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DMS-100 Family

North American DMS-100

Routine Maintenance Procedures

LET0015 and up Standard 14.02 May 2001

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Routine Maintenance Procedures

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About this document

How to check the version and issue of this document

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

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

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

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

References in this document

The following documents are referred to in this document:

- *Alarm Clearing and Performance Monitoring Procedures*
- *Card Replacement Procedures*
- *Customer Data Schema Reference Manual*
- *Disk Maintenance Subsystem Reference Manual, 297-1001-526*
- *Lines Maintenance Guide*
- *Magnetic Tape Reference Manual, 297-1001-118*
- *Office Parameters Reference Manual*
- *Recovery Procedures*
- *Trouble Locating and Clearing Procedures*

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

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

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

What precautionary messages mean

The types of precautionary messages used in 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

<p>ATTENTION</p> <p>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.</p>
--

DANGER - Possibility of personal injury

	<p>DANGER Risk of electrocution</p> <p>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.</p>
---	--

WARNING - Possibility of equipment damage

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

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

CAUTION - Possibility of service interruption or degradation

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

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

How commands, parameters, and responses are represented

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

Input prompt (>)

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

```
>BSY
```

Commands and fixed parameters

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

```
>BSY CTRL
```

Variables

Variables are shown in lowercase letters:

```
>BSY CTRL ctrl_no
```

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

Responses

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

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

FP 3 Busy CTRL 0: Command passed.

1 Routine maintenance procedures

Introduction

This chapter contains procedures for How to perform routine maintenance on the DMS-100 switch. Each procedure contains the following sections:

- Application
- Interval
- Common procedures
- Action

Application

This section describes the purpose of the procedure.

Interval

This section indicates when to perform the procedure.

Common procedures

This section lists common procedures used during the routine maintenance procedure. A common procedure is a series of steps that repeats in maintenance procedures. Common procedures include card removal and replacement. Common procedures are in the common procedures chapter in this NTP.

Do not use common procedures unless the step-action procedure directs you to.

Action

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

Adding an LCM to a REx test schedule

Application

Use this procedure to add a line concentrating module (LCM) and the variants of an LCM to a routine exercise (REx) test schedule. The LCM variants include international LCM (ILCM), integrated services digital network LCM (LCMI), and enhanced LCM (LCME). You can use this procedure to add a line module, and the variants of a line module. Line module variants include an enhanced line module (ELM).

Interval

The REx schedule, that includes the list of equipment to test, is normally defined after system installation. Modify the list when the system tests an LCM, or after the installation of new equipment.

Common procedures

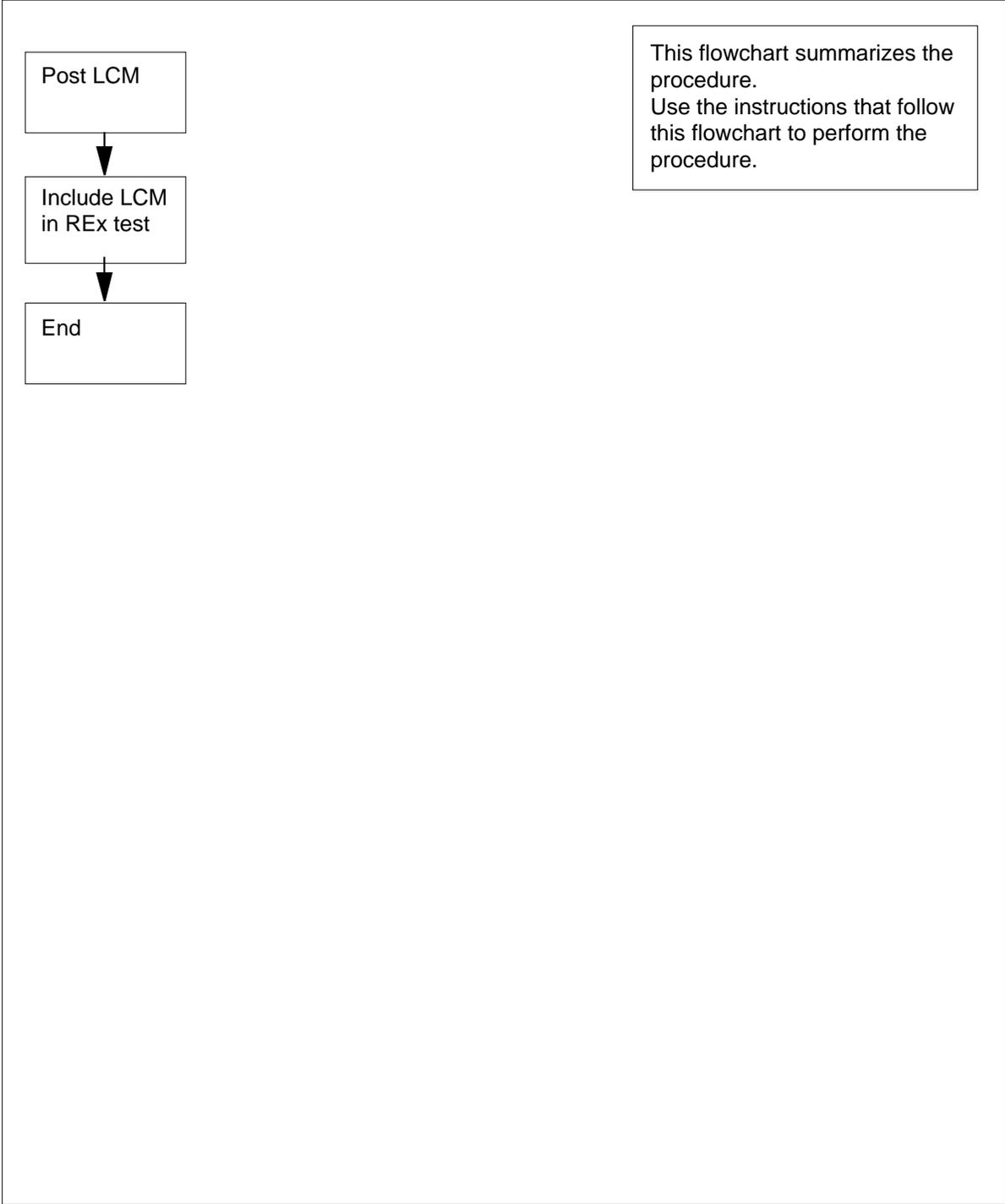
There are no common procedures.

Action

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

Adding an LCM to a REx test schedule (continued)

Summary of Adding an LCM to a REx test schedule



Adding an LCM to a REx test schedule (end)

Adding an LCM to a REx test schedule

At the CI level of the MAP workstation:

- 1 To access the PM level, type
`>MAPCI ;MTC ;PM`
and press the Enter key.
- 2 To post the LCM to include in the REx test, type
`>POST LCM site frame bay`
and press the Enter key.
where
site
is the four-character string that indicates the location of the LCM
frame
is the number of the frame that contains the LCM (0 to 511)
bay
is the bay of the LCM
- 3 To include the posted LCM in the REx test schedule , type
`>TST REX ON`
and press the Enter key.

Example of a MAP response:

LCM HOST 00 0 is added to the list
of LCM types scheduled for a REX
test.

- 4 From the MAP response in step 3, determine if the REx schedule includes the LCM.

If the LCM	Do
is part of the REx schedule	step 6
is not part of the REx schedule	step 5

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

Adding an XPM to a REx test schedule

Application

Use the following procedure to add XMS-based peripheral modules (XPM) to a routine exercise (REx) test schedule.

The line group controller (LGC), message and switch buffer (MSB) and remote cluster controller (RCC) node types support REx tests.

The LGC nodes include the following variants:

- integrated services digital network (ISDN) LGC (LGCI)
- international LGC (ILGC)
- offshore LGC (LGCO)
- PCM-30 LGC (PLGC)
- Global Peripheral Platform (GPP)
- Turkish LGC (TLGC)
- Australian LGC (ALGC)
- line trunk controller (LTC)
- international LTC (ILTC)
- Turkish LTC (TLTC)
- digital trunk controller (DTC)
- ISDN DTC (DTCI)
- PCM-30 DTC (PDTC)
- Turkish DTC (TDTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMSR)
- subscriber module access (SMA)
- integrated cellular peripheral (ICP)
- traffic-operator position system (TOPS) message switch (TMS)

The RCC nodes include the following variants:

- Turkey RCC (TRCC)
- ISDN RCC (RCCI)

Adding an XPM to a REx test schedule (continued)

- Australian RCC (ARCC)
- PCM30 RCC (PRCC)
- RCC2
- SRCC
- RCO2

Interval

Perform this procedure when you add an XPM to a REx testing schedule. The REx schedule, that includes the list of equipment to test, is normally defined after system installation. If required, modify the list to test an XPM, or modify the list after the installation of new equipment.

Common procedures

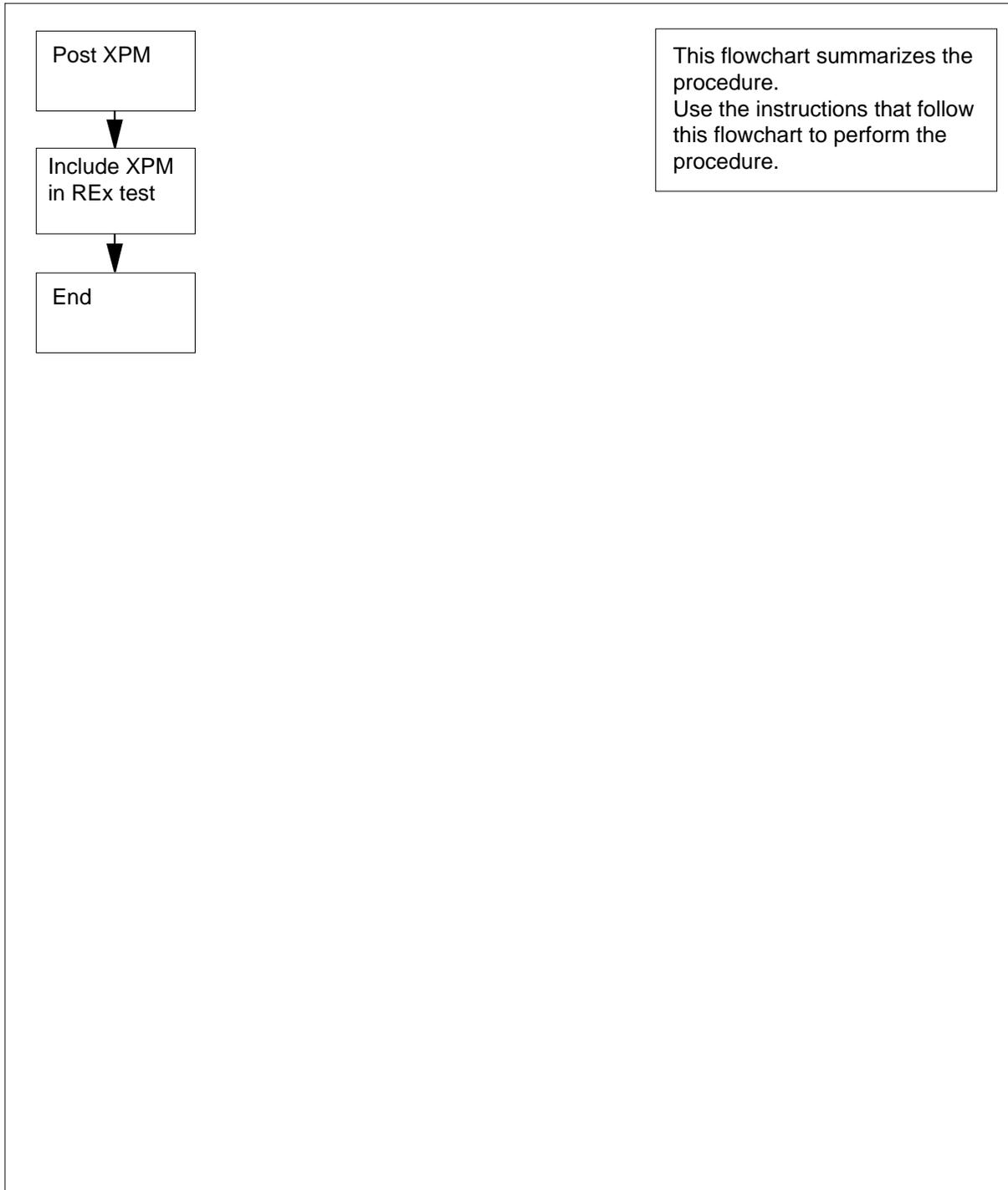
There are no common procedures.

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.

Adding an XPM to a REx test schedule (continued)

Summary of Adding an XPM to a REx test schedule



Adding an XPM to a REx test schedule (end)

Adding of an XPM to a REx test schedule

At the MAP terminal

- 1 To access the PM level, type

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

and press the Enter key.

- 2 To post the XPM to include in the REx test, type

```
>POST xpm_type xpm_no
```

and press the Enter key.

where

xpm_type

is the type of XPM to include (for example, LGC)

xpm_no

is the number of the XPM (0 to 2047) to include in the REx test schedule

- 3 To include the posted XPM in the REx test schedule, type

```
>TST REX ON
```

and press the Enter key.

Example of a MAP response:

```
LGC 2 IS NOW INCLUDED IN THE REX SCHEDULE.
```

- 4 From the MAP response in step 3, determine if the REx schedule includes the XPM.

If the XPM	Do
is part of the REx schedule	step 6
is not part of the REx schedule	step 5

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

Air filter NTLX5015 removal and replacement procedure

Application

Use this procedure to replace the DMS-Spectrum Peripheral Module (SPM) air filters in the SPM air filter assembly NTLX5015.

The corporate product code (CPC) for the air filter is A0665487.

Interval

Perform this procedure at intervals of every three months.

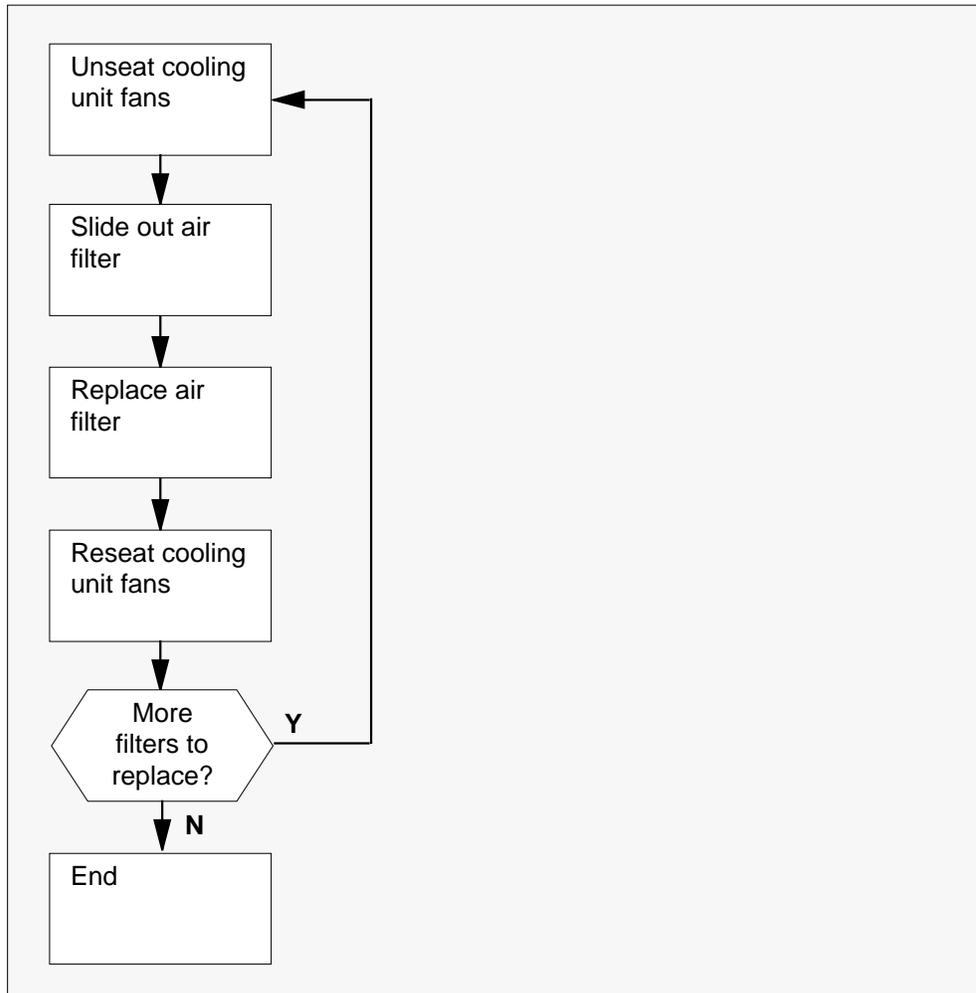
Common procedures

This procedure does not refer to any common procedures.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the routine maintenance procedure.

Air filter NTLX5015 removal and replacement procedure (continued)

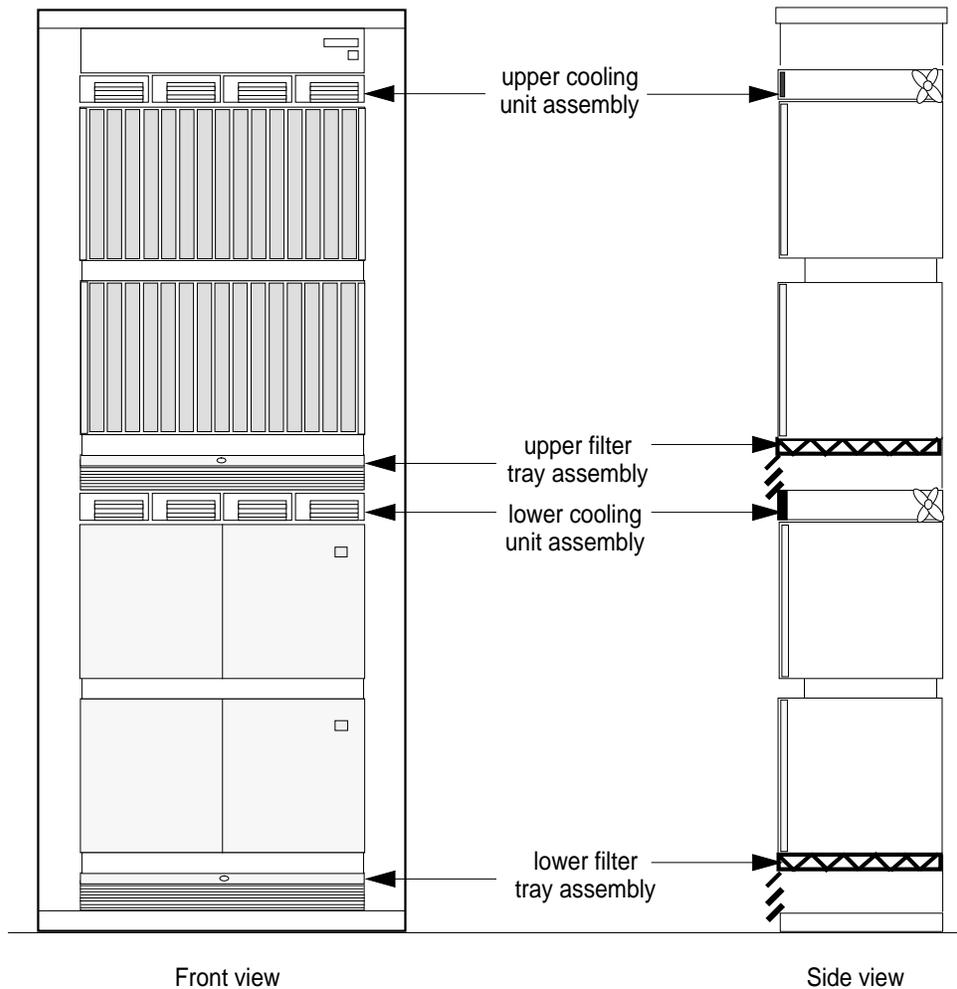


SPM air filter removal and replacement procedure

At the SPM frame

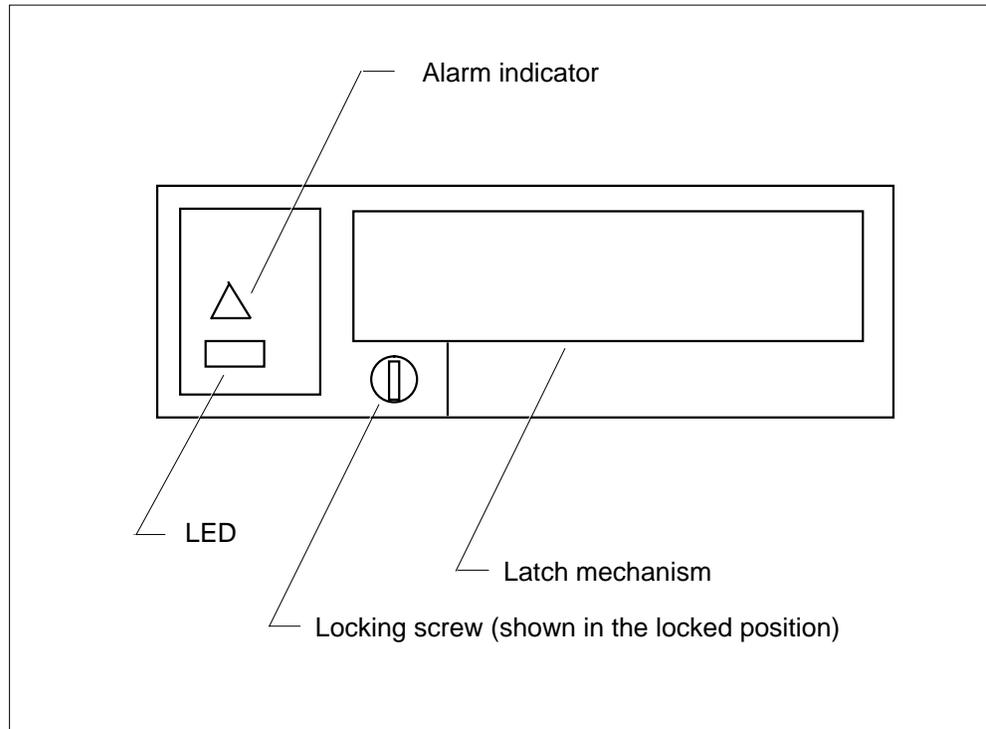
- 1 Locate the two SPM cooling unit assemblies and their associated filter tray assemblies.

Air filter NTLX5015 removal and replacement procedure (continued)



- 2 Select either the upper or lower cooling unit assembly.
- 3 Unlock each fan unit of the cooling unit assembly by turning the locking screw one-quarter turn counter clockwise. After turning the locking screw, the slot in the center of the locking screw is in the horizontal position.

Air filter NTLX5015 removal and replacement procedure (continued)



4



DANGER

To prevent overheating

Do not leave the cooling unit fans off for more than 30 minutes.

Unlatch the fan unit by placing your hand into the fan's faceplate handle and squeezing the latch mechanism. Unseat the fan unit by pulling it toward you until the handle is clear of the cooling unit frame. Do not remove the fan unit from the cooling unit frame. Pull the fan unit toward you only far enough to unseat it.

5



DANGER

Rotating fan blades

To avoid injury, wait until the fan stops turning before you remove the air filter. Dust from the filter will be pulled through the unit if you remove the filter while the fan is turning.

Air filter NTLX5015 removal and replacement procedure (end)

- Repeat step 4 for all four fans in the cooling unit assembly associated with the filter you are replacing.
- 6** After the fans have stopped turning, lightly press on the center of the filter tray assembly to disengage it.
 - 7** Slide the filter tray assembly from the unit.
 - 8** Lift the air filter A0665487 out of the filter tray assembly and discard the used air filter.
 - 9** Immediately insert a new air filter into the filter tray assembly.
 - 10** Slide the filter tray assembly, with the new air filter, back in the unit.
 - 11** Push each of the four fan units into the frame until they latch.
 - 12** To lock each fan unit, turn the locking screw one-quarter turn clockwise. After turning the locking screw, the slot in the center of the locking screw is in the vertical position.
 - 13** Repeat steps 3 through 12 for each SPM air filter you need to replace.
 - 14** The procedure is complete.

Allocating recording volumes in the DIRP utility

Application

Use this procedure to allocate normal or parallel recording volumes to a contributing subsystem and the DIRP utility. Allocation occurs by means of the MNT command at the DIRP level of the MAP display. Use this procedure to allocate recording volumes located on all DIRP recording device types.

You must allocate parallel volumes through the table control. To allocate parallel volumes through table control, change the fields in the DIRPPOOL table. You can use the MNT command to allocate parallel volumes.

Allocate volumes to a contributing subsystem for one of the following reasons:

- to initiate recording for a subsystem
- to expand the amount of recording space that is available to a given subsystem
- to reconfigure the available recording space

Use this procedure with the DIRP101 logs. For additional information about DIRP101 logs, refer to *Trouble Locating and Clearing Procedures*.

Interval

Perform this procedure when you must send the recorded information for downstream processing. Allocate tape volumes at more frequent intervals than disk volumes.

Common Procedures

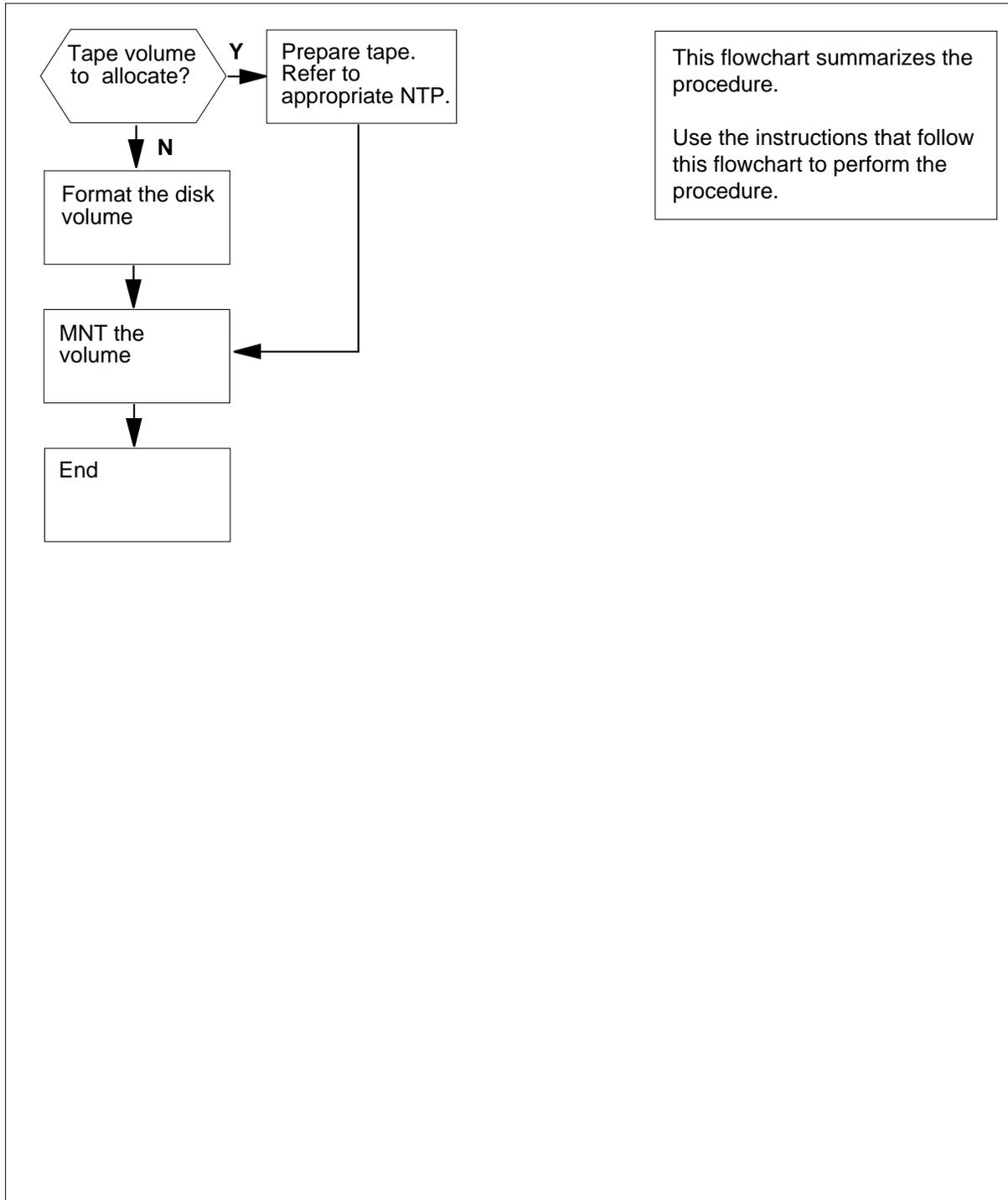
There are no common procedures.

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.

Allocating recording volumes in the DIRP utility (continued)

Summary of Allocating recording volumes in the DIRP utility



Allocating recording volumes in the DIRP utility (continued)

Allocating recording volumes in the DIRP utility

At your current location

1



CAUTION

Possible loss or corruption of AMA data

Use this procedure and follow it exactly. Not doing so will 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.

Determine if you must record the volume on disk or magnetic tape.

If you must record the volume on	Do
disk	step 3
tape	step 2

2 Prepare a tape. Refer to *Magnetic Tape Reference Manual*. Complete the instructions and return to this point.

Proceed to step 6.

At the MAP terminal

3 To access the DIRP level of the MAP display, type

```
>MAPCI ;MTC ;IOD ;DIRP
```

and press the Enter key.

4 To format the disk volume, type

```
>DIRPPFMT vol_name
```

and press the Enter key.

where

vol_name

is the disk volume that you must format.

Example of a MAP response:

```
WARNING - THIS COMMAND COULD TAKE ABOUT nn MINUTES TO EXECUTE
```

```
*** WARNING - PARALLEL VOLUME PREFORMATTING WILL  
*** CONSUME A CONSIDERABLE AMOUNT OF CPU TIME AND  
*** WILL SLOW DISK RESPONSE
```

```
PLEASE CONFIRM ("YES" OR "NO"):
```

Allocating recording volumes in the DIRP utility (continued)

- 5 To confirm the formatting operation, type

>YES

and press the Enter key.

MAP response:

```
FILE CREATED WITH FILENAME: Byymddhrmnsq.
THE LENGTH OF THE FILE IS nn DIRP RECORDS.
```

- 6 To allocate the volume, type

>MNT **ssys** **vol_name** **parallel** **vol_no** **file_name**

and press the Enter key.

where

ssys

is the name of the subsystem the volume must allocate to.

vol_name

is the volume allocated to the subsystem

parallel

indicates that the subsystem parallel pool is to allocate the volume.
This parameter is optional.

vol_no

is the volume number the volume is to occupy in the subsystem normal
or parallel pool. This parameter is optional.

file_name

is the name of the file if you must manually name the file on tape. This
parameter is optional. If the user does not enter a name, the
system generates a name for the file.

Example of a MAP terminal response:

```
UPDATING VOLUME INFORMATION FOR
vol_name: vol_no IN pool_type POOL
pool_no, pool_name
PLEASE CONFIRM ("YES" OR "NO"):
```

- 7 To confirm the allocation, type

>YES

and press the Enter key.

Example of a MAP response:

```
REGULAR VOLUME vol_name ALLOCATED.
```

If the allocation was	Do
successful	step 8
not successful	step9

Allocating recording volumes in the DIRP utility (end)

- 8** Determine if more volumes to allocate are present.
- | If more volumes | Do |
|------------------------|-----------|
| are present | step 7 |
| are not present | step 10 |
- 9** For additional help, contact the next level of support.
- 10** The procedure is complete.

Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs

Application

Use this procedure to allocate test volumes on new 8-in. (203-mm), 5.25-in. (133-mm), or 3.5-in. (89-mm) disk drive units (DDU).

Use test volumes to perform DDU file transfer tests.

Interval

Perform this procedure when you install a new 8-in., 5.25-in. or 3.5-in. DDU.

Common procedures

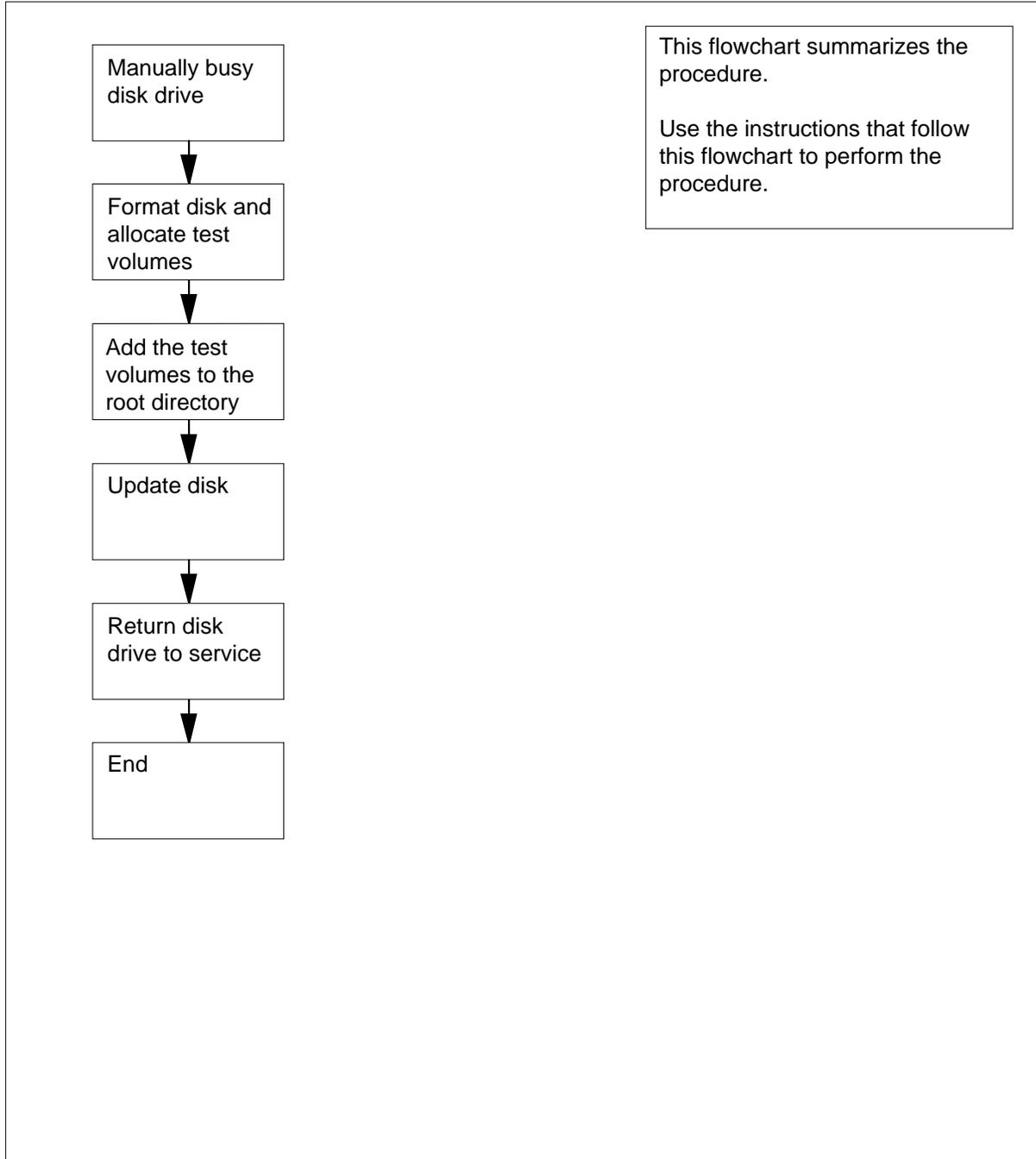
There are no common procedures.

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.

Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs (continued)

Summary of Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs



Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs (continued)

Allocating test volumes on 8-in., 5.25-in., and 3.5-in. DDUs

At the MAP terminal

1



CAUTION
Risk of service interruption
 Contact the next level of support before you start this procedure.

To access the CI level of the MAP display, type

>QUIT ALL

and press the Enter key.

2

To access the allocation utility, type

>DSKALLOC ddu_no

and press the Enter key.

where

ddu_no

is the number of the DDU to allocate (0 to 9)

Example of a MAP response:

*****IMPORTANT*****

To reduce the risk of disk corruption, please make certain that no other users attempt any maintenance activities on the DDU being allocated.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

3

To confirm the command, type

>YES

and press the Enter key

Example of a MAP response:

The disk is un-formatted.

Do you want to format it?

Please confirm ("YES", "Y", "NO", or "N"):

If the controller

Do

is IOC

step 4

is IOM

step 5

Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDU's (continued)

- 4 To confirm the command, type
>YES
and press the Enter key
Example of a MAP response:
- ```
Starting format process - may take up to 20 mins
DRIVE HAS BEEN FORMATTED
No volumes allocated

Unused space on the disk: 58000 blocks
```
- Go to step 6.
- 5 To confirm the command, type  
>YES  
and press the Enter key  
*Example of a MAP terminal response:*
- ```
Starting format process - may take up to 90 mins
DRIVE HAS BEEN FORMATTED
No volumes allocated

Unused space on the disk:      58000 blocks
```
- 6 To add a test volume to the disk, type
>ADD TEST1 32767
and press the Enter key.
- Note:** The name given to a DDU volume must start with a letter, not a number.
- Example of a MAP response:*
- ```
ADDITION DONE
```
- 7 Determine if the volume addition was successful.
- | If the MAP terminal response                | Do      |
|---------------------------------------------|---------|
| indicates that the test volume is too large | step 8  |
| indicates that the addition is complete     | step 10 |
- 8 To abort the command, type  
>ABORT  
and press the Enter key.

---

**Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs (continued)**

---

- 9** To quit the allocation utility, type  
**>QUIT**  
 and press the Enter key.  
 Go to step 2.
- 10** To add a second test volume that can occupy all the unused blocks, type  
**>ADD TEST2 no\_unused\_blocks**  
 and press the Enter key.  
*where*  
**no\_unused\_blocks**  
 is the number of blocks not used, to a maximum of 65 535 blocks per volume

- 11** To add the first test volume to the root directory, type  
**>DIRADD TEST1**  
 and press the Enter key.  
*where*  
*Example of a MAP response:*

OK

- 12** Repeat step 11 for the test volume that remains.

- 13** To display the volumes on the disk, type  
**>DISPLAY**  
 and press the Enter key.  
*Example of a MAP response:*

| Name                      | Open     | Allocated | Label      | Modified | SerialNumber     |
|---------------------------|----------|-----------|------------|----------|------------------|
| Address                   | ReadOnly | RootDir   | InitiSysfl | Size     |                  |
| TEST1                     | D000 YES | NO        | YES        | YES      | NO NO 2800 32767 |
| TEST2                     | D000 YES | NO        | YES        | YES      | NO NO 2801 25233 |
| Unused space on the disk: |          |           |            |          | 0 Blocks         |

- 14** Determine if the RootDir column at the MAP display reads YES for each test volume.

| If the column                   | Do      |
|---------------------------------|---------|
| reads YES                       | step 15 |
| reads NO                        | step 11 |
| reads NO after second attempt   | step 9  |
| reads NO after several attempts | step 22 |

---

## Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDU (continued)

---

- 15 To enforce the allocation of the test 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.

