects through a CPDC	step 21

At the front of PDC

- 20 To insert the cooling unit fuses, push the fuse cartridges straight into the front panel of the PDC.

Go to step 22.

At the front of CPDC

- 21



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker.
Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker.
Wear eye protection.

Throw the circuit breakers for the cooling unit.

Replacing a cooling unit assembly in a 42-in. cabinet

CPC A0377580, A0382102, A0383322, A0383323 (end)

At the front of the cabinet

- 22** Determine if all cooling unit fans are operating.

Note: If one or more of the cooling unit fans is not operating, the fan failure lamp turns on. The fan failure lamp is at the top of the cabinet between the doors.

If	Do
all fans are operating	step 23
any fans are not operating	step 24

- 23** Close the cabinet doors.

Go to step 25.

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

- 25** The procedure is complete.

Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984

Application

Use this procedure to replace a cooling unit electronic module. Use this procedure when an electronic module has one of the following common product codes (CPC), in a 42-in. (1.07-m) DMS cabinet:

- A0383326
- A0383327
- A0383984

Note: The product engineering codes for a 42-in. DMS cabinet are NT9X95AA and NT9X95BA.

Definition

An electronic module for the cooling unit provides the external alarm connection. The module also provides power and fusing for the cooling unit fans.

Common procedures

There are no common procedures.

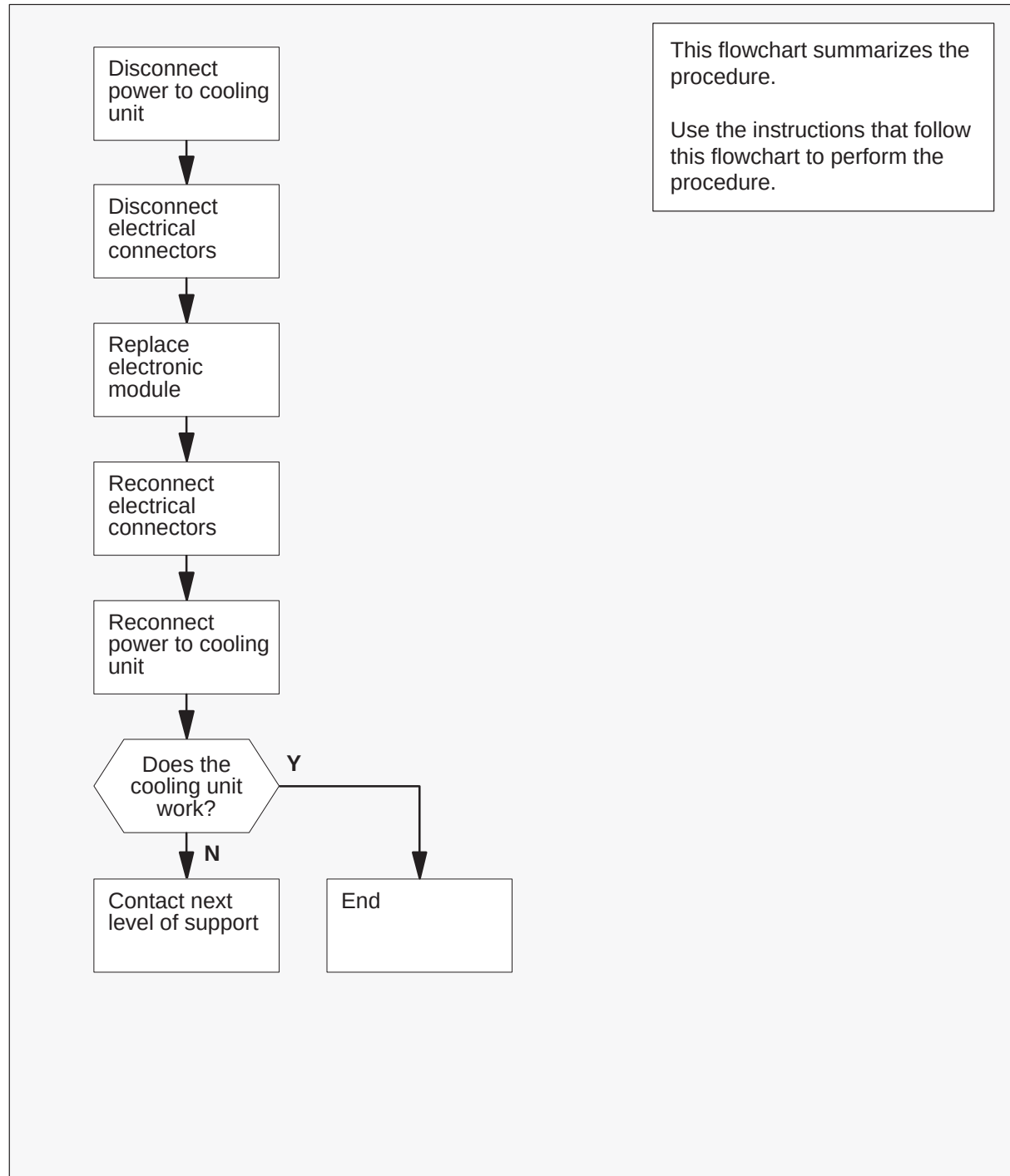
Action

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.

Replacing a cooling unit electronic module

CPC A0383326, A0383327, A0383984 (continued)

Summary of Replacing a cooling unit electronic module



Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)

Replacing a cooling unit electronic module

At your current location

1



DANGER

Risk of injury or damage to equipment

When you replace an electronic module for the cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



DANGER

Risk of injury or damage to equipment

When you replace an electronic module for the cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.

Obtain a replacement electronic module for the cooling unit.

At the front of the cabinet

2 Record the cabinet number.

Note: The cabinet number (for example, A10) is on the front of the cabinet, above the doors.

Replacing a cooling unit electronic module
CPC A0383326, A0383327, A0383984 (continued)

- 3 Consult office records or operating company personnel. Determine if power for the cooling unit connects through a power distribution center (PDC) or a cabinetized PDC (CPDC).

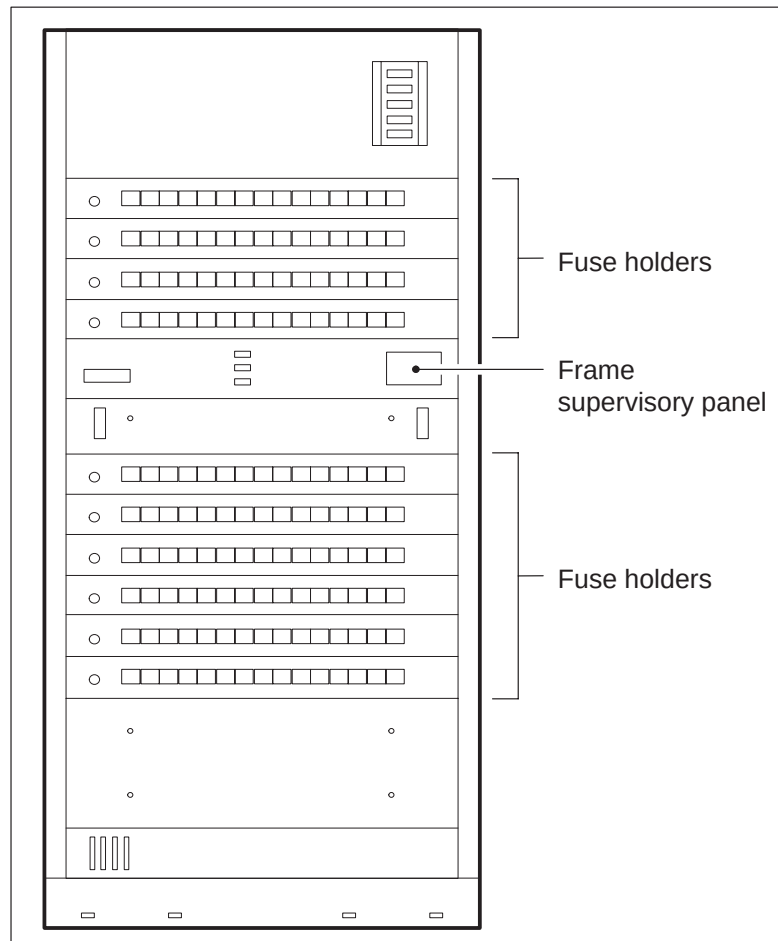
If power to the cooling unit	Do
connects through a PDC	step 4
connects through a CPDC	step 6

Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)

At the front of the PDC

- 4 Locate the two cooling unit fuses.

Note: The cooling unit fuse cartridges are on the front panel of the PDC. The fuse cartridges contain two cooling unit fuses. One fuse is for the A side power feed. The other fuse is for the B side power feed. The cabinet number (recorded in step 2) is above each fuse cartridge and the letters SN CU (SuperNode cooling unit) are below each fuse cartridge.



- 5



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge from the cooling unit. Wear eye protection.

Replacing a cooling unit electronic module

CPC A0383326, A0383327, A0383984 (continued)



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge from the cooling unit. Wear eye protection.



CAUTION

Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

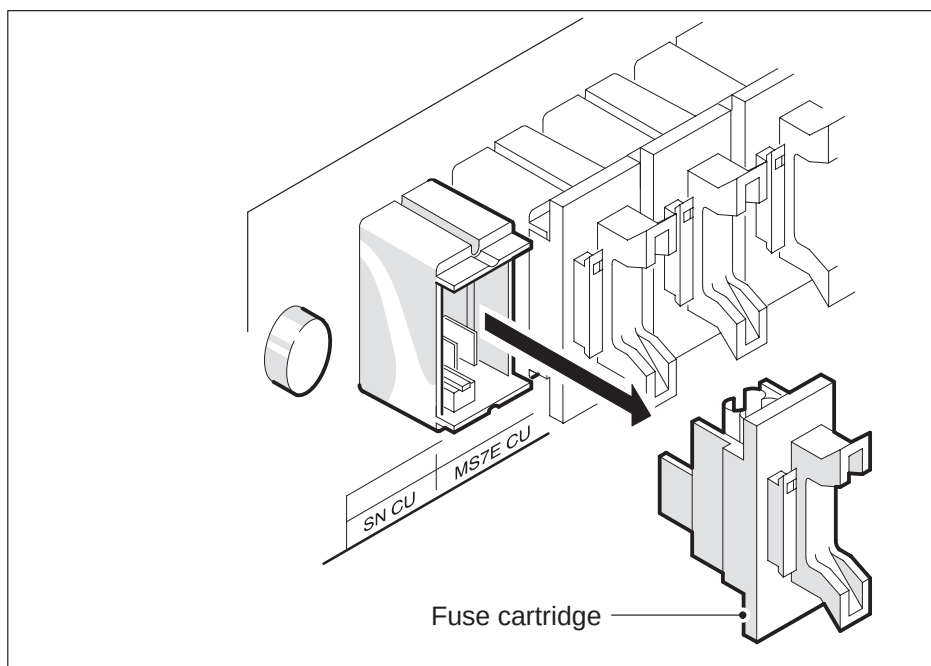
Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.

To remove the cooling unit fuses, pull the fuse cartridges straight out from the front panel of the PDC.