Firmware Allocation Map Updated
Writing Label of Volume TEST1
Successful
Starting Initialization of Volume TEST1
A break HX of this process may cause severe corruption on
the disk that may require reinitialization of all non
initialized volumes.
Block in error: 8909
Number of Bad Blocks = 1
Successful
Writing Label of Volume TEST2
Successful
Starting Initialization of Volume TEST2
A break HX of this process may cause severe corruption on
the disk that may require reinitialization of all non
initialized volumes.
Number of Bad Blocks = 0
Successful
Update Done

```

- 16 From the MAP response, determine the number of bad blocks.

| <b>If the number of bad blocks</b> | <b>Do</b> |
|------------------------------------|-----------|
| is a maximum of 260                | step 17   |
| is a minimum of 260                | step 22   |

- 17 To quit the allocation utility, type

**>QUIT**

and press the Enter key.

| <b>If the controller</b> | <b>Do</b> |
|--------------------------|-----------|
| is IOC                   | step 18   |
| is IOM                   | step 19   |

- 18 To post the controller card for the DDU, type

**>MAPCI;MTC;IOD;IOC ioc\_no;CARD card\_no**

---

## Allocating test volumes on 8-in., 5.25-in., or 3.5-in. DDUs (end)

---

and press the Enter key.

where

**ioc\_no**

is the number of the IOC (0 to 19) that holds the controller card for the DDU

**card\_no**

is the number of the controller card (0 to 8)

Go to step 20.

- 19** To post the IOM controller card for the DDU, type  
>MAPCI;MTC;IOD;IOC ioc\_no;PORT port\_no

where

**ioc\_no**

is the number of the IOM

**port\_no**

is the number of the IOM port (16 to 17)

- 20** To return the disk drive to service, type

>RTS

and press the Enter key.

*Example of a MAP response:*

RTS process may take up to 3 Minutes. OK

---

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 21 |
| failed             | step 22 |

---

- 21** To verify the test volume allocations, type

>PRINT ROOTDIR

and press the Enter key.

*Example of a MAP response:*

|           |        |      |      |
|-----------|--------|------|------|
| MAP       | DEVICE | COPY | 6000 |
| F         | DEVICE | COPY | 6001 |
| PRT2      | DEVICE | COPY | 6002 |
| DOnOTEST1 | DEVICE | COPY | A002 |
| DOnOTEST2 | DEVICE | COPY | A001 |

Go to step 23.

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

- 23** The procedure is complete.

## **Allocating test volumes on 14-in. DDUs**

---

### **Application**

Use this procedure to perform volume allocation tests on a 14-in. (356-mm) I/O controller (IOC) disk drive unit (DDU) after recent installation.

The test volumes are used for DDU file transfer tests.

### **Interval**

Perform this procedure after the installation of a new 14-in. DDU.

### **Common procedures**

There are no common procedures.

### **Action**

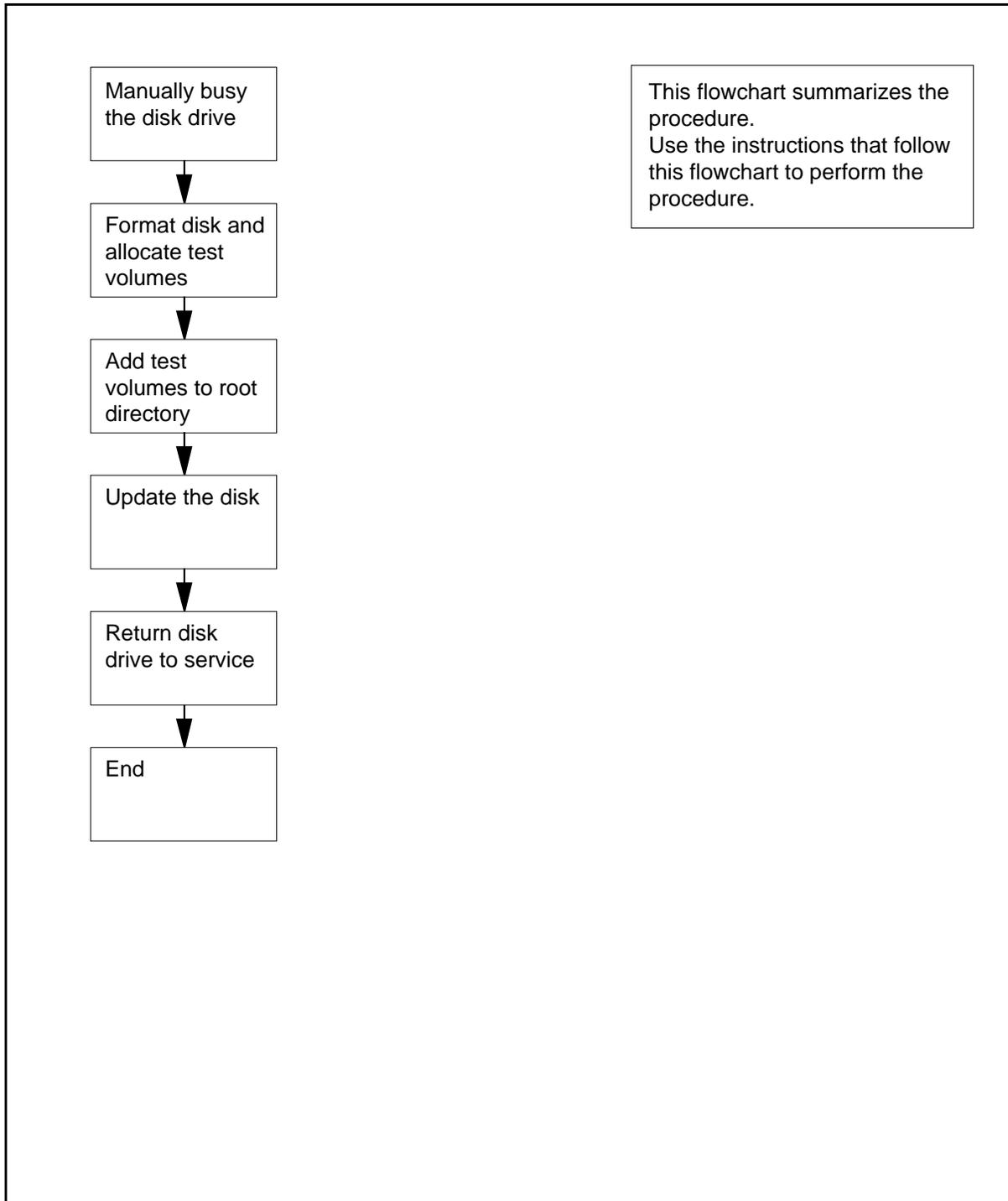
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

---

## Allocating test volumes on 14-in. DDUs (continued)

---

### Allocating test volumes on 14-in. DDUs



## Allocating test volumes on 14-in. DDUs (continued)

---

### Allocating test volumes on 14-in. DDUs

#### *At your current location*

1



#### **CAUTION**

##### **Risk of service interruption**

Contact the next level of support before starting this procedure.

To access the CI level of the MAP display, type

```
>QUIT ALL
```

and press the Enter key.

2

To access the disk allocation utility, type

```
>ALLOC ddu_no
```

and press the Enter key.

*where*

**ddu\_no**

is the number of the DDU to allocate (0 to 9)

*Example of a MAP response:*

```
*****IMPORTANT*****
```

To reduce the risk of disk corruption, please make certain that no other users attempt any maintenance activities on the DDU being allocated.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

3

To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP response:*

```
The disk is un-formatted.
```

```
Do you want to format it?
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

4

To confirm the command, type

```
>YES
```

and press the Enter key

*Example of a MAP response:*

---

## Allocating test volumes on 14-in. DDUs (continued)

---

```
Starting format process - may take up to 10 mins
DRIVE HAS BEEN FORMATTED
No volumes allocated
```

```
Unused space on the disk: 58000 blocks
```

- 5** To add a test volume to the disk, type

```
>ADD TEST1 vol_size
```

and press the Enter key.

where

**vol\_size**

is the size of the test volume in blocks, as determined from the following table

Example of a MAP response:

```
ADDITION DONE
```

| If the DDU             | DoEnter |
|------------------------|---------|
| is a PRIAM model 6650  | 32000   |
| is a PRIAM model 15450 | 32767   |
| is any other model     | 10000   |

**Note:** The name given to a DDU volume must start with a letter, not a number.

- 6** From the MAP response, determine if the addition was successful.

| If the MAP response                     | Do     |
|-----------------------------------------|--------|
| indicates that the volume is too large  | step 7 |
| indicates that the addition is complete | step 9 |

- 7** To ABORT the command, type

```
>ABORT
```

and press the Enter key.

- 8** To quit the allocation utility, type

```
>QUIT
```

and press the Enter key.

Go to step 2.

## Allocating test volumes on 14-in. DDUs (continued)

- 9** To add a second test volume to occupy all the unused blocks, type  
**>ADD TEST2 no\_unused\_blocks**  
 and press the Enter key.

*where*

**no\_unused\_blocks**

is the number of blocks not used

- 10** To add the first test volume to the root directory, type  
**>DIRADD TEST1**  
 and press the Enter key.

*Example of a MAP response:*

OK

- 11** Repeat step 10 for the test volume that remains.

- 12** To display the volumes on the disk, type

**>DISPLAY**

and press the Enter key.

*Example of a MAP response:*

| Name                      | Open     | Allocated | LabelModified | SerialNumber |
|---------------------------|----------|-----------|---------------|--------------|
| Address                   | ReadOnly | RootDir   | InitiSysfl    | Size         |
| TEST1                     | D000     | YES NO    | YES YES NO    | 2800 32767   |
| TEST2                     | D000     | YES NO    | YES YES NO    | 2801 25233   |
| Unused space on the disk: |          |           | 0 Blocks      |              |

- 13** Confirm that the RootDir column reads Yes for each test volume.

| If the column                   | Do      |
|---------------------------------|---------|
| reads YES                       | step 14 |
| reads NO                        | step 10 |
| reads NO after second attempt   | step 8  |
| reads NO after several attempts | step 20 |

- 14** To update the disk, type

**>UPDATE**

and press the Enter key.

*Example of a MAP response:*

---

## Allocating test volumes on 14-in. DDUs (continued)

---

```

WARNING: A break HX of this process may cause
 severe corruption on the disk that may
 require it to be reformatted.
Firmware Allocation Map Updated
Writing Label of Volume TEST1
Successful
Starting Initialization of Volume TEST1
A break HX of this process may cause severe corruption on
the disk that may require reinitialization of all non
initialized volumes.
Block in error: 8909
Number of Bad Blocks = 1
Successful
Writing Label of Volume TEST2
Successful
Starting Initialization of Volume TEST2
A break HX of this process may cause severe corruption on
the disk that may require reinitialization of all non
initialized volumes.
Number of Bad Blocks = 0
Successful
Update Done

```

- 15** Use the following list and the MAP response in step 14 to determine if the disk drive passed the test.

The maximum allowed number of bad blocks for

- Model 6650 is 100 blocks
- Model 15450 is 230 blocks
- any other model is 40 blocks

| If the number of bad blocks              | Do      |
|------------------------------------------|---------|
| is acceptable                            | step 16 |
| is not acceptable                        | step 8  |
| is not acceptable after several attempts | step 20 |

- 16** To quit the allocation utility, type

```
>QUIT
```

and press the Enter key.

- 17** To post the controller card for the DDU, type

```
>MAPCI;MTC;IOD;IOC ioc_no;CARD card_no
```

and press the Enter key.

*where*

---

## Allocating test volumes on 14-in. DDUs (end)

---

**ioc\_no**

is the number of the IOC (0 to 19) that holds the controller card for the DDU

**card\_no**

is the number of the controller card (0 to 8)

**18** To return the disk drive to service, type

>RTS

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 19 |
| failed             | step 20 |

**19** To verify the allocations, type

>PRINT ROOTDIR

and press the Enter key.

*Example of a MAP response:*

```
MAP DEVICE COPY 6000
F DEVICE COPY 6001
PRT DEVICE COPY 6002
DOnOTEST1 DEVICE COPY A002
DOnOTEST2 DEVICE COPY A001
DOnOTEST3 DEVICE COPY A002
```

Go to step 21.

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

**21** The procedure is complete.

---

## Automatic execution of exec files using DMSSCHED

---

### Application

This procedure contains guides and examples to invoke the DMSSCHED commands. The DMSSCHED commands automatically execute pre-written exec files based on time of day, and type of output required.

The DMSSCHED commands include:

- DEFINE
- OUTPUT
- START
- INQUIRE
- CANCEL
- STOP
- HIST
- CLEAR

#### *DMSSCHED command DEFINE*

This command associates an SOS exec file with a user ID. Correct DMSSCHED user IDs are USER01, USER02, ....., USER12. The system logs on the user at a time specified by the START command. During log on, the system executes the exec file that associates with the user ID. Only one exec file at a time can associate with each user ID. The user must specify the storage device that contains the file. The SFDEV, SLM, and DDU contains the input exec file. The DEFINE command can specify the compression of the output file.

#### *DMSSCHED command OUTPUT*

This command specifies a FILENAME where any output from the commands in the exec file will be saved. You must also specify a device name to contain the file.

#### *DMSSCHED command START*

This command specifies the time of day a user logs on. This command also specifies if the user logs on periodically. Periodic log ons occur daily, weekly, or at any other interval that is a multiple of a day. This command also specifies the maximum amount of time a user can remain logged on. The system can automatically log the user off. This condition occurs if the user does not execute all commands in the exec file when the maximum time passes.

## Automatic execution of exec files using DMSSCHED (continued)

---

### *DMSSCHED command INQUIRE*

This command displays all information on a specified user or all correct users.

### *DMSSCHED command CANCEL*

This command cancels an automatic log-on schedule that the START command defined earlier.

### *DMSSCHED command STOP*

This command forces the immediate log-off of a user that is logged on.

### *DMSSCHED command HIST*

This command displays a history of previous DMSSCHED operations.

### *DMSSCHED command CLEAR*

This command clears the DMSSCHED history buffer.

## Interval

The system can automatically execute a minimum of one CI command at a given time of day. The system can also automatically save the output to a file. For example, the system can collect logs of a given type during the night without an operator to execute the commands. The user can specify execution as one-time-only, or as occurring at intervals. The interval is a minimum of one day.

## Common procedures

There are no common procedures.

## Example of using DMSSCHED

The following example illustrates the automatic collection of software error (SWER) logs in the DMS LOGUTIL System at 1 a.m. daily.

**Note:** This example is only one way to use DMSSCHED. This example is not a complete study of DMSSCHED capabilities. For a more detailed description of DMSSCHED refer to the section Invoking DMS Scheduler (DMSSCHED) commands.

The following example creates an exec file and contains the DMSSCHED command. The name of the exec file is COLLECT\_SWER.

---

**Automatic execution of exec files using DMSSCHED** (continued)

---

*At the MAP display*

1. To create the COLLECT\_SWER file, type

```
>EDIT collect_swer
and press the Enter key.
```

2. To add input, type

```
>INPUT
and press the Enter key.
```

Response:

```
INPUT:
```

3. To enter the log utility, type

```
>LOGUTIL
and press the Enter key.
```

4. To open a log, type

```
>OPEN s
and press the Enter key.
```

*Note:* The letter s represents the number of the log to display.

5. To display all logs before the current log at the CI prompt, type

```
>BACK all
and press the Enter key.
```

Response:

```
EDIT:
```

6. To save the file to SFDEV, type

```
>FILE sfdev
and press the Enter key.
```

7. To enter the DMSSCHED utility, type

```
>DMSSCHED
and press the Enter key.
```

## Automatic execution of exec files using DMSSCHED (continued)

---

Response:

DMSSCHED:

8. To associate the exec file with the user identification user01, type

```
>DEFINE user01 collect_swerv sfdev
```

and press the Enter key.

Response:

User USER01 has now a new exec file COLLECT\_SWERV on SFDEV

9. To schedule the execution to occur at 1 a.m. daily and last a minute, type

```
>START user01 01 00 1 MON DAILY
```

and press the Enter key.

Response:

Enter Password:

10. Enter the password that you obtained from office records or next level of support.

---

## Automatic execution of exec files using DMSSCHED (continued)

---

Response:

START passed: Schedule change successfully

11. To verify that you scheduled the session correctly, type

>INQUIRE user01

Response:

```

--- Schedule of all Fingerprint users 1996/06/24 10:33:42.543 Sun.---
User InFile InDev OutFile Outdev Hr Min Dur SchdDate Cycle
----- ----- ----- ----- ----- -- --- --- -
USER02 COLLECT SFDEV SFDEV 01 00 1 1996/06/25 1

Act Comp
--- ----

--- End of Schedule ---

LEGEND

InFile: Input SOS exec file name
InDev: Input device name
Outfile: Output file name
 If NOOITPUT selected, then Outfile and OutDev will be set to
 NONE. If not specified, then Outfile will be generated
 automatically and defaulted to the form
 <USERXX><MM><DD><HH><MIN>.
OutDEV: Output device name. If not specified, it will be defaulted
 to InDev. Notice that only the first seven characters of
 each field are displayed.

```

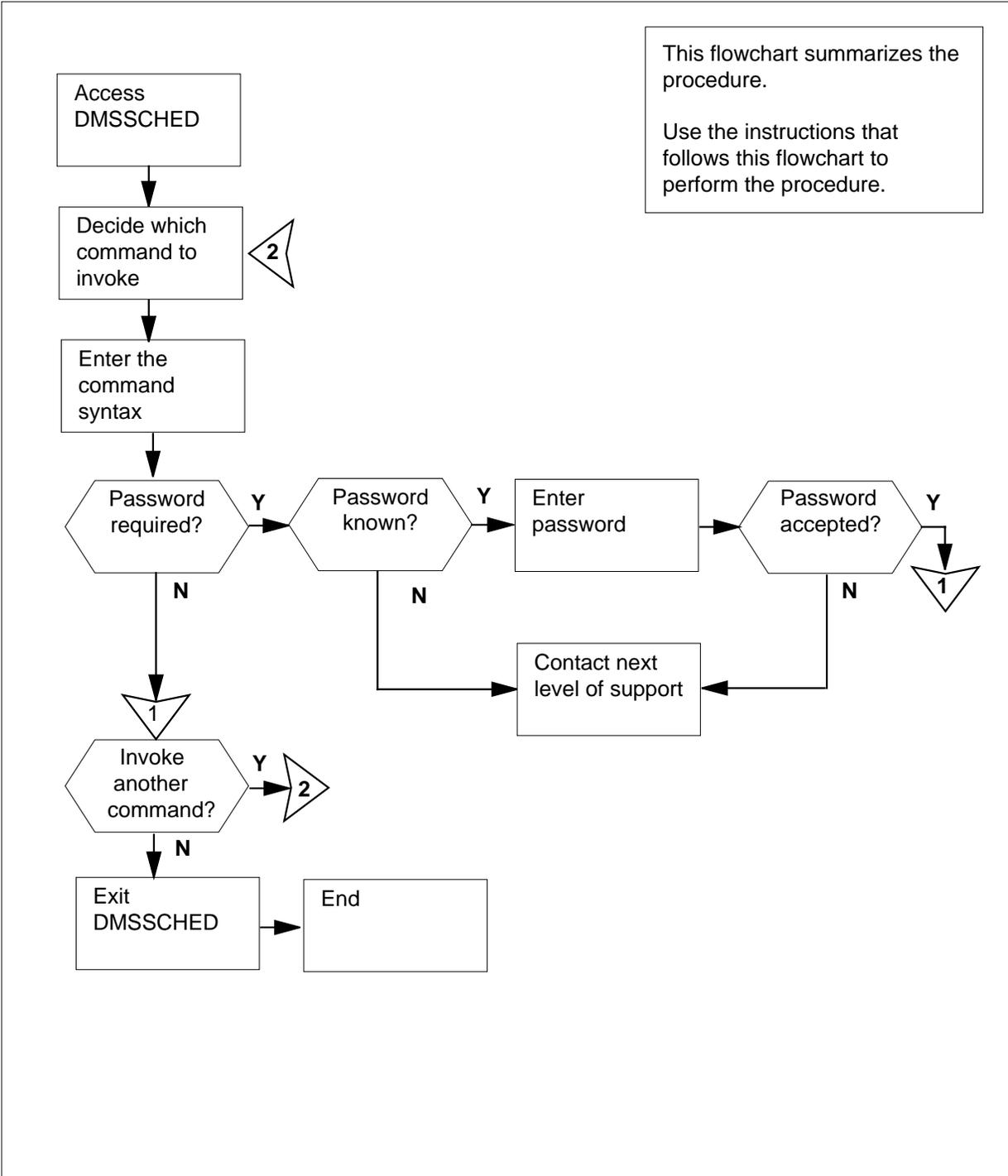
The first session occurs at 1:00 a.m. Monday June 25, 1996. At any time after this session, print the output file to view the collected SWER logs. In this example, the name of the output file is not specified. As a result, the output file will appear in SFDEV under the default FILENAME USER0106280100\$OUT.

### 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.

## Automatic execution of exec files using DMSSCHED (continued)

### Summary of DMS Scheduler (DMSSCHED) commands



---

## Automatic execution of exec files using DMSSCHED (continued)

---

### Invoking DMS Scheduler (DMSSCHED) commands

#### At the MAP display

- 1 To access the DMSSCHED from any level of the MAP display, type

```
>DMSSCHED
```

and press the Enter key.

Response:

DMSSCHED:

- 2 Determine which command to invoke.

| If the command | Do      |
|----------------|---------|
| is DEFINE      | step 3  |
| is OUTPUT      | step 5  |
| is START       | step 7  |
| is INQUIRE     | step 12 |
| is CANCEL      | step 14 |
| is STOP        | step 19 |
| is HIST        | step 21 |
| is CLEAR       | step 23 |

- 3 To associate an SOS exec file with a user ID, type

```
>DEFINE <Userid><Input file><Input device> [{NOOUTPUT} {COMPRESS}]
```

and press the Enter key.

where

#### User id

is the ID of the user to automatically log on. Correct entries are USER XX, where XX can have a value of 01 to 12.

#### Input file

is the SOS exec file to associate with the user. The system executes the SOS exec file when the user automatically logs on.

#### Input device

is the name of the device that contains the exec file. The SFDEV, SLM or DDU can contain the file.

#### NOOUTPUT

is an optional keyword. When you enter the NOOUTPUT command, the exec file can not produce an output file.

---

## Automatic execution of exec files using DMSSCHED (continued)

---

**COMPRESS**

is an optional keyword. When you enter the COMPRESS command, compression of the output file will occur. If you use this option, the system adds a `_Z` extension to the output filename.

- 4 Determine if you need to invoke other DMSSCHED commands.

---

| <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |

---

- 5 To save output to a specified FILENAME, type  
`>OUTPUT <Userid><Output file><Output device>`  
 and press the Enter key.

*where*

**User id**

is the ID of the user to automatically log on. Correct entries are USER XX, where XX can have a value of 01 to 09, or 12.

**Output file**

is the user-defined FILENAME to which any output of the commands in the exec file are written. If you do not use the OUTPUT command, the output file receives a default name with the following format:  
`<Userid><Month><Day><Hour><Minute>$OUT` that specifies the time of day the system began to log the user on.

**Output device**

is the user-specified output device. The output device can be SFDEV, SLM or DDU. If you do not use the OUTPUT command, the output device defaults to the input device.

- 6 Determine if you need to invoke other DMSSCHED commands.

---

| <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |

---

- 7 To specify the time and period a user logs on, type  
`>START<Userid><Hour><Minute><Maxon><Wkday> [ {DAILY} {WEEKLY} <Cycledays> ]`

and press the Enter key.

*where*

**User id**

is the ID of the user to automatically log on. Correct entries are USER XX, where XX can have a value of 01 to 09, or 12. This user id must have an input file already associated with the id by the DEFINE command.

---

## Automatic execution of exec files using DMSSCHED (continued)

---

**Hour**

is the hour of the day the system logs on the user. Correct entries are 0 to 23.

**Minute**

is the minute the system logs on the user. Correct entries are 0 to 59.

**Maxon**

is the maximum time period, in minutes, that the user can log on. Correct entries are from 1 to 300 minutes.

**Wkday**

is the day of the week the system automatically logs on the user for the first time. Correct entries are MON, TUE, WED, THU, FRI, SAT and SUN.

**DAILY**

is an optional keyword that specifies that the system logs on the user daily.

**WEEKLY**

is an optional keyword that specifies that the system logs on the user one time each week.

**Cycledays**

is the number of days between log ons. The default is zero, which means the system only logs on the user one time. Note that DAILY and WEEKLY are special occurrences of Cycledays. Cycledays equal to one and seven, in the given sequence.

Response:

Enter Password:

- 8** Determine the password from office records.

| <b>If the office records</b> | <b>Do</b> |
|------------------------------|-----------|
| contain the password         | step 9    |
| do not contain the password  | step 28   |

- 9** Enter the password.

- 10** Determine if the password is correct.

| <b>If the system</b>                              | <b>Do</b> |
|---------------------------------------------------|-----------|
| accepts the password and the START command passes | step 11   |
| does not accept the password                      | step 28   |

- 11** Determine if you need to invoke other DMSSCHED commands.

| <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |

---

## Automatic execution of exec files using DMSSCHED (continued)

---

- 12** To display all information on a specified user, type  
**>INQUIRE <Userid> | {ALL}**  
 and press the Enter key.  
*where*  
**User id**  
 is the ID of any correct user. Correct entries are USER XX, where XX can have a value of 01 to 09, or 12.  
**ALL**  
 is an optional keyword that specifies that the system must display information on all correct users now defined.
- 13** Determine if you need to invoke other DMSSCHED commands.
- | <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |
- 
- 14** To cancel an automatic log on defined earlier by the START command, type  
**>CANCEL <Userid>**  
 and press the Enter key.  
*where*  
**User id**  
 is the ID of the user. The START command defines the log on schedule for this user.  
 Response:  
 Enter Password:
- 15** Determine the password from office records.
- | <b>If the office records</b> | <b>Do</b> |
|------------------------------|-----------|
| contain the password         | step 16   |
| do not contain the password  | step 28   |
- 
- 16** Enter the password.
- 17** Determine if the password is correct.
- | <b>If the system</b>                             | <b>Do</b> |
|--------------------------------------------------|-----------|
| accepts the password, and CAN-CEL command passes | step 18   |
| does not accept the password                     | step 28   |
-

---

**Automatic execution of exec files using DMSSCHED** (continued)

---

- 18 Determine if you need to invoke other DMSSCHED commands.
- | <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |
- 
- 19 To force the immediate log off of a user that is now logged on, type  
>**STOP** <Userid>  
and press the Enter key.  
*where*
- User id**  
is the ID of the user logged on. Correct entries are USER XX, where  
XX can have a value of 01 to 09, or 12.
- 20 Determine if you need to invoke other DMSSCHED commands.
- | <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |
- 
- 21 To display a history of previous DMSSCHED operations, type  
>**HIST**  
and press the Enter key.
- 22 Determine if you need to invoke other DMSSCHED commands.
- | <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |
- 
- 23 To clear the DMSSCHED history buffer, type  
>**CLEAR**  
and press the Enter key.  
Response:  
Enter Password:
- 24 Determine the password from office records.
- | <b>If the office records</b> | <b>Do</b> |
|------------------------------|-----------|
| contain the password         | step 25   |
| do not contain the password  | step 28   |
- 
- 25 Enter the password.
-

---

## Automatic execution of exec files using DMSSCHED (end)

---

- 26** Determine if the history buffer cleared.
- 
- | <b>If the history buffer</b> | <b>Do</b> |
|------------------------------|-----------|
| cleared                      | step 27   |
| did not clear                | step 28   |
- 
- 27** Determine if you need to invoke other DMSSCHED commands.
- 
- | <b>If invocation of other commands</b> | <b>Do</b> |
|----------------------------------------|-----------|
| is needed                              | step 2    |
| is not needed                          | step 29   |
- 
- 28** For additional help, contact the next level of support.
- 29** To exit DMSSCHED, type  
`>QUIT all`  
and press the Enter key.
- 30** The procedure is complete.

## **Backing up an 800Plus database to DAT**

---

### **Application**

Use this procedure to create a back-up copy of the 800Plus database files on a digital audio tape (DAT). You can restore the DAT back-up copy to disk if the local master database on the update processor (UP) is defective or destroyed.

### **Interval**

Perform this procedure daily.

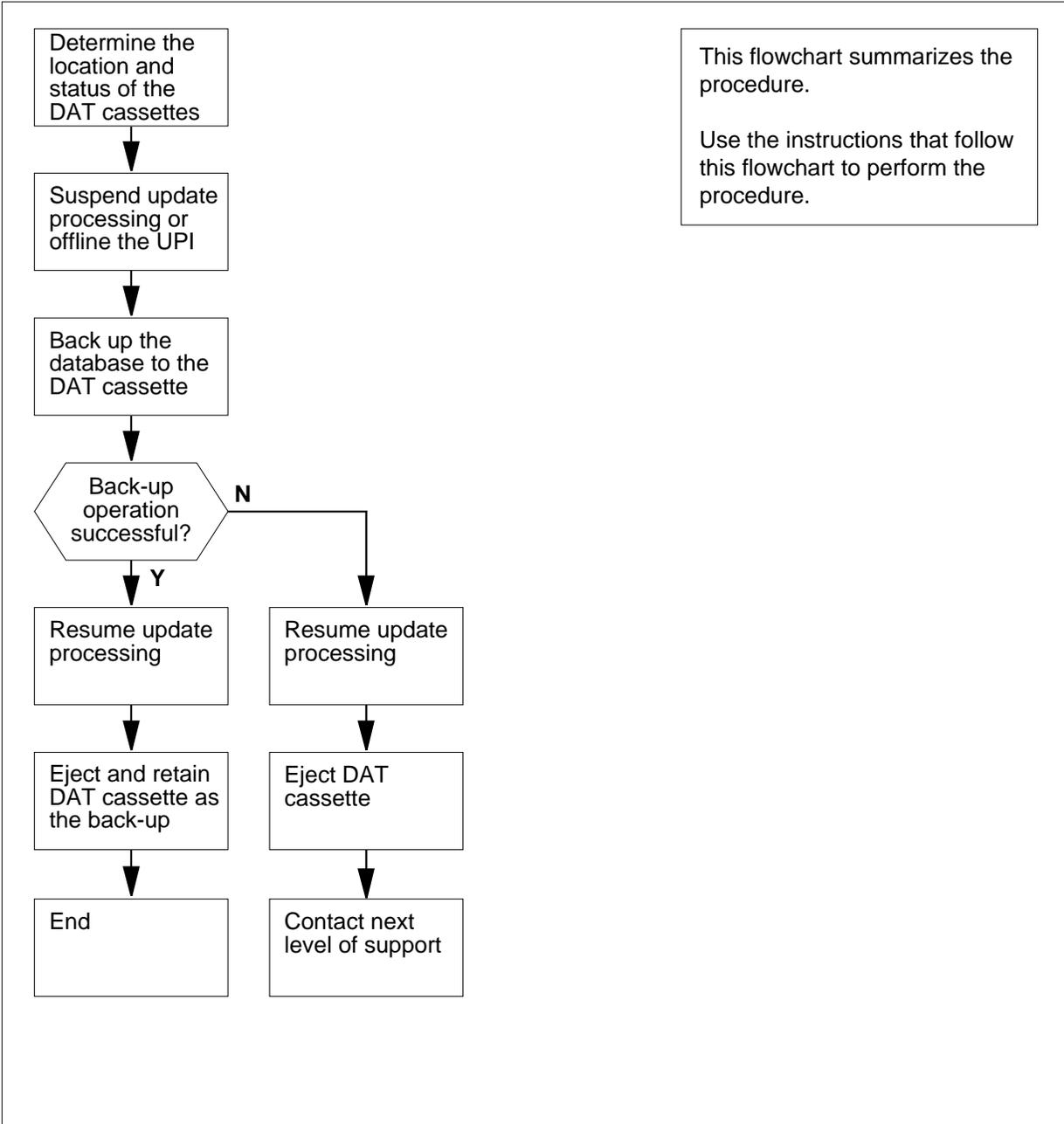
### **Common procedures**

There are no common procedures.

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.

## Backing up an 800Plus database to DAT (continued)

### Summary of Backing up an 800Plus database to DAT



---

## Backing up an 800Plus database to DAT (continued)

---

### Action

#### Backing up an 800Plus database to DAT

##### At the MAP terminal

1



#### CAUTION

**Tasks require trained and qualified operating company personnel**

This procedure includes commands that require trained and qualified operating company personnel. You must perform tasks correctly to avoid potential service degradations. Make sure that only trained and qualified employees proceed.



#### CAUTION

**Loss of service**

Perform this procedure during a low traffic period. This procedure suspends emergency and normal updates to the 800Plus master database.

From office records or from operating company personnel, obtain the number of the file processor (FP) that hosts the UP.

2 To access the PM level of the MAP display, type

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

and press the Enter key.

3 To post the FP that hosts the UP, type

```
>POST FP fp_no
```

and press the Enter key.

where

**fp\_no**

is the number of the FP that you obtained at step 1

*Example input*

```
>POST FP fp_no
```

*Example of a MAP response*

```
FP 0: FP0_R128 Plane Devices
InSv
```

4 To access the Devices level of the MAP display, type

```
>DEVICES
```

## Backing up an 800Plus database to DAT (continued)

and press the Enter key.

*Example of a MAP display*

```

FP 0: FP0_R128 Plane Devices
InSv
 CTRL0 CTRL1 DEVICE
DABM . . 0 1 2 3 4 5
SCSI 0 . (EN) . (EN) - -
SCSI 1 . (DIS) . (DIS) - -

```

- 5 Query the FP devices to determine if an in-service DAT drive is available. To query the FP devices, type

```
>QUERYFP TYPE CT
```

and press the Enter key.

*Example of a MAP response*

| Dev Name | SCSI | Dev | Type | Quad | Shelf | Slot | Status |
|----------|------|-----|------|------|-------|------|--------|
| CT01     | 0    | 1   | ct   | 2    | 2     | 20   | InSv   |
| CT11     | 1    | 1   | ct   | 3    | 2     | 26   | InSv   |

**Note:** DAT drive devices have the prefix CT in their name.

---

**If**

**Do**

a minimum of one InSv DAT drive is available      step 6

InSv DAT drives are not available      step 28

---

**Note:** Service state appears under the Status header on the MAP display.

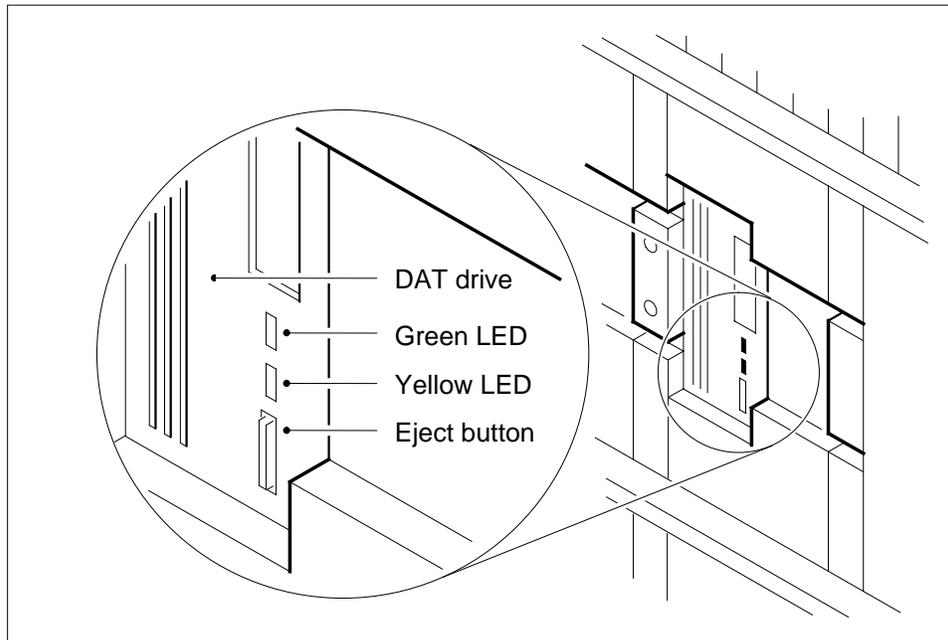
- 6 Record the device name, SCSI number, device number, and location (quad and shelf) of an in-service DAT drive.

**Note:** Device name appears under the Dev Name header on the MAP display. The SCSI number appears under the SCSI header. Device number appears under the Dev header. Location appears under the Quad and Shelf headers.

**At the storage device shelf for the UP**

- 7 Determine if the DAT drive is available for use.

**Backing up an 800Plus database to DAT (continued)**



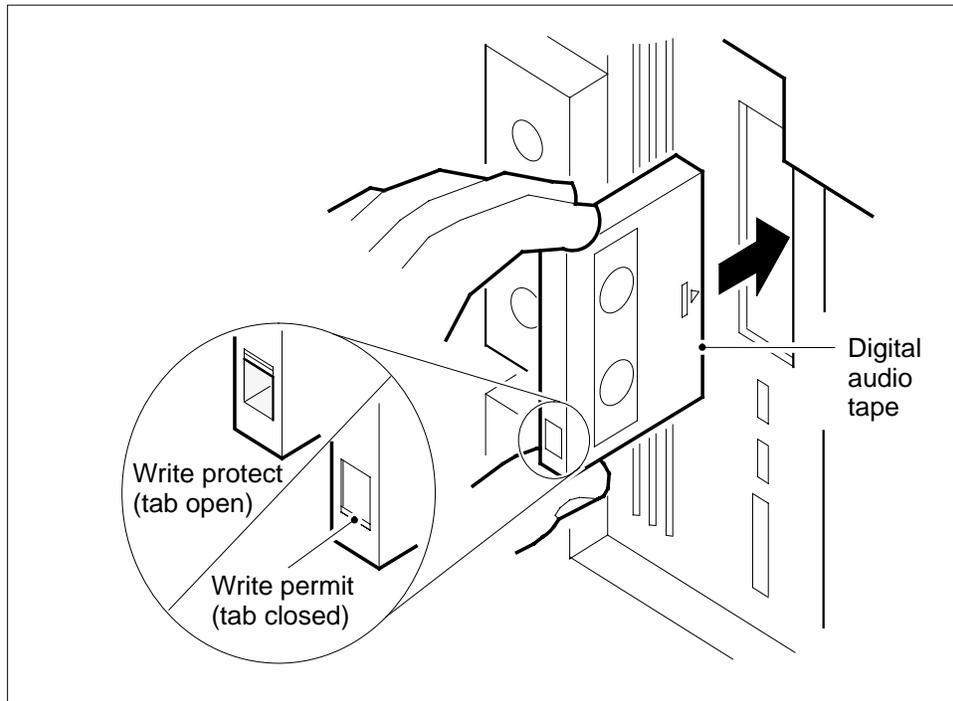
| If the DAT drive                                                                    | Do      |
|-------------------------------------------------------------------------------------|---------|
| does not have a cassette mounted (no LEDs are lit)                                  | step 8  |
| has a cassette already mounted (the green LED is lit and the yellow LED is not lit) | step 28 |
| is in trouble (the green LED flashes)                                               | step 28 |
| is in use (green and yellow LEDs are lit)                                           | step 28 |

- 8** Mount the DAT cassette in the DAT drive. Make sure that the write protect tab is in the write permit (closed) position.

---

## Backing up an 800Plus database to DAT (continued)

---



- 9 Make sure that the green LED on the DAT drive is lit.

---

| If the green LED | Do      |
|------------------|---------|
| is lit           | step 10 |
| is not lit       | step 28 |

---

**At the MAP**

- 10 To access the SCPLOC level of the MAP display, type  
>CCS;SCP;POST 800PLUS;SCPLOC  
and press the Enter key.

*Example of a MAP display*

---

## Backing up an 800Plus database to DAT (continued)

---

```

 CCS7 SCP
 . .
Service: 800PLUS State: InSv
SMS Status Logged Out UPD: All Susp RET: All Susp
SCP Local 111111 11112222 22222233
Components 01234567 89012345 67890123 45678901
UPI .-----
QPI -..... ...-----
UBH .-----
CRM -----
Instance Function(s) RP
UPI 0:InSv EMERG:InSv NORMAL:InSv FP0:InSv
Instances in POSTed set: 0

```

- 11** To post the UPI, type  
**>POST UPI instance\_no**

and press the Enter key.

*where*

**instance\_no**  
 is the UPI number

- 12** Check the state of the update processing instance (UPI).

**Note:** The UPI state appears on the right side of the UPI header on the logical component status field of the MAP display.

| If the UPI state          | Do      |
|---------------------------|---------|
| is a dot (.) (in service) | step 11 |
| is other than listed here | step 28 |

- 13** To manually busy the UPI, type

**>BSY**

and press the Enter key.

*Example of a MAP response*

```
UPI 0 : WARNING: Emergency and Normal updates will be
suspended.
```

```
Do you wish to continue?
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

- 14** To confirm the command, type

**>YES**

and press the Enter key.

*Example of a MAP response*

## Backing up an 800Plus database to DAT (continued)

---

UPI 0 : Passed.

- 15** To offline the UPI, type  
**>OFFL**  
and press the Enter key.  
*Example of a MAP response*

UPI 0 : Passed.

- 16** To access the TRMSADM utility, type  
**>TRMSADM FP fp\_no**  
and press the Enter key.  
*where*  
**fp\_no**  
is the number of the FP you used at step 3

*Example input*

**>TRMSADM FP 0**

*Example of a MAP response*

The Master database will be assumed to reside on  
FP 0.

- 17** To back up the database, type  
**>BACKUPDB 800PLUS instance\_no destination**  
and press the Enter key.

*where*

**instance\_no destination**

is the device name of the DAT drive that you recorded at step 6

*Example input*

**>BACKUPDB 800PLUS 0 CT01**

*Example of a MAP response*

---

## Backing up an 800Plus database to DAT (continued)

---

```

StartTime <date> <hr : min : sec : msec>;
Waiting for report messages:
Warning - this may take some time!
Report : Destination Device is OK.
Report : TRMS file TIMEREG is Backed up
Report : TRMS file SDTATHOL is Backed up
Report : TRMS file CANANPA is Backed up
Report : TRMS file E800NXX is Backed up
Report : TRMS file E800NUM is Backed up
Completion msg received
MSG Time: <date> <hr : min : sec : msec>;
Report: back-up for <DBName> is Completed.
Report: Database 800PLUS__MASTER__0 is Backed up.

```

| If the response                                                                                                            | Do      |
|----------------------------------------------------------------------------------------------------------------------------|---------|
| is Completion msg received<br>MSG Time:<date><br><hr : min : second : msec>;<br>Report: back-up for <DBName> is Completed. | step 18 |
| is other than listed here                                                                                                  | step 23 |

- 18** To quit the TRMSADM utility, type  
>**QUIT**  
and press the Enter key.
- 19** To post the UPI, type  
>**POST UPI instance\_no**  
and press the Enter key.  
*where*  
**instance\_no**  
is the UPI number
- 20** To manually busy the UPI, type  
>**BSY**  
and press the Enter key.  
*Example of a MAP response*  
  
UPI 0 : Passed.
- 21** To return the UPI to service, type  
>**RTS**

---

## Backing up an 800Plus database to DAT (continued)

---

and press the Enter key.

*Example of a MAP response*

UPI 0 : Passed.

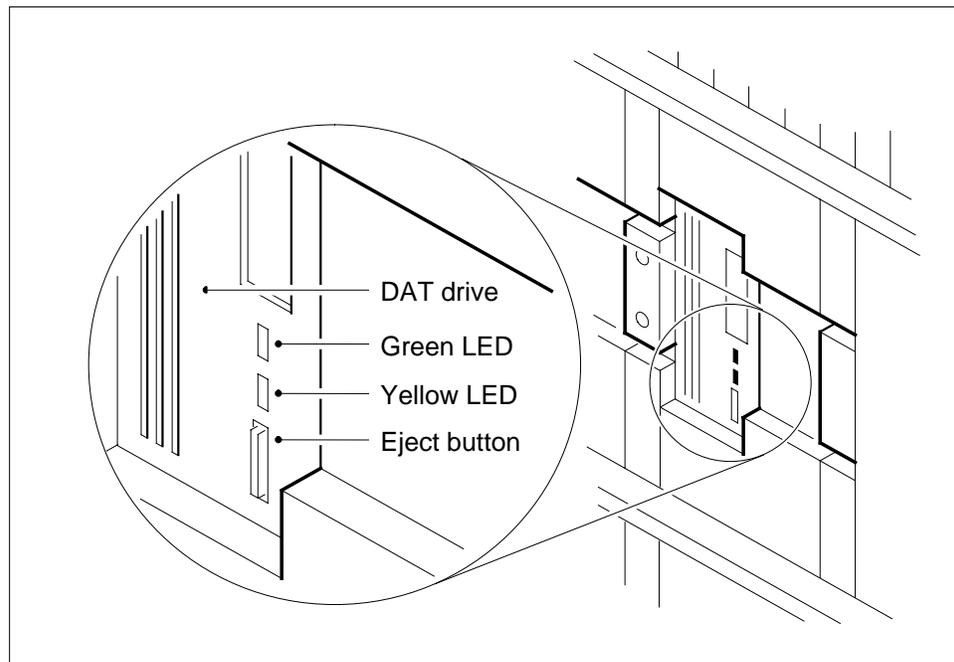
---

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 22 |
| failed             | step 28 |

---

### ***At the storage device shelf for the UP***

- 22** Press the EJECT button on the DAT drive to eject the DAT cassette. Keep the DAT cassette as the back-up copy.



Go to step 29.

- 23** To quit the TRMSADM utility, type  
**>QUIT**  
and press the Enter key.

---

## Backing up an 800Plus database to DAT (continued)

---

24

**CAUTION****Loss of service**

A normal back up of the database did not complete correctly. This procedure suspends emergency and normal updates to the 800Plus master database. Return the UPI to service before you contact the next level of support.

To post the UPI, type

```
>POST UPI instance_no
```

and press the Enter key.

*where*

**instance\_no**

is the UPI number

25 To manually busy the UPI, type

```
>BSY
```

and press the Enter key

*Example of a MAP response*

```
UPI 0 : Passed.
```

26 To return the UPI to service, type

```
>RTS
```

and press the Enter key

*Example of a MAP response*

```
UPI 0 : Passed.
```

---

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 27 |
| failed             | step 28 |

---

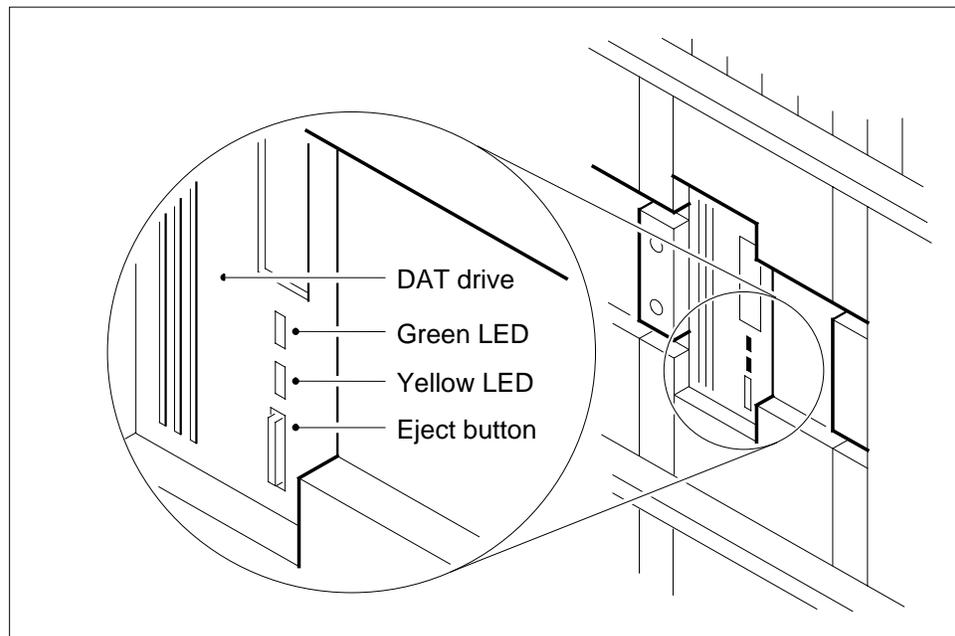
**At the storage device shelf for the UP**

27 Press the EJECT button on the DAT drive to eject the DAT cassette.

---

## Backing up an 800Plus database to DAT (end)

---



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

---

## Backing up an FP image file on SLM disk to SLM tape

---

### Application

Use this procedure to back up a file processor (FP) image file on a system load module (SLM) disk to a SLM tape.

### Interval

Perform this procedure as required by the routine maintenance schedule of your office.

### Common procedures

There are no common procedures.

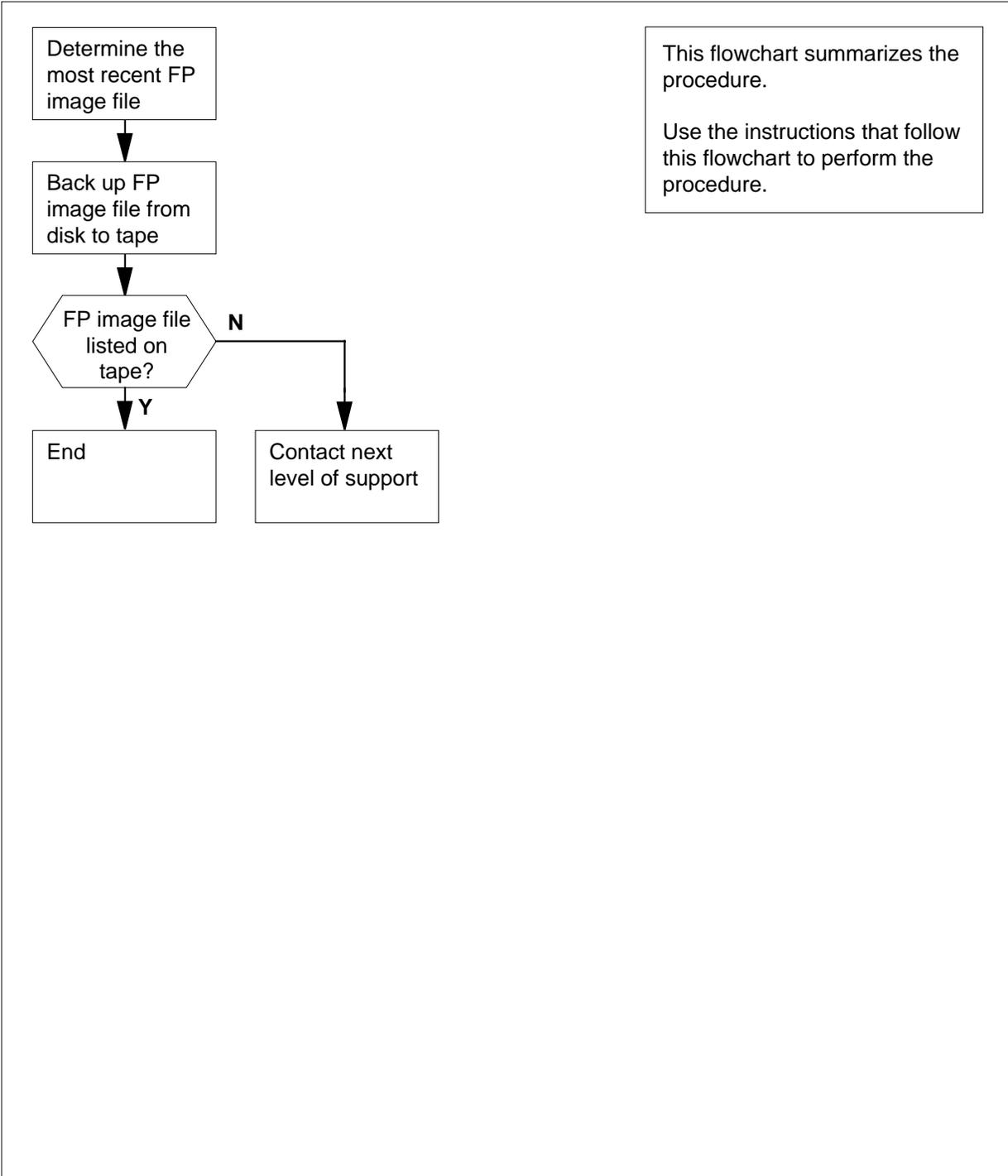
### Action

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:** There is a tape indicator LED on the tape drive of all SLM drives. This LED is on the tape drive and it is different from the LED on the faceplate of the NT9X44. When you insert the tape using the IT command in DISKUT, the indicator lamp lights up. The indicator lamp remains illuminated until the system completes the ET command in the DISKUT. When the ET command is complete, the indicator lamp turns off. You now can remove the tape from the tape drive.

## Backing up an FP image file on SLM disk to SLM tape (continued)

### Backing up an FP image file on SLM disk to SLM tape



---

## Backing up an FP image file on SLM disk to SLM tape (continued)

---

### Backing up an FP image file on SLM disk to SLM tape

#### At the MAP terminal

- 1 To access the disk utility of the MAP display, type

```
>DISKUT
```

and press the Enter key.

*Example of a MAP response:*  
Disk utility is now active.DISKUT:

- 2 To determine the FILENAME of the latest FP image on SLM disk, type

```
>LISTFL volume_name
```

and press the Enter key.

where

#### volume\_name

is the name of the volume on the SLM disk (up to 12 alphanumeric characters). The first four characters are the name of the device (S00D or S01D). The next eight characters are the name of the volume on the disk.

*Example input:*

```
>LISTFL S01DIMAGE
```

*Example of a MAP response:*

File information for volume S01DIMAGE:

```
{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

930212 0 I F 13460 6730 1020 APX35CG
930212 0 I F 7154 3577 1020 ERS35CG
930216 0 I F 33936 16968 1020 FPX35BU
930216 0 I F 5334 2667 1020 LRC35CG
930215 0 I 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

```

**Note:** In the example, the FP image FILENAME is FPX35BU.

- 3 Obtain an SLM tape.

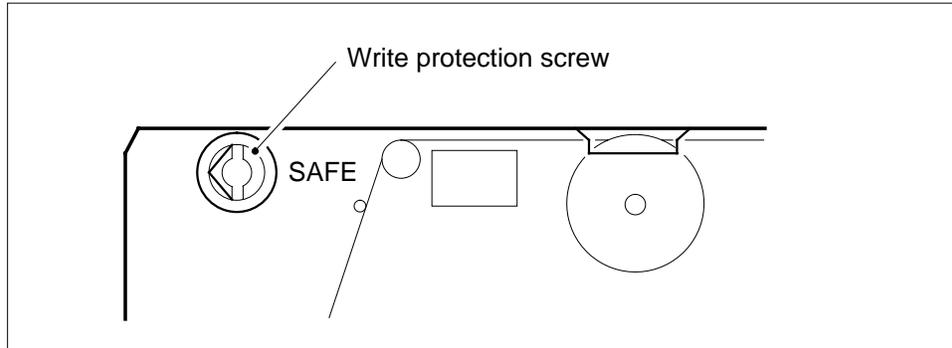
#### At the system load module

- 4 Rotate the SLM tape cartridge write protect screw 180° away from the safe position.

---

## Backing up an FP image file on SLM disk to SLM tape (continued)

---



- 5 Insert the tape into the correct SLM tape drive.

**At the MAP terminal**

- 6 To prepare the tape, type

```
>INSERTTAPE device_name WRITELABEL label_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

**label\_name**

is the name you give the tape

*Example of a MAP response:*

```
***** WARNING *****
```

Writing the label FPIMAGE to tape volume S01T on node CM will destroy all files stored on this tape volume.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

- 7 To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP response:*

The INSERT operation may take up to 5 minutes to tension the tape.

- 8 To back up the FP image file on SLM disk to SLM tape, type

```
>BACKUP FILE file_name device_name
```

and press the Enter key.

where

---

## Backing up an FP image file on SLM disk to SLM tape (continued)

---

**file\_name**  
is the FP image file name

**device\_name**  
is S00T if you are working on SLM 0, or S01T if you are working on SLM 1

*Example input:*

```
>BA FILE FPX35BU S00T
```

*Example of a MAP response:*

STD file FPX35BU on disk volume S01DIMAGE, node CM is opened.

Tape file FPX35BU on tape device S01T, node CM is created.

The copy operation may take several minutes.

Tape file FPX35BU on tape device S01T, node CM is closed.

STD file FPX35BU on disk volume S01DIMAGE, node CM is closed.

STD file FPX35BU on volume S01DIMAGE, node CM is copied to  
tape file FPX35BU on tape device S01T, node CM.

- 9** To confirm that you correctly backed up the FP image file on SLM disk to SLM tape, type

```
>LISTFL device_name
```

and press the Enter key.

*where*

**device\_name**  
is S00T or S01T

| If the FP image file | Do      |
|----------------------|---------|
| appears              | step 10 |
| does not appear      | step 13 |

- 10** To eject the tape from the SLM tape drive, type

```
>EJECTTAPE 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

## **Backing up an FP image file on SLM disk to SLM tape (end)**

---

***At the SLM***

- 11** Remove the tape from the SLM. Store the tape.

***At the MAP terminal***

- 12** To quit the disk utility, type  
>QUIT  
and press the Enter key.  
Go to step 14.
- 13** For additional help, contact the next level of support.
- 14** The procedure is complete.

---

## Cable-cover assembly removal and replacement procedure

---

### Application

Use this procedure to remove and replace the DMS-Spectrum Peripheral Module (SPM) cable-cover assembly.

### Definition

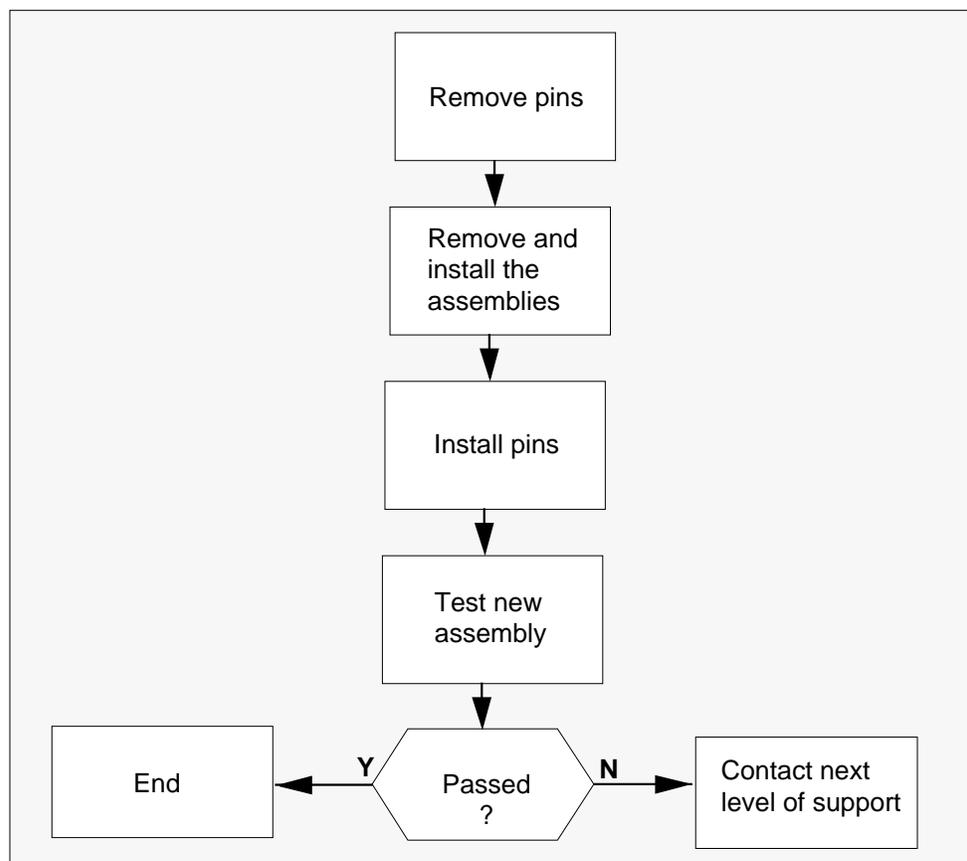
Perform the specific steps located in the action section to remove and replace a faulty cable-cover assembly.

### 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.



## Cable-cover assembly removal and replacement procedure (continued)

---



### **CAUTION**

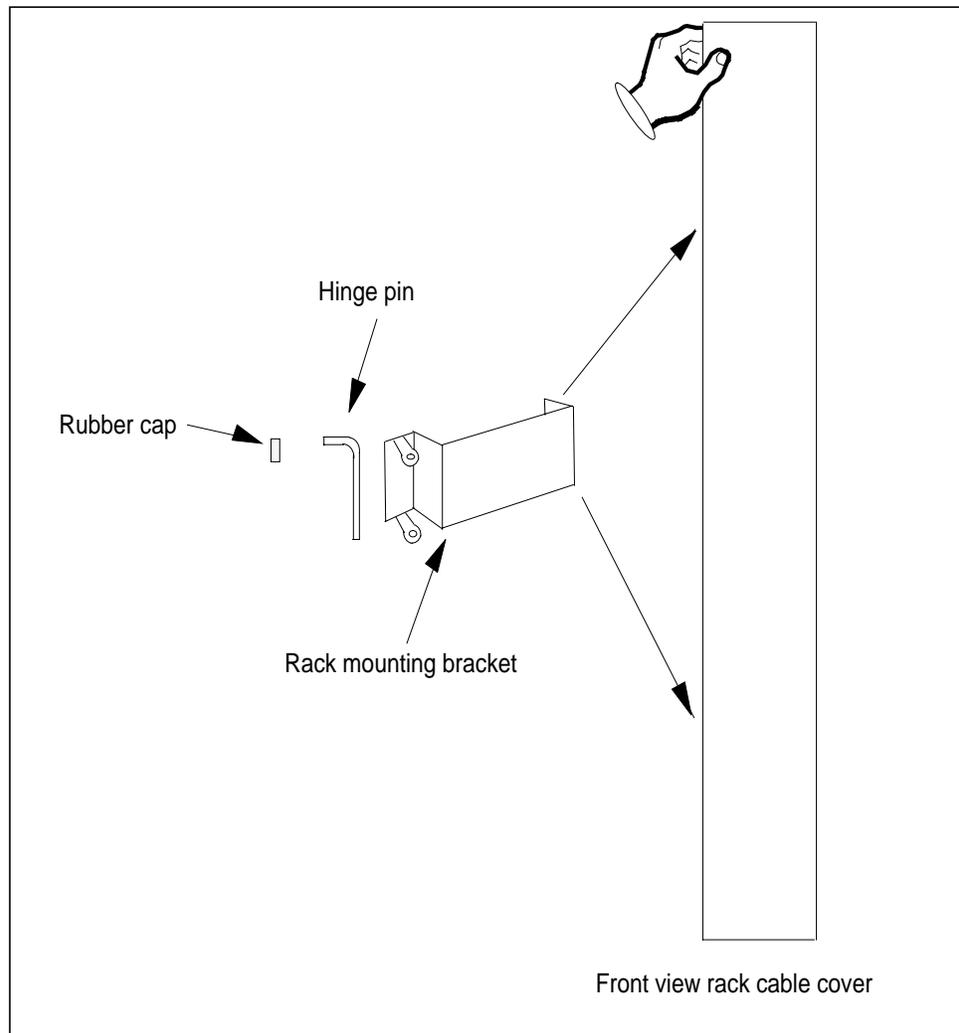
#### **Static electricity damage**

While handling circuit cards or cables, wear a wrist strap connected to the wrist-strap grounding point on the frame. This protects the cards against damage caused by static electricity.

#### ***At the SPM frame***

- 1 Open and access the faulty cable-cover assembly.
- 2 As shown in the following figure, while holding the assembly remove the hinge pins located at the top and bottom of the faulty cable-cover assembly.

## Cable-cover assembly removal and replacement procedure (end)



- 3 Remove the faulty cable-cover assembly from the frame assembly.
- 4 Hold the new cable-cover assembly in place and insert the hinge pins removed in Step 2.
- 5 Install a rubber cap P.O. 866014 on top of each hinge pin.
- 6 To test the new assembly, open and close the new cable-cover assembly several times to ensure it works correctly.
- 7 If the new assembly does not operate correctly, contact the personnel responsible for the next level of support.
- 8 You have completed this procedure.

## Changing CM REx intensity

---

### Application

Use this procedure to change the schedule or level of the CM routine exercise (REx) test intensity.

You can select one of the following CM REx intensity levels:

- BASE - includes a REx image test and results in a net switch of activity (SWact)
- FULL - includes an image and all other REx tests

### Interval

To reduce out-of-sync time, perform this procedure when the schedule or intensity of the CM REx test requires a change.

### Common procedures

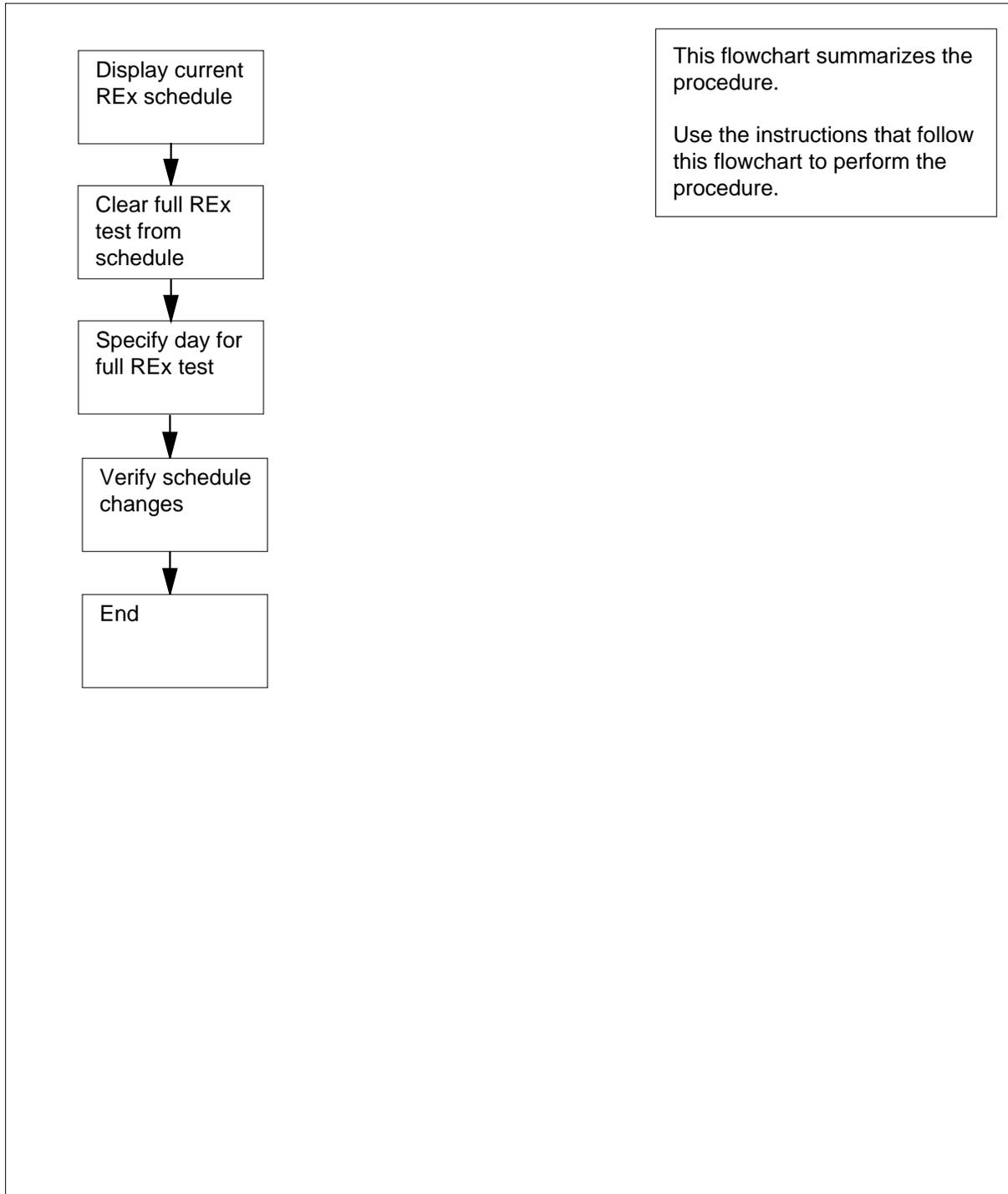
There are no common procedures.

### Action

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

## Changing CM REx intensity (continued)

### Summary of Changing CM REx intensity



---

## Changing CM REx intensity (continued)

---

### Changing CM REx intensity

#### At the MAP terminal

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

```
>MAPCI ;MTC ;CM
```

and press the Enter key.

*Example of a MAP response:*

```
CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC
0 no cpu 1 . . yes . . .
```

- 2 To display the current REx intensity schedule and level assignment, type

```
>REXCMINT STATUS
```

and press the Enter key.

*Example of a MAP response*

```
rexcmint status
Status of CM REx Intensity (b=base, f=full, c=carry-forward)
```

```
Mon Tue Wed Thu Fri Sat Sun
b b f c b b b
```

**Note:** In the example, the letter c under Thursday indicates that a full REx test did not complete on Wednesday. The system will attempt a full REx on Thursday. This test carryover continues until a full REx test is successful.

- 3 To remove the full intensity test from the schedule, type

```
>REXCMINT CLEARDAY day
```

where

**day**

is the day of the week that the system schedules a full REx test (mon, tue, wed, thu, fri, sat, or sun)

*Example of a MAP response*

```
clearday wed
You are about to clear all days for full REx.
Please confirm ("YES", "Y", "NO", or "N"):
```

- 4 To confirm the change, type

```
>Y
```

*Example of a MAP terminal response*

```
Day for full CM REx Intensity has been cleared.
```

```
WARNING!!! All days for full CM REx Intensity are cleared.
```

---

## Changing CM REx intensity (end)

---

- 5 To enter the required day for full CM REx intensity test, type  
**>REXCMINT SETDAY day**  
 and press the Enter key.  
*where*  
**day**  
 is the day of the week when the system requires the full REx test (mon, tue, wed, thu, fri, sat, or sun)  
*Example of a MAP response*
- ```

rexcmint setday thu
Day for full CM REX Intensity has been set.

```
- Note:** You can set more than one day of the week for a full REx intensity test.
- 6 To verify the changes to the REx schedule, type
>REXCMINT STATUS
 and press the Enter key.
Example of a MAP response
- ```

rexcmint status
Status of CM REX Intensity (b=base, f=full, c=carry-forward)

Mon Tue Wed Thu Fri Sat Sun
 b b b f b b b

```
- Note:** If a REx test carries over to any days changed by this procedure, the carryover identification (c) overrides scheduled items. When the REx test completes correctly, the schedule appears as changed.
- 7 To quit from the CM level of the MAP display, type  
**>QUIT ALL**  
 and press the Enter key.
- 8 The procedure is complete.

## **Cleaning the digital audio tape (DAT) drive NTFX32CA in an IOM**

---

### **Application**

Use this procedure to clean a digital audio tape (DAT) drive NTFX32CA in an input/output module (IOM). An integrated services module (ISM) contains the IOM.

### **Interval**

If the tape cassette is not new, perform this procedure according to the schedule shown in table 1. You can also perform this procedure when the STATUS light on the front panel of the drive unit flashes.

#### **Tape cleaning schedule**

| <b>Number of DDS cartridges each day</b> | <b>&lt;1</b> | <b>2-3</b>      | <b>&gt;4</b> |
|------------------------------------------|--------------|-----------------|--------------|
| Cleaning interval                        | Weekly       | Twice each week | Daily        |

If the tape cassette is new, clean the recording heads once after the first four hours of read/write operation. After the first cleaning, clean the recording heads after 25 hours of read/write operation or according to office standards.

### **Common procedures**

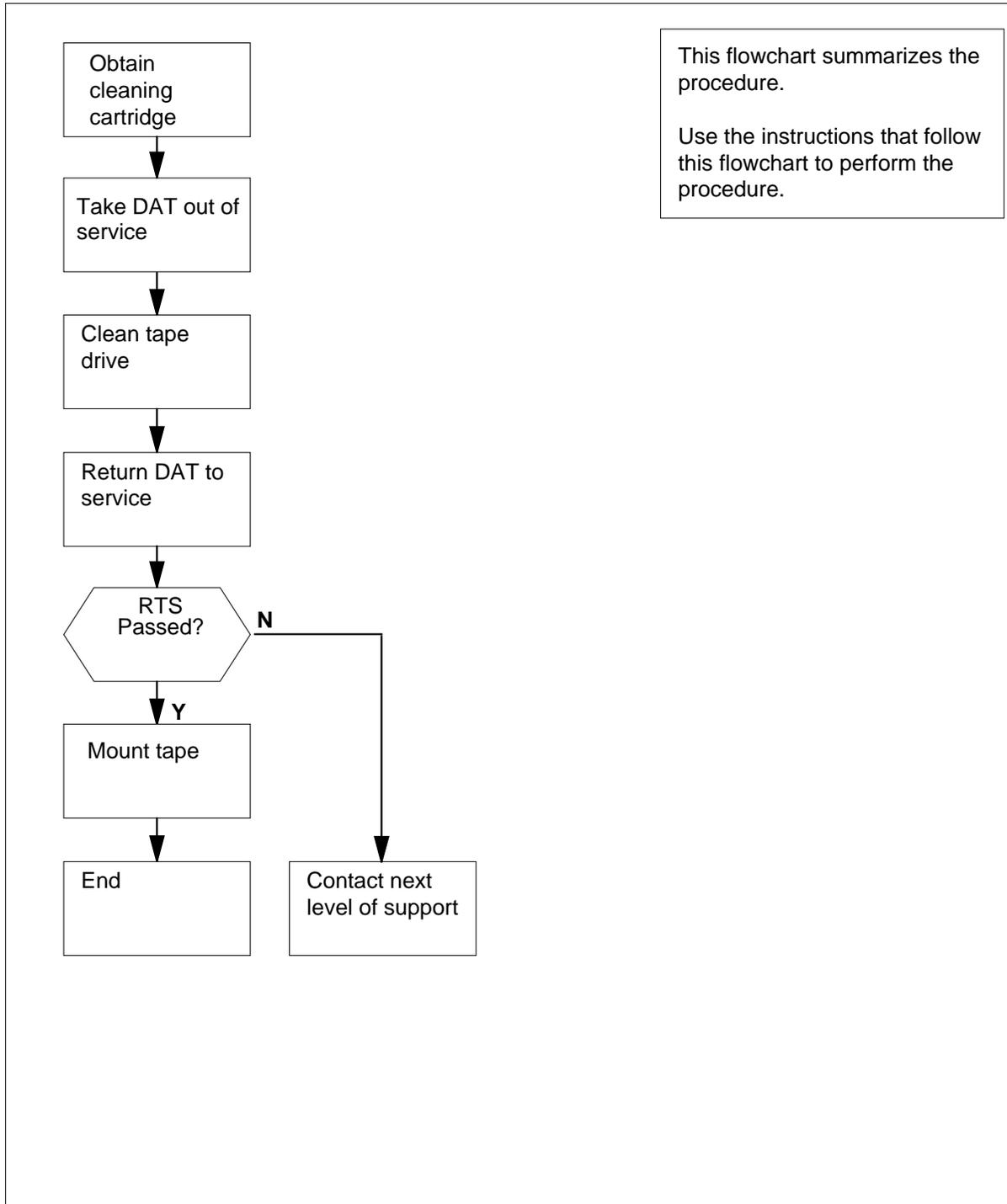
Refer to routine procedure Selection of DAT tapes approved by Nortel Networks.

### **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.

## Cleaning the digital audio tape (DAT) drive NTFX32CA in an IOM (continued)

### Summary of Cleaning the digital audio tape (DAT) drive NTFX32CA



## Cleaning the digital audio tape (DAT) drive NTFX32CA in an IOM (continued)

### Cleaning the digital audio tape (DAT) drive NTFX32CA

#### At your current location

- 1 Obtain the DDS cleaning cartridge A0627569.

#### At the MAP terminal

- 2 To access the IOD level of the MAP terminal and determine which digital audio tape is idle, type

```
>MAPCI ;MTC ;IOD ;LISTDEV MTD
```

and press the Enter key.

**Note:** The system display includes the status of the DAT

#### Example of a MAP display:

| MTD | TapeName | Status | IOC.CARD/PORT |
|-----|----------|--------|---------------|
| 0   |          | Idle   | 0.0           |
| 1   |          | Idle   | 3.17          |
| 4   |          |        | 8.17          |
| 6   |          |        | 9.17          |

- 3 Select an idle DAT to clean.

- 4 To post the IOM controller, type

```
>IOC ioc_no
```

and press the Enter key.

where

**ioc\_no**  
is the number of the IOC

#### Example of a MAP display:

```
DIRP: SMDR B XFER: . SLM : . NPO: . NX25: .
MLP : . DPPP: . DPPU: . SCAI :
```

| 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 | C |   |   |   | M |    |    |    |    |    |    | S  | S  |
|       |      | O | O | O |   | O | O |   |   |   | P |    |    |    |    |    |    | C  | C  |
|       |      | N | N | N |   | N | N |   |   |   | C |    |    |    |    |    |    | S  | S  |

- 5 To post the DAT, type

```
>PORT port_no
```

and press the Enter key.

where

**port\_no**  
is the port number of the idle DAT

## Cleaning the digital audio tape (DAT) drive NTFX32CA in an IOM (continued)

**Example of a MAP display:**

```

Port 17 MTD 1 DevType DAT
(SCSI) TapeName User
 Status Idle

```

**6** To demount the DAT, type

```
>DEMOUNT Tmtd_no
```

and press the Enter key.

where

**mtd\_no**

is the number of the MTD

**7** To manually busy the DAT, type

```
>BSY
```

and press the Enter key.

*Example of a MAP display:*

```
OK
```

**At the DAT unit**

**8**



**DANGER**

**Possible loss of data**

To recover a cartridge you can force eject a cartridge. Use this method as a last resort. Do not use this method as a quick way to eject the cartridge. If you force eject a cartridge, data loss can occur and the tape can format incorrectly.

To remove the tape cartridge, press the EJECT button at the front of the unit.

**9** Insert the cleaning cartridge A0627569 into the drive. The drive automatically takes the cartridge and cleans the head.

The total cleaning time is approximately 12 s. When the cleaning is finished, the drive ejects the cleaning cartridge.

| If the cartridge | Do      |
|------------------|---------|
| ejects in < 10 s | step 10 |
| ejects in ± 12 s | step 11 |

**10** Cleaning does not occur. The cartridge can no longer be used.

Discard the cartridge and repeat step 9 with a new cartridge.

---

## Cleaning the digital audio tape (DAT) drive NTFX32CA in an IOM (continued)

---

- 11** Remove the cleaning cartridge and write the date on the label of the cartridge. This procedure provides a record of the number of times you use the cartridge.

You can use a cleaning cartridge for 25 cleaning cycles.

- 12** Insert the cartridge that you removed in step 8 into the slot on the front panel of the drive. As you insert the cartridge, the drive takes the cartridge and performs a load sequence.

**Note:** By default, the drive detects DDS Media Recognition System cartridges. If you load another type of cartridge, the system treats this cartridge as write protected. The system can read the cartridge, but cannot write to the cartridge.

### At the MAP display

- 13** To access the port level of the MAP display for the DAT, type

```
>MAPCI;MTC;IOD;IOC ioc_no;PORT port_no
```

and press the Enter key.

where

**ioc\_no**

is the number of the input/output module that houses the DAT unit in use.

**port\_no**

is the number of the IOM port that connects to the DAT unit

### Example of a MAP display:

```
Port 17 MTD 1 DevType DAT
(SCSI) TapeName User
 Status Idle
```

- 14** To return the DAT to service, type

```
>RTS
```

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 15 |
| failed             | step 17 |

- 15** To mount the removed tape again, type