Note: When you remove the fuse cartridges, you remove power from the cooling unit. Removal of power from the cooling unit can cause the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)



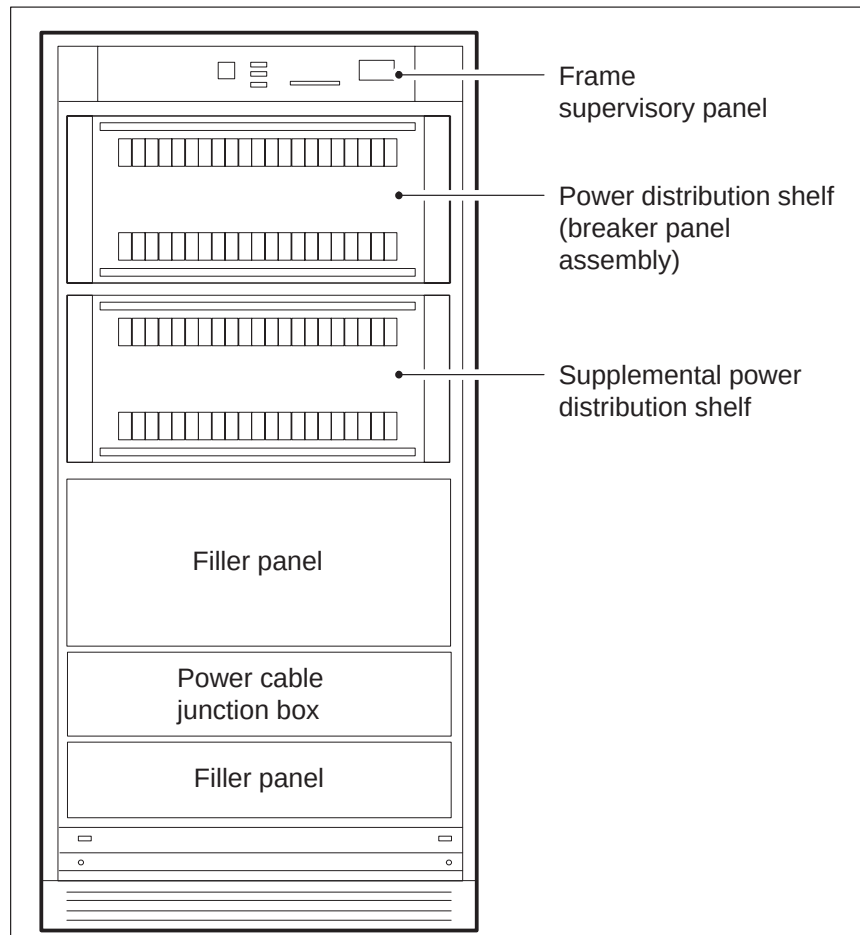
At the front of the CPDC

- 6 Locate the circuit breakers for the cooling unit.

Replacing a cooling unit electronic module

CPC A0383326, A0383327, A0383984 (continued)

Note: The two cooling unit circuit breakers are on the front panel of the CPDC. One circuit breaker is for the side A power feed. The other circuit breaker is for the side B power feed. The cabinet number (recorded in step 2) is above each circuit breaker. The letters SN CU (SuperNode cooling unit) are below each circuit breaker.



Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)

7



DANGER

Risk of injury

Electricity can arc when you throw the circuit breakers for the cooling unit. Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw the circuit breakers for the cooling unit. Wear eye protection.



CAUTION

Possible loss of service

Disconnect power to the cooling unit before you throw the circuit breakers. If you throw the wrong breakers, you can disconnect power to a critical hardware component and cause loss of service.



CAUTION

Possible loss of service

Disconnect power to the cooling unit before you throw the circuit breakers. If you throw the wrong breakers, you can disconnect power to a critical hardware component and cause loss of service.

Throw the circuit breakers for the cooling unit.

Note: When you throw the circuit breakers, you remove power from the cooling unit. Removal of power from the cooling unit can cause the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

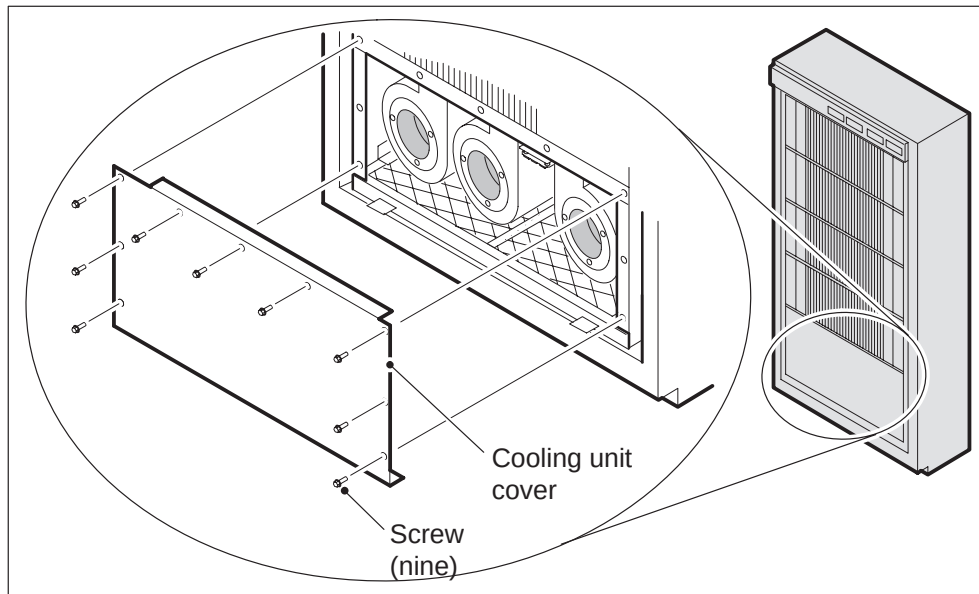
Replacing a cooling unit electronic module

CPC A0383326, A0383327, A0383984 (continued)

At the front of the cabinet

- 8 Open the cabinet doors.
- 9 To remove the cooling unit cover at the bottom of the cabinet, remove the nine mounting screws from the cover.

Note: Do not remove the four bolts that fasten the cooling unit to the cabinet. The procedure *Replacing a cooling unit assembly* in this document shows the location of the screws.



At the back of the cabinet

- 10 Remove the two screws that fasten the electronic module to the cooling unit assembly.

Note: The screws are near the upper left-hand corner of the backplate of the cooling unit.

- 11 Disconnect the power connector from the electronic module.

Note: The power connector is near the upper left-hand corner of the backplate of the cooling unit.

Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)

At the front of the cabinet

12



CAUTION

Possible equipment damage or service interruption

Label all electrical connectors before you disconnect them. If you reconnect to the wrong electrical connector, you can cause equipment damage or service interruption.



CAUTION

Possible equipment damage or service interruption

Label all electrical connectors before you disconnect them. If you reconnect to the wrong electrical connector, you can cause equipment damage or service interruption.

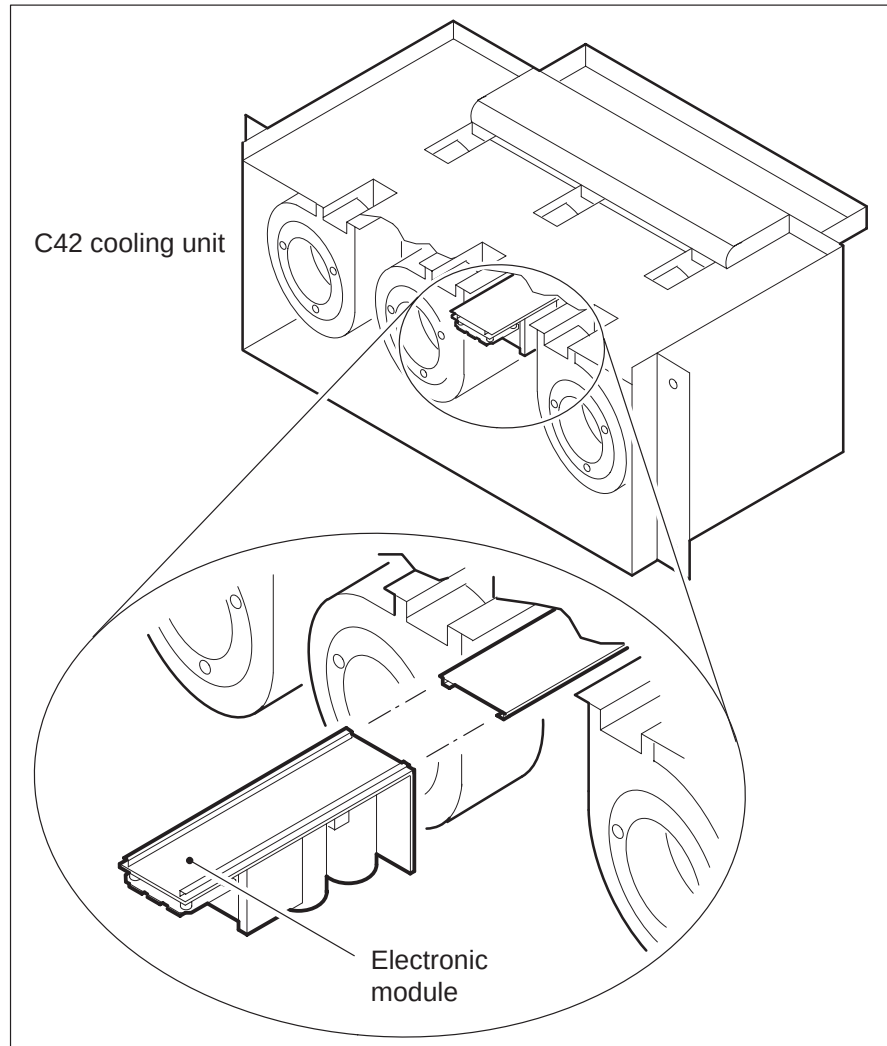
Disconnect the four electrical connectors at the front of the electronic module.

Note: Use both hands to disconnect the connectors. Grasp the top of the connector in one hand and the bottom of the connector in the other hand. Press the releases at the sides of the connector top and pull on the connector bottom.

Replacing a cooling unit electronic module

CPC A0383326, A0383327, A0383984 (continued)

- 13 Slide out cooling unit electronic module.



- 14 Slide the replacement cooling unit electronic module until the module touches the cooling unit backplate.

- 15 Reconnect the four electrical connectors that you removed in step 12.

Note: To reconnect each connector, press the releases on the connector top. Insert the connector bottom until it locks in place. If you cannot insert the connector bottom, turn it one-half turn and try to insert it again.

Replacing a cooling unit electronic module CPC A0383326, A0383327, A0383984 (continued)

At the back of the cabinet

- 16 Insert the screws that fasten the electronic module into the cooling unit assembly. You removed these screws in step 10.
- 17 Reconnect the power connector that you disconnected in step 11.

At the front of the cabinet

- 18 Determine if power for the cooling unit connects through a PDC or a CPDC.

If the power for the cooling unit	Do
connects through a PDC	step 19
connects through a CPDC	step 20

At the front of PDC

- 19 To insert the cooling unit fuses, push the fuse cartridges straight into the front panel of the PDC.
Go to step 21.

At the front of CPDC

- 20 Throw the circuit breakers for the cooling unit.

At the front of the cabinet

- 21 Determine if all the cooling unit fans work.

Note: If one or more of the cooling unit fans does not work, the fan failure lamp turns ON. The fan failure lamp is at the top of the cabinet between the doors.

If	Do
all fans work	step 22
any fans do not work	step 24

- 22 To reinstall the cooling unit cover, insert the mounting screws into the cover.
Note: Step 9 shows the location of the mounting screws.
- 23 Close the cabinet doors.
Go to step 25.
- 24 For additional help, contact the next level of support.