```
>MOUNT mtd_no
```

and press the Enter key.

where

**mtd\_no**

is the number of the MTD (DAT)

---

**Cleaning the digital audio tape (DAT) drive NTFX32CA  
in an IOM (end)**

---

- 16** From the MAP display in step 2, determine if you must clean any more idle DAT units.

---

**If you**

**Do**

---

must clean more drives

step 3

do not have to clean more drives

step 18

---

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

- 18** The procedure is complete.

## **Cleaning the digital audio tape drive heads in a file processor (FP)**

---

### **Application**

Use this procedure to clean digital audio tape drive (DAT) heads on a file processor (FP).

### **Interval**

Perform this procedure

- when the green status light emitting diode (LED) on the DAT drive flashes
- if the tape cassette is new, clean the recording heads once after the first four hours of read/write operation. After the first cleaning, clean the recording heads after 25 hours of read/write operation or according to office standards.
- if the tape cassette is not new, clean after 25 hours of operation or according to office standards.

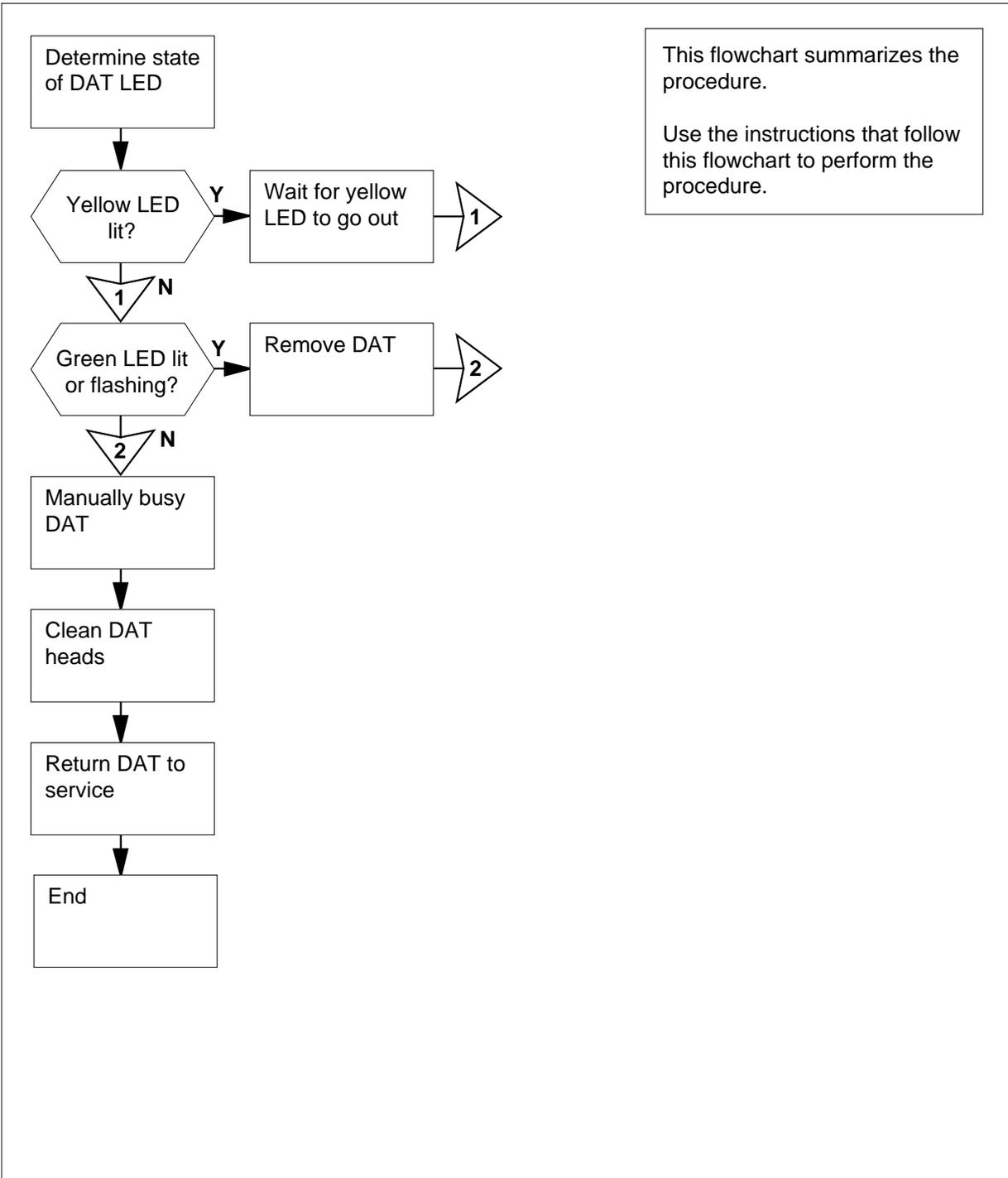
### **Common procedures**

Refer to routine procedure Selection of DAT tapes approved by Nortel Networks.

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.

## Cleaning the digital audio tape drive heads in a file processor (FP) (continued)

### Summary of Cleaning digital audio tape drive heads



## Cleaning the digital audio tape drive heads in a file processor (FP) (continued)

---

### Action

#### Cleaning digital audio tape drive heads

##### *At the storage device shelf*

1



**DANGER**

**Possible tape failure**

If an excess of magnetic dust or particles collects at a minimum of one of the heads, read/write problems can result. In this event, the tape can reach the point where the tape cannot be read or cannot be written to.



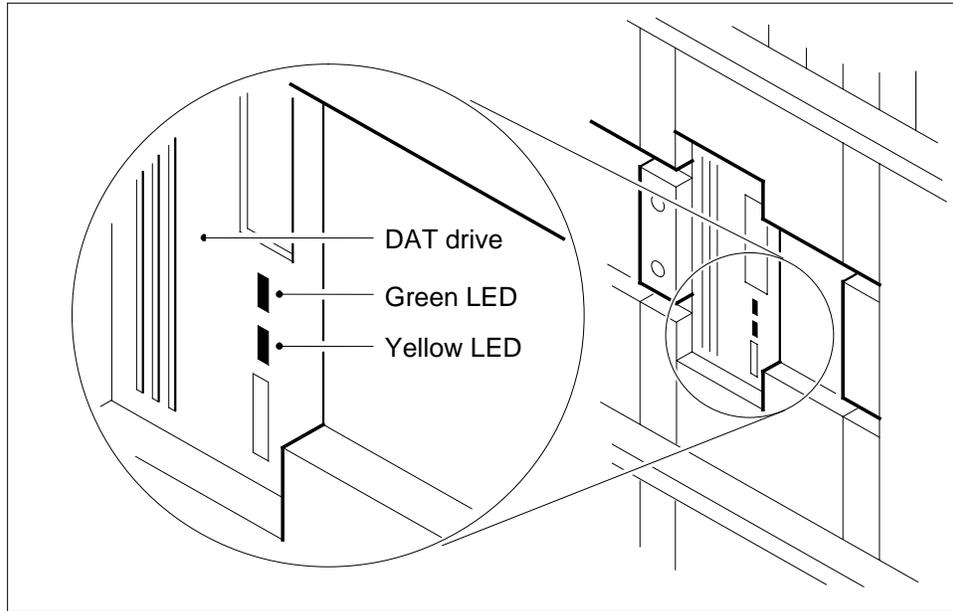
**DANGER**

**Possible DAT failure**

Do not use an audio DAT cleaning cassette. The DAT drive does not recognize audio cleaning cassettes. Audio cleaning cassettes will not work. Use a Nortel (Northern Telecom) approved DAT cleaning cassette.

- 2 Obtain a Nortel approved DAT cleaning cassette.  
Determine the state of the yellow LED.

## Cleaning the digital audio tape drive heads in a file processor (FP) (continued)



| If the yellow LED | Do      |
|-------------------|---------|
| is lit            | step 3  |
| is not lit        | step 14 |

- 3 Wait for the yellow LED to turn off.
- 4 Determine and note the state of the green LED.

| If the green LED | Do      |
|------------------|---------|
| is always lit    | step 5  |
| flashes slowly   | step 14 |
| flashes quickly  | step 14 |
| is not lit       | step 14 |

- 5 Remove the DAT cassette.

**At the MAP terminal**

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

*Example of a MAP response:*

## Cleaning the digital audio tape drive heads in a file processor (FP) (continued)

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
| PM | 0    | 0    | 0    | 0    | 1    | 38   |

- 7 To post the FP that associates with the DAT, type

>POST FP **fp\_no**

and press the Enter key.

where

**fp**

is the FP number (0 to 12)

Example of a MAP terminal response:

```
FP 0: FP0_256 Plane Devices
SysB /Mtce
```

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

>DEVICES

and press the Enter key.

Example of a MAP response:

|        | CTRL0 |      | CTRL1 |       | DEVICE      |
|--------|-------|------|-------|-------|-------------|
| DABM   | .     |      | .     |       | 0 1 2 3 4 5 |
| SCSI 0 | .     | (EN) | .     | (DIS) | . . . . - - |
| SCSI 1 | .     | (EN) | .     | (DIS) | . . . . - - |

- 9 To manually busy the device, type

>BSY DEV **scsi\_no dev\_no**

and press the Enter key.

where

**scsi\_no**

is the SCSI (0 or 1) bus connected to the device

**dev\_no**

is the device number (0 to 5)

Example of a MAP response:

|        | CTRL0 |      | CTRL1 |       | DEVICE      |
|--------|-------|------|-------|-------|-------------|
| DABM   | .     |      | .     |       | 0 1 2 3 4 5 |
| SCSI 0 | .     | (EN) | .     | (DIS) | . . M . - - |
| SCSI 1 | .     | (EN) | .     | (DIS) | . . . . - - |

---

**If the BSY command**

**Do**

passed

step 10

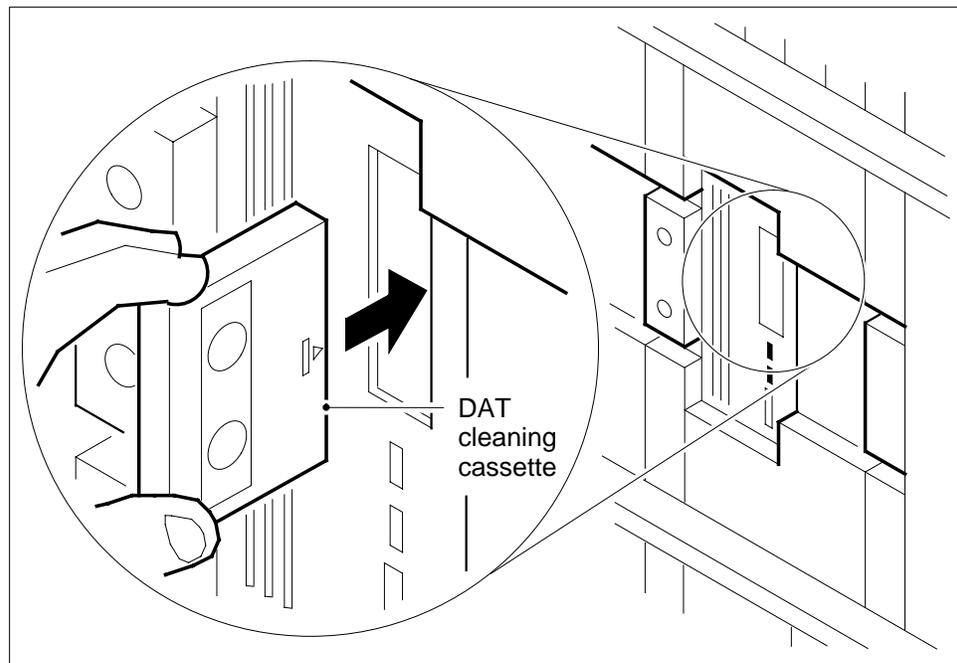
---

## Cleaning the digital audio tape drive heads in a file processor (FP) (continued)

| If the BSY command | Do      |
|--------------------|---------|
| failed             | step 14 |

### *At the storage device shelf*

- 10** Insert the DAT cleaning cassette into the DAT drive you want to clean.



- 11** Wait until the system ejects the DAT cleaning cassette.  
**12** Remove the DAT cleaning cassette.

### *At the MAP terminal*

- 13** To return the device to service, type  
`>RTS DEV scsi_no dev_no`  
 and press the Enter key.

*where*

**scsi\_no**

is the SCSI (0 or 1) bus connected to the device

**dev\_no**

is the device number (0 to 5)

*Example of a MAP response:*

## Cleaning the digital audio tape drive heads in a file processor (FP) (end)

---

|        | CTRL0 |      | CTRL1 |       | DEVICE      |
|--------|-------|------|-------|-------|-------------|
| DABM   | .     |      | .     |       | 0 1 2 3 4 5 |
| SCSI 0 | .     | (EN) | .     | (DIS) | . . . . - - |
| SCSI 1 | .     | (EN) | .     | (DIS) | . . . . - - |

---

**If the RTS command**

**Do**

passed

step 15

failed

step 14

---

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

## Cleaning the magnetic tape drive

---

### **Application**

Use this procedure to clean a magnetic tape drive (MTD).

### **Interval**

Perform this procedure daily.

### **Common Procedures**

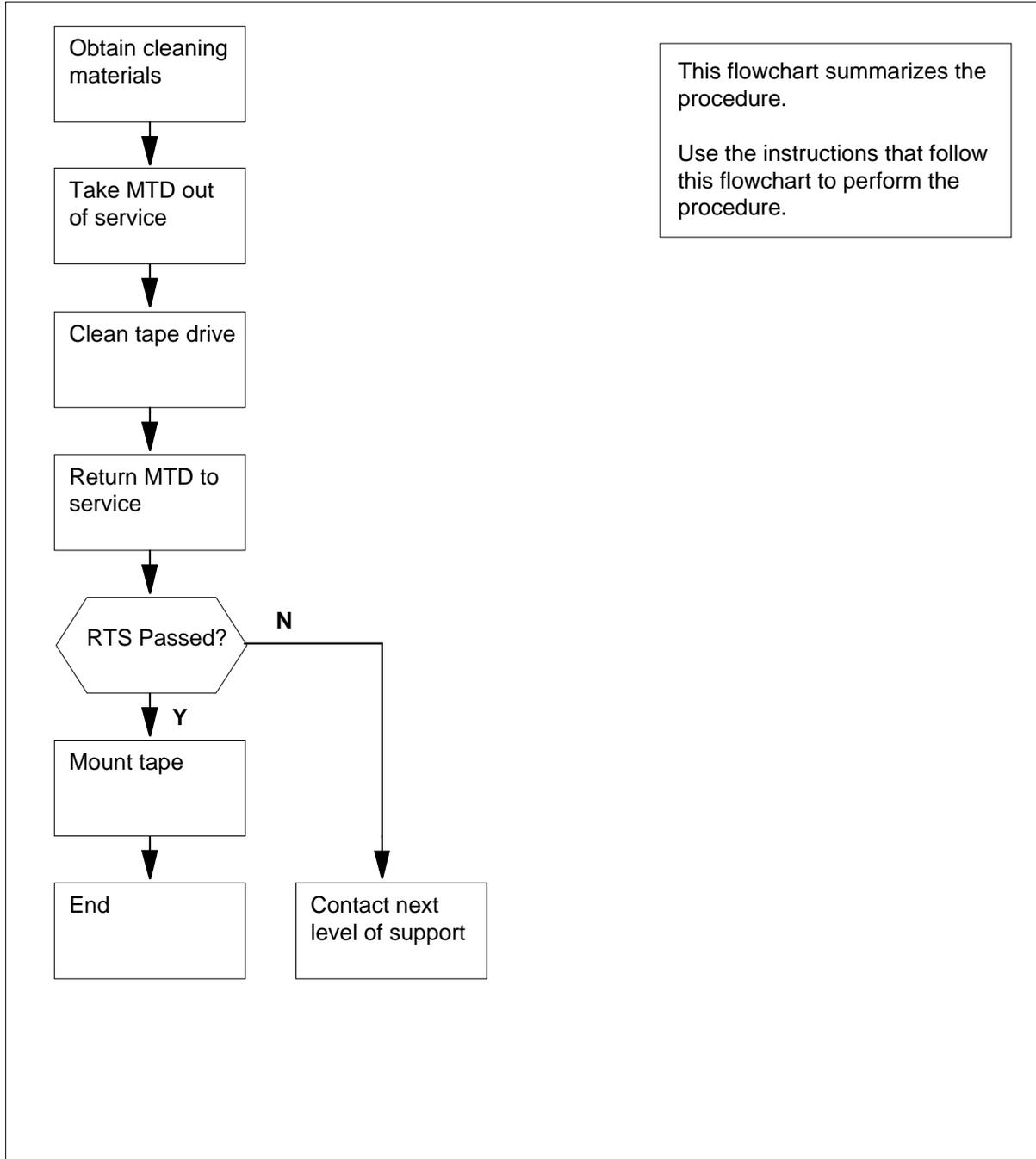
There are no common procedures.

### **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.

## Cleaning the magnetic tape drive (continued)

### Summary of Cleaning the magnetic tape drive



---

## Cleaning the magnetic tape drive (continued)

---

### Cleaning the magnetic tape drive

#### *At your current location*

- 1 Obtain the following cleaning materials and fluids:
  - a clean, soft bristled brush
  - glass cleaner
  - lint-free rags or towels
  - isopropyl alcohol
  - head cleaner (Hewlett-Packard No. 8500-08100)

#### *At the MAP terminal*

- 2 To access the IOD level of the MAP terminal and determine which MTD is idle, type:

```
>MAPCI;MTC;IOD;LISTDEV MTD
```

and press the Enter key.

**Note:** The system display includes the status of the MTD.

*Example of a MAP response:*

```
MTD TapeName Status IOC.CD
 0 Idle 0.0
 1 Idle 1.0
```

- 3 Select an idle MTD to clean.
- 4 To post the controller system configured, type

```
>IOC ioc_no
```

and press the Enter key.

*where*

**ioc\_no**

is the number of the affected IOC or IOM

*Example of a IOC MAP display:*

```
DIRP: SMDR B XFER: . SLM : . NPO: . NX25: .
MLP : . DPPP: . DPPU: . SCAI :

IOC CARD 0 1 2 3 4 5 6 7 8
 0 PORT 0123 0123 0123 0123 0123 0123 0123 0123 0123
 STAT .---- .---- ...P ..-- ..-- --- --- --- ---
 TYPE MTD DDU CONS DLC CONS
```

*Example of a IOM MAP display:*

## Cleaning the magnetic tape drive (continued)

```
DIRP: SMDR B XFER: . SLM : . NPO: . NX25: .
MLP : . DPPP: . DPPU: . SCAI :
```

```
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 M M M M M M M M M M M M M M
 O O O O T P P P P P P P P P P P P P P P P
 N N N N D C C C C C C C C C C C C C C C C
```

| If the controller | Do     |
|-------------------|--------|
| is IOC            | step 5 |
| is IOM            | step 6 |

- 5** To post the MTD controller card, type

```
>CARD card_no
```

and press the Enter key.

where

**card\_no**

is the number of the idle MTD

Example of a MAP response:

```
Card 0 MTD 0
 TapeName system
 Status Idle
 User
```

Go to step 7.

- 6** To post the MTD port, type

```
>PORT port_no
```

and press the Enter key.

where

**port\_no**

is the port number of the idle MTD device

Example of a MAP display:

```
Port 5 MTD DevType
 TapeName User
 Status Idle
```

- 7** To manually busy the MTD controller card or IOM MTD device, type

```
>BSY
```

and press the Enter key.

## Cleaning the magnetic tape drive (continued)

*Example of a MAP response:*

OK

**At the MTD**

- 8** To set the drive offline, press the offline button, and remove the magnetic tape from the MTD.
- 9** Set the power switch to OFF.
- 10** Moisten the applicators with cleaning liquid and clean the following parts on the tape drive:
  - supply tension rollers (use Isopropyl alcohol)
  - take-up tension rollers (use Isopropyl alcohol)
  - supply idler rollers (use Isopropyl alcohol)
  - take-up idler rollers (use Isopropyl alcohol)
  - tape guides (use Isopropyl alcohol)
  - capstan (use head cleaner)
  - photosensor unit (use Isopropyl alcohol)
  - tape cleaning pad (use head cleaner)
  - read/write/erase heads (use head cleaner)
- 11** Wipe the dirt off the cover with a soft bristled brush.
- 12**



**DANGER**

**Possible damage to the tape drive**

To avoid damage to the read heads, do not spray the glass cleaner on the tape drive.

Use the following procedure to clean the transparent door:

- a. Brush the dust off the cover with a soft bristled brush.
- b. Wipe the surfaces of the cover with lint-free towels. Spray the towels with glass cleaner.
- 13** Set the power switch to ON.
- 14** Prepare to return the MTD to service:
  - a. Thread the tape to the drive.
  - b. Set the tape drive online.

| <b>If the controller</b> | <b>Do</b> |
|--------------------------|-----------|
| is IOC                   | step 15   |

## Cleaning the magnetic tape drive (continued)

| If the controller | Do      |
|-------------------|---------|
| is IOM            | step 16 |

### At the MAP display

- 15** To access the card level of the MAP display for the MTD, type  
**>MAPCI;MTC;IOD;IOC ioc\_no;CARD card\_no**  
 and press the Enter key.

where

**ioc\_no**

is the number of the input/output controller that houses the MTD

**card\_no**

is the number of the card that connects to the MTD

Example of a MAP display:

```
Card 0 MTD
 TapeName
 Status ManB
 User
```

- 16** To access the port level of the MAP display for the MTD, type  
**>MAPCI;MTC;IOD;IOC ioc\_no;PORT port\_no**  
 and press the Enter key.

where

**ioc\_no**

is the number of the input/output controller that houses the MTD

**port\_no**

is the number of the IOM port that connects to the MTD

Example of a MAP display:

```
Port 5 MTD DevType
 TapeName User
 Status ManB
```

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

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 18 |
| failed             | step 20 |

---

## Cleaning the magnetic tape drive (end)

---

- 18** To mount the tape again, type  
`>MOUNT mtd_no`  
 and press the Enter key.  
*where*  
     **mtd\_no**  
     is the number of the MTD (0 or 1)
- 19** From the MAP display in step 2, determine if you must clean more idle tape drives.
- | <b>If you</b>                         | <b>Do</b> |
|---------------------------------------|-----------|
| must clean more idle drives           | step 3    |
| do not need to clean more idle drives | step 21   |
- 20** For additional help, contact the next level of support.
- 21** The procedure is complete.

## **Cleaning the optical sensors in a 14-in DDU**

---

### **Application**

Use this procedure to clean the optical sensors on the 14-in (356-mm) disk drive unit (DDU).

*Note:* Some steps in this procedure require two persons.

### **Interval**

Perform the procedure every 180 days (six months).

### **Common procedures**

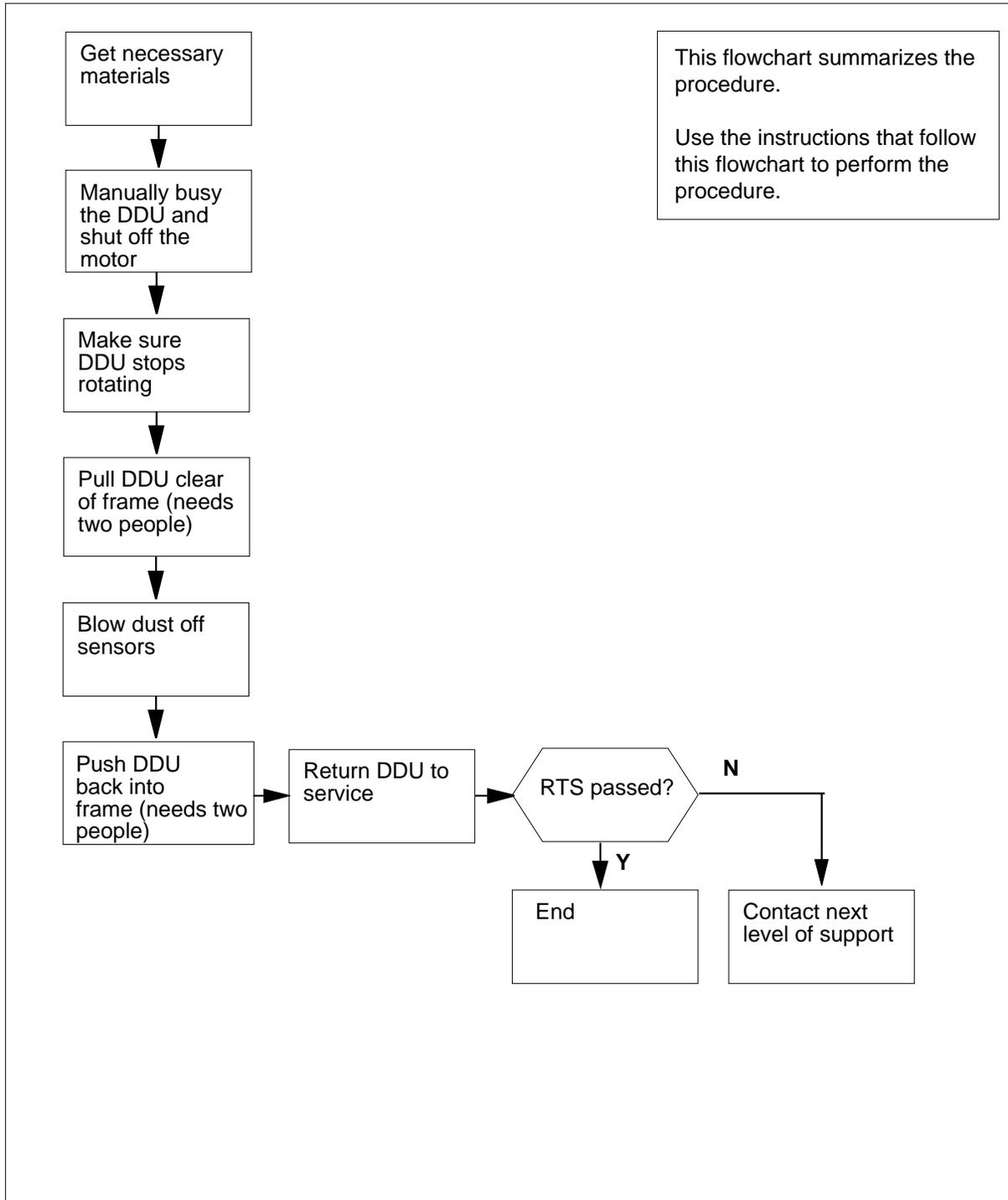
There are no common procedures.

### **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.

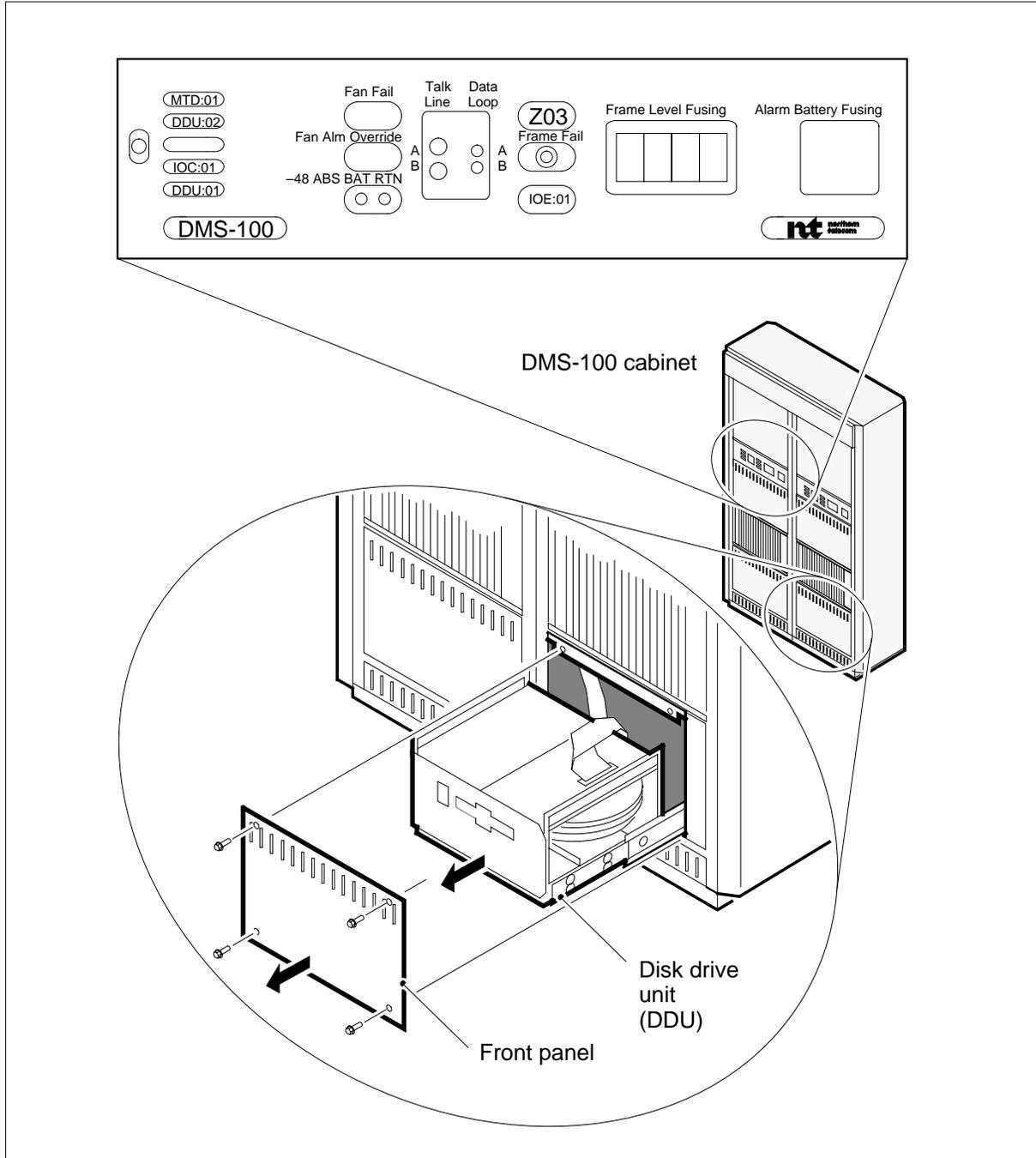
## Cleaning the optical sensors in a 14-in DDU (continued)

### Summary of Cleaning the optical sensors in a 14-in DDU



## Cleaning the optical sensors in a 14-in DDU (continued)

### DDU shelf



---

## Cleaning the optical sensors in a 14-in DDU (continued)

---

### Cleaning the optical sensors in a 14-in DDU

#### *At your current location*

- 1 Obtain the following items:
  - a flat-blade screwdriver with a 1/4-in wide blade
  - a source of oil-free compressed air at a pressure that does not exceed 103.42 kPa (15 lbf/ft<sup>2</sup>)
  - a pair of gloves

#### *At the CI level of the MAP terminal*

- 2 To access the IOD level of the MAP display for the controller card that controls the DDU, type

```
>MAPCI ;MTC ;IOD
```

and press the Enter key.

- 3 To access the IOC level of the MAP display to determine the number of the card that controls the DDU, type

```
>IOC ioc_no
```

and press the Enter key.

*where*

#### **ioc\_no**

is the input/output controller number (0 to 19) that holds the controller card for the DDU

*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
```

Note the IOC card and the DDU in use.

- 4 To access the Card level of the MAP display, type

```
>CARD card_no
```

and press the Enter key.

*where*

#### **card\_no**

is the number of the controller card that you determined in step 3

*Example of a MAP response:*

```
CARD 8 Unit 0
 User SYSTEM Drive_State
 Status BSY spinning
```

- 5 To manually busy the controller card for the DDU, type

```
>BSY
```

## Cleaning the optical sensors in a 14-in DDU (continued)

- and press the Enter key.
- 6 To turn off the disk drive motor, type  
>STOP  
and press the Enter key.  
MAP response:

DISK STOP SUCCESSFUL

| If the disk drive | Do     |
|-------------------|--------|
| stops             | step 8 |
| does not stop     | step 7 |

7



**WARNING**  
**Static electricity**  
Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle the DDU. The wrist strap protects the DDU against static electricity damage.

Wait 2 minutes and return to step 6.

*At the front of the DDU shelf*

8



**DANGER**  
**Possible loss of service**  
Make sure you remove the correct fuse. If you remove the wrong fuse, a loss of service or a shut-down of MAP terminals and printers will occur. Removal of the wrong fuse can cause a loss of recording space for billing information.

Set the POWER switch on the power converter to OFF.

- 9 Remove the fuse that powers the DDU on the FSP or MSP.

| If the DDU                                   | Do  |
|----------------------------------------------|-----|
| Remove fuse                                  |     |
| is not a DMS-100P and the DDU is in shelf 04 | F03 |

## Cleaning the optical sensors in a 14-in DDU (continued)

| If the DDU                                               | Do/Remove fuse                                                  |
|----------------------------------------------------------|-----------------------------------------------------------------|
| is not a DMS-100P and the DDU is in shelf 18             | F02                                                             |
| is not a DMS-100P and the DDU is in shelf 32             | F01                                                             |
| is in a PCPM or PCMM frame on a DMS-100P Packaged Switch | Contact the next level of support for the correct fuse numbers. |

10



**DANGER**  
**Risk of personal injury**  
 To avoid injury, do not touch the rotating parts on the bottom of the DDU.

Use the screwdriver to remove the screws that secure the front panel of the DDU to the frame rails.

### At the Card level of the MAP display

11 From the Drive\_State header on the MAP display, verify that the disk drive is not rotating.

*Example of a MAP display:*

```
CARD 8 Unit 0
 User SYSTEM Drive_State
 Status BSY stopped
```

| If the disk drive | Do      |
|-------------------|---------|
| is not rotating   | step 13 |
| is rotating       | step 12 |

12 Wait 3 min until the disk is not rotating. When STOPPED appears under the Drive State header, continue the procedure.

## Cleaning the optical sensors in a 14-in DDU (continued)

---

*At the front of the DDU shelf*

13



**WARNING**

**Possible equipment damage**

Make sure that the disk is not rotating before you attempt to lock the carriage and heads. If the disk is rotating, you will damage the locking mechanism.

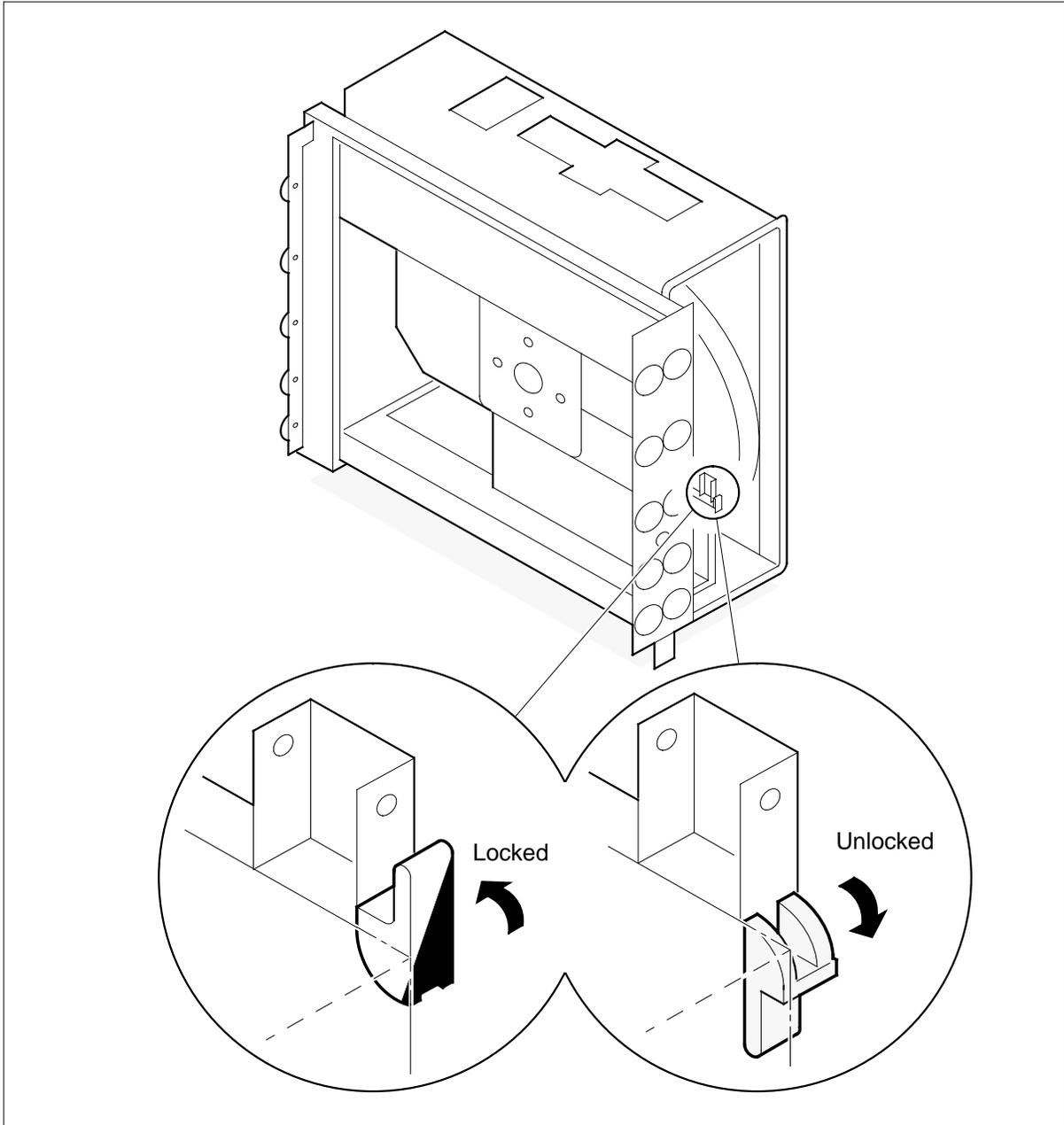
To locate the carriage and head locking levers of the DDU, refer to the following figure.

---

## Cleaning the optical sensors in a 14-in DDU (continued)

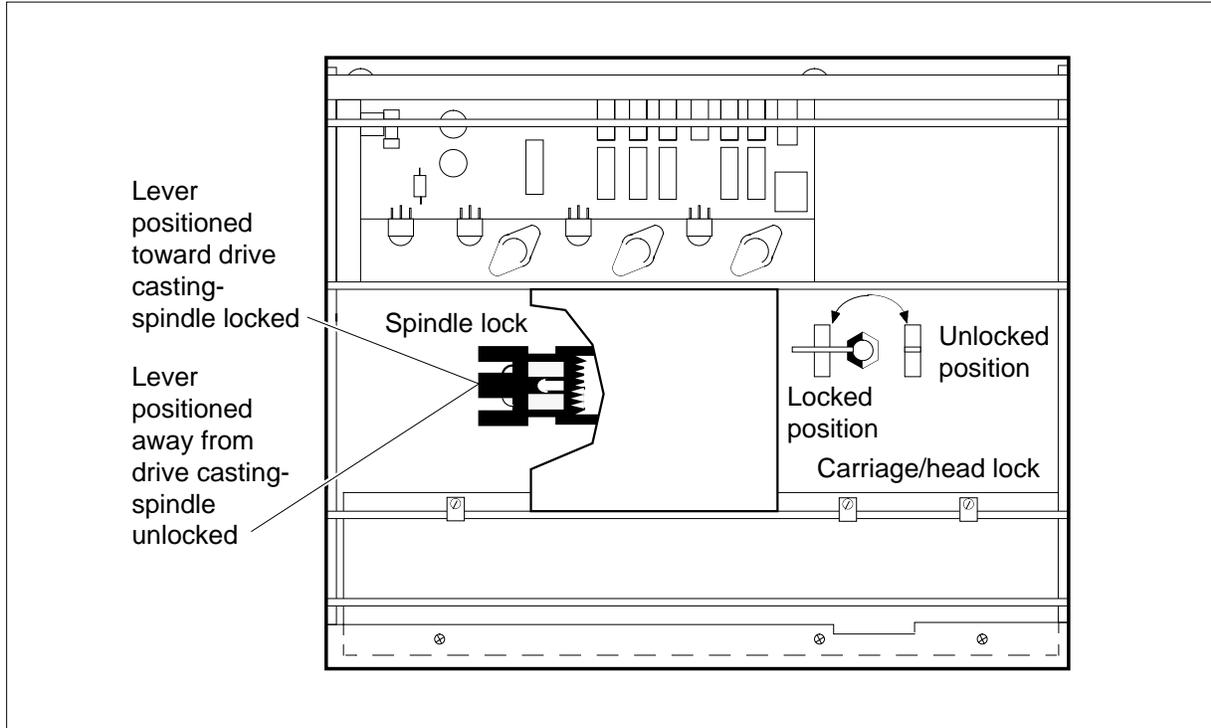
---

### Location of single level lock



## Cleaning the optical sensors in a 14-in DDU (continued)

### Location of head and spindle locks



Set the lever or levers so that you lock the carriage and heads.

14



#### **DANGER**

##### **Possible loss of data**

Lock the heads and the carriage. If you pull the DDU away from the frame and do not lock the heads and carriage, you can destroy the recording media and all the information on the disk.

This step requires two persons, one at the front of the frame and the other at the back.

The person at the front must pull the DDU away from the frame. The person at the back makes sure that the cables do not catch on the hardware in the frame.

---

**Cleaning the optical sensors in a 14-in DDU (continued)**

---

15

**DANGER****Risk of personal injury**

Make sure that the pressure of the compressed air is a maximum of 103.42 kPa (15 lbf/ft<sup>2</sup>). Wear safety glasses to avoid eye injury from flying particles. Use low pressure to avoid injury if the nozzle touches your skin.

**DANGER****Possible equipment damage**

Wear gloves when you perform this procedure. Do not touch the optical sensors with your hands or with a rag. Deposits from the rag or your hands can damage the sensors.

Use compressed air to blow the dust off the sensors on either side of the spindle on the bottom of the DDU.

**16** Insert and secure the screws that hold the front panel of the DDU to the frame.

17

**CAUTION****Possible loss of data**

Route the ribbon cable as shown in the following figure. If you do not route the cable as shown, you can lose data as a result of signal interference.

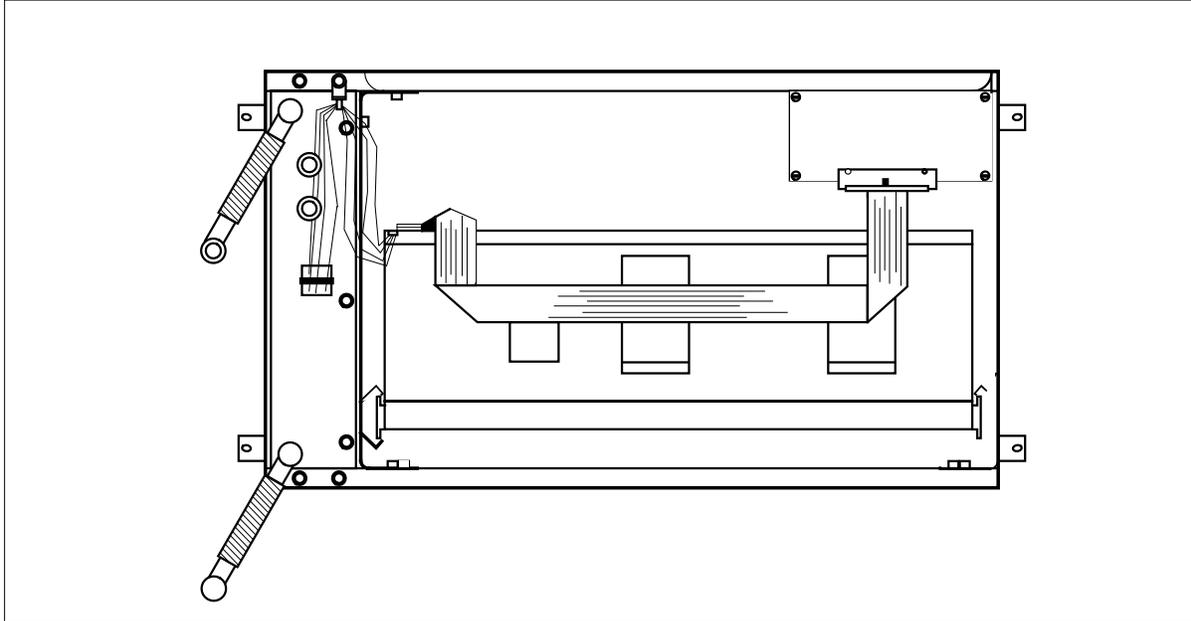
Route the ribbon cable as shown in the following figure.

---

## Cleaning the optical sensors in a 14-in DDU (continued)

---

### Position of the ribbon cable



- 18 Release the carriage and head-locking levers.
- 19 Insert the fuse that you removed from the FSP or MSP in step 9.
- 20 Use the following steps to turn on the power converter:
  - a. Press and hold the RESET button on the power converter.
  - b. Set the power switch on the converter to ON.
  - c. Release the RESET button.

#### ***At the Card level of the MAP terminal***

- 21 To start the disk drive motor, type  
>START  
and press the Enter key.  
*MAP response:*

DISK START SUCCESSFUL

- 22 To test the disk drive controller, type  
>TST  
and press the Enter key.

---

| <b>If the TST command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed                    | step 23   |
| failed                    | step 24   |

---

---

**Cleaning the optical sensors in a 14-in DDU (end)**

---

- 23** To return the disk drive unit to service, type  
>**RTS**  
and press the Enter key.

---

| <b>If the RTS command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed                    | step 25   |
| failed                    | step 24   |

---

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

## Cleaning the PCE frame filter (integrated and standalone)

---

### Application

Use this procedure to clean the position controller equipment (PCE) filters.

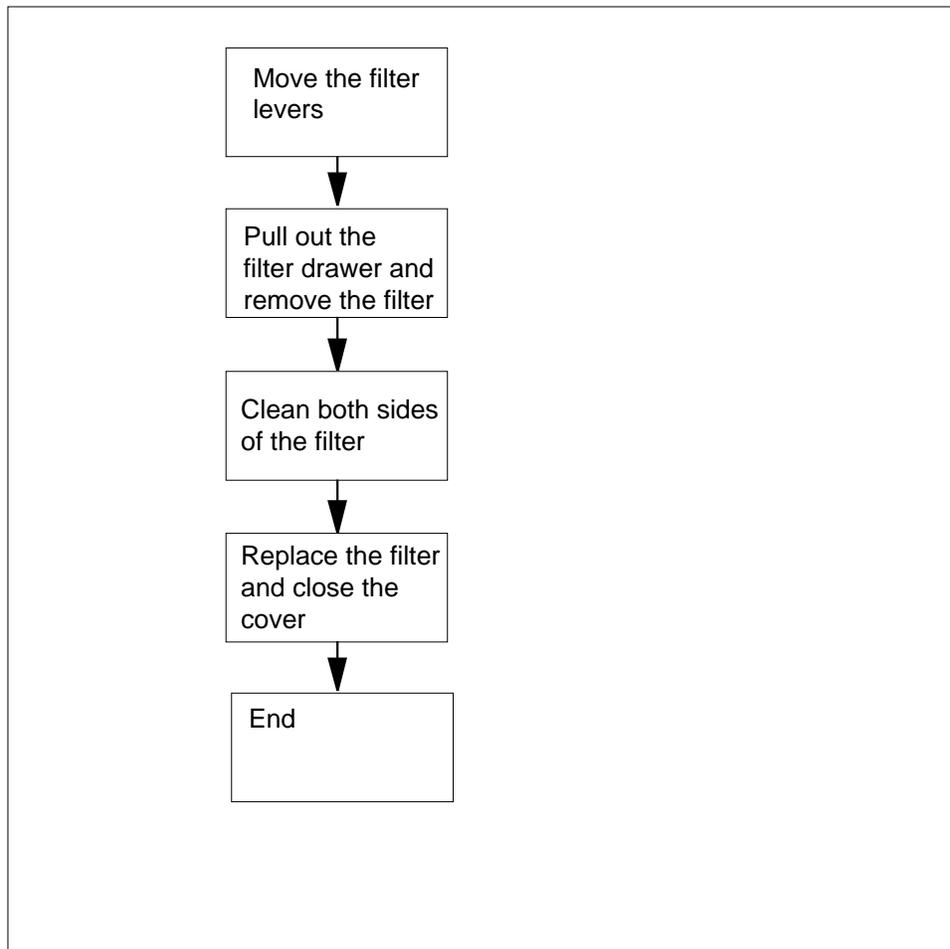
### Interval

Perform this procedure when the dust level of the PCE requires maintenance.

### Action

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

#### Summary of how to clean the PCE frame filter (integrated and standalone)

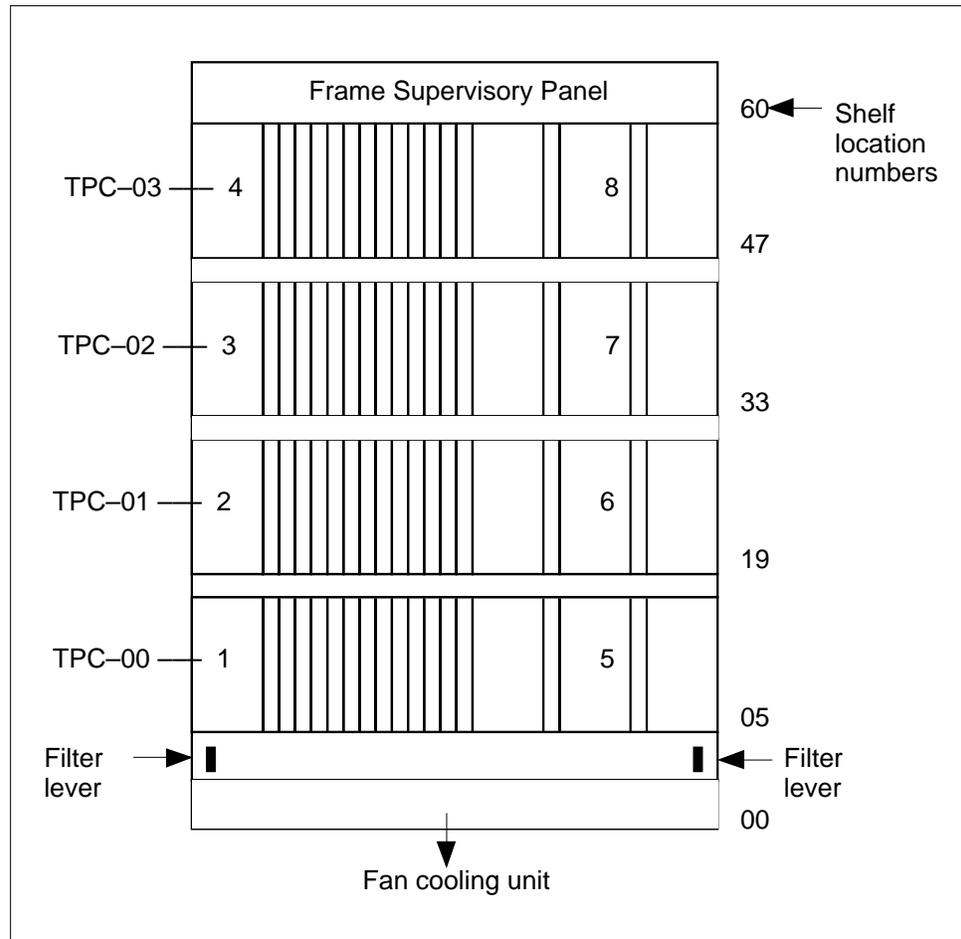


## Cleaning the PCE frame filter (integrated and standalone) (end)

### How to clean the PCE frame filter (integrated and standalone)

#### At the PCE

1 See the following figure to locate the filter levers at the bottom of the PCE.



- 2 Move the filter levers so the filter drawer cover opens.
- 3 Pull out the filter drawer and remove the filter.
- 4 Use compressed air to clean both sides of the filter.
- 5 Place the filter back into the filter drawer.
- 6 Close the filter drawer cover.
- 7 The procedure is complete.

## Cleaning the SLM tape drive heads in a DMS SuperNode

---

### Application

Use this procedure to clean the read/write head on a system load module (SLM) tape drive.

The SLM IIIs in SuperNode and SuperNode SE switches can have a unit that consists of the current Connor. This unit can also consist of the new Tandberg drive. The features are a result of sparing and field returns. You can identify the drives quickly; the new Tandberg drive has a tape door.

Use the recommended tape cartridge as follows:

- DC600 for SLM I tape drive
- DC6250 for SLM IA and II tape drives
- DC6525 for SLM III tape drive

Nortel customers that want to purchase the Tandberg Data cleaning cartridge A0677506 referred to in this procedure can order as follows:

- for Canada, call 1-800-668-1717
- for the United States, call 1-800-347-4850 option 2

### Interval

Perform this procedure after

- the first pass of a new tape cartridge
- each 8 hours of tape drive use

### Common procedures

Performance of this procedure requires reference to the following common procedures:

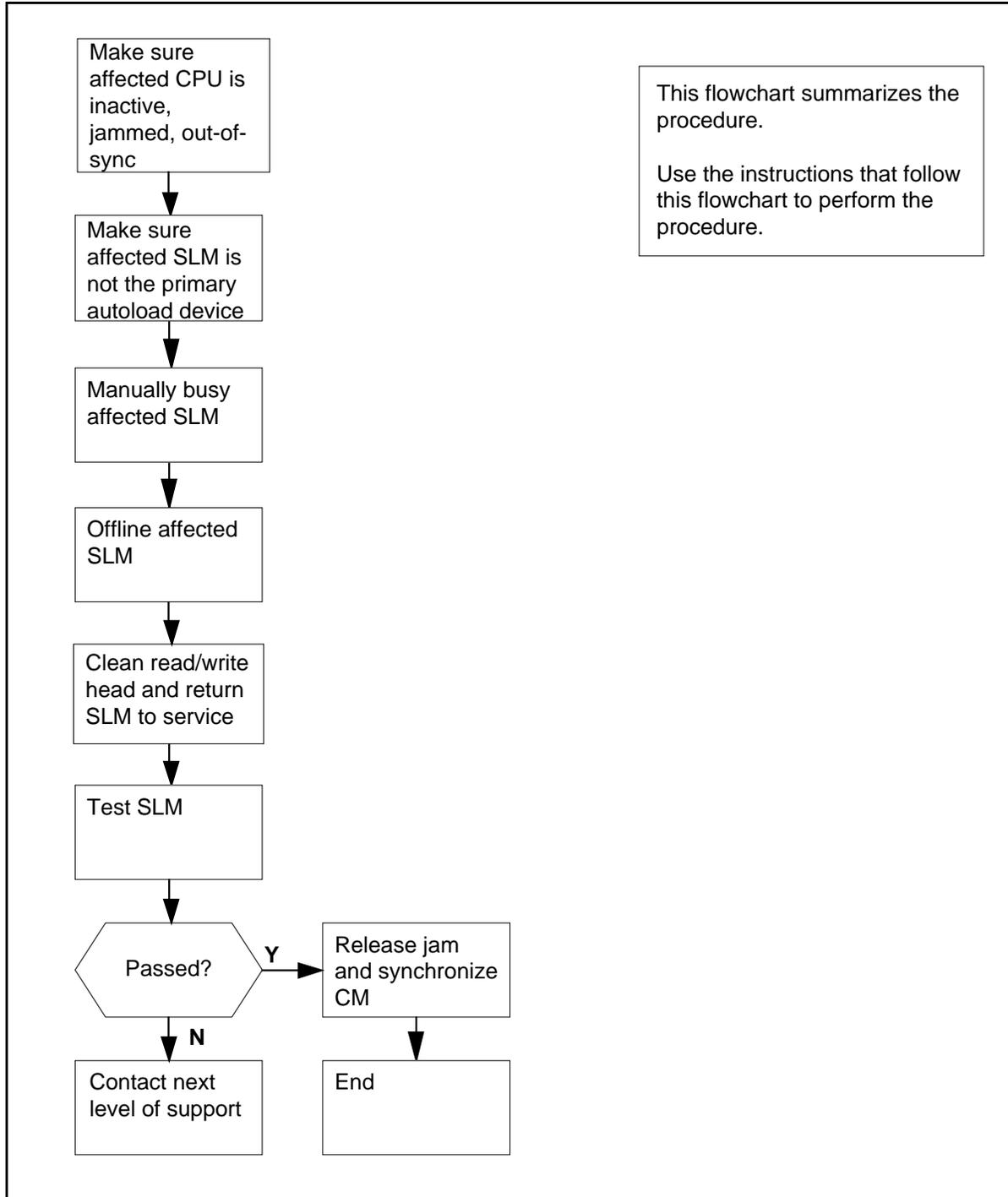
- "Activity switch with memory match" procedure in the *Alarm Clearing and Performance Monitoring Procedures*, 297-YYYY-543
- "Switching the clock source" procedure in the *Card Replacement Procedures*, 297-YYYY-547

### Action

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

## Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

### Summary of Cleaning the SLM tape drive heads in a DMS SuperNode



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## Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

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### Cleaning the SLM tape drive heads in a DMS SuperNode

#### *At your current location*

1



#### **CAUTION**

##### **Loss of data recording services**

This procedure removes the SLM from service. Before you begin, make sure that another device can assume the data recording services. The SLM that you remove from service provides the data recording services. Make sure that the other device has enough data storage capacity to assume the recording.

Obtain the following cleaning materials:

- isopropyl alcohol base head cleaning liquid
- a lint-free swab

or Tandberg Data dry process cleaning cartridge A0677506

#### *At the MAP terminal*

2 To access the CM level of the MAP display, type

```
>MAPCI ;MTC ;CM
```

and press the Enter key.

*Example of a MAP display:*

```
CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no cpu 1 .
. yes
```

3 Determine if the tape drive you want to clean is on the same side of the switch as the active or the inactive CPU.

**Note:** The name of the active CPU appears under the Act header of the MAP display. The SLM 1 tape drive is on the same side of the switch as the active CPU (CPU 1). This condition appears in the example in step 2,

---

| <b>If the tape drive is on the same side of the switch as the</b> | <b>Do</b> |
|-------------------------------------------------------------------|-----------|
| active CPU                                                        | step 11   |
| inactive CPU                                                      | step 4    |

---

---

**Cleaning the SLM tape drive heads in a DMS SuperNode** (continued)
 

---

4

**CAUTION****Loss of service**

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart will occur. The word Active on the top banner of the display identifies the reset terminal for the active CPU.

Determine if the inactive CPU is jammed.

**Note:** The word "yes" under the Jam header indicates that the CPU is jammed. The area remains blank if the CPU is not jammed. In the example in step 2, the inactive CPU is jammed.

| <b>If the inactive CPU is</b> | <b>Do</b> |
|-------------------------------|-----------|
| jammed                        | step 7    |
| not jammed                    | step 5    |

**At the CM reset terminal for the inactive CPU**

5 To jam the inactive CPU, type

```
>\JAM
```

and press the Enter key.

*RTIF response:*

Please Confirm (YES/NO)

6 To confirm the command, type

```
>YES
```

and press the Enter key.

*RTIF response:*

JAM DONE

**At the MAP terminal**

7 Determine if the CPUs are in sync.

**Note:** A dot or EccOn under the Sync header indicates that the CPUs are in sync. The word "no" indicates that the CPUs are not in sync. In the example in step 2, the CPUs are not in sync.

| <b>If the CPUs are</b> | <b>Do</b> |
|------------------------|-----------|
| in sync                | step 8    |
| not in sync            | step 12   |

---

## Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

---

- 8 To drop synchronization, type  
>DPSYNC  
and press the Enter key.

| If the response is                                                                                                                       | Do      |
|------------------------------------------------------------------------------------------------------------------------------------------|---------|
| About to drop sync with CPU n active. The inactive CPU is JAMMED.<br>Do you want to continue. Please confirm ("YES", "Y", "NO", OR "N"): | step 9  |
| Drop synchronization failed                                                                                                              | step 71 |
| Aborted. Active CPU n has a faulty processor clock.<br>other than listed here                                                            | step 71 |

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

*Example of a MAP response:*

Maintenance action submitted. Running in simplex mode with active CPU 0.

**At the CM reset terminal for the inactive CPU**

- 10 Wait until A1 flashes on the reset terminal for the inactive CPU.

**Note:** Allow 5 min for A1 to flash.

| If A1          | Do      |
|----------------|---------|
| flashes        | step 12 |
| does not flash | step 71 |

- 11 Perform the procedure "Activity switch with memory match" in the *Alarm Clearing and Performance Monitoring Procedures*. Complete the procedure and return to this point.

---

**Cleaning the SLM tape drive heads in a DMS SuperNode** (continued)
 

---

*At the MAP terminal*

12



**CAUTION**

**Possible loss of service**

Make sure that the CM runs on the clock of the active CPU. A cold restart or a system image reload occurs if you power down the inactive side of the CM. During this time the CM runs on the clock of the inactive CPU.

To determine if the CM runs on the clock of the active CPU, type

**>INSYNC**

and press the Enter key.

*Example of a MAP response:*

```

CPU pair is NOT insync, CPU 0 is active.
CM is running on active CPU clock.

```

```

Memory error correction is ENABLED

```

```

The Inactive CPU is jammed.

```

| <b>If the CM runs on the</b> | <b>Do</b> |
|------------------------------|-----------|
| inactive clock               | step 13   |
| active clock                 | step 14   |

**13** Perform the procedure "Switching the clock source" in the *Card Replacement Procedures*. Complete the procedure and return to this point.

**14** To access the CMMNT level of the MAP display, type

**>CMMNT**

and press the Enter key.

*Example of a MAP response:*

---

## Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

---

```

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC
0 . cpu 0

Traps: Per minute = 0 Total = 5

AutoLdev: Primary = SLM 0 DISK Secondary = SLM 1 DISK

Image Restartable = No image test since last restart

Next image test restart type = RELOAD

Last CM REXTST executed

System memory in kbytes as of 14:39:07
Memory (kbytes): Used = 105984 Avail = 12800 Total=118784

```

- 15** Determine from the MAP display which device is the primary autoload device.  
**Note:** In the example in step 14, the primary autoload device is the disk of SLM 0.
- 16** Determine if the tape drive you are cleaning is in the primary or secondary SLM.

---

**If the tape drive you are cleaning is in the**      **Do**

---

|               |         |
|---------------|---------|
| primary SLM   | step 17 |
| secondary SLM | step 18 |

---

- 17** To change the autoload device to a device in the other SLM, type  
**>AUTOLD SLM slm\_number device\_type**  
 and press the Enter key.  
*where*
- slm\_number**  
 is the number of the SLM (0 or 1) that does not contain the primary autoload device
- device\_type**  
 is the SLM device type (DISK or TAPE)
- MAP response:*  
 New autold route has been set.
- 18** To access the SLM you are servicing, type  
**>IOD;SLM slm\_number**  
 and press the Enter key.  
*where*

---

## Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

---

- slm\_number**  
is the number of the SLM (0 or 1) that contains the tape drive you are cleaning
- 19** To manually busy the SLM you are servicing, type  
**>BSY**  
and press the Enter key.  
*Example of a MAP response:*  
SLM 0 busy passed.
- Note:** The letter M on the right side of the SLM Stat header indicates that the associated SLM is manual busy.
- 20** To access the PMC level of the MAP display, type  
**>CM;PMC**  
and press the Enter key.  
*Example of a MAP display:*
- ```
CM 0
      PMC 0
      .

PORT0:  pbsy
PORT1:  .
```
- 21** To manually busy the port that corresponds to the SLM you are servicing, type
>BSY pmc_number PORT port_number
and press the Enter key.
where
- pmc_number**
is the number of the affected PMC (0 or 1)
- port_number**
is the number of the port (0 or 1) that corresponds to the SLM you are servicing
- MAP response:*
Maintenance action submitted.Passed.
- 22** To access the SLM you are servicing, type
>IOD;SLM slm_number
and press the Enter key.
where
- slm_number**
is the number of the SLM (0 or 1) you are servicing
- 23** To offline the SLM you are servicing, type
>OFFL
and press the Enter key.

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

MAP terminal response:

WARNING: The link to SLM 0 is out service. Setting this SLM offline is not safe enough for its drives. The 12-volt converter power card has to be turned off manually before attempting to remove the SLM unit. Please confirm ("YES", "Y", "NO", or "N"):

24 To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

SLM 0 now offline. Do not remove SLM card until disk drive is spun down! This will be indicated when the SLM card light turns off.

If the head cleaning method is	Do
manual	step 25
automatic (Tandberg tape)	step 26

At the SLM shelf

25



WARNING

Static electricity damage

Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle circuit cards. The wrist strap protects the cards against static electricity damage.

To power down the appropriate SLM plane: power down the two power converter cards, NT9X47 and NT9X30. Press and release the power switches on the faceplates of both converter cards at the same time.

Note: For CPU 0, the NT9X47 is in slots 1F through 3F and the NT9X30 is in slots 4F through 6F. For CPU 1, the NT9X47 is in slots 33F through 35F. The NT9X30 is in slots 36F through 38F for CPU 1.

26 Determine if a tape cartridge is present in the SLM.

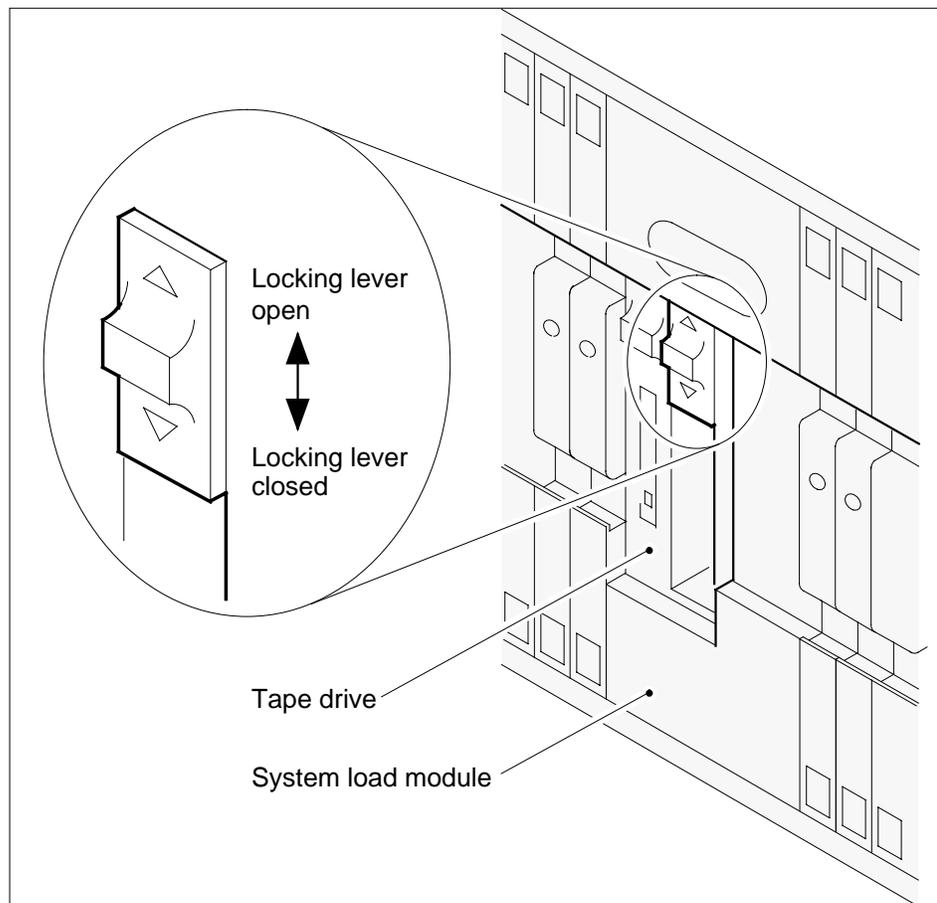
If a tape cartridge is	Do
present (Connor drive)	step 27

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

If a tape cartridge is	Do
present (Tandberg drive)	step 29
not present (Connor drive)	step 31
not present (Tandberg drive)	step 44

27 To release the tape cartridge, press the locking lever up.

Note: The locking lever is at the top of the opening in the tape drive. When the tape cartridge releases, the cartridge will eject part way from the tape drive.



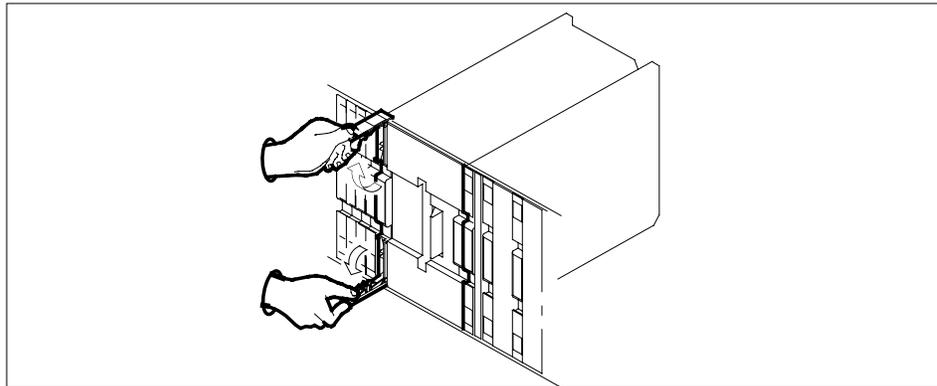
28 To withdraw the tape cartridge, pull the cartridge straight out from the tape drive.

If the cleaning method is	Do
manual (Connor drive)	step 31

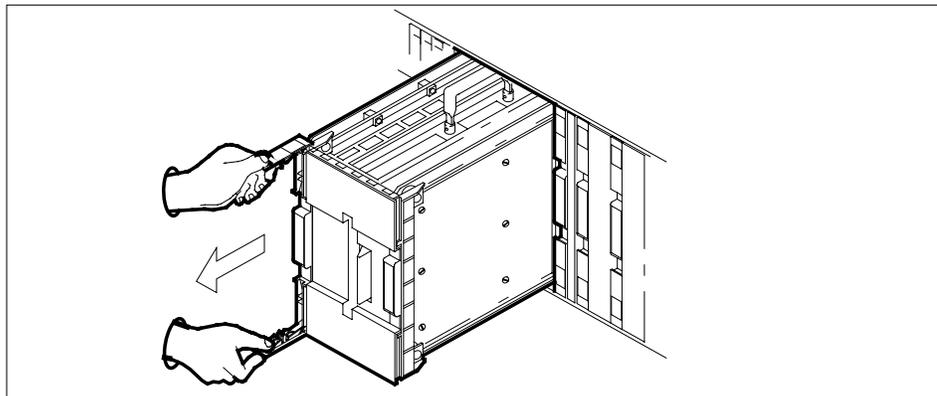
Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

- | | If the cleaning method is | Do |
|--|----------------------------------|-----------|
| | tape cartridge (Connor drive) | step 44 |
- 29** Push on the Tandberg drive door button to open the door. Push the button to release the tape cartridge.
To withdraw the tape cartridge, pull the cartridge straight out from the drive unit.
Go to step 44.
- 30** Determine how you clean the SLM tape drive heads.

- | | If you clean the SLM | Do |
|--|------------------------------------|----------------|
| | by removing the SLM from the shelf | steps 31 to 43 |
| | while the SLM is in the shelf | steps 35 to 37 |
- 31** Pull open the locking levers on the SLM until the levers are horizontal.



- 32** Slowly pull the SLM toward you until the locking latch at the back prevents the SLM from clearing the shelf.



Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

- 33 Close the locking levers on the SLM faceplate.
- 34 Grasp the carrying handle. Press the locking latch with your thumb while you slide the SLM from the shelf.
- 35 Apply an isopropyl alcohol base head cleaning liquid to a clean, lint-free swab.
- 36 Wipe the read/write head with the moistened swab. Do not touch parts near the read/write head.
 - Note 1:** On the NT9X44AA, the read/write head is at the back of the tape drive opening.
 - Note 2:** On the NT9X44AB and AD, the read/write head is at the top of the tape drive opening. For easier access to the read/write head, turn the NT9X44AB and AD upside down. Push the locking lever to the lock position.
- 37 Wipe all the cleaning liquid from the read/write head with a clean, dry swab.
 - Note:** If you are cleaning the SLM while the SLM is in the shelf, go to step 43.
- 38 Pull open the locking levers on the SLM until the levers are horizontal.

At the SLM shelf

- 39 Use your free hand to support and align the SLM with the slots in the shelf. Carefully slide the SLM into the shelf until the locking latch at the back of the SLM engages the shelf. Do not use more force than needed.
- 40 Slide the SLM the rest of the way into the shelf.
- 41 Use your fingers or thumbs to push on the upper and lower edges of the faceplate. Make sure that the SLM sits completely in the shelf.
- 42 Close the locking levers on the SLM.
- 43 Switch on the two power converter cards, NT9X47 and NT9X30 to power up the two power converter cards. Lift and release the power switches on the faceplates of both converter cards at the same time.
 - Note:** For CPU 0, the NT9X47 is in slots 1F through 3F and the NT9X30 is in slots 4F through 6F. For CPU 1, the NT9X47 is in slots 33F through 35F and the NT9X30 is in slots 36F through 38F.

Go to step 49.
- 44 Open the Tandberg 1/4 in cleaning cartridge box and remove the instruction book. Apply the liquid as the instruction book indicates.

If the drive is	Do
Connor	step 45
Tandberg	step 47

- 45 Insert the cleaning cartridge in the Connor drive. When you insert the tape completely in the drive, the tape operates automatically. Allow a 20 s cleaning cycle.
- 46 To release the cleaning cartridge in the Connor drive, press the drive locking lever up.

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

Go the step 49.

- 47** Insert the cleaning cartridge into the Tandberg drive and close the drive door. When you insert the tape completely and close the door, the tape will operate automatically.

Allow a 20 s cleaning cycle.

- 48** Push the Tandberg drive door button to open the door. Push the button to release the cleaning cartridge.

To withdraw the cartridge, pull the cartridge straight out from the drive unit.

Go to step 51.

49



DANGER

Tape damage

Allow 5 min for the tape drive to dry before you insert a tape cartridge.

Insert a blank tape into the SLM tape drive.

Note: Insert tape cartridges with the metal plate to the left and the tape access opening facing up.

- 50** To lock the tape in place, press down on the locking lever.

Go to step 52.

51



DANGER

Tape damage

Allow 5 min for the tape drive to dry before you insert a tape cartridge.

Insert a blank tape cartridge in the Tandberg drive and close the drive door.

Note: Insert tape cartridges with the read/write tape facing the bottom of the drive. Correct tape position appears in a diagram inside the door.

At the MAP terminal

- 52** To access the PMC level of the MAP display, type

>CM;PMC

and press the Enter key.

Example of a MAP display:

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

```
CM 0
      PMC 0
      istb
```

```
PORT0: mbsy
PORT1: .
```

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

```
>RTS pmc_number PORT port_number
```

and press the Enter key.

where

pmc_number

is the number of the PMC (0 or 1)

port_number

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

Example of a MAP response:

Maintenance action submitted.Passed.

If the RTS command	Do
passed	step 54
failed	step 71

- 54** To access the serviced SLM, type

```
>IOD;SLM slm_number
```

and press the Enter key.

where

slm_number

is the number of the SLM (0 or 1) that contains the tape drive you cleaned

- 55** To manually busy the serviced SLM, type

```
>BSY
```

and press the Enter key.

If the BSY command	Do
passed	step 56
failed	step 71

- 56** To test the manual busy SLM, type

```
>TST ALL
```

and press the Enter key.

Example of a MAP response:

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

The tape test will write on the tape media.
 It is recommended to insert a scratch tape, otherwise
 data on the current tape may be destroyed. Are you ready
 to continue?
 Please confirm ("YES", "Y", "NO", or "N"):

- 57** To confirm the command, type

>YES

and press the Enter key.

If the TST command	Do
passed	step 58
failed	step 71

- 58** Determine if you removed a tape from the SLM before you cleaned the tape heads.

If you	Do
removed a tape (Connor drive)	step 59
removed a tape (Tandberg drive)	step 62
did not remove a tape	step 64

- 59** To remove the blank tape, press the locking lever and pull the tape cartridge straight out.

- 60** Insert the tape cartridge that you removed in step 28 into the SLM tape drive.

- 61** To lock the tape cartridge in place, press the locking lever down.
 Go to step 64.

- 62** Push on the Tandberg drive door button to open the door. To release the blank tape, continue to push on the button.

To withdraw the cartridge, pull the cartridge straight out from the drive unit.

- 63** Insert the tape cartridge you removed in step 29 into the tape drive. Close the drive door.

- 64** To return the manual busy SLM to service, type

>RTS

and press the Enter key.

Example of a MAP response:
 SLM 0 return to service passed.

Cleaning the SLM tape drive heads in a DMS SuperNode (continued)

65 Determine if a tape cartridge was present in the SLM in step 26.

If a tape cartridge was	Do
present	step 68
not present (Connor drive)	step 66
not present (Tandberg drive)	step 67

66 To remove the blank tape, press the locking lever up and pull the tape cartridge straight out.

Go to step 68.

67 Push on the Tandberg drive door button to open the door. To release the blank tape, continue to push the button. To withdraw the cartridge, pull the cartridge straight out from the drive unit.

At the CM reset terminal for the inactive CPU

68 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

69 To synchronize the CM, type

>CM;SYNC

and press the Enter key.

Example of a MAP response:

Maintenance action submitted.Synchronization successful.

If the response indicates	Do
the SYNC command was successful	step 72
the SYNC command failed	step 71
Inactive CPU configuration does not support burst mode operation.	step 71
Burst mode operation will now be disabled as it is not supported by both CPUs. Current high call processing utilization indicates that disabling burst mode operation may result in raising call processing utilization to a point where CALL ORIGINATION FAILURES MAY OCCUR.	step 71

Cleaning the SLM tape drive heads in a DMS SuperNode (end)

	If the response indicates	Do
	The CPUs are out of sync due to a problem with mismatches. The mismatch logs should be analyzed before re-syncing. Do you wish to continue? Please confirm ("YES", "Y", or "NO", "N")(SuperNode/SuperNode SE Series 70 only)	step 70
	other than listed here	step 71
70	(SN/SNSE Series 70 only) To deny the action, type >NO and press the Enter key. Go to step 71.	
71	For additional help, contact the next level of support.	
72	The procedure is complete.	

Cleaning the SLM tape drive heads in a DMS SuperNode SE

Application

Use this procedure to clean the read/write head on a system load module (SLM) tape drive.

The SLM IIIs in SuperNode and SuperNode SE switches can combine the current Connor and the new Tandberg drive. The switches can combine the drives as a result of sparing and field returns. You can identify the drives because the new Tandberg drive has a tape door.