Replacing a cooling unit electronic module
CPC A0383326, A0383327, A0383984 (end)

25 The procedure is complete.

Replacing a cooling unit fan CPC A0345301

Application

Use this procedure to replace a cooling unit fan with the common product codes (CPC) A0345301, in a 42-inch DMS cabinet:

Note: The product engineering codes (PEC) for a 42-inch DMS cabinet are NT9X0104 and NT9X0113.

Definition

Cooling unit fans cool the cabinet components.

Common procedures

There are no common procedures.

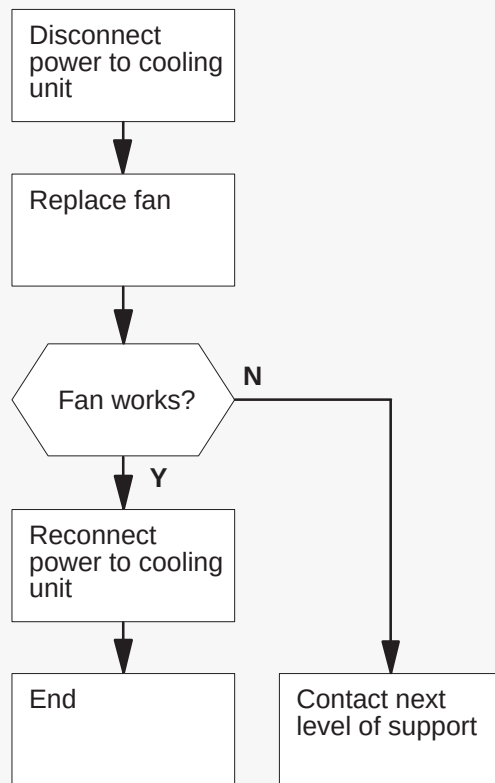
Action

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.

Replacing a cooling unit fan

CPC A0345301 (continued)

Summary of Replacing a cooling unit fan



This flowchart summarizes the procedure.

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

Replacing a cooling unit fan CPC A0345301 (continued)

Replacing a cooling unit fan

At your current location

1



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.

Obtain a replacement for the cooling unit fan.

Record the cabinet number.

Note: The cabinet number (for example, D00) is on the front of the cabinet, above the doors.

Replacing a cooling unit fan
CPC A0345301 (continued)

At the front of the cabinet

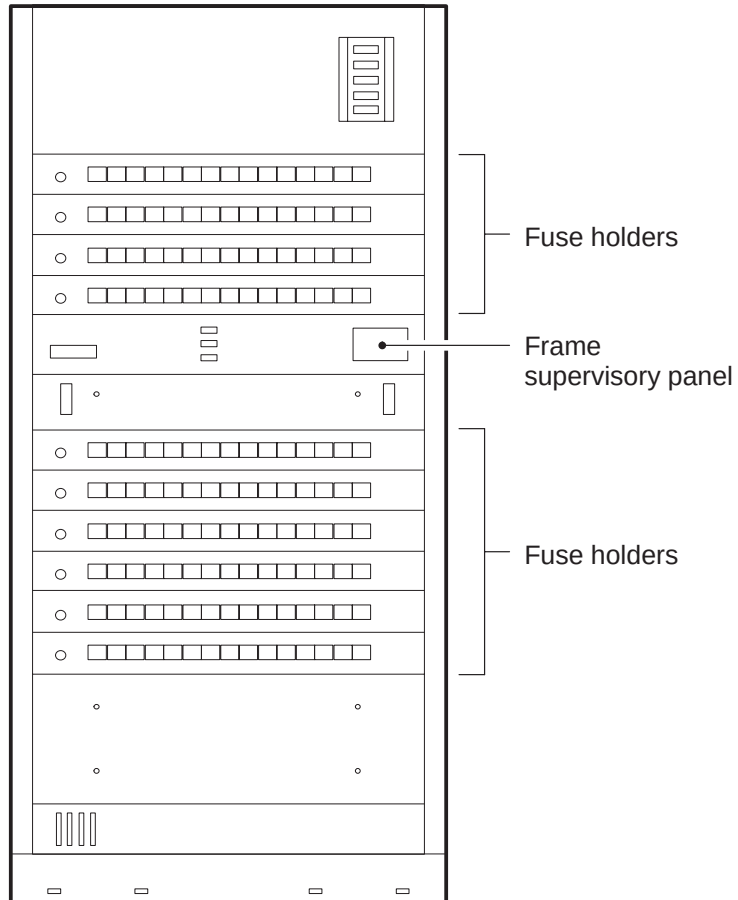
- 2 Consult office records or operating company personnel. Determine if power to the cooling unit connects through a power distribution center (PDC), or a cabinetized PDC (CPDC).

If power to the cooling unit	Do
connects through a PDC	step 3
connects through a CPDC	step 5

Replacing a cooling unit fan CPC A0345301 (continued)

3 Locate the cooling unit fuses.

Note: The cooling unit fuse cartridges are on the front panel of the PDC. The fuse cartridges contain two cooling unit fuses. One fuse is for the side A power feed. The other fuse is for the side B power feed. The cabinet number (recorded in step 1) is above each fuse cartridge. The letters SN CU (SuperNode cooling unit) are below each fuse cartridge.



4



DANGER

Risk of injury

Electricity can arc when you remove the fuse cartridges for the cooling unit. Wear eye protection.

Replacing a cooling unit fan

CPC A0345301 (continued)



DANGER

Risk of injury

Electricity can arc when you remove the fuse cartridges for the cooling unit. Wear eye protection.



CAUTION

Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

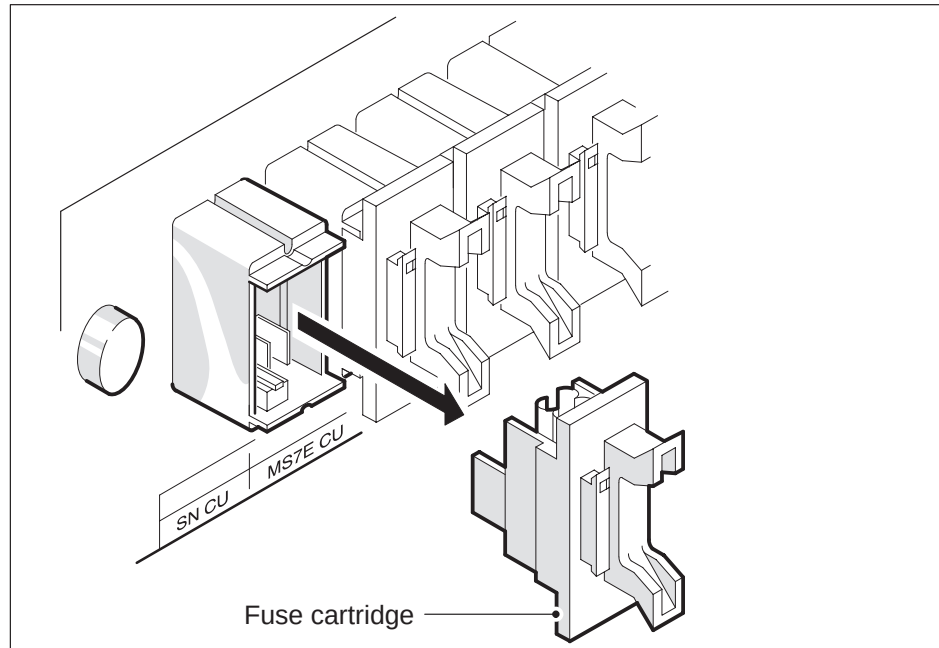
Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.

To remove the cooling unit fuses, pull the fuse cartridges straight out from the front panel of the PDC.

Note: When you remove the fuse cartridges, you remove power from the cooling unit. Removal of power from the cooling unit causes the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

Replacing a cooling unit fan CPC A0345301 (continued)

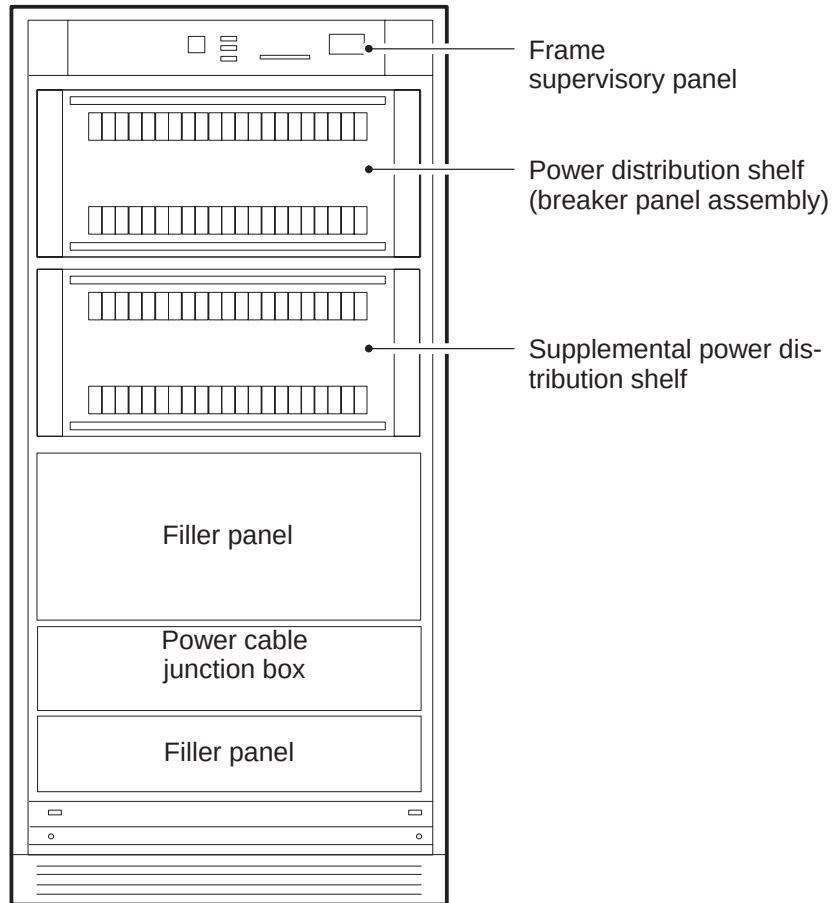


Replacing a cooling unit fan

CPC A0345301 (continued)

- 5 Locate the cooling unit circuit breakers.

Note: The two cooling unit circuit breakers are on the front panel of the CPDC. One circuit breaker is for the side A power feed. The other circuit breaker is for the side B power feed. The cabinet number (recorded in step 1) is above each breaker. The letters SN CU (SuperNode cooling unit) are below each breaker.



Replacing a cooling unit fan CPC A0345301 (continued)

6



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker for the cooling unit. Wear eye protection.



DANGER

Briefly state reasons for the danger

Enter the reasons the danger: a danger alerts the reader to a risk of personal injury or death.



CAUTION

Possible loss of service

Make sure you remove only the cooling unit fuses before you throw this circuit breaker. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

Briefly state reasons for the caution

Enter the reasons for the caution: a caution informs the reader of a risk of service interruption, equipment damage or loss of data.

Throw the circuit breaker for the cooling unit.