Use the recommended tape cartridge as follows:

- DC600 for SLM I tape drive
- DC6250 for SLM IA and II tape drives
- DC6525 for SLM III tape drives

Northern Telecom customers can purchase the Tandberg Data cleaning cartridge (Nortel part number A0677506) referred to in this procedure as follows:

- for Canada, phone 1-800-668-1717
- for the United States, phone 1-800-347-4850 option 2

Interval

Perform this procedure after:

- the first pass of a new tape cartridge
- each 8 hours of tape drive use

Common procedures

Performance of this procedure requires reference to the following common procedures:

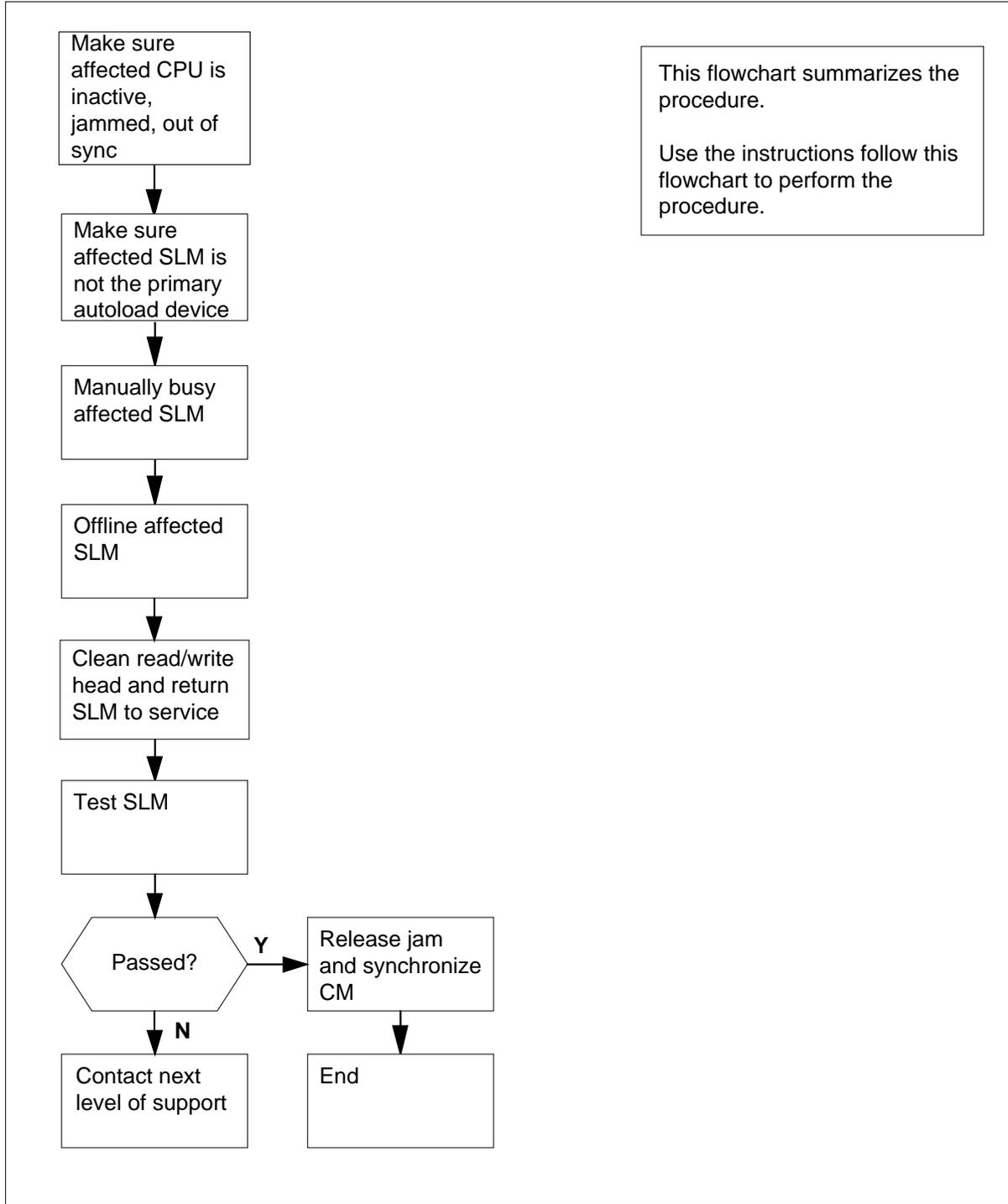
- "Activity switch with memory match" procedure in the *Alarm Clearing and Performance Monitoring Procedures*, 297-YYYY-543
- "Switching the clock source" procedure in the *Card Replacement Procedures*, 297-YYYY-547

Action

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

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

Summary of Cleaning SLM tape drive heads in a DMS SuperNode SE



Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

Cleaning SLM tape drive heads in a DMS SuperNode SE

At your current location

1



CAUTION

Loss of data recording services

This procedure removes the SLM from service. Before you attempt this procedure, make sure that another device assumes the data recording services of the SLM that you remove from service. Make sure that the other device has the data storage capacity to assume the recording.

Obtain the following cleaning materials:

- isopropyl alcohol-base head cleaning liquid
- a lint-free swab

or Tandberg Data dry process cleaning cartridge A0677506

At the MAP terminal

2 To access the CM level of the MAP display, type

>MAPCI ;MTC ;CM

and press the Enter key.

Example of a MAP display

```
CM  Sync  Act  CPU0  CPU1  Jam  Memory  CMMnt  MC  PMC
0   no   cpu 1   .     .   yes   .     .   .
```

3 Determine which side of the switch the tape drive is on. The tape drive that you will clean can be on the same side as the active CPU or the inactive CPU.

Note: The Act header of the MAP display identifies the active CPU. In step 2, the tape drive is in SLM 1 on the same side of the switch as the active CPU (CPU 1).

If the tape drive is on the same side of the switch as the	Do
active CPU	step 11
inactive CPU	step 4

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

4



CAUTION

Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is out of sync, a cold restart occurs. The word Active on the top banner of the display identifies the reset terminal for the active CPU.

Determine if the inactive CPU is jammed.

Note: The word "yes" under the Jam header indicates a jammed CPU. If the CPU is not jammed, the area is blank. Step 2 shows a jammed, inactive CPU.

If the inactive CPU is	Do
jammed	step 7
not jammed	step 5

At the CM reset terminal for the inactive CPU

5 To jam the inactive CPU, type

>\JAM

and press the Enter key.

RTIF response

Please Confirm (YES/NO)

6 To confirm the command, type

>YES

and press the Enter key.

RTIF response

JAM DONE

At the MAP terminal

7 Determine if the CPUs are in sync.

Note: A dot or EccOn display under the Sync header indicates that the CPUs are in sync. The word "no" indicates that the CPUs are not in sync. In step 2, the CPUs are not in sync.

If the CPUs are	Do
in sync	step 8
not in sync	step12

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 8** To drop synchronization, type
`>DPSYNC`
 and press the Enter key.

If the response is	Do
About to drop sync with CPU n active. The inactive CPU is Jammed. Do you want to continue. Please confirm ("YES", "Y", "NO", OR "N"):	step 9
Drop synchronization failed	step 76
Aborted. Active CPU n has a faulty processor clock.	step 76
other than listed here	step 76

- 9** To confirm the command, type
`>YES`
 and press the Enter key.
Example of a MAP response

```
Maintenance action submitted.
Running in simplex mode with active CPU 0.
```

At the CM reset terminal for the inactive CPU

- 10** Wait until A1 flashes on the reset terminal for the inactive CPU.
Note: Allow 5 min for A1 to begin to flash.

If A1	Do
flashes	step 12
does not flash	step 76

- 11** Perform the procedure "Activity switch with memory match" in the *Alarm Clearing and Performance Monitoring Procedures* and return to this point.

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

At the MAP terminal

12



CAUTION

Loss of service

Make sure that the CM runs on the clock of the active CPU. A cold restart or a system image reload occurs if you power down the inactive side of the CM. During this time, the CM runs on the clock of the inactive CPU.

To determine if the CM runs on the clock of the active CPU, type

>INSYNC

and press the Enter key.

Example of a MAP response

```
CPU pair is NOT insync, CPU 0 is active.  
CM is running on active CPU clock.
```

```
Memory Error Correction is ENABLED.
```

```
The Inactive CPU IS jammed.
```

If the CM runs on the	Do
inactive clock	step 13
active clock	step 14

13 Perform the procedure "Switching the clock source" in the *Card Replacement Procedures* and return to this point.

14 To access the CMMNT level of the MAP display, type

>CMMNT

and press the Enter key.

Example of a MAP display

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

slm_number

is the number of the SLM (0 or 1) that contains the tape drive you are cleaning

- 19 To manually busy the SLM, type

>BSY

and press the Enter key.

Example of a MAP response

SLM 0 busy passed.

Note: The letter M on the right of the SLM Stat header means that the associated SLM is manual busy.

- 20 To access the PMC level of the MAP display, type

>CM;PMC

and press the Enter key.

Example of a MAP display

```
CM 0
      PMC 0
```

```
.
```

```
PORT0: pbsy
```

```
PORT1: .
```

- 21 To manually busy the port that corresponds to the SLM, type

>BSY **pmc_number** PORT **port_number**

and press the Enter key.

where

pmc_number

is the number of the affected PMC (0 or 1)

port_number

is the number of the port (0 or 1) that corresponds to the SLM you are servicing

Example of a MAP response

```
Maintenance action submitted.
```

```
Passed.
```

- 22 To access the MC level of the MAP display, type

>MC

and press the Enter key.

Example of a MAP display

```
MC 0    MC 1
```

```
.      mbsy
```

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

23



CAUTION
Possible loss of service
 Make sure that you busy the MC that corresponds to the inactive CPU. If you power down the plane with the active MC that is busy, a warm restart occurs.

Determine if the message controller (MC) that corresponds to the inactive CPU is manual busy.

Note: In the MAP display in step 22, the MC that corresponds to the inactive CPU (MC 1) is manual busy.

If the MC is	Do
manual busy	step 25
not manual busy	step 24

24

To manually busy the MC that corresponds to the inactive CPU, type

```
>BSY mc_number
```

and press the Enter key.

where

mc_number

is the number of the MC (0 or 1) that corresponds to the inactive CPU

Example of a MAP response

```
Maintenance action submitted.  
MC busied OK.
```

If the BSY command	Do
passed	step 25
failed	step 76

25

To access the SLM, type

```
>IOD;SLM slm_number
```

and press the Enter key.

where

slm_number

is the number of the SLM (0 or 1) you are servicing

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 26 To offline the SLM, type
>**OFFL**
and press the Enter key.
MAP response

WARNING: The link to SLM 0 is out service. Setting this SLM offline is not safe enough for its drives. The 12-volt converter power card has to be turned off manually before attempting to remove the SLM unit. Please confirm ("YES", "Y", "NO" or "N"):

- 27 To confirm the command, type
>**YES**
and press the Enter key.
Example of a MAP response

SLM 0 now offline. Do not remove SLM card until disk drive is spun down! This will be indicated when the SLM card light turns off.

If the head cleaning method is	Do
manual	step 28
automatic (Tandberg tape)	step 29

At the SLM shelf

28



WARNING

Static electricity damage

Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle circuit cards. The wrist strap protects the cards against static electricity damage.

Power down the correct SLM plane. To switch off the power converter cards, NT9X91 and NT9X15, press down and release the power switches at the same time. The power switches are on the faceplates of both converter cards.

Note: The NT9X91 is in slots 1F through 3F for CPU 0 and slots 36F through 38F for CPU 1. The NT9X15 is in slots 4F through 6F for CPU 0 and slots 33F through 35F for CPU 1.

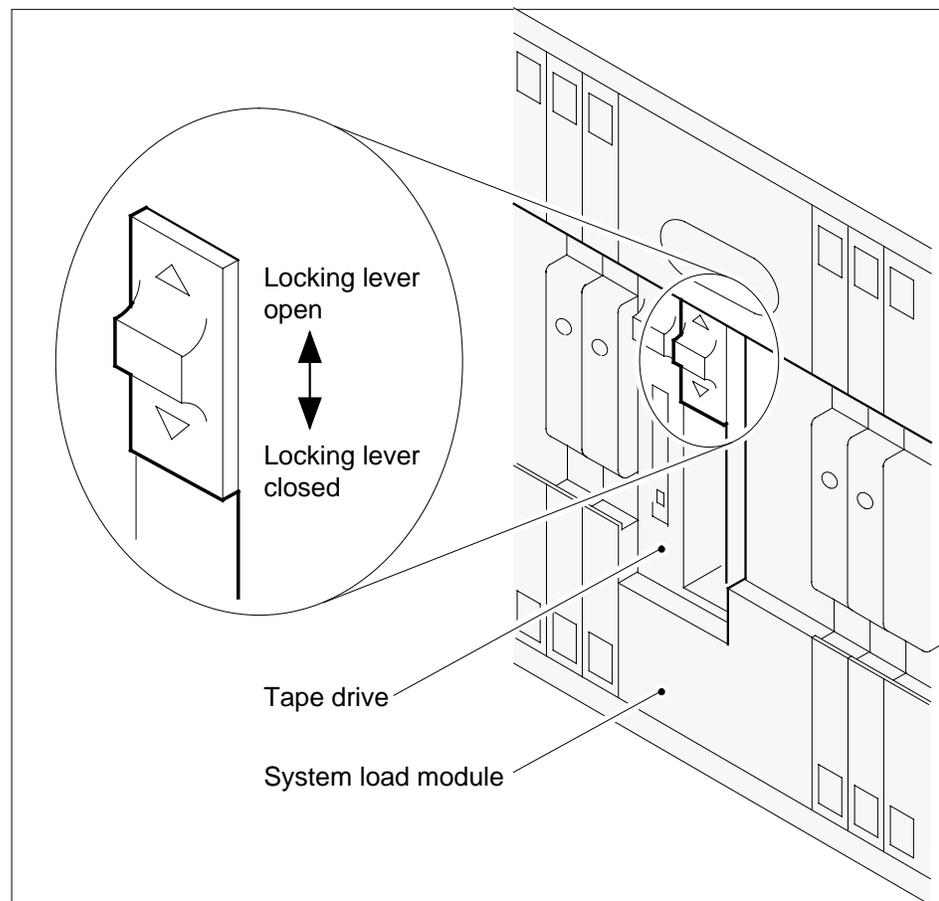
Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 29 Determine if a tape cartridge is present in the SLM.

If a tape cartridge is	Do
present (Connor drive)	step 30
present (Tandberg drive)	step 32
not present (Connor drive)	step 34
not present (Tandberg drive)	step 47

- 30 To release the tape cartridge, press up on the locking lever.

Note: The locking lever is at the top of the opening in the tape drive. When you release the tape cartridge, the cartridge ejects part way from the tape drive.



Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 31 To withdraw the tape cartridge, pull the cartridge out of the tape drive.

IfThe cleaning method is	Do
manual (Connor drive)	step 34
tape cartridge (Connor drive)	step 47

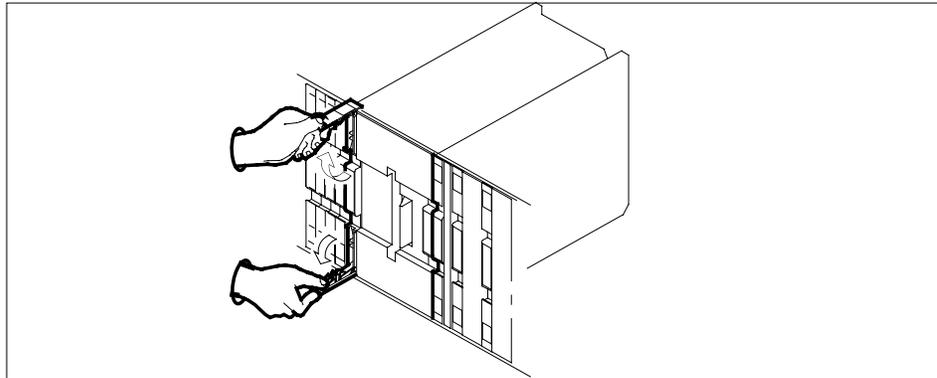
- 32 To open the door, push on the Tandberg drive door. To release the tape cartridge, continue to push on the button.

To withdraw the tape cartridge, pull the cartridge out of the drive unit.
Go to step 47.

- 33 Determine how you clean the SLM tape drive heads.

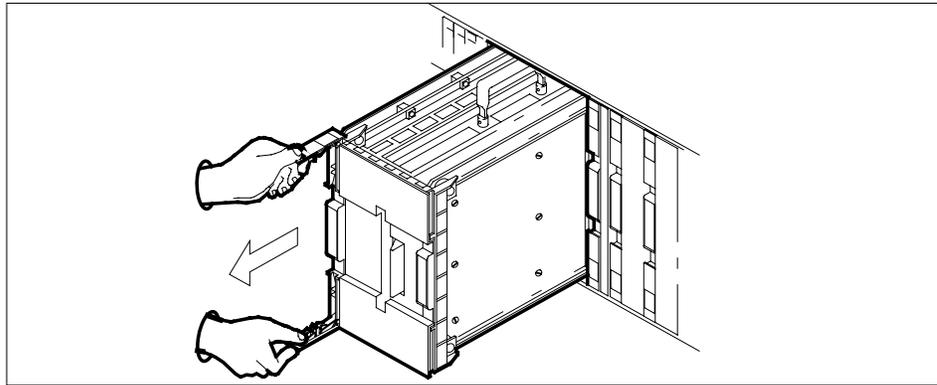
If you clean the SLM	Do
by removing the SLM from the shelf	steps 34 to 46
while the SLM is in the shelf	steps 38 to 40

- 34 Pull open the locking levers on the SLM until the levers are horizontal.



- 35 Slowly pull the SLM toward you until the locking latch at the back prevents the SLM from clearing the shelf.

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)



- 36 Close the locking levers on the SLM faceplate.
- 37 Grasp the carrying handle. Use your thumb to press the locking latch while you slide the SLM from the shelf.
- 38 Apply an isopropyl alcohol-base head cleaning liquid to a clean, lint-free swab.
- 39 Wipe the read/write head with the moistened swab. Do not touch the parts that are near the read/write head.
- Note 1:** On the NT9X44AA, the read/write head is at the back of the tape drive opening.
- Note 2:** On the NT9X44AB and AD, the read/write head is at the top of the tape drive opening. For easier access to the read/write head, turn the NT9X44AB and AD upside down. Push the locking lever to the lock position.
- 40 Wipe all the cleaning liquid from the read/write head with a clean, dry swab.
- Note:** If you are cleaning the SLM while the SLM is in the shelf, go to step 46.
- 41 Pull open the locking levers on the SLM until they are horizontal.

At the SLM shelf

- 42 Use your free hand to support and align the SLM with the slots in the shelf. Carefully slide the SLM into the shelf until the locking latch at the back of the SLM engages the shelf. Do not use force.
- 43 Slide the SLM the rest of the way into the shelf.
- 44 Use your fingers or thumbs to push on the upper and lower edges of the faceplate. This procedure makes sure that the SLM sits completely in the shelf.
- 45 Close the locking levers on the SLM.

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 46** To power up the power converter cards, NT9X91 and NT9X15, lift and release the power switches at the same time. The power switches are on the faceplates of both converter cards.

Note: The NT9X91 is in slots 1F through 3F for CPU 0 and slots 36F through 38F for CPU 1. The NT9X15 is in slots 4F through 6F for CPU 0 and slots 33F through 35F for CPU 1.

Go to step 52.

- 47** Open the Tandberg 1/4 in cleaning cartridge and remove the instruction pamphlet. Apply the liquid according to the instruction pamphlet.

If the drive is	Do
Connor	step 48
Tandberg	step 50

- 48** Insert the cleaning cartridge in the Connor drive. If you insert the tape completely, the drive operates automatically.

Allow a 20 s cleaning cycle.

- 49** To release the cleaning cartridge in the Connor drive, press up on the drive locating lever.

Go to step 52.

- 50** Insert the cleaning cartridge into the Tandberg drive and close the drive door. If you insert the tape completely and close the door, the drive operates automatically.

Allow a 20 s cleaning cycle.

- 51** To open the door, push on the Tandberg drive door button. To release the cleaning cartridge, continue to push on the button.

To withdraw the cartridge, pull the cartridge out of the drive unit.

Go to step 54.

52



DANGER

Tape damage

Allow 5 min for the tape drive to dry before you insert a tape cartridge.

Insert a blank tape into the Connor tape drive.

Note: Insert a tape cartridge with the metal plate on the left. Make sure that the tape access opening faces up.

- 53** To lock the tape in place, press down on the locking lever.

Go to step 55.

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

54



DANGER
Tape damage
 Allow 5 min for the tape drive to dry before you insert a tape cartridge.

Insert a blank tape into the Tandberg tape drive.

Note: Make sure the read and write tape of the cartridge faces the bottom of the drive. A diagram inside the drive door shows the correct tape position.

At the MAP terminal

55 To access the PMC level of the MAP display, type

`>CM;PMC`

and press the Enter key.

Example of a MAP display

```
CM 0
      PMC 0
      istb
```

```
PORT0: mbsy
PORT1: .
```

56 To return the manual busy PMC port to service, type

`>RTS pmc_number PORT port_number`

and press the Enter key.

where

pmc_number

is the number of the PMC (0 or 1)

port_number

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

Example of a MAP response

Maintenance action submitted.Passed.

If the RTS command	Do
passed	step 57
failed	step 76

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

- 57 To access the serviced SLM, type
`>IOD;SLM slm_number`
 and press the Enter key.
where
 slm_number
 is the number of the SLM (0 or 1) that contains the tape drive you
 cleaned

- 58 To manually busy the serviced SLM, type
`>BSY`
 and press the Enter key.

If the BSY command	Do
passed	step 59
failed	step 76

- 59 To test the manual busy SLM, type
`>TST ALL`
 and press the Enter key.
Example of a MAP response

The tape test will write on the tape media.
 It is recommended to insert a scratch tape, otherwise
 data on the current tape may be destroyed. Are you ready
 to continue?
 Please confirm ("YES", "Y", "NO" or "N"):

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

If the TST command	Do
passed	step 61
failed	step 76

- 61 Determine if you removed a tape from the SLM before you cleaned the tape heads.

If you	Do
removed a tape (Connor drive)	step 62
removed a tape (Tandberg drive)	step 64

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

	If you	Do
	did not remove a tape	step 67
62	To remove the blank tape, press up on the locking lever and pull the tape cartridge out.	
63	Insert the tape cartridge that you removed in step 31 into the SLM tape drive.	
64	To lock the tape cartridge in place, press down on the locking lever. Go to step 67.	
65	To open the door, push on the Tandberg drive door button. To release the blank tape, continue to push on the button. To withdraw the cartridge, pull the cartridge out of the drive unit.	
66	Insert the tape cartridge that you removed in step 32 into the drive unit. Close the drive door.	
67	To return the manual busy SLM to service, type >RTS and press the Enter key. <i>Example of a MAP response</i> SLM 0 return to service passed.	
68	Determine if a tape cartridge was present in the SLM in step 29.	
	If a tape cartridge was	Do
	present	step 71
	not present (Connor drive)	step 69
	not present (Tandberg drive)	step 70
69	To remove the blank tape, press up on the locking lever and pull the tape cartridge out of the SLM tape drive. Go to step 71.	
70	To open the door, push on the Tandberg drive door button. To release the blank tape, continue to push on the button. To withdraw the cartridge, pull the cartridge out of the drive door.	
71	To access the MC level of the MAP display, type >CM;MC and press the Enter key.	
72	To return the manual busy MC to service, type >RTS mc_number and press the Enter key. <i>where</i>	

Cleaning the SLM tape drive heads in a DMS SuperNode SE (continued)

mc_number

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

Example of a MAP response

Maintenance action submitted.
MC RTS ok.

If the RTS command	Do
passed	step 73
failed	step 76

At the CM reset terminal for the inactive CPU

73 To release the jam of the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response

JAM RELEASE DONE

At the MAP terminal

74 To synchronize the CM, type

>CM;SYNC

and press the Enter key.

Example of a MAP response

Maintenance action submitted.
Synchronization successful.

If the response indicates	Do
the SYNC command was successful	step 77
the SYNC command failed	step 76
Inactive CPU configuration does not support burst mode operation.	step 76
Burst mode operation will now be disabled as it is not supported by both CPUs. Current high call processing utilization indicates that disabling burst mode operation may result in raising call processing utilization to a point where CALL ORIGINATION FAILURES MAY OCCUR.	step 76

Cleaning the SLM tape drive heads in a DMS SuperNode SE (end)

If the response indicates	Do
<p>The CPUs are out of sync due to a problem with mismatches. The mismatch logs should be analyzed before re-syncing. Do you wish to continue? Please confirm ("YES", "Y", or "NO", "N") (SuperNode/SuperNode SE Series 70 only)</p>	<p>step 75</p>
<p>other than listed here</p>	<p>step 76</p>
<p>75 (SuperNode/SuperNode SE Series 70 only) To deny the action, type >NO and press the Enter key. Go to step 76.</p>	
<p>76 For additional help, contact the next level of support.</p>	
<p>77 The procedure is complete.</p>	

Conducting a carrier loopback test

Application

Use this procedure to test access channel integrity between the frame-relay interface unit (FRIU) and the customer equipment.

To perform the test, place the selected channels into loopback mode. Send frames from the FRIU to the customer prem of the link from the FRIU to the point of loopback. This test reveals the integrity of the access channel link and can identify the location of a link fault.

If the test fails or indicates a high bit error rate (BER) check the integrity of:

- the T1 carrier
- the FRIU
- the customer equipment

When the tests are complete, remove the loop at the MAP display.

Interval

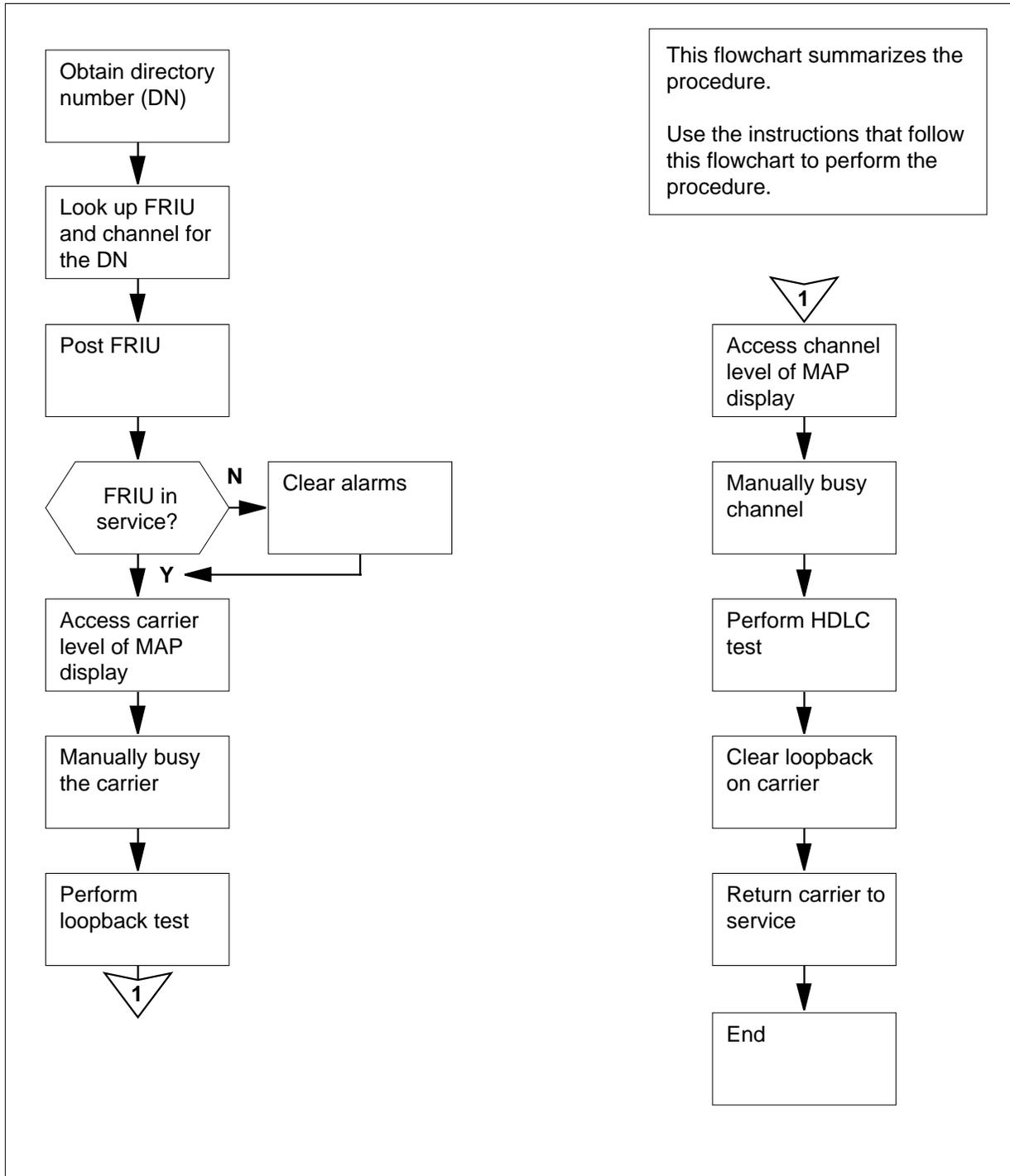
Repeat this procedure at normal intervals, or when the quality of the T1 carrier is suspect.

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.

Conducting a carrier loopback test (continued)

Summary of Conducting a carrier loopback test



Conducting a carrier loopback test (continued)

Conducting a carrier loopback test

At your current location:

- 1 Obtain the directory number (DN) from the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display,
>PVDNCI
and press the Enter keyResponse:

PVDNCI :

- 3 To identify the agent ID that associates with the DN that you obtained from the customer, type
>FRSDISP DN NO dir_no
and press the Enter key
where
dir_no
is the DN supplied by the customer
Response:

PVDNCI :

DN 6132263770 belongs to FRS Agent 1

Note: The agent ID is at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type
>FRSDISP AGENT ID agent_no
and press the Enter key
where
agent_no
is the agent ID that you obtained in step 3
Response:

```
AGENT DN      NP   SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel given to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

- 5 To return to the CI level of the MAP display, type
>QUIT
and press the Enter key

Conducting a carrier loopback test (continued)

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

>MAPCI;MTC;PM

and press the Enter key

Response:

	SysB	ManB	OffL	CBSy	ISTb	InSv
PM	2	0	0	0	0	70

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key

where

friu_no

is the number of the FRIU that you obtained at step 4

Response:

FRIU	121	InSv	Rsvd
------	-----	------	------

If the state of the FRIU

Do

is InSv or ISTb

step 9

is other than listed here

step 8

8 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

9 To access the Carrier level of the MAP display, type

>CARR

and press the Enter key

10 To manually busy the carrier, type

>BSY FORCE

and press the Enter key

11 Determine which test needs completion.

If you

Do

need to test in-band between the FRIU and the DS-1 interface connection of the customer

step 12

need to test the customer service unit (at 1.344 or 1.536 Mbit/s)

step 13

Conducting a carrier loopback test (continued)

	If you	Do
	need to test out-of-band between the FRIU and the DS-1 interface connector of the customer	step 14
	need to test out-of-band between the FRIU and the equipment of the customer (at 1.344 or 1.536 Mbit/s)	step 15
	need to test a payload loopback out-of-band between the FRIU and the customer installation (at 1.344 or 1.536 Mbit/s)	step 16
12	To test in-band between the FRIU and the DS-1 interface connector of the customer, type >LOOP RMTEND CONN and press the Enter key Go to step 17.	
13	To test the customer service unit (at 1.344 or 1.536 Mbit/s), type >LOOP RMTEND LINE and press the Enter key Go to step 17.	
14	To test out-of-band between the FRIU and the DS-1 interface connector of the customer, type >LOOP RMTEND CONN OOB and press the Enter key Go to step 17.	
15	To test out-of-band between the FRIU and the equipment of the customer (at 1.344 or 1.536 Mbit/s), type >LOOP RMTEND LINE OOB and press the Enter key Go to step 17.	
16	To test a payload loopback out-of-band between the FRIU and the customer installation (at 1.344 Mbit/s or 1.536 Mbit/s), type >LOOP RMTEND PAYLD and press the Enter key Go to step 17.	

Conducting a carrier loopback test (continued)

- 17** To access the Channel level of the MAP display, type
>CHAN
 and press the Enter key
- 18** To manually busy a channel, type
>BSY channel_no
where
channel_no
 is the number of the channel (0 to 23)
- 19** To perform a high level data link connection (HDLC) test on the selected channel, type
>HDLCTST channel_no
 and press the Enter key
where
channel_no
 is the number of the channel (0 to 23)
- 20** Record the HDLC test output and bit error rate (BER) from the MAP display.
Note: You can let this test run for any length of time. The longer the test runs, the more reliable the results are. You can let the test run to detect link faults that are not continuous. The test can detect link transients.
- 21** To return the channel to service, type
>RTS
 and press the Enter key
- | If the state of the channel | Do |
|-----------------------------|---------|
| is InSv | step 24 |
| is other than listed here | step 22 |
-
- 22** Perform the correct FRIU alarm clearing procedure to clear any FRIU alarms. Complete the procedure and return to this point.
- 23** To return to the Carrier level of the MAP display, type
>CARR
 and press the Enter key
 Go to step 17.
- 24** To return to the Carrier level of the MAP display, type
>QUIT
 and press the Enter key
- 25** To clear the loopback on the carrier, type
>LOOP CLEAR

Conducting a carrier loopback test (end)

and press the Enter key

Note: This command clears all loopbacks established on the carrier.

- 26** To return the carrier to service, type

>RTS

and press the Enter key

If the state of the carrier	Do
is InSv	step 28
is other than listed here	step 27

- 27** Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

Go to step 29.

- 28** To return to the PM level of the MAP display, type

>QUIT

and press the Enter key

- 29** The procedure is complete.

Converting devices from tape to disk in the DIRP utility

Application

Use this procedure to convert a subsystem from a magnetic tape device (MTD) recording device to a disk drive unit (DDU) recording device. Contact a technical support group for this procedure.

Interval

Perform this procedure when the DMS office switches from an MTD to a disk-type recording device.

Common procedures

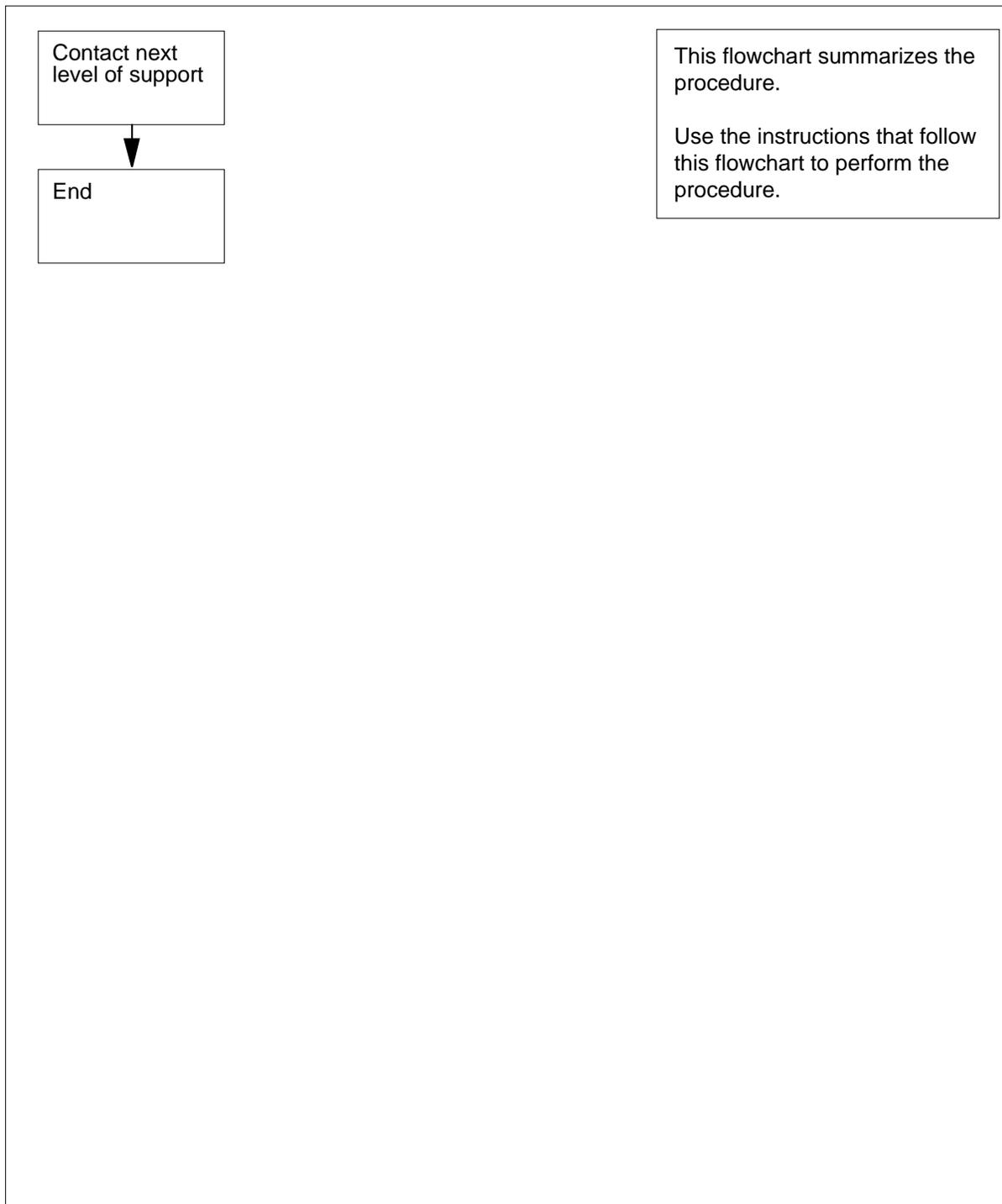
There are no common procedures.

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.

Converting devices from tape to disk in the DIRP utility (continued)

Summary of Converting devices from tape to disk in the DIRP utility



Converting devices from tape to disk in the DIRP utility (end)

Converting devices from tape to disk in the DIRP utility

At your Current Location

- 1 You cannot complete this procedure at this level of maintenance.
- 2 For additional help, contact the next level of support.
- 3 The procedure is complete.

Copying an office image from SLM disk to SLM tape

Application

Use this procedure to copy an office image from a system load module (SLM) disk to an SLM tape cartridge.

Interval

Perform this procedure weekly, or as indicated in the routine maintenance schedule for your office. Refer to *Preparing a routine maintenance schedule* in this document for information about how to prepare a routine maintenance schedule for your office.

Common procedures

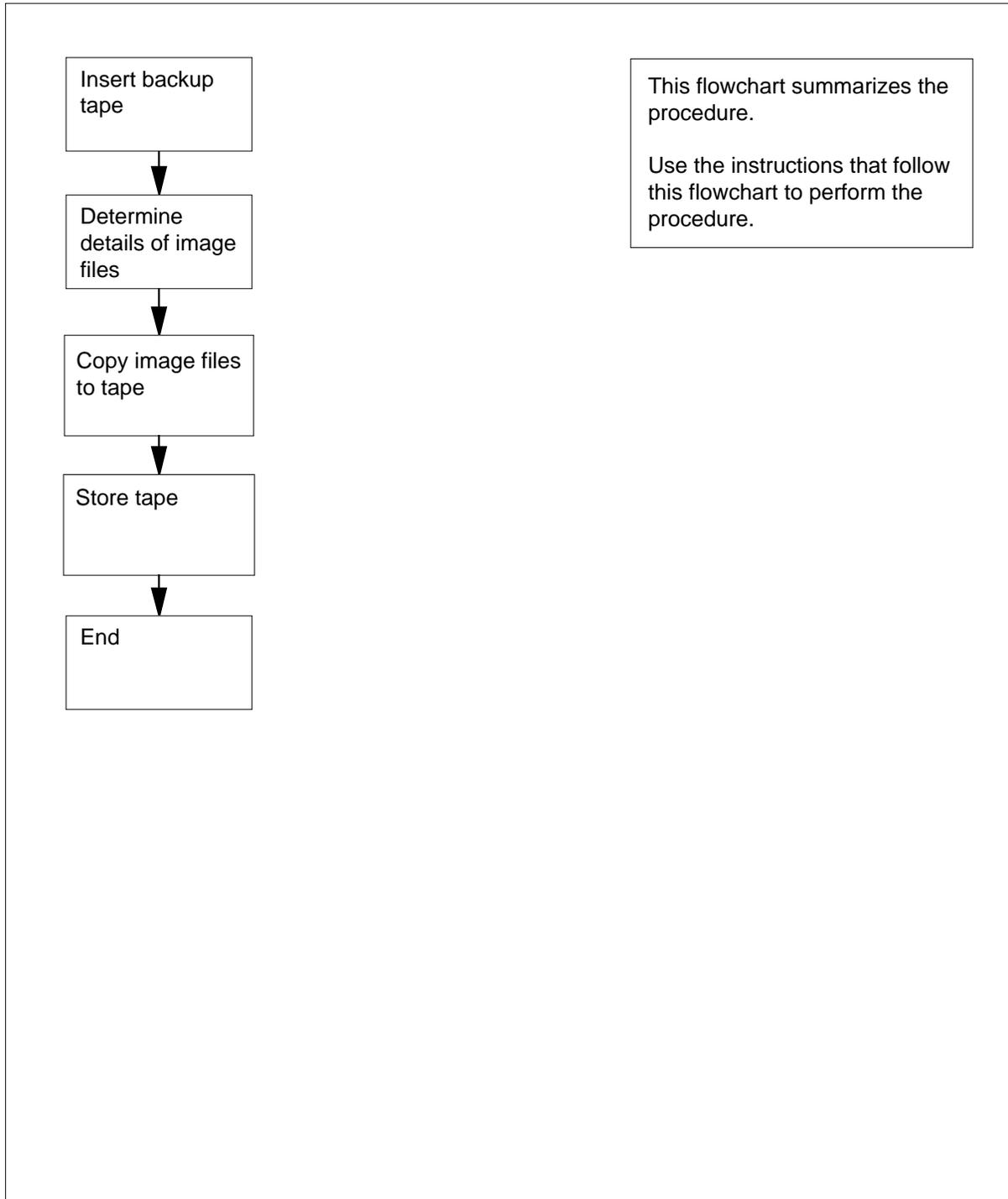
There are no common procedures.

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.

Copying an office image from SLM disk to SLM tape (continued)

Summary of Copying an office image from SLM disk to SLM tape



Copying an office image from SLM disk to SLM tape (continued)

Copying an office image from SLM disk to SLM tape

At the MAP terminal

- 1 To access the CI level of the MAP display, type
`>QUIT ALL`
and press the Enter key.
- 2 To determine if the system enabled automatic image-taking, type
`>AUTODUMP STATUS`
and press the Enter key.

Example of a MAP response:

```
Successful Image: S990218220590_CM  
Taken: 1999/02/18 22:05:08.952 THU.  
On Volume: S00DIMAGE
```

```
Last Image: S990218220590_CM  
Taken: 1999/02/18 22:05:08.952 THU.  
On Volume: S00DIMAGE
```

```
ISN Auto Imaging was last run on 1999/02/18 23:22:10.619 THU.  
0 images were requested by PRSM.  
0 images were taken successfully.  
0 images failed.  
0 images were aborted.
```

```
The latest ISN Auto Imaging history file is S990218232HISISN ( S00DIMAGE.
```

```
SCHEDULED-Image Dump is ON.
```

```
RETAIN option is OFF.
```

```
Next scheduled dump is FRIDAY at 22:00 hours.
```

```
Next image to be dumped S01DIMAGE.
```

If the response	Do
is Image Dump is ON	step 3
is Image Dump is OFF	step 5

- 3 Record the volume name of the latest image dump.
Note: In the example in step 2, the volume name of the latest image dump is S00DIMAGE1.

Copying an office image from SLM disk to SLM tape (continued)

- 4 Record the file names of the last successful message switch (MS) and computing module (CM) image dumps. You will copy these files to SLM tape.

Note: In the example in step 2, the file names of the last successful image dump are 930215_MS and 930215_CM.

Go to step 6.

- 5 From office records, determine the name of the volume that contains the latest office image dump. Record the volume name.

- 6 To access the disk utility, type

>DISKUT

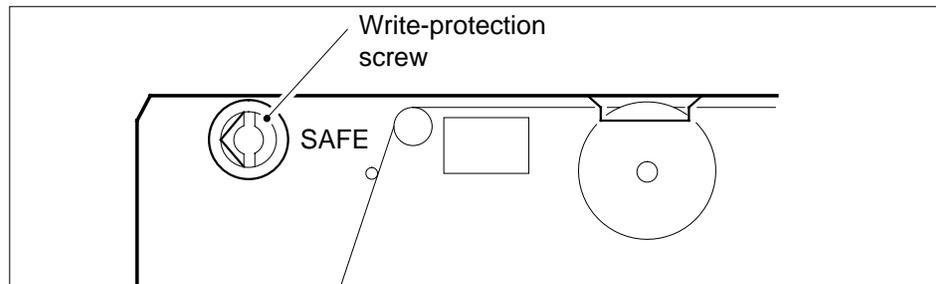
and press the Enter key.

At the SLM

- 7 Obtain an SLM tape cartridge.

Note: For weekly or monthly office image backups, determine which tape is next for the weekly or monthly office image backup. Determine the tape from the office maintenance schedule or from operating company personnel. Copy the office image on this tape.

- 8 Use a slot-head screwdriver to rotate the SLM tape cartridge write-protection screw 180° from the SAFE position.

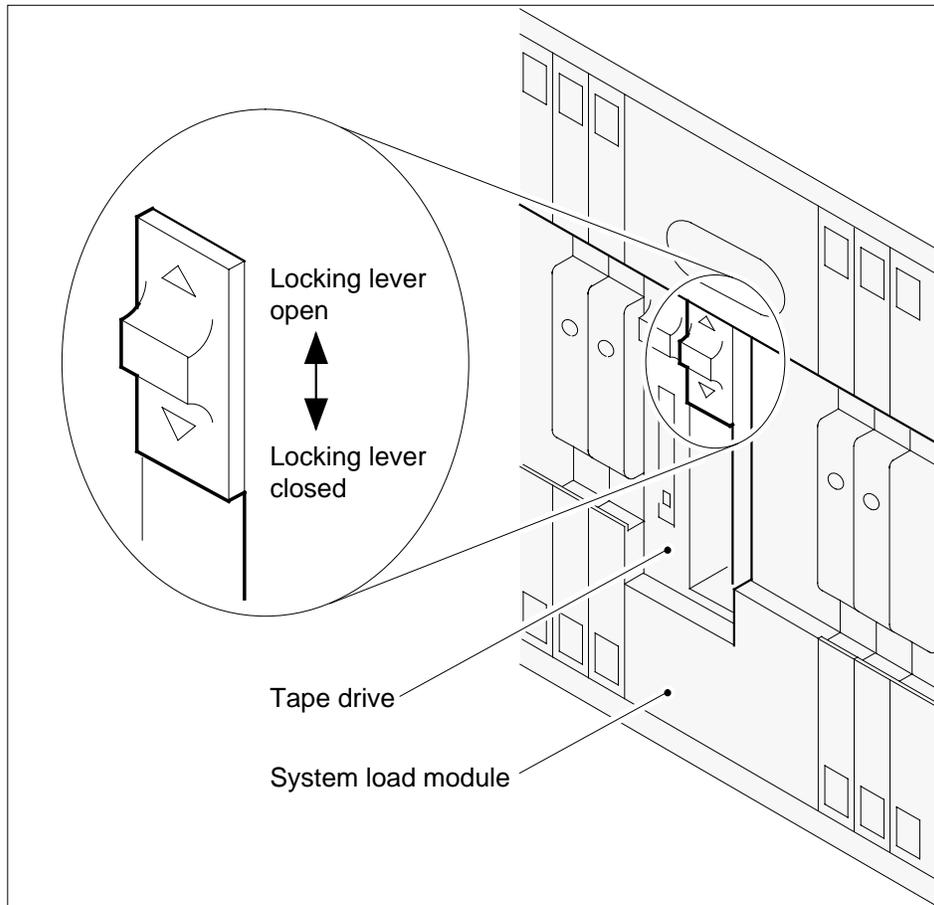


- 9 Insert the tape cartridge into the SLM tape drive.

- 10 Push the locking lever to the lock position.

Note: You can locate the locking lever at the top of the opening in the tape drive.

Copying an office image from SLM disk to SLM tape (continued)



At the MAP terminal

11 To mount the inserted tape, type
>INSERTTAPE *tape_device_name* WRITELABEL *label_name*
and press the Enter key.

where

tape_device_name
is the tape drive (S00T or S01T) that contains the tape

label_name
is an alphanumeric name for the tape, up to six characters long

Example input:

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

Writing the label IMGBUP to tape volume S00T on node CM will destroy all files stored on this tape volume.

Do you want to continue?

Please confirm ("YES", "Y", "NO" or "N"):

- 12** To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

The INSERT operation may take up to 5 minutes to tension the tape.

A tape is now available to user on unit 0, node CM.

Name IMGBUP has been written to the tape label.

- 13** To list the files in the volume that contains the latest office image, type

>LISTFL **volume_name**

and press the Enter key.

where

volume_name

is the name of the SLM disk and the volume that contains the latest office image files

Example input:

>LISTFL S00DIMAGE1

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

File information for volume S00DIMAGE1:

{NOTE: 1 BLOCK = 512 BYTES }

LAST FILE MODIFY DATE	O R I O CODE 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 Y	12744	6372	1020	930215_MS
930215	0 I F Y	188180	94090	1020	930215_CM
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 Y	1432	6372	1024	930212_MS
930212	0 I F Y	6272	94090	1024	930212_CM

If automatic image dump	Do
is on (SLM 1)	step 15
is on (SLM 1A, 2 or 3)	step 16
is not on	step 14

14 Determine the names of the latest MS and CM image files.

Note: In the example in step 13, the latest MS and CM image files are 930215_MS and 930215_CM.

15 SLM device 1 only

To copy the latest MS image file to the SLM tape, type

>BACKUP FILE filename tape_device_name tape_file_name

and press the Enter key.

where

filename

is the name of the latest MS image file

tape_device_name

is the tape device name (S00T or S01T) that you entered in step 11

tape_file_name

is the name you assign to the MS image file that you are copying to tape (maximum 32 characters)

Copying an office image from SLM disk to SLM tape (continued)

Example input:

```
>BACKUP FILE 930215_MS S00T 930215_MS
```

Example of a MAP response:

STD file 930215_MS on disk volume S00DIMAGE, node CM is opened.
 Tape file 930215_MS on tape device S00T, node CM has been created.
 The copy operation may take several minutes.
 Std file 930215_MS on volume IMAGE1, node CM is copied to tape file 930215_MS on tape device S00T, node CM.

If the response	Do
indicates the command was successful	step 27
is other than listed here	step 44

16 SLM device IA, 2 and 3 only

To copy the latest MS image file to the SLM tape, type

```
>BACKUP FILE filename tape_device_name tape_file_name
```

and press the Enter key.

where

filename

is the name of the latest MS image file

tape_device_name

is the tape device name (S00T or S01T) that you entered in step 11

tape_file_name

is the name you assign to the MS image file that you are copying to tape (maximum 32 characters)

Example input:

```
>BACKUP FILE 930215_MS S00T 930215_MS
```

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

STD file 930215_MS on disk volume S00DIMAGE, node CM is opened.
Tape file 930215_MS on tape device S00T, node CM has been created.
The copy operation may take several minutes.
Std file 930215_MS on volume IMAGE1, node CM is copied to tape file 930215_MS on tape device S00T, node CM.

If the response	Do
indicates the command was successful	step 28
indicates not enough tape capacity or determined free space is present on the tape to backup the image file	step 17
is other than listed here	step 44

- 17** You will see one of the following WARNING messages when you do not list the tape file. You will also see these messages if the file or volume for backup will exceed the 140 Mbyte threshold.

Example of a SLM 2 or 1A-MAP response:

SLM2/SLM1A supports 140/240 Mbytes normalized size tape.

The STD volume backup from s00dvoll1 has exceeded the threshold for 140 MByte tapes. There is 2000000 blocks already used up on the tape. The STD volume requires 120000 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

Copying an office image from SLM disk to SLM tape (continued)

Example of a SLM 3-MAP response:

SLM3 supports 140/240/500 Mbytes normalized size tape.

Notes: The amount of free space left on the tape can not be determined. The STD volume backup from s00dvoll requires 12345 free blocks on tape. The backup will fail if the free space is smaller than the size of the volume that is to be backed-up.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

Example of a SLM 3-MAP response:

SLM3 supports 140/240/500 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the tape normalized capacity (123 blocks) left on the tape. The STD volume requires 150 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

18 To cancel the command, type

>NO

and press the Enter key.

Example of a MAP response:

BACKUP command is aborted.

Operation aborted by user.

If the WARNING

Do

is for an SLM 1A or SLM 2 or SLM 3 (free space is not determined) step 13

is for an SLM 1A or SLM 2 or SLM 3 (not enough tape capacity) step 19

Copying an office image from SLM disk to SLM tape (continued)

- 19 To demount the tape, type
>EJECTTAPE **tape_device_name**
and press the Enter key.
where
tape_device_name
is the tape device name (S00T or S01T) that you entered in step 11

Example of a MAP response:

The EJECT operation may take up to 5 minutes to position tape to beginning.
Rewind of tape S00T, unit 0, on node CM is completed.
This tape device is not available to the user now.

At the SLM

- 20 To release the tape cartridge, press the locking lever up.
Note: When the tape cartridge releases, the cartridge will eject part way from the tape drive.
- 21 To withdraw the tape cartridge, pull the cartridge out of the tape drive.
- 22 Obtain a DC6250 (250-Mbyte) or DC6525 (525-Mbyte) tape cartridge, depending on the SLM type.

If you	Do
can obtain a tape cartridge	step 23
cannot obtain a tape cartridge	step 44

- 23 Use a slot-head screwdriver to rotate the SLM tape cartridge write-protection screw 180° from the SAFE position.
- 24 Insert the DC6250 or DC6525 tape cartridge into the SLM tape drive.

At the MAP terminal

- 25 To mount the inserted tape, type
>INSERTTAPE **tape_device_name** WRITELABEL **label_name**
and press the Enter key.
where
tape_device_name
is the tape drive (S00T or S01T) that contains the tape
label_name
is an alphanumeric name for the tape, a maximum of six characters long

Example input:

>INSERTTAPE S00T WRITELABEL IMGBUP

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

Writing the label IMGBUP to tape volume S00T on node CM will destroy all files stored on this tape volume.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

26 To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

The INSERT operation may take up to 5 minutes to tension the tape.

A tape is now available to user on unit 0, node CM. Name IMGBUP has been written to the tape label.

Go to step 16.

27 SLM device 1 only

To copy the CM image file to the SLM tape, type

>BACKUP FILE **filename** **tape_device_name** **tape_file_name**

and press the Enter key.

where

filename

is the name of the latest office image file

tape_device_name

is the tape device name (S00T or S01T) that you entered in step 11

tape_file_name is

the name you assign to the CM image file that you copied to tape (maximum 32 characters)

Example input:

>BACKUP FILE 930215_CM S00T 930215_CM

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

STD file 930215_CM on disk volume S00DIMAGE, node CM is opened.
 Tape file 930215_CM on tape device S00T, node CM has been created.
 The copy operation may take several minutes.
 Std file 930215_CM on volume IMAGE1, node CM is copied to tape file 930215_CM on tape device S00T, node CM.

If the response	Do
indicates the command was successful	step 39
indicates not enough tape capacity is present to back up the image file	step 30
is other than listed here	step 44

28 SLM device IA, 2 and 3 only

To copy the latest CM image file to the SLM tape, type

```
>BACKUP FILE filename tape_device_name tape_file_name
```

and press the Enter key.

where

filename

is the name of the latest CM image file

tape_device_name

is the tape device name (S00T or S01T) that you entered in step 11

tape_file_name

is the name you assign to the CM image file that you are copying to tape (maximum 32 characters)

Example input:

```
>BACKUP FILE 930215_CM S00T 930215_CM
```

Copying an office image from SLM disk to SLM tape (continued)

Example of a MAP response:

STD file 930215_CM on disk volume S00DIMAGE, node CM is opened.
 Tape file 930215_CM on tape device S00T, node CM has been created.
 The copy operation may take several minutes.
 Std file 930215_CM on volume IMAGE1, node CM is copied to tape file 930215_CM on tape device S00T, node CM.

If the response	Do
indicates the command was successful	step 39
indicates not enough tape capacity or determined free space is present on the tape to backup the image file	step 29
is other than listed here	step 44

- 29** You will see one of the following WARNING messages when you do not list the tape file. These messages also display if the file or volume you back up will exceed the 140 Mbyte threshold

Example of a SLM 2 or 1A-MAP response:

SLM2/SLM1A supports 140/240 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the threshold for 140 MByte tapes. There is 2000000 blocks already used up on the tape. The STD volume requires 120000 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

Copying an office image from SLM disk to SLM tape (continued)

Example of a SLM 3-MAP response:

SLM3 supports 140/240/500 Mbytes normalized size tape.

Notes: The amount of free space left on the tape can not be determined. The STD volume backup from s00dvoll requires 12345 free blocks on tape. The backup will fail if the free space is smaller than the size of the volume that is to be backed-up.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

Example of a SLM 3-MAP response:

SLM3 supports 140/240/500 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the tape normalized capacity (123 blocks) left on the tape. The STD volume requires 150 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

30 To cancel the command, type

>NO

and press the Enter key.

Example of a MAP response:

BACKUP command is aborted.

Operation aborted by user.

If the WARNING	Do
----------------	----

is for an SLM 1A or SLM 2 or SLM 3 (free space is not determined)	step 13
---	---------

is for an SLM 1A or SLM 2 or SLM 3 (not enough tape capacity)	step 31
---	---------

Copying an office image from SLM disk to SLM tape (continued)

- 31 To demount the tape, type
`>EJECTTAPE tape_device_name`
 and press the Enter key.
where
tape_device_name
 is the tape device (S00T or S01T) name that you entered in step 11

At the SLM

- 32 To release the tape cartridge, press the locking lever up.
 33 To withdraw the tape cartridge, pull the cartridge out of the tape drive.
 34 Obtain a DC6250 (250-Mbyte) or DC6525 (525 Mbyte) tape cartridge, depending on the SLM type.

If you	Do
can obtain a tape cartridge	step 35
cannot obtain a tape cartridge	step 44

- 35 Use a slot-head screwdriver to rotate the SLM tape cartridge write-protection screw 180° from the SAFE position.
 36 Insert the DC6250 or DC6525 tape cartridge into the SLM tape drive.

At the MAP terminal

- 37 To mount the inserted tape, type
`>INSERTTAPE tape_device_name WRITELABEL label_name`
 and press the Enter key.
where
tape_device_name
 is the tape drive (S00T or S01T) that contains the tape
label_name
 is an alphanumeric name for the tape, a maximum of six characters long

Example input:

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

Example of a MAP response:

```
Writing the label IMGBUP to tape volume S00T on node CM
will destroy all files stored on this tape volume.
```

```
Do you want to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 38 To confirm the command, type
`>YES`

Copying an office image from SLM disk to SLM tape (end)

and press the Enter key.

Example of a MAP response:

The INSERT operation may take
up to 5 minutes to tension the tape.

A tape is now available to user on unit 0, node CM.
Name IMGBUP has been written to the tape label.

Go to step 27 for SLM 1.

Go to step 28 for SLM 1A, 2 and 3.

39 To demount the tape, type

>EJECTTAPE *tape_device_name*

and press the Enter key.

where

tape_device_name

is the tape device name (S00T or S01T) that you entered in step 11

Example of a MAP response:

The EJECT operation may take up to 5 minutes to position
tape to beginning.

Rewind of tape S00T, unit 0, on node CM is completed.

This tape device is not available to the user now.

40 To quit from the disk utility, type

>QUIT

and press the Enter key.

At the SLM

41 To release the tape cartridge, press the locking lever up.

42 To withdraw the tape cartridge, pull the cartridge out of the tape drive.

43 Store the tape in the designated tape backup storage area for your office.

Go to step 45.

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

45 The procedure is complete.

Daily replacement of magnetic tapes in the DIRP utility

Application

Use this procedure to mount and demount magnetic tape device (MTD) volumes. You must mount another tape volume on another drive before you demount a tape volume. Perform this action to make sure that a tape records at all times. Demount a tape to allow the system to send data for downstream processing.

Use this procedure to replace magnetic tapes for both regular and parallel recording.

Use this procedure to change a tape on a magnetic tape device used to record automatic message accounting (AMA) data.

Use this procedure with the DIRP101 logs. For additional information about DIRP logs, refer to *Trouble Locating and Clearing Procedures*.

Interval

Perform this procedure daily, or according to operating company operating procedures.

Common procedures

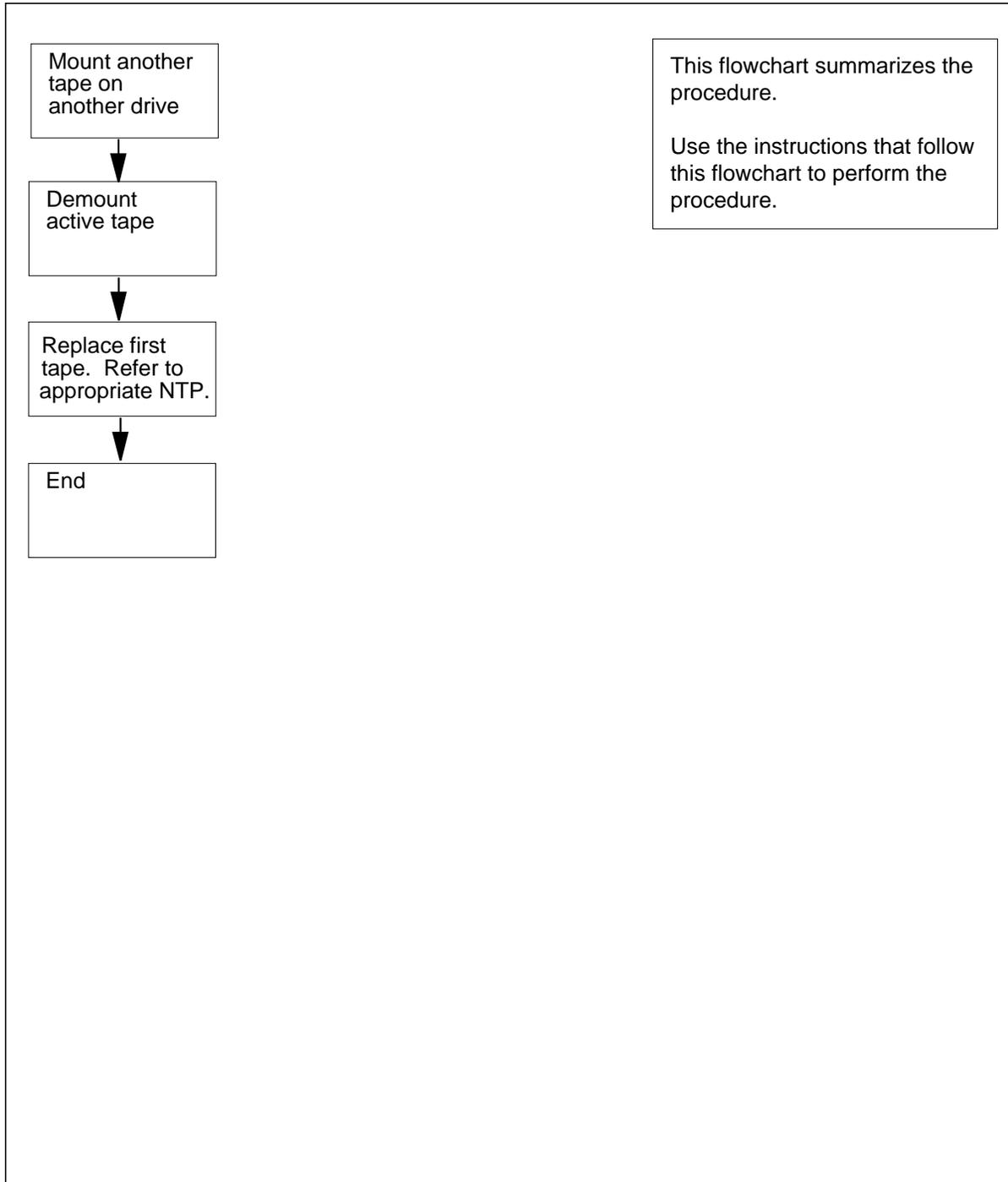
There are no common procedures.

Action

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

Daily replacement of magnetic tapes in the DIRP utility (continued)

Summary of Daily replacement of magnetic tapes in the DIRP utility



Daily replacement of magnetic tapes in the DIRP utility (continued)

Daily replacement of magnetic tapes in the DIRP utility

At the MAP terminal

1



CAUTION

Possible loss or corruption of AMA data

Use this procedure and follow it exactly. Not doing so will lose or corrupt 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 mount another tape on another drive, type

```
>MNT ssys tape_name paralel
```

and press the Enter key.

where

ssys

is the subsystem

tape_name

is the tape name

paralel

indicates the tape is a parallel tape. This parameter is optional.

MAP response:

```
PARALLEL RECORDING IS NOT CURRENTLY ACTIVE FOR ssys.
RECORDING MAY BEGIN IMMEDIATELY ON THIS PARALLEL
VOLUME.
```

```
UPDATING VOLUME INFORMATION FOR VOLUME vol_no IN
PARALLEL POOL pool_no, pool_name
PLEASE CONFIRM ("YES" OR "NO"):
```

3

To confirm the information, type

```
>YES
```

and press the Enter key.

MAP response:

```
PARALLEL VOLUME tape_name ALLOCATED.
```

4

To demount the active tape, type

```
>DMNT ssys tape_name paralel
```

Daily replacement of magnetic tapes in the DIRP utility (continued)

and press the Enter key.

where

ssys

is the subsystem

tape_name

is name of the active tape

paralel

indicates the tape is a parallel tape. This parameter is optional.

MAP response:

**

**WARNING--THIS UPDATE MAY AFFECT THE CURRENTLY
RECORDING PARALLEL FILE

**

UPDATING VOLUME INFORMATION FOR tape_no: VOLUME
vol_no IN PARALLEL POOL pool_no, pool_name
PLEASE CONFIRM ("YES" OR "NO"):

If the information	Do
--------------------	----

is correct	step 6
------------	--------

is not correct	step 5
----------------	--------

is not correct after several at- tempts	step 10
--	---------

5 To cancel the volume information, type

>NO

and press the Enter key.

Return to step 4.

6 To confirm the volume information, type

>YES

and press the Enter key.

MAP response:

PARALLEL VOLUME tape_name WILL BE TAKEN OUT OF DIRP AS
SOON AS POSSIBLE.

TOTAL PARALLEL RETENTION FOR SUBSYSTEM ssys MAY BE
REDUCED.

Daily replacement of magnetic tapes in the DIRP utility (end)

- 7** Wait for a DIRP101 log report or an updated IOD alarm display to confirm the demount.
- | If the demount confirmation | Do |
|------------------------------------|-----------|
| is yes | step 8 |
| is no | step 4 |
| is no after several attempts | step 10 |
- 8** Determine if the the updated volume information is correct.
- | If the information | Do |
|--|-----------|
| is correct | step 9 |
| is not correct | step 4 |
| is not correct after several at-tempts | step 10 |
- 9** Remove the original, deallocated tape and replace the tape with a new tape. Refer to *Magnetic Tape Reference Manual*, 297-1001-118, and return to this point.
- 10** For additional help, contact the next level of support.
- 11** This procedure is complete.

Deallocating recording volumes in the DIRP utility

Application

Use this procedure to deallocate regular or parallel recording volumes from a contributing subsystem and the DIRP utility. Use the DMNT command at the DIRP level of the MAP to perform this deallocation. Use this procedure to deallocate recording volumes located on all DIRP recording device types.

Deallocate a recording volume for one of the following reasons:

- to allow a data center to receive data for processing
- to remove a device on which excessive input/output errors occur
- to make the recording device available for maintenance or other purposes

Use this procedure with the DIRP101 logs. For additional information about DIRP101 logs, refer to *Trouble Locating and Clearing Procedures*.

Note 1: The MINFILES field in the DIRPSSYS table controls the minimum number of files that must be open. If you demount a volume, the number of open files can fall below the MINFILES level. The DIRP utility will not permit the user to demount a volume if this condition occurs.

Note 2: For additional information about the DIRPSSYS table, refer to *Translations Guide*.

Interval

Perform this procedure as part of a normal daily operation.

Common procedures

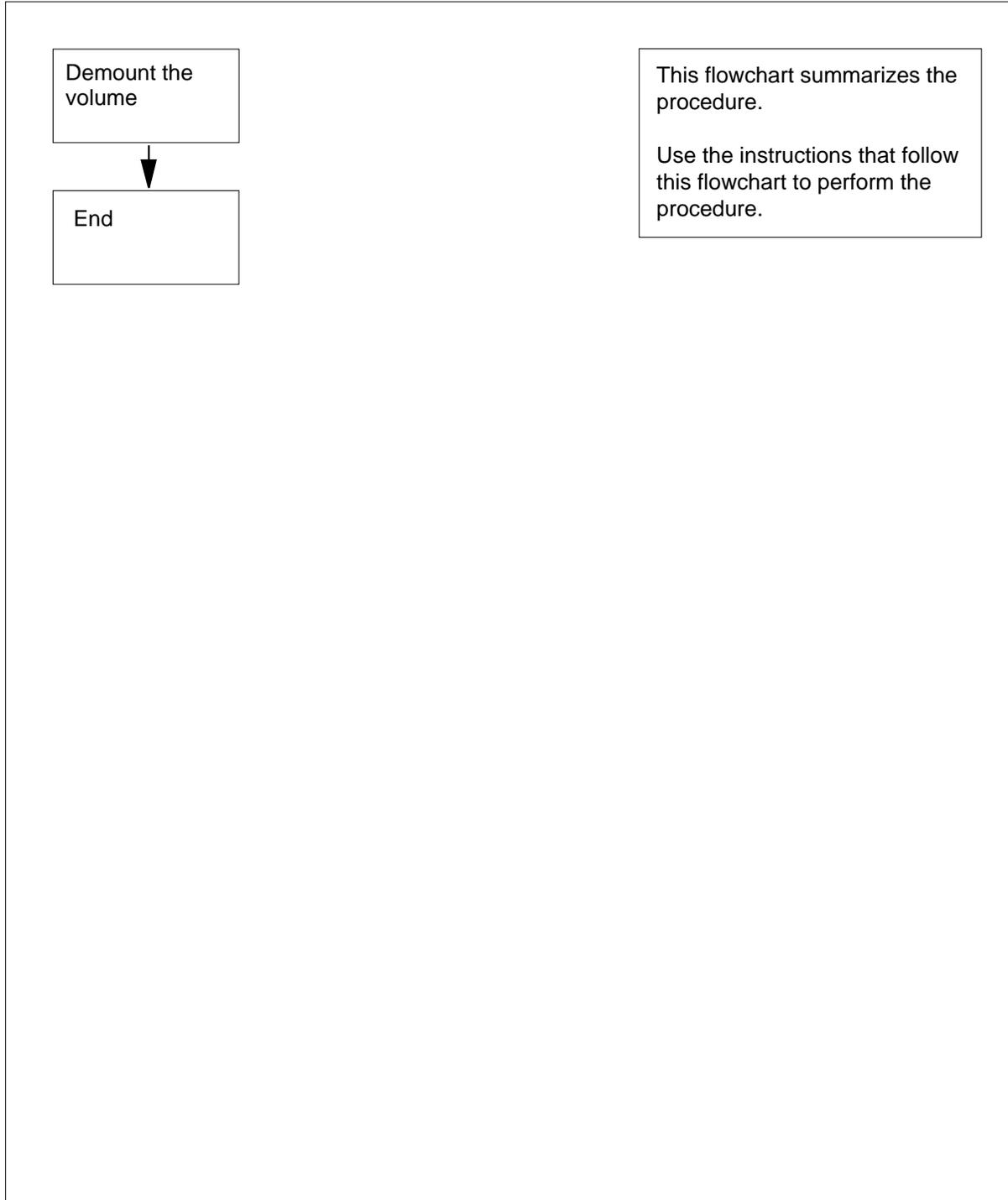
There are no common procedures.

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.

Deallocating recording volumes in the DIRP utility (continued)

Summary of Deallocating recording volumes in the DIRP utility



Deallocating recording volumes in the DIRP utility (continued)

Deallocating recording volumes in the DIRP utility

At the MAP

1



CAUTION

Loss or corruption of AMA data

Use this procedure and follow it exactly. Not doing so will lose or corrupt 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 deallocate the volume, type

```
>DMNT ssys vol_name parallel
```

and press the Enter key.

where

ssys

is the subsystem

vol_name

is the name of the volume to demount

parallel

indicates that the volume is a parallel volume. This parameter is optional.

Example of a MAP response:

```
**WARNING - THIS UPDATE MAY AFFECT  
THE ACTIVE FILE  
**
```

```
UPDATING VOLUME INFORMATION FOR  
vol_name: vol_no IN pool_type POOL  
pool_no, pool_name  
PLEASE CONFIRM ("YES" OR "NO"):
```

If the volume information	Do
is correct	step 4
is not correct	step 3

3

To cancel the deallocation, type

```
>NO
```

Deallocating recording volumes in the DIRP utility (end)

and press the Enter key.

Return to step 2.

- 4** To confirm the deallocation, type

>YES

and press the Enter key.

Example of a MAP response:

```
REGULAR VOLUME vol_name WILL BE TAKEN OUT OF DIRP AS
SOON AS POSSIBLE.
```

- 5** Determine if you have more volumes to deallocate.

If you	Do
have more volumes to deallocate	step 2
do not have more volumes to deallocate	step 6

- 6** The procedure is complete.

Determining PVC status

Application

Use this procedure to display pre-permanent virtual connection (PVC) status and traffic information on the posted channel. The following information displays:

- frame and octet counts for transmitted and received frames
- explicit congestion notification (ECN) events

Interval

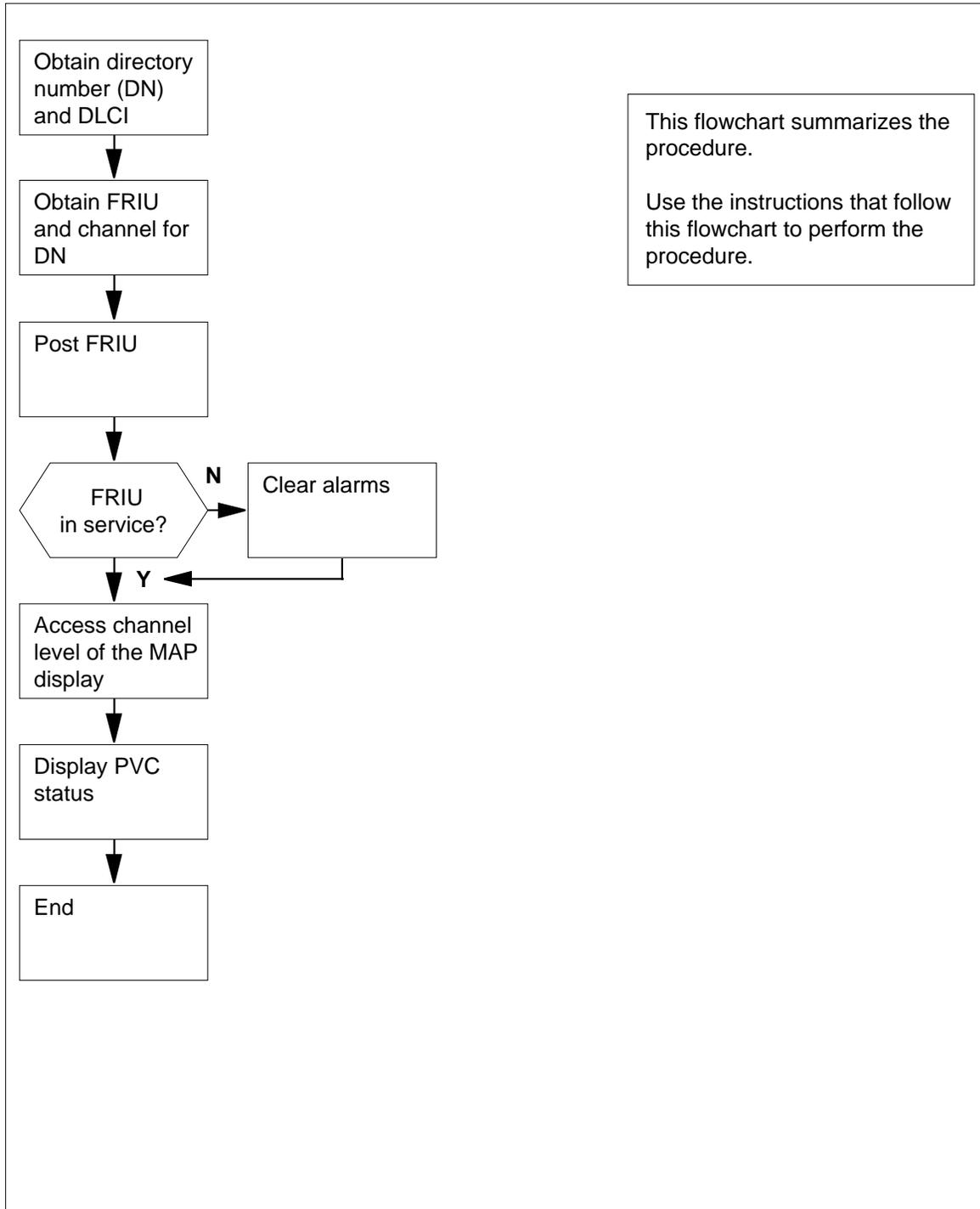
Perform this procedure as required.

Action

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

Determining PVC status (continued)

Summary of Determining PVC status



Determining PVC status (continued)

Determining PVC status

At your current location

- 1 From office records or from operating company personnel, obtain the directory number (DN) for the customer.
- 2 From office records or from operating company personnel, obtain the data link connection identifier (DLCI) for the customer.

At the MAP

- 3 To access the PVDNCI level of the MAP display, type
>PVDNCI
and press the Enter key.
Response:

PVDNCI :

- 4 To identify the agent ID that associates with the DN obtained from the customer, type
>FRSDISP DN NO dir_no
and press the Enter key.
where
 dir_no
 is the DN supplied by the customer
Response:

PVDNCI :

DN 6132263770 belongs to FRS Agent 1

Note: The agent ID is at the end of the response. In the example, the agent ID is 1.