Note: When you throw the circuit breakers, you remove power from the cooling unit. Removal of power from the cooling unit causes the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

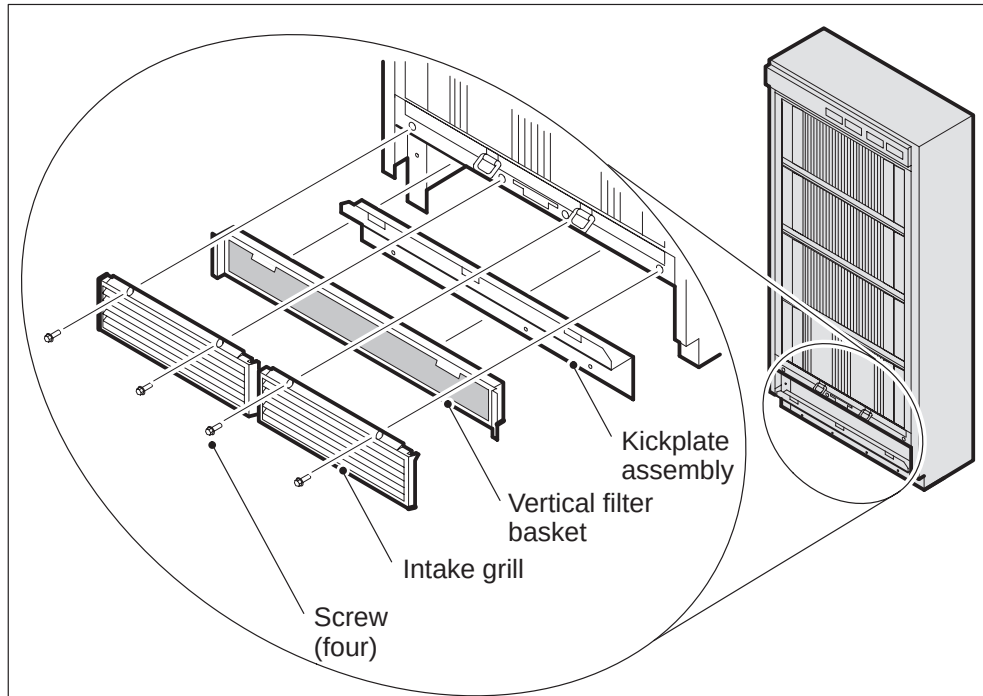
At the front of the cabinet

7 Open the cabinet doors.

Replacing a cooling unit fan

CPC A0345301 (continued)

- 8 Remove the two intake grills for the cooling unit at the bottom of the cabinet. To remove the intake grills, remove the four screws that hold the intake grills in place.



- 9 To remove the filter basket, pull on the handles.
- 10 To remove the kickplate assembly, remove the mounting screws and mounting bolts that hold the assembly in place.

Note: The four mounting screws are along the bottom of the kickplate. The two mounting bolts are at the sides of the kickplate.

Replacing a cooling unit fan CPC A0345301 (continued)

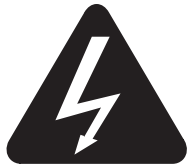
11



DANGER

Electrocution

Avoid contact with the cabinet wiring. Contact with the wiring can result in electric shock.



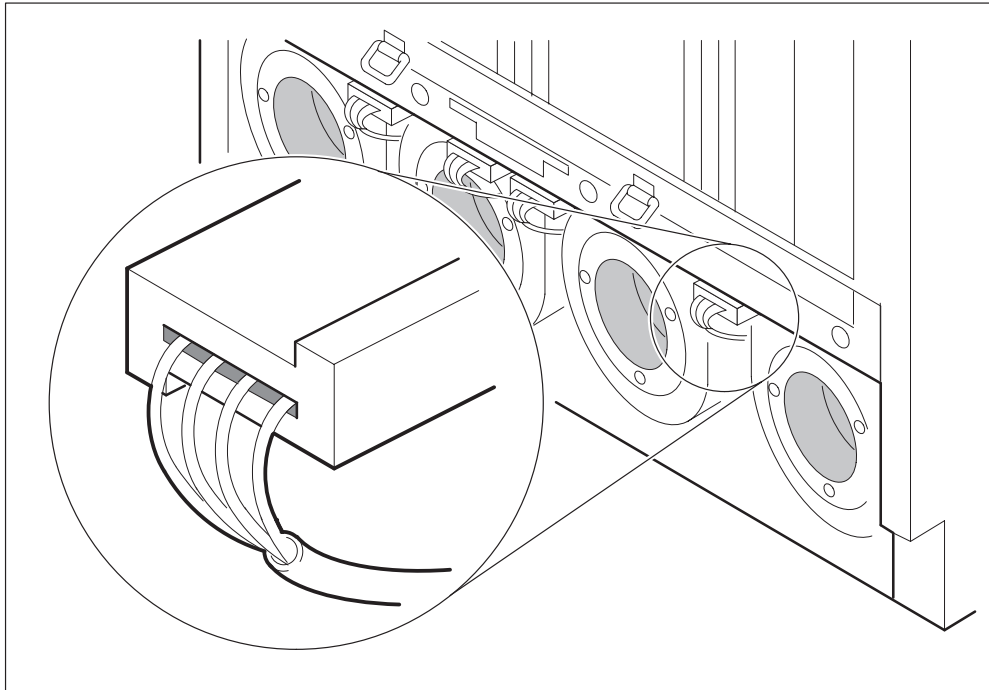
DANGER OF ELECTRIC SHOCK

Electrocution

Avoid contact with the cabinet wiring. Contact with the wiring can result in electric shock.

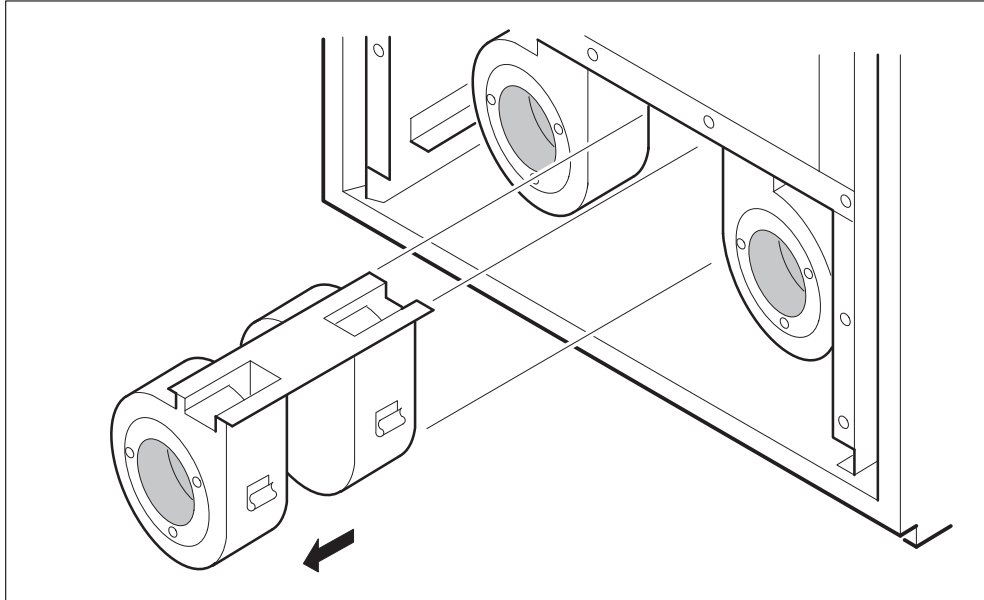
Disconnect the electrical connector of the fan that has faults from the corresponding electrical connector of the cabinet.

Note: The connector for each fan is above the fan.



Replacing a cooling unit fan CPC A0345301 (continued)

- 12 Slide the fan that has faults the rest of the way out of the cabinet.



- 13 Slide the replacement fan into the cabinet.
- 14 Connect the electrical connector of the replacement fan to the corresponding electrical connector of the cabinet.
- 15 Determine if power for the cooling unit connects through a circuit breaker at the CPDC.

If the power for the cooling unit	Do
connects through a PDC	step 16
connects through a CPDC	step 17

At the front of the PDC

- 16 To insert the cooling unit fuses, push the fuse cartridges straight into the front panel of the PDC.
- Go to step 18.

Replacing a cooling unit fan CPC A0345301 (continued)

At the front of the CPDC

17



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker for the cooling unit. Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker for the cooling unit. Wear eye protection.

Throw the circuit breakers for the cooling unit.

At the front of the cabinet

18 Determine if the replacement fan works.

If the replacement fan	Do
works	step 19
does not work	step 23

19 Reinstall the kickplate assembly.

Note: Step 8 shows the location of the kickplate assembly.

20 Reinstall the filter basket.

Note: Step 8 shows the location of the filter basket.

21 Reinstall the cooling unit intake grill.

Note: Step 8 shows the location of the cover mounting screws for the intake grill.

22 Close the cabinet doors.

Go to step 24.

Replacing a cooling unit fan

CPC A0345301 (end)

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

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325

Application

Use this procedure to replace a cooling unit fan. Use this procedure when the fan has one of the following common product codes (CPC), in a 42-in. DMS cabinet:

- A0381714
- A0382103
- A0383325

Note: The product engineering codes (PEC) for a 42-in. DMS cabinet are NT9X95AA and NT9X95BA.

Definition

Cooling unit fans cool the cabinet parts.

Common procedures

There are no common procedures.

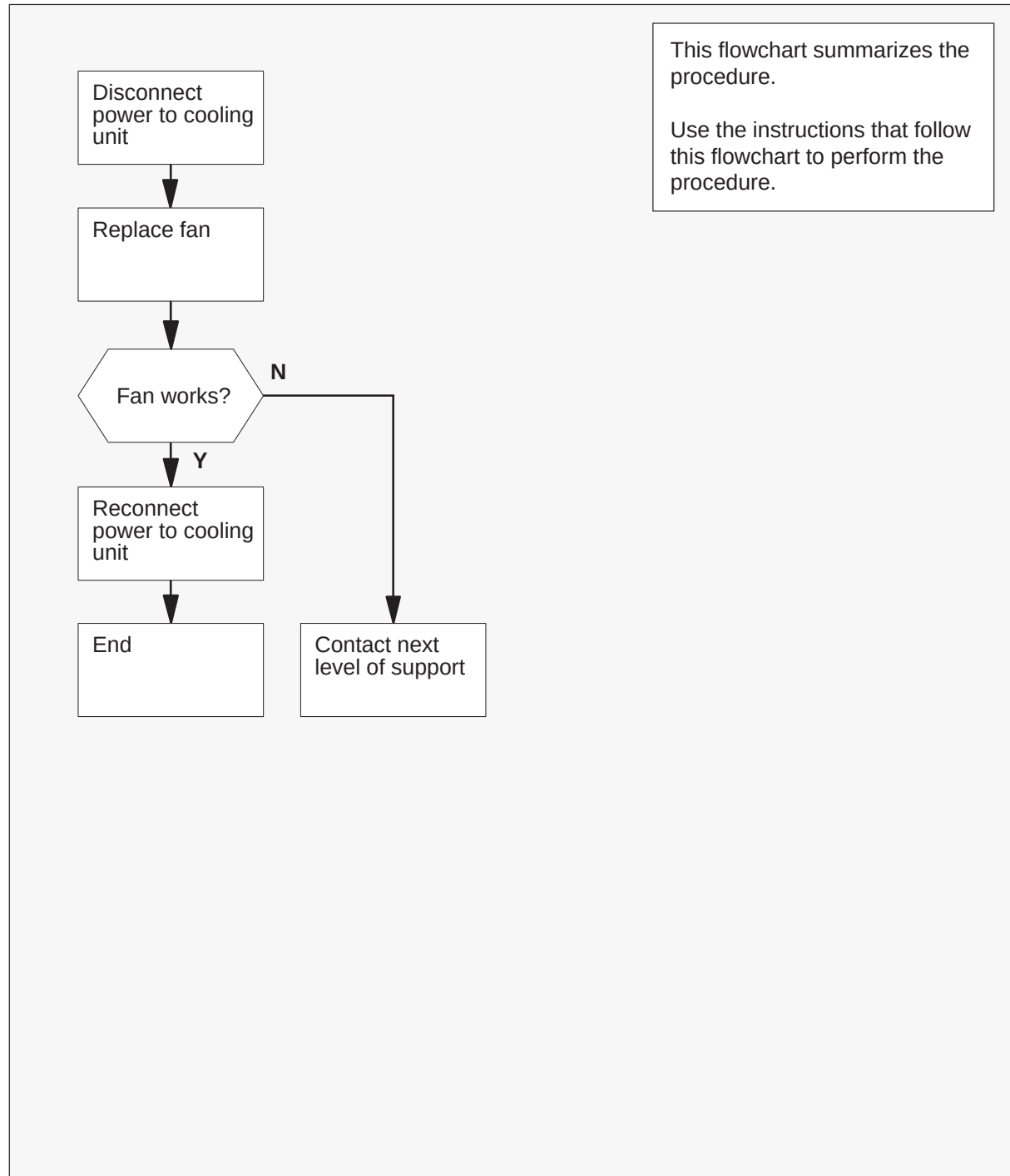
Action

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.

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

Summary of Replacing a cooling unit fan



Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

Replacing a cooling unit fan

At your current location

1



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



DANGER

Risk of injury or damage to equipment

When you replace a cooling unit, do not wear jewelry (for example, rings, bracelets, or necklaces).



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.



WARNING

Possible equipment damage

Do not remove power to the cooling unit for more than 30 minutes. Extended removal of power can cause the unit to overheat and cause damage.

Obtain a replacement for the cooling unit fan.

Record the cabinet number.

Note: The cabinet number (for example, D00) is on the front of the cabinet, above the doors.

Replacing a cooling unit fan
CPC A0381714, A0382103, A0383325 (continued)

At the front of the cabinet

- 2 Consult office records or operating company personnel. Determine if power to the cooling unit connects through a power distribution center (PDC) or a cabinetized PDC (CPDC).

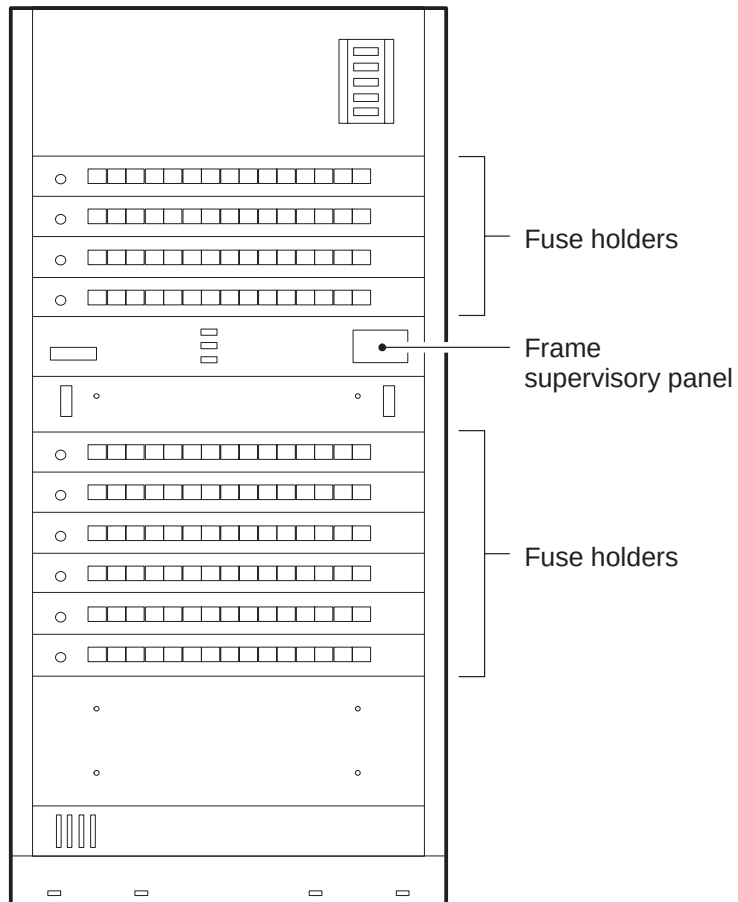
If power to the cooling unit	Do
connects through a PDC	step 3
connects through a CPDC	step 5

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

3 Locate the cooling unit fuses.

Note: The cooling unit fuse cartridges are on the front panel of the PDC. The fuse cartridges contain two cooling unit fuses. One fuse is for the side A power feed. The other fuse is for the side B power feed. The cabinet number (recorded in step 1) is above each fuse cartridge. The letters SN CU (SuperNode cooling unit) are below each fuse cartridge.



4



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge from the cooling unit. Wear eye protection.

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)



DANGER

Risk of injury

Electricity can arc when you remove a fuse cartridge from the cooling unit. Wear eye protection.



CAUTION

Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

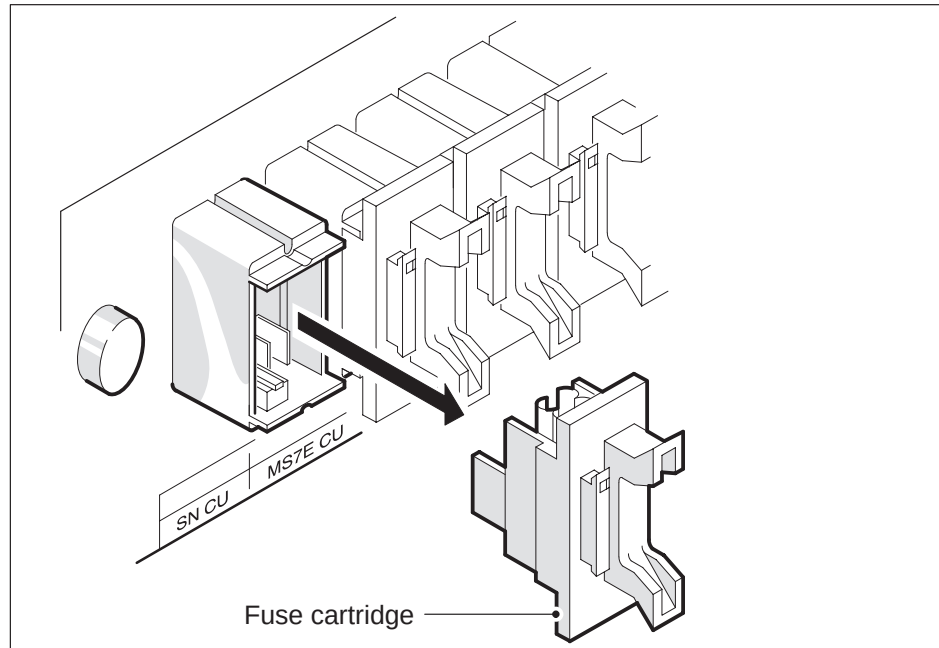
Possible loss of service

Remove only the cooling unit fuses. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.

To remove the cooling unit fuses, pull the fuse cartridges straight out from the front panel of the PDC.

Note: When you remove the fuse cartridges, you remove power from the cooling unit. Removal of power from the cooling unit causes the fan failure lamp to turn ON. The fan failure lamp is at the top of the cabinet between the doors.

Replacing a cooling unit fan CPC A0381714, A0382103, A0383325 (continued)

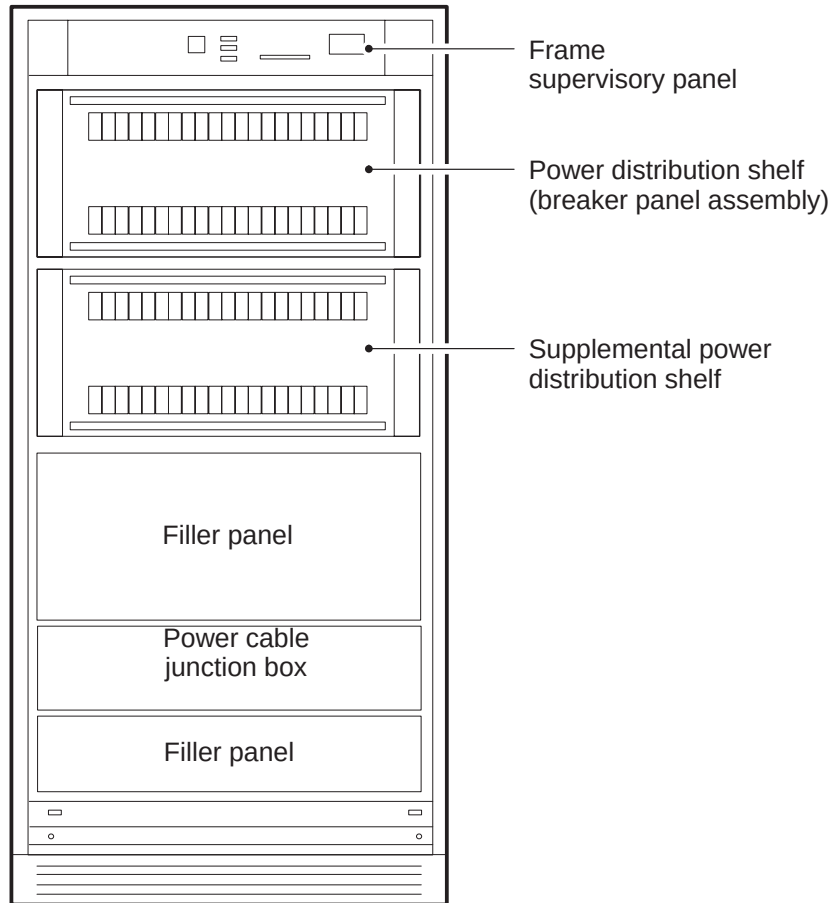


Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

- 5 Locate the circuit breakers for the cooling unit.

Note: The two cooling unit circuit breakers are on the front panel of the CPDC. One circuit breaker is for the side A power feed. The other circuit breaker is for the side B power feed. The cabinet number (recorded in step 1) is above each breaker. The letters SN CU (SuperNode cooling unit) are below each breaker.



Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

6



DANGER

Risk of injury

Electricity can arc when you throw circuit breakers for the cooling. Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw circuit breakers for the cooling. Wear eye protection.



CAUTION

Possible loss of service

Make sure that you remove only the cooling unit fuses before you throw the circuit breakers. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.



CAUTION

Possible loss of service

Make sure that you remove only the cooling unit fuses before you throw the circuit breakers. Removal of the wrong fuses can disconnect power to a critical hardware component and cause loss of service.

Throw the circuit breaker for the cooling unit.

Note: When you throw the circuit breakers, you remove power from the cooling unit. Removal of power from the cooling unit can cause the fan failure lamp to turn on. The fan failure lamp is at the top of the cabinet between the doors.

At the front of the cabinet

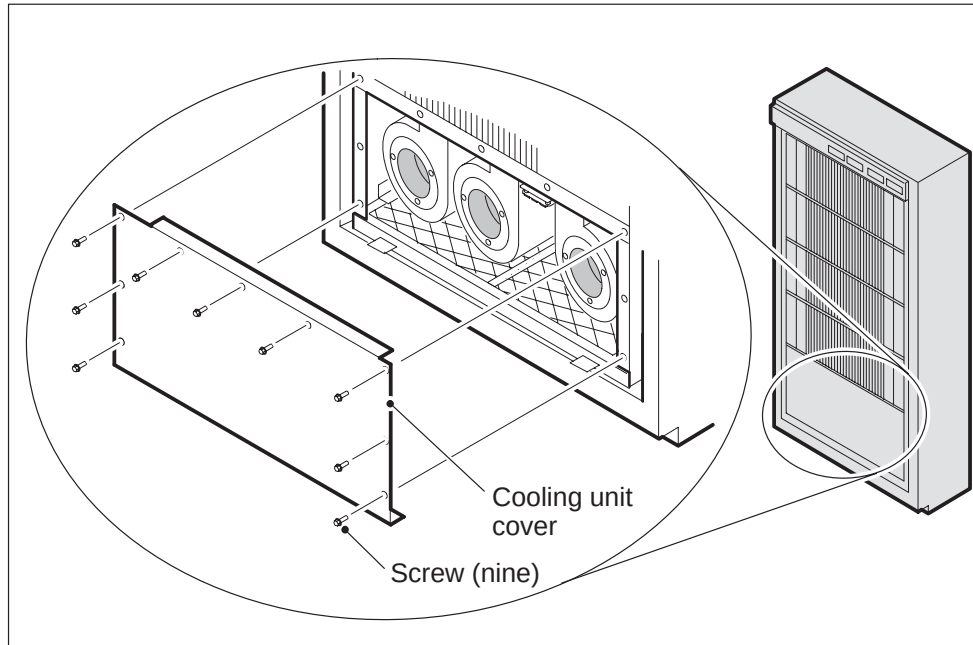
7 Open the cabinet doors.

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

- 8 The cooling unit cover is at the bottom of the cabinet. To remove the cover, remove the nine mounting screws from the cover.

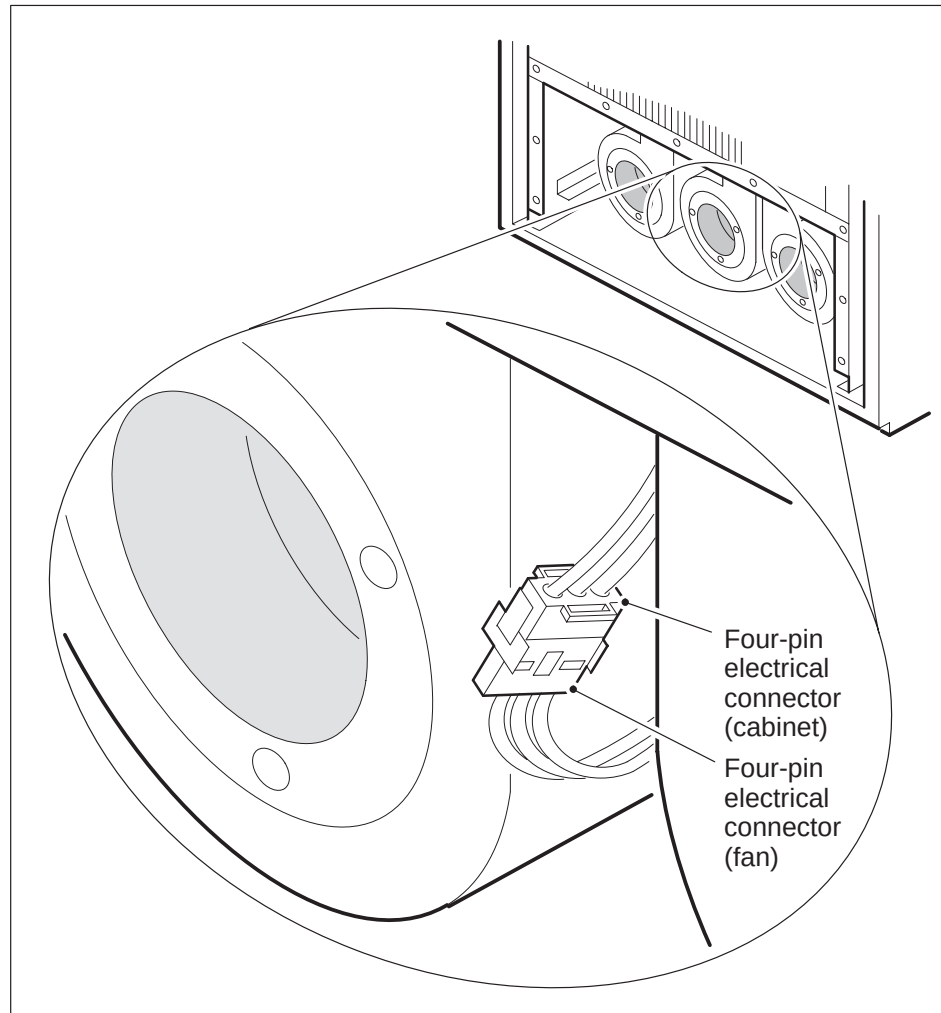
Note: Do not remove the four bolts that fasten the cooling unit to the cabinet. The procedure *Replacing a cooling unit assembly* in this document shows the location of the screws.



Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (continued)

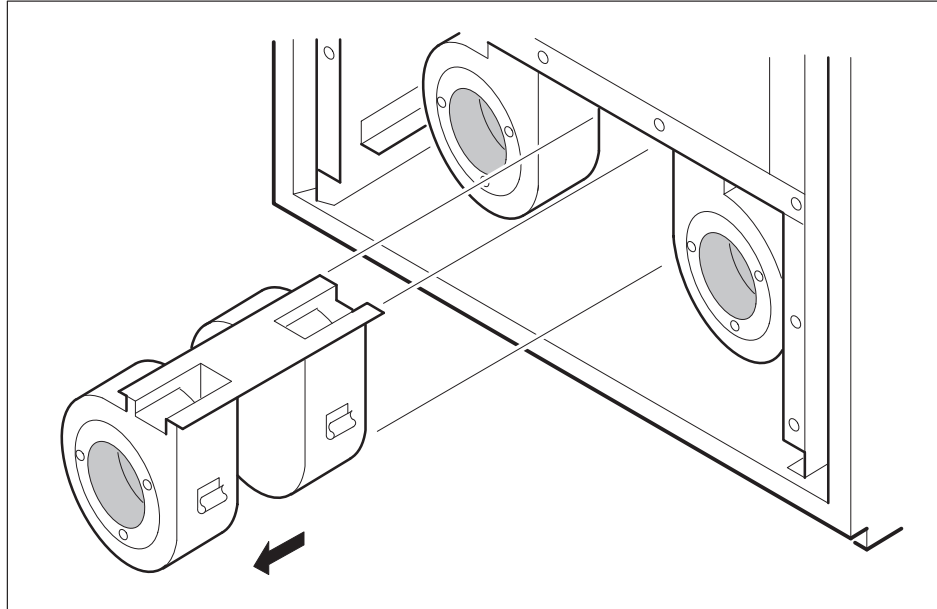
- 9 Slide the fan that has faults out of the cabinet so that you can disconnect the four-pin electrical connector of the fan.



- 10 Disconnect the four-pin connector of the fan that has faults from the corresponding four-pin connector of the cabinet.

Replacing a cooling unit fan CPC A0381714, A0382103, A0383325 (continued)

- 11 Slide the fan that has faults the rest of the way out of the cabinet.



- 12 Slide the replacement fan part way into the cabinet.
- 13 Connect the four-pin electrical connector of the replacement fan to the corresponding four-pin electrical connector of the cabinet.
- Note:** Step 9 shows the location of the connector.
- 14 Slide the replacement fan the rest of the way into the cabinet.
- 15 Determine if power for the cooling unit connects through a circuit breaker at the CPDC.

If the power for the cooling unit	Do
connects through a PDC	step 16
connects through a CPDC	step 17

At the front of the PDC

- 16 To insert the cooling unit fuses, push the fuse cartridges straight into the front panel of the PDC.
- Go to step 18.

Replacing a cooling unit fan

CPC A0381714, A0382103, A0383325 (end)

At the front of the CPDC

17



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker for the cooling unit. Wear eye protection.



DANGER

Risk of injury

Electricity can arc when you throw a circuit breaker for the cooling unit. Wear eye protection.

Throw the circuit breakers for the cooling unit.

At the front of the cabinet

18 Determine if the replacement fan works.

If the replacement fan	Do
works	step 19
does not work	step 21

19 Replace the cooling unit cover.

Note: Step 8 shows the location of the cover mounting screws.

20 Close the cabinet doors.

Go to step 22.

21 For additional help, contact the next level of support.

22 The procedure is complete.

Replacing a CU voltage limiter and filter in a 28-in. cabinet

Application

Use this procedure to replace a cooling unit (CU) voltage limiter and filter (NTNX13CA) in a 28-in. (0.635-m) cabinet.

Definition

The CU voltage limiter and filter limits the input voltage to 56 V.

Common procedures

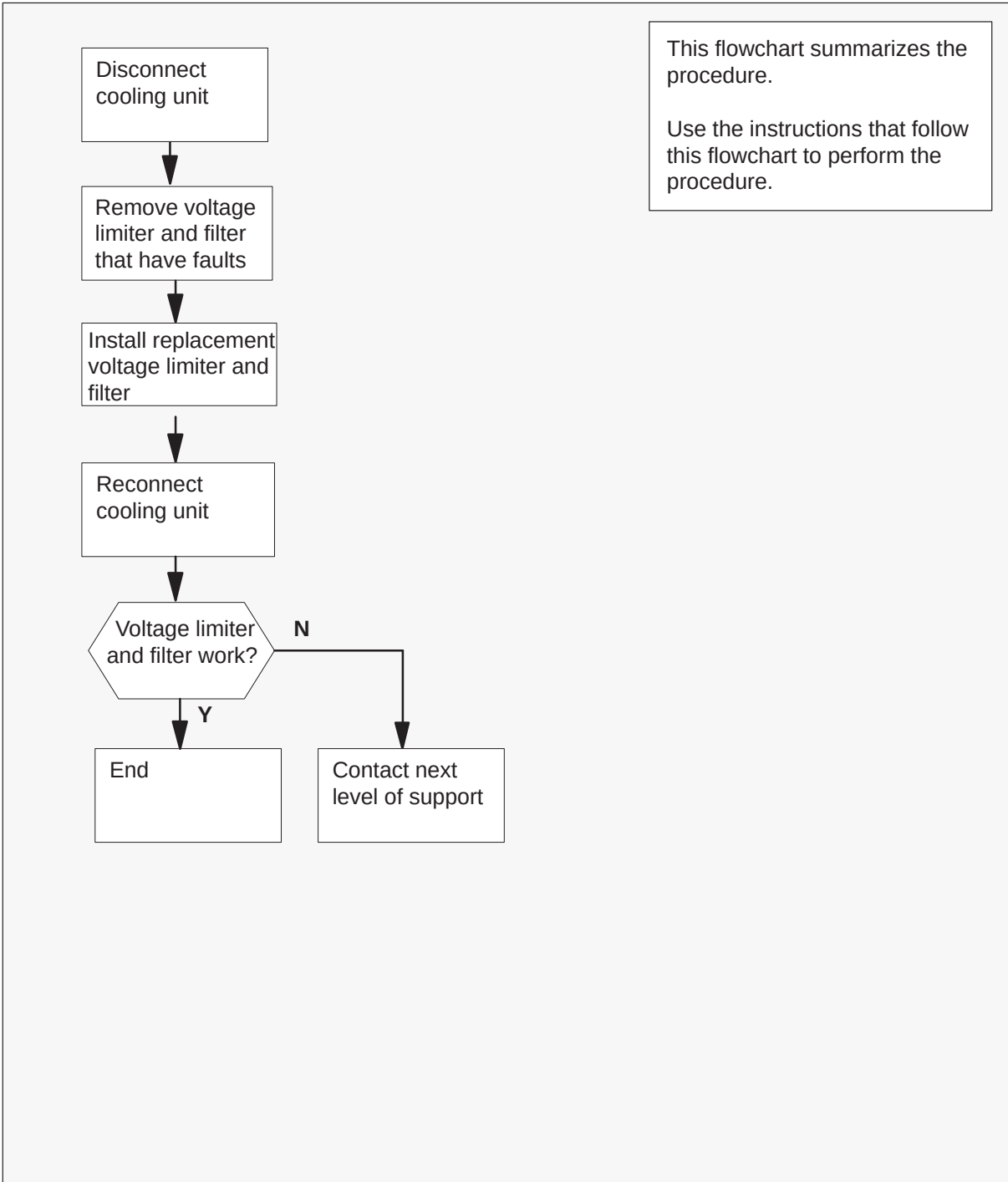
There are no common procedures.

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.

Replacing a CU voltage limiter and filter in a 28-in. cabinet (continued)

Summary of Replacing a CU voltage limiter and filter in a 28-in. cabinet



Replacing a CU voltage limiter and filter in a 28-in. cabinet (continued)

Replacing a CU voltage limiter and filter in a 28-in. cabinet

At the rear of the cabinet

1



WARNING

Loss of cabinet cooling

Disconnection of the cooling unit for an extended period of time can cause the equipment in the cabinet to overheat.



WARNING

Loss of cabinet cooling

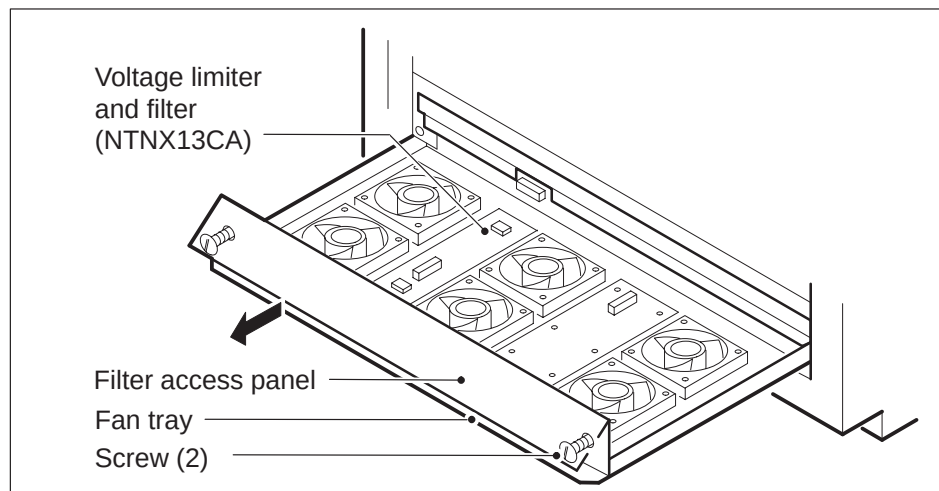
Disconnection of the cooling unit for an extended period of time can cause the equipment in the cabinet to overheat.

Open the cabinet doors.

- 2 Disconnect the 15-pin electrical connector of the fan tray from the cabinet. The connector of the fan tray at the bottom of the cabinet corresponds to the 15-pin connector of the cabinet.

At the front of the cabinet

- 3 Open the cabinet doors.
- 4 Loosen the two screws that hold the fan tray in place.



Replacing a CU voltage limiter and filter in a 28-in. cabinet (continued)

- 5 Slide the fan tray out of the cabinet.

- 6



WARNING
Static electricity damage
To handle circuit cards, wear a wrist strap that connects to a wrist-strap grounding point. A grounding point will be on the modular supervisory panel (MSP), or a frame supervisory panel (FSP). The wrist strap protects against static electricity damage.



CAUTION FOR ESDS
Static electricity damage
To handle circuit cards, wear a wrist strap that connects to a wrist-strap grounding point. A grounding point will be on the modular supervisory panel (MSP), or a frame supervisory panel (FSP). The wrist strap protects against static electricity damage.

Unplug the two connectors on the NTN13CA card.

- 7 To remove the NTN13CA card from the fan tray, pull on the card near each standoff that supports the fan tray. The standoffs have a snapoff tip so that the card pulls off without the requirement of any tools.
 - 8 Align the holes of the new card with the standoffs.
 - 9 Press down on the card near the standoffs until the card snaps into place.
 - 10 Reconnect the two connectors to the replacement NTN13CA.
 - 11 Slide the fan tray back into the cabinet.
 - 12 Tighten the two screws that hold the fan tray in place.
- At the back of the cabinet***
- 13 Reconnect the 15-pin electrical connector of the fan tray.
 - 14 Close the cabinet doors.

Replacing a CU voltage limiter and filter in a 28-in. cabinet (continued)

At the front of the cabinet

15



DANGER

Risk of personal injury

Contact with unshielded cabinet wiring can result in electric shock. Do not touch the cabinet wiring.

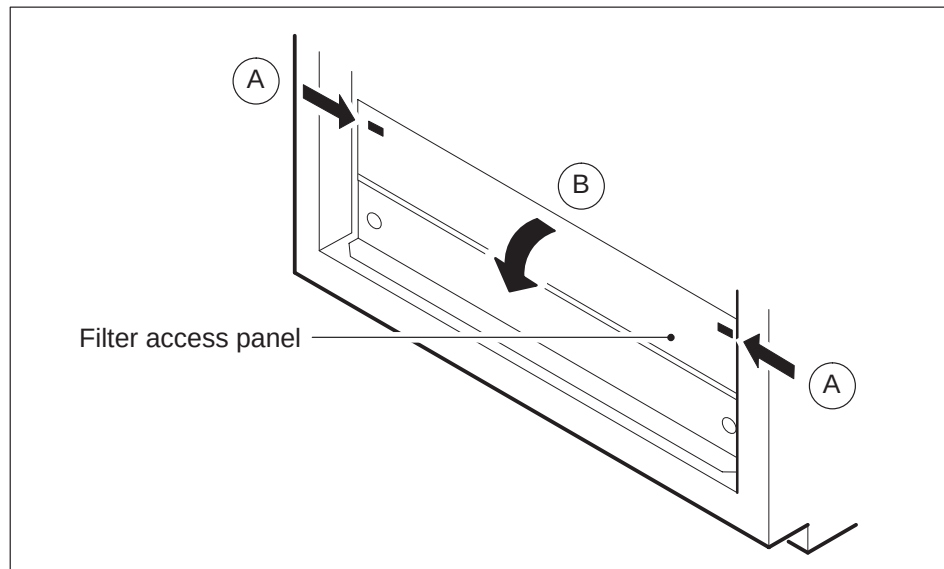


DANGER

Risk of personal injury

Contact with unshielded cabinet wiring can result in electric shock. Do not touch the cabinet wiring.

Open the filter access panel at the bottom of the cabinet. To open the panel, slide the catches toward each other (A) and swing the panel downward (B).



Replacing a CU voltage limiter and filter in a 28-in. cabinet (end)

- 16 Determine if the replacement NTN13CA card operates.

Note: The LED on the NTN13CA card is off, if the unit operates correctly.

If the LED	Do
is off	step 17
is on	step 19

- 17 Close the filter access panel.
- 18 Close the cabinet doors. Go to step 20.
- 19 For additional help, contact the next level of support.
- 20 The procedure is complete.

Index

A

AMP connectors, 2x5, SuperNode cabling, Assembling *Vol. 1*, 1-59
 APU, Downloading software to *Vol. 1*, 1-594
 attendant console problem, Correct *Vol. 1*, 1-274
 audio SLE defaulted to by VSLE session, troubleshooting *Vol. 2*, 1-283
 automatic line test failure, Correcting *Vol. 1*, 1-278

B

BCLID link failure, troubleshooting *Vol. 1*, 1-64
 bulkhead gasket, Replacing *Vol. 1*, 1-993
 busy trunk circuits
 Monitoring *Vol. 1*, 1-797
 processing *Vol. 1*, 1-797

C

C7BERT, Running *Vol. 2*, 1-143, 1-184
 C7TIMER, Changing table entries *Vol. 1*, 1-159
 call cutoff problem, Correcting *Vol. 1*, 1-179
 call processing busy (CPB), trouble locating *Vol. 1*, 1-712
 Can't be called, trouble locating and clearing *Vol. 1*, 1-75
 Can't call out, trouble locating and clearing *Vol. 1*, 1-112
 card or assembly
 Returning in Canada *Vol. 2*, 1-119
 Returning in Germany *Vol. 2*, 1-123
 Returning in Japan *Vol. 2*, 1-127
 Returning in the United States *Vol. 2*, 1-131
 card replacement procedures, NT9X95 *Vol. 2*, 1-66
 CCS alarms, Prioritizing *Vol. 1*, 1-836
 Clearing trouble on the SCAI link, trouble locating *Vol. 1*, 1-168
 continuity tests
 external, performing *Vol. 1*, 1-815, 1-821
 internal, performing *Vol. 1*, 1-826, 1-831

cooling unit assembly in a 42-in. cabinet, Replacing *Vol. 1*, 1-996
 cooling unit electronic module, Replacing *Vol. 1*, 1-1011
 cooling unit fan, Replacing
 CPC A0345301 *Vol. 1*, 1-1025
 CPC A0381714, A0382103, or A0383325 *Vol. 1*, 1-1039
 cooling unit NTRX91AA, Replacing *Vol. 2*, 1-80
 CU voltage limiter and filter in a 28-in. cabinet, Replacing *Vol. 1*, 1-1052
 cut, trouble locating *Vol. 1*, 1-716

D

D-channel
 determine state *Vol. 1*, 1-458, 1-463
 restoring far-end service *Vol. 2*, 1-93
 D-channel maintenance busy (DMB), trouble locating *Vol. 1*, 1-719
 D-channel, backup, manually switch *Vol. 1*, 1-793
 D-channel, busy, returning to service *Vol. 2*, 1-104, 1-110
 D-channels, restoring far-end service *Vol. 2*, 1-98
 data error problem, Correcting *Vol. 1*, 1-186
 Determine the location of the trouble, trouble locating *Vol. 1*, 1-476
 Digital test access, trouble locating and clearing *Vol. 1*, 1-490
 digital test unit trouble, Correcting *Vol. 1*, 1-282
 disk drive unit, Replacing
 14-in. *Vol. 1*, 1-969
 8-in. or 5.25-in. *Vol. 1*, 1-947
 DN incorrect or not displayed, troubleshooting *Vol. 1*, 1-700
 door gasket, Replacing *Vol. 2*, 1-16
 DRAM announcement trouble, Correcting *Vol. 1*, 1-297
 DRAM sit tone trouble, Correcting *Vol. 1*, 1-307

2-2 Index

DS-1 loopback, establish far-end office *Vol. 1*, 1-673
DS-1 PCM30 loopback, establish a far-end office *Vol. 1*, 1-679
DSCWID/SCWID subscriber, waiting call notification, failure *Vol. 1*, 1-628

E

E911 LDT and Line/ACD PSAP complaint, trouble locating and clearing *Vol. 1*, 1-638
E911 LDT PSAP complaint, trouble locating and clearing *Vol. 1*, 1-646
E911 LDT PSAP Operator Complaint, trouble locating and clearing *Vol. 1*, 1-656
E911 Line and ACD PSAP complaint, trouble locating and clearing *Vol. 1*, 1-665
EDRAM voice file trouble, Correcting *Vol. 1*, 1-315
EIU, Downloading software to *Vol. 1*, 1-599
enhanced network load datafill, Correcting *Vol. 1*, 1-327

F

fan in a 28-in. cabinet, Replacing *Vol. 2*, 1-19
fan in a 28-in. frame, Replacing *Vol. 2*, 1-26
fan in a 42-in. cabinet, Replacing *Vol. 2*, 1-33
free pay telephone service, line with, Correcting *Vol. 1*, 1-251

I

idle (IDL), trouble locating *Vol. 1*, 1-726
incoming callers list, troubleshooting DNs *Vol. 1*, 1-697
installation busy (INB), trouble locating *Vol. 1*, 1-737
ISUP per-call continuity test, Setting up *Vol. 2*, 1-239
ISUP trunk audits, Scheduling *Vol. 2*, 1-233

L

LIM, Returning to service *Vol. 2*, 1-135
LIM unit
 Downloading software to *Vol. 1*, 1-604
 Returning to service *Vol. 2*, 1-139
line card
 procedure for replacing *Vol. 2*, 1-46
 procedure for reseating *Vol. 2*, 1-83
 Replacing when missing *Vol. 2*, 1-54
line flux cancellation error, Correcting *Vol. 1*, 1-197
line loop detect error, Correcting *Vol. 1*, 1-204

line loopback problem, Correcting *Vol. 1*, 1-210
line module busy (LMB), trouble locating *Vol. 1*, 1-741
line noise problem, Correcting *Vol. 1*, 1-217
line pad test problem, Correcting *Vol. 1*, 1-221
line ringing failure, Correcting *Vol. 1*, 1-225
line state, determine *Vol. 1*, 1-467
line synchronization loss, U-loop, Correcting *Vol. 1*, 1-229
line test failure, automatic, Correcting *Vol. 1*, 1-278
line test unit trouble, Correcting *Vol. 1*, 1-340
line that does not receive calls, Correcting *Vol. 1*, 1-234
line that does not ring, Correcting *Vol. 1*, 1-241
line transhybrid error, Correcting *Vol. 1*, 1-246
line transmission or reception, Correcting *Vol. 1*, 1-390
line with free pay telephone service, Correcting *Vol. 1*, 1-251
linkset, offline, Activating *Vol. 1*, 1-34
LIU7
 Activate a loopback on *Vol. 1*, 1-18
 Activating a loopback on *Vol. 1*, 1-9
 Downloading software to *Vol. 1*, 1-609
 Recovering if stuck *Vol. 1*, 1-846, 1-856, 1-867
lock out (LO), trouble locating *Vol. 1*, 1-747
locked-out trunks, Correcting *Vol. 1*, 1-350
logs
 DIRP101
 Reason 100 *Vol. 1*, 1-533
 Reason 127 *Vol. 1*, 1-537
 Reason 129 *Vol. 1*, 1-542
 Reason 153 *Vol. 1*, 1-547
 Reason 154 *Vol. 1*, 1-552
 Reason 155 *Vol. 1*, 1-557
 Reason 2 *Vol. 1*, 1-496
 Reason 223 *Vol. 1*, 1-562
 Reason 251 *Vol. 1*, 1-568
 Reason 26 *Vol. 1*, 1-502
 Reason 266 *Vol. 1*, 1-574
 Reason 267 *Vol. 1*, 1-579
 Reason 27 *Vol. 1*, 1-508
 Reason 279 *Vol. 1*, 1-584
 Reason 280 *Vol. 1*, 1-589
 Reason 46 *Vol. 1*, 1-513
 Reason 51 *Vol. 1*, 1-519
 Reason 56 *Vol. 1*, 1-523
 Reason 78 *Vol. 1*, 1-528
 TRMS301, Responding to *Vol. 2*, 1-90
loopback, NTEX26AA paddleboard, Activate *Vol. 1*, 1-26

loopback on an LIU7
 Activate *Vol. 1*, 1-18
 Activating *Vol. 1*, 1-9

M

manual busy (MB), trouble locating *Vol. 1*, 1-757
 metallic test access trouble, Correcting *Vol. 1*,
 1-355
 metallic test unit trouble, Correcting *Vol. 1*, 1-360
 missing telephone, Confirming *Vol. 1*, 1-175

N

no ANI on coin line condition, Correcting *Vol. 1*,
 1-256
 NT9X95, card replacement procedures *Vol. 2*, 1-66
 NTEX26AA paddle board, loopback, Activate
Vol. 1, 1-26
 NTRX91AA, cooling unit, Replacing *Vol. 2*, 1-80

P

packet service unavailable (PSU), trouble locating
Vol. 1, 1-761, 1-803
 PCM level meter card trouble, Correcting *Vol. 1*,
 1-382
 peripheral module, Correct no response *Vol. 1*,
 1-377
 point-of-use power supply, procedure for replacing
Vol. 2, 1-58
 power supply, point-of-use, procedure for replacing
Vol. 2, 1-58
 PRI trunk, busy, returning to service *Vol. 2*, 1-114

R

release mismatch problems, Correcting *Vol. 1*,
 1-403
 Repair an NTB63AA cooling unit on the bench
 top, trouble locating and clearing *Vol. 1*,
 1-887
 Repair FAN faults on an LCEI frame; cooling unit
 replacement, trouble locating and clearing
Vol. 1, 1-875
 Repairing and replacing NT3X90AA cooling units,
 trouble locating and clearing *Vol. 1*, 1-894
 Repairing and replacing NT3X90AB cooling units,
 trouble locating and clearing *Vol. 1*, 1-908
 Repairing and replacing NT3X90AC cooling units,
 trouble locating and clearing *Vol. 1*, 1-921
 REx test (automatic), Scheduling *Vol. 2*, 1-228
 REx test (automatic) schedule
 Adding a LIM *Vol. 1*, 1-51

Adding an NIU *Vol. 1*, 1-54
 Excluding a LIM *Vol. 1*, 1-689
 Excluding an NIU *Vol. 1*, 1-692
 REx test (manual), Performing on an NIU *Vol. 1*,
 1-808
 ringing pretrip, Correcting *Vol. 1*, 1-263

S

signaling link marginal performance report
 (SLMPR), Setting up *Vol. 2*, 1-244
 signaling link occupancy, Estimating *Vol. 1*, 1-685
 softkey information failure, troubleshooting *Vol. 2*,
 1-256
 softkey trouble, troubleshooting *Vol. 1*, 1-3
 SuperNode cabling, 2x5 AMP connectors, Assem-
 bling *Vol. 1*, 1-59

T

T1 trunks, Correcting
 receive-level trouble *Vol. 1*, 1-396
 supervision trouble *Vol. 1*, 1-425
 transmission-level trouble *Vol. 1*, 1-443
 test access line relay, stuck, Correcting *Vol. 1*,
 1-270
 Test the DS-1 carrier states, trouble locating and
 clearing *Vol. 2*, 1-266
 throttling logs mechanism, Activating *Vol. 1*, 1-44
 transmission test trunk trouble, Correcting *Vol. 1*,
 1-430
 transmission test unit trouble, Correcting *Vol. 1*,
 1-437
 TRMS301 logs, Responding to *Vol. 2*, 1-90
 trouble locating
 Clearing trouble on the SCAI link *Vol. 1*, 1-168
 CPB line state *Vol. 1*, 1-712
 CUT line state *Vol. 1*, 1-716
 Determine the location of the trouble *Vol. 1*,
 1-476
 DMB line state *Vol. 1*, 1-719
 IDL line state *Vol. 1*, 1-726
 INB line state *Vol. 1*, 1-737
 line card replacement procedure *Vol. 2*, 1-46
 line card reseating procedure *Vol. 2*, 1-83
 LMB line state *Vol. 1*, 1-741
 LO line state *Vol. 1*, 1-747
 MB line state *Vol. 1*, 1-757
 procedure for replacing point-of-use power sup-
 ply *Vol. 2*, 1-58
 PSU line state *Vol. 1*, 1-761, 1-803
 trouble locating and clearing
 Can't be called *Vol. 1*, 1-75

2-4 Index

Can't call out *Vol. 1*, 1-112
Digital test access *Vol. 1*, 1-490
E911 LDT and Line/ACD PSAP complaint
Vol. 1, 1-638
E911 LDT PSAP complaint *Vol. 1*, 1-646
E911 LDT PSAP Operator Complaint *Vol. 1*,
1-656
E911 Line and ACD PSAP complaint *Vol. 1*,
1-665
Repair an NTB63AA cooling unit on the bench
top *Vol. 1*, 1-887
Repair FAN faults on an LCEI frame; cooling
unit replacement *Vol. 1*, 1-875
Repairing and replacing NT3X90AA cooling
units *Vol. 1*, 1-894
Repairing and replacing NT3X90AB cooling
units *Vol. 1*, 1-908
Repairing and replacing NT3X90AC cooling
units *Vol. 1*, 1-921
Test the DS-1 carrier states *Vol. 2*, 1-266
Troubleshooting a customer-reported failure
Vol. 2, 1-270, 1-276

trouble location, determining *Vol. 1*, 1-448
Troubleshooting a customer-reported failure, trouble
locating and clearing *Vol. 2*, 1-270, 1-276
trunks, ISDN PRI, determine state *Vol. 1*, 1-485

U

U-loop, line synchronization loss, Correcting
Vol. 1, 1-229

V

voltage limiter and filter in a 28-in. cabinet, CU, Re-
placing *Vol. 1*, 1-1052
VPU, Downloading software to *Vol. 1*, 1-617
VSLE session defaults to audio SLE, troubleshoot-
ing *Vol. 2*, 1-283

X

XLIU, Downloading software to *Vol. 1*, 1-622

Meridian SuperNode
Commercial Systems
Trouble Locating and Clearing Procedures Volume 1 of 2

Copyright © 1995–1999 Northern Telecom,
All Rights Reserved.

NORTHERN TELECOM CONFIDENTIAL: The information contained in this document is the property of Northern Telecom. Except as specifically authorized in writing by Northern Telecom, the holder of this document shall keep the information contained herein confidential and shall protect same in whole or in part from disclosure and dissemination to third parties and use same for evaluation, operation, and maintenance purposes only.

Information is subject to change without notice. Northern Telecom reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant. This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules, and the radio interference regulations of the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

Allowing this equipment to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of FCC Rules, Docket No. 89-114, 55FR46066.

The MSL-100 system is certified by the Canadian Standards Association (CSA) with the Nationally Recognized Testing Laboratory (NRTL).

This equipment is capable of providing users with access to interstate providers of operator services through the use of equal access codes. Modifications by aggregators to alter these capabilities is a violation of the Telephone Operator Consumer Service Improvement Act of 1990 and Part 68 of the FCC Rules.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

YEAR 2000 READINESS DISCLOSURE

MERIDIAN, SL-100, DMS, SUPERNODE, MAP, NORTEL, NORTEL NETWORKS, NORTHERN TELECOM, and NT are trademarks of Northern Telecom.

Publication number: 555-4031-544

Product release: MSL10

Document release: Standard 08.01

Date: April 1999

Printed in the United States of America

NORTEL
NORTHERN TELECOM