- 5 To determine the FRIU number and the channel that associates with the agent ID, type
>FRSDISP AGENT ID agent_no
and press the Enter key.
where
 agent_no
 is the agent ID that you obtained in step 4
Response:

```
AGENT DN      NP   SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The CONNECT TO header in the MAP response show the FRIU number and channel assigned to this agent. In the example, the FRIU is 121 and the channel number is 7.

Determining PVC status (continued)

6 To return to the CI level of the MAP display, type
>QUIT
 and press the Enter key.

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

Response:

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	2	0	0	0	0	70

8 To post the FRIU, type
POST FRIU friu_no
where
friu_no
 is the number of the FRIU that you obtained in step 4

Response:

FRIU	121	InSv	Rsvd
------	-----	------	------

If the state of the FRIU	Do
is InSv or ISTb	step 10
is other than listed here	step 9

9 To clear the major or critical alarm on this FRIU, perform the correct FRIU alarm clearing procedures. Complete the procedure, and return to this point.

10 To access the Carrier level of the MAP display, type
>CARR
 and press the Enter key.

11 To access the Channel level of the MAP display, type
>CHAN
 and press the Enter key.

12 To display the status of the PVC, type
>QPLLC dcli_no option
 and press the Enter key.
where

dcli_no
 is the number of the DLCI (0 to 1023)

option
 is the congestion option (CONGESTION)

Determining PVC status (end)

Note: The first MAP display example shows the results of the command without the CONGESTION option parameter. The second example shows the results of the command with the congestion option parameter.

Response:

```
QPLLC 101
T1 RX :      1002 Frames;      16032 Octets;      0 Lost
T1 TX :      304 Frames;      4864 Octets;      0 Lost
Dest agent avail:Y  Connect rec:Y  Abit:N  BidirAbit:Y
```

Response:

```
QPLLC 101 congestion
Frames set with: BECN:      125 FECN :      80
Frames discarded with: DE=1:      30 DE=0:      20
SIR = 19200 b/s Frames over Bc: 34 CIR discards frames:
20
```

13 The procedure is complete.

Enabling and scheduling automatic image taking

Application

Use this procedure to enable and schedule the automatic recording of office images to a system load module (SLM) disk. The SLM disk is in a DMS SuperNode SE office. An office image consists of a message switch (MS) image and a computing module (CM) image.

Interval

This procedure is an administrative task. Perform this task according to the office supervisor.

Common procedures

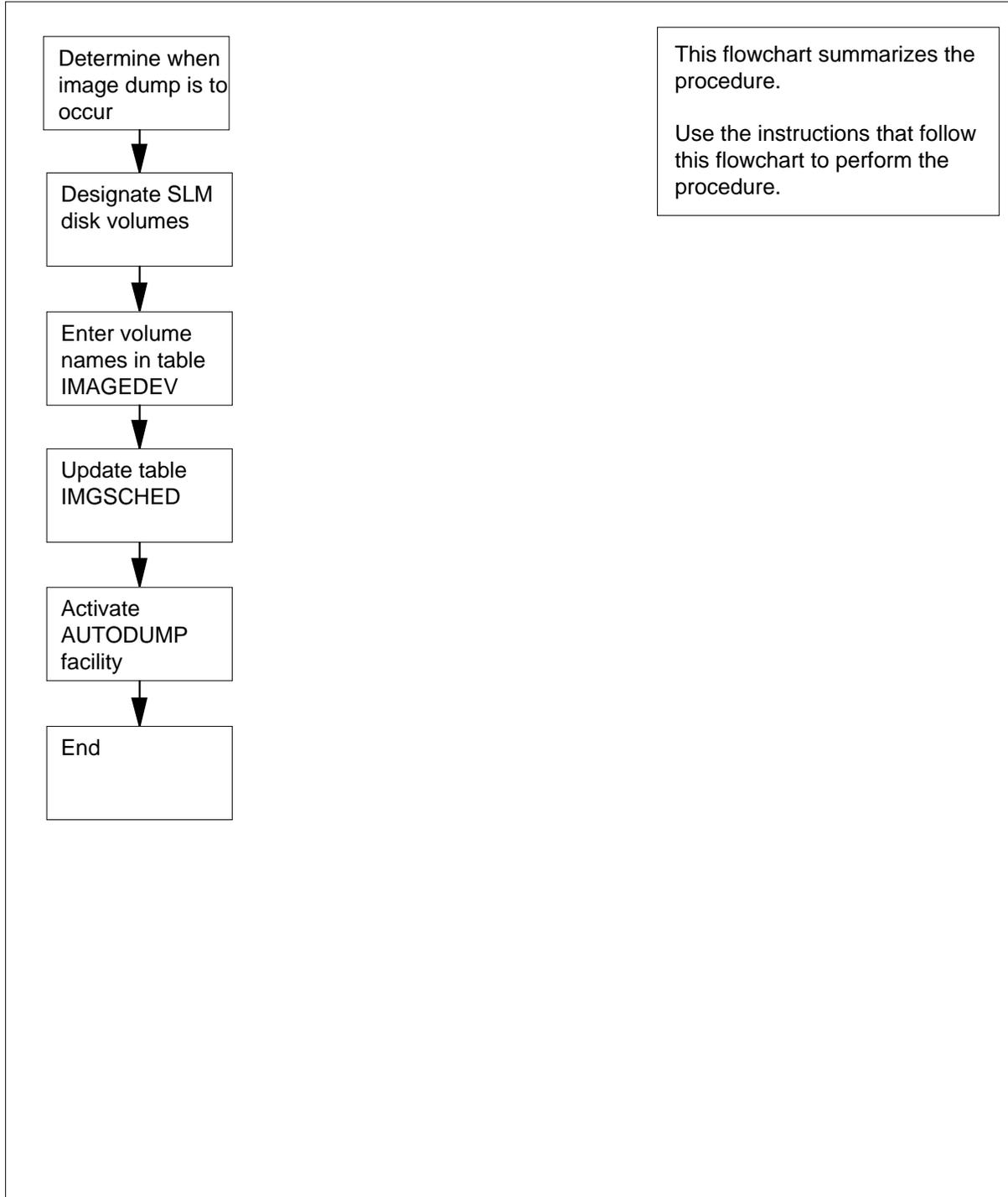
There are no common procedures.

Action

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

Enabling and scheduling automatic image taking (continued)

Summary of Enabling and scheduling automatic image taking



Enabling and scheduling automatic image taking (continued)

Enabling and scheduling automatic image taking

At your Current Location

- 1 Determine the days when office image recording occurs.

At the MAP terminal

- 2 To access the CI level of the MAP display, type

```
>QUIT ALL
```

and press the Enter key.

- 3 To access the disk utility, type

```
>DISKUT
```

and press the Enter key.

MAP response:

```
Disk utility is now active.DISKUT:
```

- 4 To list the disk volumes on the local node, type

```
>LISTVOLS CM
```

and press the Enter key.

Example of a MAP response:

```
Volumes found on the node CM:
```

```
-----
```

NAME	TOTAL BLOCKS	USED BLOCKS	FREE BLOCKS	TOTAL FILES	ITOC FILES	LARGEST FREE SEGMENT
S00DIMG0	614389	471835	142554	28	2	81715
S00DIMG1	614389	476915	137474	83	0	82386
S00DPERM	51189	50944	245	116	0	78
S00DTEMP	20473	12475	7998	49	0	7688
S00DDLOG	8185	8186	3190	4995	0	586
S01DIMG0	614389	584953	29436	39	2	7320
S01DIMG1	614389	379041	235348	127	0	158602
S01DPERM	51189	5815	45374	37	0	45363
S01DTEMP	20473	2939	17534	34	0	17358
S01DDLOG	8185	7588	597	15	0	134

```
Total number of volumes found on node CM: 10
```

Note: The example does not show the TYPE and OPEN FILES columns because of space limits.

Enabling and scheduling automatic image taking (continued)

- 5 Determine if each SLM disk contains volumes only used by the autodump facility for the storage of daily office images. You can determine this information from operating company personnel or office records.

Note: In the example in step 4, the disk volumes used for storing daily office images are S00DIMG0, S00DIMG1, S01DIMG0 and S01DIMG1.

If each SLM disk	Do
contains volumes only used by autodump	step 8
does not contain volumes only used by autodump	step 6

- 6 To quit the disk utility, type
>QUIT
 and press the Enter key.
- 7 To create disk volumes, perform the procedure *Scheduling and storing daily office image backups* in this document. Complete the procedure and return to this point.
- 8 To access table IMAGEDEV, type
>TABLE IMAGEDEV
 and press the Enter key.
MAP response:
 Table: IMAGEDEV
- 9 To add the tuple for the first of the SLM disk volumes allocated for image storage, type
>ADD volume_name Y
 and press the Enter key.
where
volume_name
 is the name of the volume to use for automatic image dumps
Example input:
ADD S00DIMG0 Y
Example of a MAP response:
 Enter Y to continue processing or N to quit.
- Note 1:** In the example in step 4, the first tuple to add is for disk volume S00DIMG0.
- Note 2:** Each tuple must have the volume name in the VOLNAME field, and the value Y in the ACTIVE field.
- 10 To confirm the command, type
>Y
 and press the Enter key.

Enabling and scheduling automatic image taking (continued)

Example of a MAP response:

Tuple to be added: S00DIMG0 Y Enter Y to confirm, N to reject or E to edit.

- 11** To confirm the command, type
>Y

and press the Enter key.

Example of a MAP response:

Tuple added.

- 12** Repeat steps 9 to 11 for each of the SLM volumes allocated for storing image dumps that remains.

Note: The completed table must contain one tuple for each volume allocated. In the example in step 4, table IMAGEDEV contains tuples for disk volumes S00DIMG0, S00DIMG1, S01DIMG0, and S01DIMG1.

- 13** To verify the tuple additions to table IMAGEDEV, type

>LIST ALL

and press the Enter key.

Example of a completed table IMAGEDEV:

```

TOP      VOLNAME      ACTIVE
-----
                S00DIMG0      Y
                S00DIMG1      Y
                S01DIMG0      Y
                S01DIMG1      Y

```

BOTTOM

If you	Do
entered all the tuple revisions	step 14
did not enter all the tuple revisions	step 30

- 14** To quit from table IMAGEDEV, type
>QUIT

and press the Enter key.

- 15** To access table IMGSCHEM, type

>TABLE IMGSCHEM

and press the Enter key.

MAP response:

Table: IMGSCHEM

- 16** To display the table contents, type

>LIST ALL

and press the Enter key.

Enabling and scheduling automatic image taking (continued)

Example of a MAP display:

```

TOP
      DAY  DUMPHOUR  DUMPMIN  CM/MS  ISN  ACTIVE
      -----
      MONDAY      21      0      Y  N  Y
      TUESDAY      21      0      Y  Y  Y
      WEDNESDAY    21      0      Y  Y  N
      THURSDAY     21      0      Y  N  Y
      FRIDAY       21      0      N  Y  Y
      SATURDAY     21      0      Y  Y  Y
      SUNDAY       21      0      N  N  N
BOTTOM
  
```

Note: Fields DUMPHOUR and DUMPMIN control the time the system performs the dump. The default time is 21:00. You can modify this time according to the requirements of each office. Perform image dumps during hours when traffic is not heavy.

- 17** To access the tuple for the first day you want to activate automatic image dumping, type

```
>POSITION  day
```

and press the Enter key.

where

day

is the day you want to activate automatic image taking, for example, MONDAY

Example input:

```
POSITION  MONDAY
```

Example of a MAP response:

```
MONDAY 21 0 Y Y Y
```

- 18** To start tuple editing, type

```
>CHANGE
```

and press the Enter key.

MAP response:

Machines not in sync - DMOS not allowed
Journal file not available - DMOS not allowed
Enter Y to continue processing or N to quit.

- 19** To confirm the command, type

```
>Y
```

and press the Enter key.

Example of a MAP response:

```
DUMPHOUR: 20
```

- 20** To enter the required dump hour, type

```
>dump_hour
```

and press the Enter key.

Enabling and scheduling automatic image taking (continued)

where

dump_hour

is the dump hour you want to enter, for example 21

Example of a MAP response:

DUMPMIN: 0

- 21** To enter the required dump minutes, type

>**dump_minutes**

and press the Enter key.

where

dump_minutes

is the dump minutes you want to enter, for example 30

Example of a MAP response:

ACTIVE: N

- 22** To select CMMS data dump, type

>**Y**

and press the Enter key. If a data dump is not required for CMMS enter N and press the Enter key.

Example of a MAP response:

ISN: N

- 23** To select ISN data dump, type

>**Y**

and press the Enter key. If an ISN data dump is not required enter N and press the Enter key.

Example of a MAP response:

ACTIVE: N

- 24** To enable automatic image dumping for the day, type

>**Y**

and press the Enter key.

Example of a MAP response:

Tuple to be changed: MONDAY 20 0 Y Y Y Enter Y to confirm, N to reject or E to edit.

- 25** To confirm the tuple change, type

>**Y**

and press the Enter key.

MAP response:

Tuple changed. Journal file inactive.

- 26** Repeat steps 17 to 25 for each day you want to activate automatic image taking.

- 27** To verify the tuple revisions to table IMGSCHEd, type

>**LIST ALL**

Enabling and scheduling automatic image taking (end)

and press the Enter key.

Example of a MAP display:

```
TOP
      DAY  DUMPHOUR  DUMPMIN  CMMS  ISN  ACTIVE
-----
    MONDAY         20         0     Y   Y   Y
    TUESDAY         21         0     Y   Y   Y
    WEDNESDAY        21         0     Y   Y   N
    THURSDAY         21         0     Y   N   Y
    FRIDAY           21         0     N   Y   Y
    SATURDAY         21         0     Y   Y   Y
    SUNDAY           21         0     N   N   N
```

If all the tuple revisions have	Do
been entered	step 28
not been entered	step 30

28 To quit from table IMGSCHEd, type by

>QUIT

and press the Enter key.

29 To activate the autodump facility for specific days and times, type

>AUTODUMP ON

and press the Enter key.

Example of a MAP response:

SCHEDULED-Image Dump is ON.Next scheduled dump is THURSDAY at 21:00 hours.Next image to be dumped on S00DIMG0.

Go to step 31.

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

31 The procedure is complete.

Excluding an LCM from a REx test schedule

Application

Use the following procedure to remove or exclude a line concentrating module (LCM) from a routine exercise (REx) test schedule. You can also use this procedure to remove or exclude the LCM variants from a routine exercise (REx) test schedule. The LCM variants include:

- international LCM (ILCM)
- integrated services digital network LCM (LCMI)
- enhanced LCM (LCME)

Use this procedure to remove a line module and the line module variants from a REx test schedule. An example of a line module variant is an enhanced line module (ELM).

Interval

Perform this procedure as required.

Common procedures

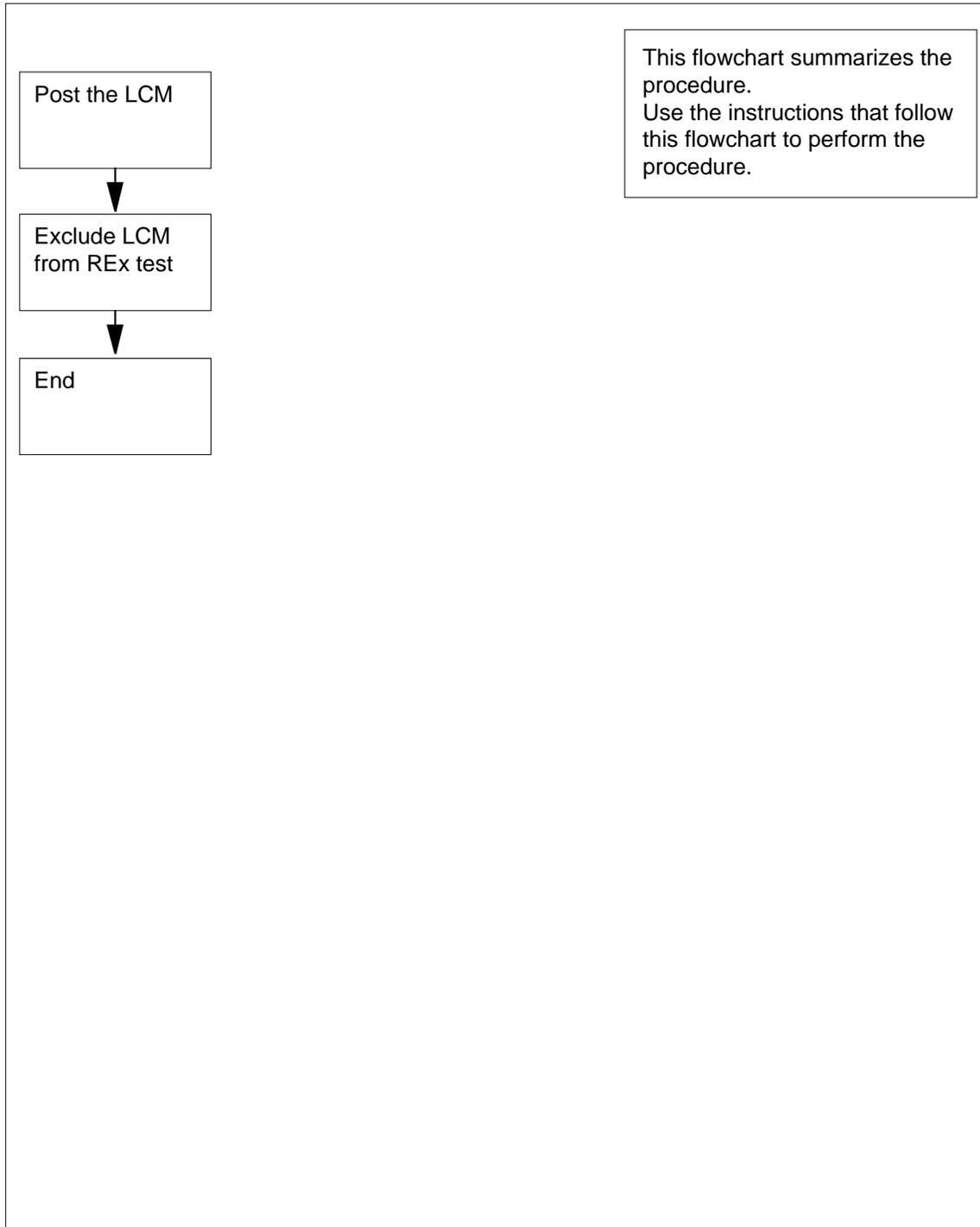
There are no common procedures.

Action

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

Excluding an LCM from a REx test schedule (continued)

Summary of Excluding an LCM from an REx schedule



Excluding an LCM from a REX test schedule (end)

Excluding an LCM from a REX test schedule

At the CI level of the MAP display:

- 1 To access the PM level, type
`>MAPCI ;MTC ;PM`
 and press the Enter key.
- 2 To post the LCM that you require a report for, type
`>POST LCM site frame bay`
 and press the Enter key.
where
 site
 is the four-character string that indicates the location of the LCM
 frame
 is the number of the frame that contains the LCM (0 to 511)
 bay
 is the number of the bay
- 3 To exclude the posted LCM from the REX test schedule, type
`>TST REX OFF`
 and press the Enter key.

Example of a MAP response:

LCM HOST 00 0 is excluded from the list of LCM types
 scheduled for a REX test.

- 4 From the MAP response in step 3, make sure that the system removes LCM
 from the REX schedule.

If the system	Do
removes the LCM from the REX schedule	step 6
does not remove the LCM from the REX schedule	step 5

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

Excluding an XPM from a REx test schedule

Application

Use this procedure to exclude XMS-based peripheral modules (XPM) from a routine exercise (REx) test.

The line group controller (LGC), message and switching buffer (MSB), and remote cluster controller (RCC) node types all support REx tests.

The LGC nodes include the following variants:

- integrated services digital network (ISDN) LGC (LGCI)
- international LGC (ILGC)
- offshore LGC (LGCO)
- PCM-30 LGC (PLGC)
- Global Peripheral Platform (GPP)
- Turkish LGC (TLGC)
- Australian LGC (ALGC)
- line trunk controller (LTC)
- international LTC (ILTC)
- Turkish LTC (TLTC)
- digital trunk controller (DTC)
- ISDN DTC (DTCI)
- PCM-30 DTC (PDTC)
- Turkish DTC (TDTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMSR)
- subscriber module access (SMA)
- integrated cellular peripheral (ICP)
- traffic operator position system (TOPS) message switch (TMS)

The MSB nodes include MSB6 and MSB7.

Excluding an XPM from a REx test schedule (continued)

The RCC nodes include the following variants:

- Turkey RCC (TRCC)
- ISDN RCC (RCCI)
- Australian RCC (ARCC)
- PCM30 RCC (PRCC)
- RCC2
- SRCC
- RCO2

Interval

Perform this procedure as required.

Common procedures

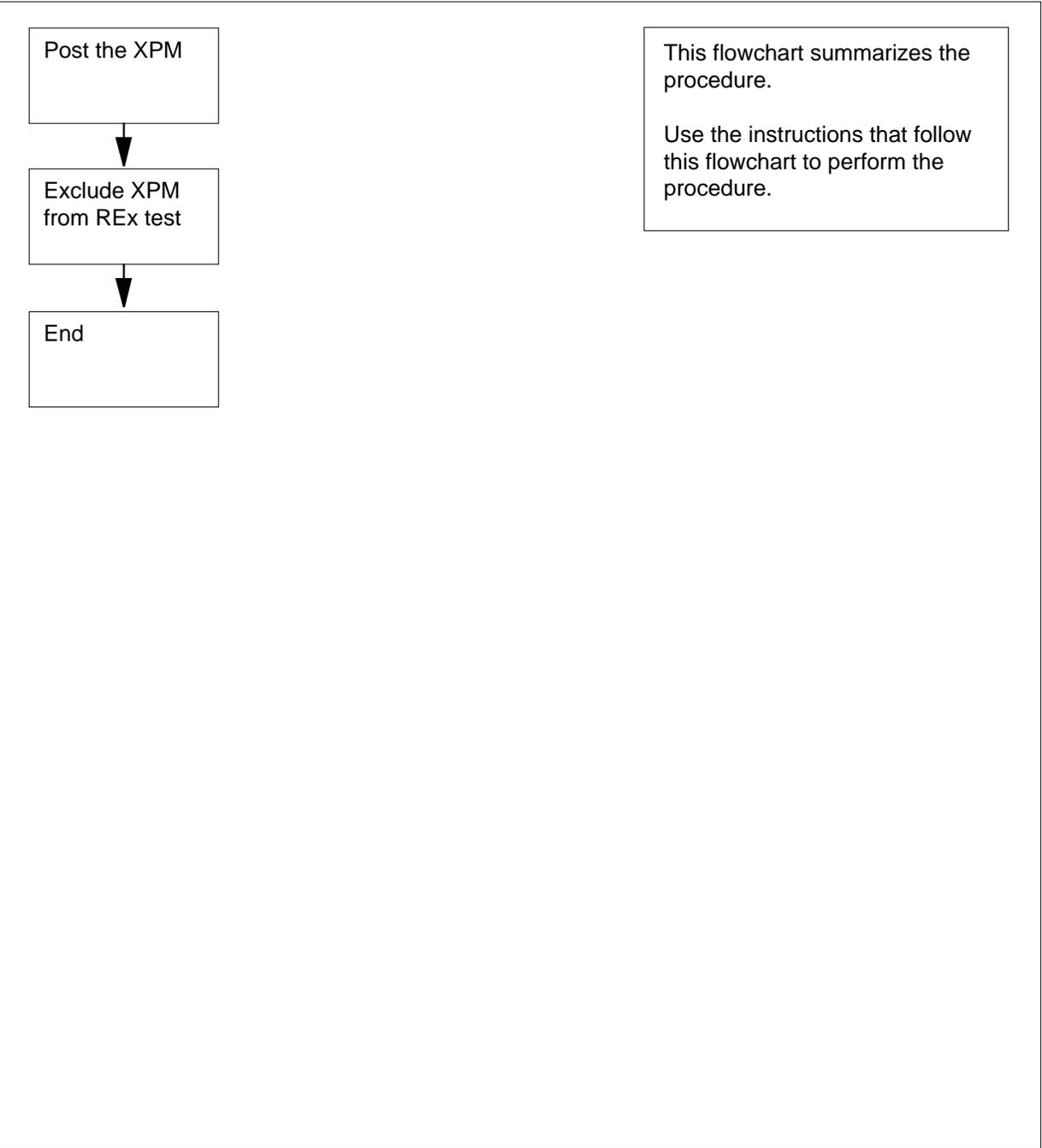
There are no common procedures.

Action

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

Excluding an XPM from a REx test schedule (continued)

Summary of Excluding an XPM from a REx test schedule



Excluding an XPM from a REx test schedule (end)

Excluding an XPM from a 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 XPM to exclude from the REx test, type
`>POST xpm_type xpm_no`
 and press the Enter key.
where
 xpm_type
 is the type of XPM to exclude (for example, LGC)
 xpm_no
 is the number of the XPM (0 to 2047) to post
- 3 To exclude the posted XPM from the REx test schedule, type
`>TST REX OFF`
 and press the Enter key.

Example of a MAP response

LGC 2 is now removed from the REX schedule.

- 4 From the MAP response, determine if the system removed the XPM from the REx schedule.

If the system	Do
removed the XPM from the REx schedule	step 6
did not remove the XPM from the REx schedule	step 5

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

Expanding recording file space on disk in the DIRP utility

Application

Use this procedure to make disk space available for recording.

Use the non-menu CLEANUP command to perform the following tasks:

- rename removed files (R) to processed files (P). The systems erases P files when the DIRP utility requires more space.
- erase specified closed parallel disk files on demounted volumes.

The CLEANUP command contains the optional year, month, and day fields. Use the fields in this command to specify that the system cleaned up all files dated before this date.

Interval

Perform this procedure when you need additional space on the recording device.

Common procedures

There are no common procedures.

Error messages for CLEANUP ALL

The following table contains the error messages for the CLEANUP ALL command. The table also contains correct actions for the messages in this procedure. For a list of common error messages refer to "Error messages for CLEANUP commands".

Error messages for CLEANUP ALL

Error message	Explanation and action
NO VOLUMES IN pool_name	Use the CLEANUP command to find a pool that does not contain any volumes. Action not required. Go to step 19.
IN VOLUME vol_name:xx 2k DIRP BLOCKS WERE RENAMEDzz OF THOSE BLOCKS ARE AVAILABLE TO DIRP AND EXPIRED	Use the CLEANUP command to rename R files to P files on this volume. The number of renamed 2-kbyte DIRP blocks is xx. The number of the renamed blocks that expired and are available to DIRP is zz. Action not required. Go to step 19.

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP SUBSYSTEM

The following table contains the error messages for the CLEANUP SUBSYSTEM command. The table also contains the correct actions for the messages in this procedure. For a list of common error messages refer to "Error messages for CLEANUP commands".

Error messages for CLEANUP SUBSYSTEM

Error message	Explanation and action
COULD NOT GET VOLUME INFORMATION.RETURN CODE: valuefile_system specific message	A file system error occurs when you use the CLEANUP command to try to cleanup a volume. Go to step 18.
COULD NOT GET VOLUME INFORMATION FOR file_name.RETURN CODE: valuefile_system specific message	A file system error occurs when you use the CLEANUP command to try to cleanup a file. Go to step 18.
NO VOLUMES IN pool_name	Use the CLEANUP command to find a pool that does not contain any volumes. Action not required. Go to step 19.
UNKNOWN SUBSYSTEM NAMEnnnn IS NOT A VALID SUBSYSTEM NAME	The DIRP utility does not recognize the subsystem name entered. Check the subsystem name and return to step 6.

Error messages for CLEANUP POOL

The following table contains the error messages for the CLEANUP POOL command. The table also contains the correct actions for the messages in this

Expanding recording file space on disk in the DIRP utility (continued)

procedure. For a list of common error messages refer to “Error messages for CLEANUP commands”.

Error messages for CLEANUP POOL

Error message	Explanation and action
pool_name IS NOT DEFINED IN TABLE DIRPPPOOL	The pool name that you specified is not in the DIRPPPOOL table. Check the pool name and return to step 9.
NO VOLUMES IN pool_name	Use the CLEANUP command to find a pool that does not contain any volumes. Action not required. Go to step 19.
CLEANUP OF PARALLEL POOLS IS NOT SUPPORTEDCLEANUP FILE COMMAND WILL ERASE PARALLEL FILES	You attempted to CLEANUP a parallel pool. Locate a regular pool and enter the command again, or erase parallel files. To erase parallel files, demount the parallel volume from the DIRP utility. Refer to the procedure <i>How to deallocate recording volumes in the DIRP utility</i> . Go to step 2.

Error messages for CLEANUP VOLUME

The following table contains the error messages for the CLEANUP VOLUME command. The table also contains the appropriate actions for the messages in

Expanding recording file space on disk in the DIRP utility (continued)

this procedure. For a list of common error messages refer to "Error messages for CLEANUP commands".

Error messages for CLEANUP VOLUME

Error message	Explanation and action
<pre>vol_name IS NOT A READY DISK VOLUME IN DIRPPOOL.DO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</pre>	<p>The volume is not in table DIRPPOOL.Check the volume name.To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p> <p>Go to step 19.</p>
<pre>COULD NOT GET VOLUME INFORMATION.RETURN CODE: valuefile_system specific message</pre>	<p>A file system error occurs when processing a CLEANUP VOLUME command.</p> <p>Go to step 18.</p>
<pre>IN VOLUME vol_name:xx 2k DIRP BLOCKS WERE RENAMEDzz OF THOSE BLOCKS ARE AVAILABLE TO DIRP AND EXPIRED</pre>	<p>Use the CLEANUP command to rename R files to P files on this volume.The number of renamed 2-kbyte DIRP blocks is xx.The number of the renamed blocks that expired and are available to DIRP is zz.</p> <p>Action not required. Go to step 19.</p>
<pre>CLEANUP OF PARALLEL VOLUMES IS NOT SUPPORTEDCLEANUP FILE COMMAND WILL ERASE PARALLEL FILES</pre>	<p>You attempted to CLEANUP a parallel pool.Locate a regular pool and enter the command again, or erase parallel files. To erase the parallel files, demount the parallel volume from the DIRP utility. Refer to the procedure <i>How to deallocate recording volumes in the DIRP utility</i>.</p> <p>Go to step 2.</p>

Error messages for CLEANUP FILE

The following table contains the error messages for the CLEANUP FILE command. The table also contains correct actions for the messages in this

Expanding recording file space on disk in the DIRP utility (continued)

procedure. For a list of common error messages refer to "Error messages for CLEANUP commands".

Error messages for CLEANUP FILE (Sheet 1 of 3)

Error message	Explanation and action
<pre>file_name IS NOT A VALID PARALLEL OR "R" FILE NAME</pre>	<p>The specified file:</p> <ul style="list-style-type: none"> is not a correct parallel file name is not a correct DIRP-generated R file name (the file name does not need to be in a volume in the DIRPPOOL table) P was in a subsystem removed from DIR <p>Check the file name and return to step 15 to enter the command again.</p>
<pre>file_name IS NOT ON ANY VOLUME IN DIRPPOOLDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</pre>	<p>The specified file is not present on any volume in table DIRPPOOL.</p> <p>To confirm the command, type YES and press the Enter key. To cancel, type NO and press the Enter key. Check the file name and return to step 15 to enter the command again.</p>
<pre>VOLUME CONTAINING file_name IS NOT IN A READY STATE.DO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</pre>	<p>The volume that contains the file is not in the DIRPPOOL table or is not in a READY state.</p> <p>To cancel, type NO and press the Enter key. Determine why the volume is not in the READY state. If required, go to step 18. If not required, return to step 15 to enter the command again.</p>
<pre>FILE ERASE OPERATION FAILED ON FILE file_name.RETURN CODE: valuefile_system specific message</pre>	<p>A file system error occurs when you use the CLEANUP command to try to erase a parallel file.</p> <p>Go to step 18.</p>
<pre>COULD NOT GET VOLUME INFORMATION FOR file_name.RETURN CODE: valuefile_system specific message</pre>	<p>A file system error occurs when you use the CLEANUP command to try to determine if the file was on a volume recognized by the DIRP utility.</p> <p>Go to step 18.</p>

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP FILE (Sheet 2 of 3)

Error message	Explanation and action
<p>Ryyymmddhrmnsqssys IS NOT ON ANY VOLUME IN DIRPPool.DO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>The file is on a volume that is not in the DIRPPool table.Check the volume name. To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p> <p>Go to step 19.</p>
<p>Ryyymmddhrmnsqssys IS NOT TERMINATED.</p>	<p>You cannot rename the file when you use the CLEANUP command because</p> <ul style="list-style-type: none"> • the file does not exceed the retention period in table DIRPSSYS, or • file date is before the date that you entered on the command line <p>Return to step 15. Use the date option, and enter the command again. A future date makes sure the file terminates.</p>
<p>Ryyymmddhrmnsqssys IS RENAMED TO Pyyymmddhrmnsqssysn 2k DIRP BLOCKS WERE RENAMEDn OF THOSE BLOCKS ARE IN EXPIRED "P" FILES</p>	<p>Use the CLEANUP command to rename the R file to a P file. An n represents the number of DIRP blocks.</p> <p>Action not required. Go to step 19.</p>
<p>Ryyymmddhrmnsqssys IS RENAMED TO Pyyymmddhrmnsqssysxx 2k DIRP BLOCKS WERE RENAMEDzz OF THOSE BLOCKS ARE IN EXPIRED "P" FILES</p>	<p>Use the CLEANUP command to rename the R to a P file. The number of renamed DIRP blocks is xx.The number of the blocks that expired and are available to the DIRP utility and that the system can erase if required, is zz.</p> <p>Action not required. Go to step 19.</p>

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP FILE (Sheet 3 of 3)

Error message	Explanation and action
WRONG TYPE: FILE NAME file_ nameENTER: file_name[YEAR: YYYY] [MONTH: MM] [DAY: DD]	The specified file name is not present. Check the file name and enter the command again. To cancel the command, type ABORT and press the Enter key. Go to step 15.
CANNOT CLEANUP A FILE ON A VOLUME STILL MOUNTED TO DIRP.vol_name: vol_no IN pool_type POOL pool_no, pool_name	When you use the CLEANUP command you cannot clean up a parallel file before you demount the parallel volume the file is on. To erase parallel files, demount the parallel volume from the DIRP utility. Refer to the procedure <i>How to deallocate recording volumes in the DIRP utility..</i> Go to step 2.

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP commands

The following table contains the common error messages that follows any CLEANUP command. The table also contains the correct actions for the messages in this procedure.

Error messages for CLEANUP commands (Sheet 1 of 4)

Error message	Explanation and action
<pre>PARMS: <TYPE> {ALL, SUBSYSTEM <subsystem name STRING, VOLUME <volume name> DEVICE name, POOL <pool name> STRING, FILE <file name> FILE name}ENTER <TYPE> (<YEAR: YYYY> {1976 to 3000}) (<MONTH: MM> {1 to 12}) (DAY: DD> {1 to 31})</pre>	<p>System display in response to a QUERY CLEANUP command.</p> <p>Enter correct information as prompted.</p>
<pre>INVALID SYMBOL: <TYPE> {ALL, SUBSYSTEM <subsystem name> STRING, VOLUME <volume name> DEVICE name, POOL <pool name> STRING, FILE <file name> FILE name}ENTER <TYPE> (<YEAR: YYYY>) (<MONTH: MM>) (DAY: DD>)</pre>	<p>You entered a type that is not correct after the CLEANUP command.</p> <p>Go to step 2 and enter the command again. Use the correct type.</p>
<pre>DATE FORMAT IS: YYYY MM DD</pre>	<p>You entered a month variable that is not correct.</p> <p>Check the correct month variables (1 through 12) and enter the date option of the CLEANUP command again. To enter the date, type the correct variables and press the Enter key.</p>
<pre>EITHER INCORRECT OPTIONAL PARAMETER(S) OR TOO MANY PARAMETERS.DATE FORMAT IS: YYYY MM DD</pre>	<ol style="list-style-type: none"> 1. The value for the number of days exceeds the range variable. 2. You entered too many date parameters. <p>Enter the correct variable for the day or date again.</p>
<pre>INVALID NUMBER OF DAYS FOR mm</pre>	<p>The value for the days of the month is not correct.</p> <p>Enter the correct variable.</p>

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP commands (Sheet 2 of 4)

Error message	Explanation and action
<p>RENAMING "R" FILES WITH FILE DATES nn-aaa-nnnn OR BEFORE.RENAMING OR DELETING FILE RyyymmddhrmnsqssysDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>Use the CLEANUP command to rename R files with file dates equal to or before nn-aaa-nnnn to P files. An nn represents the date. Anaaa represents a three-letter abbreviation of a month. Annnnn represents the year.</p> <p>To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key. If you enter YES, the system allows the NODATE option when you delete parallel files.</p>
<p>RENAMING "R" FILE(S) WITH FILE DATE(S) day-month-year OR BEFORE.RENAMING FILE RyyymmddhrmnsqssysDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>Use the CLEANUP command to rename the R files with dates equal to or before day-month-year to P files. The day represents the day of the month. The month represents a three-letter abbreviation of a month. The year represents the year.</p> <p>To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p>
<p>SUBSYSTEM MUST CURRENTLY BE RECORDING ON DISK</p>	<p>The DIRP utility is not recording to disk in this office. You cannot use the CLEANUP command.</p> <p>Contact the next level of support.</p>
<p>THE RETENTION PERIOD IN DIRPSSYS WILL BE USED TO DETERMINE WHICH "R" FILES ARE TERMINATED.RENAMING FILE file_nameDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<ol style="list-style-type: none"> 1. You entered a year character that was not correct. CLEANUP uses the retention period that you entered in the DIRPSSYS table to determine the terminated R files. 2. You entered the command correctly. CLEANUP uses the retention period in the DIRPSSYS table to determine the terminated R files. <p>To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p>

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP commands (Sheet 3 of 4)

Error message	Explanation and action
<p>THE RETENTION PERIOD IN DIRPSSYS WILL BE USED TO DETERMINE WHICH "R" FILES ARE TERMINATED.RENAMING OR DELETING FILE non_dirp_file_nameDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>Confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key. Go to step 19.</p>
<p>CLEANUP IS AVAILABLE ONLY IN OFFICES WHERE DIRP IS RECORDING TO DISK</p>	<p>This office cannot allow the DIRP utility to record to disk devices.</p>
<p>THE RETENTION PERIOD IN DIRPSSYS WILL BE USED TO DETERMINE WHICH "R" FILES ARE TERMINATED.RENAMING OR DELETING FILE RyymddhrmnsqssysDO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>This is a confirmation message. The retention period that you entered in the DIRPSSYS table determines the files to terminate. To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p>
<p>THE RETENTION PERIOD IN DIRPSSYS WILL BE USED TO DETERMINE WHICH "R" FILES ARE TERMINATED.THE TIME REQUIRED TO COMPLETE CLEANUP DEPENDS ON THE NUMBER OF VOLUMES AFFECTED AND THE NUMBER OF "R" FILES ON THOSE VOLUMES.DO YOU WISH TO CONTINUE?PLEASE CONFIRM ("YES" OR "NO"):</p>	<p>This is a confirmation message. The retention period that you entered in the DIRPSSYS table determines the files for termination. The number of volumes affected and R files on those volumes determines the length of time to cleanup those files. To confirm the command, type YES and press the Enter key. To cancel the command, type NO and press the Enter key.</p>
<p>UNABLE TO COMPLETE SCAN FOR "R" FILES ON volume_name.RETURN CODE: valuefile_system specific message</p>	<p>A file system error occurs before CLEANUP completes a scan for R files on a volume. Go to step 18.</p>

Expanding recording file space on disk in the DIRP utility (continued)

Error messages for CLEANUP commands (Sheet 4 of 4)

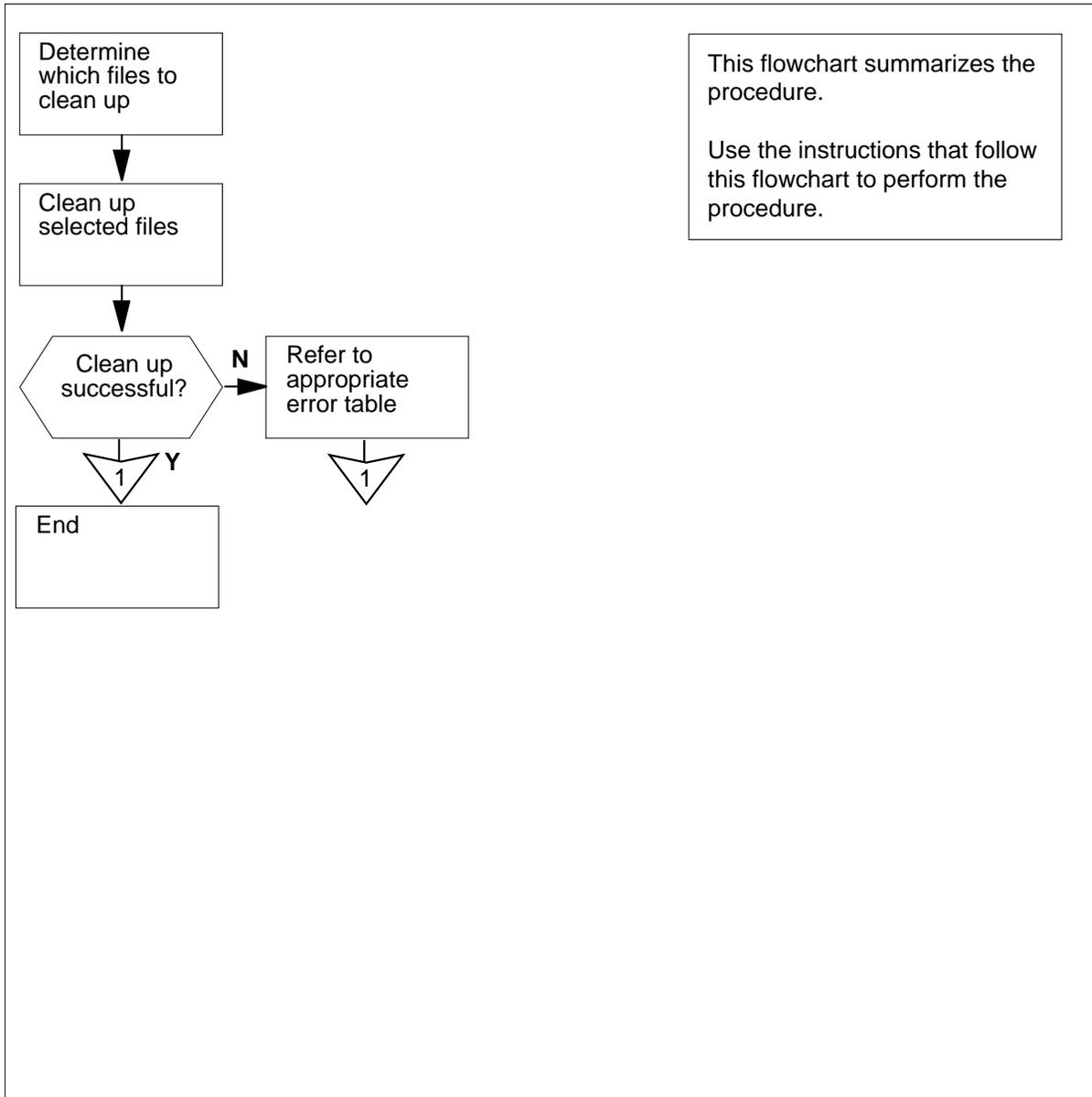
Error message	Explanation and action
UNABLE TO GET FILE INFOR FOR file_name.RETURN CODE: valuefile_system specific message	A file system error occurs before CLEANUP tries to clean up a file. Go to step 18.
UNABLE TO RENAME file_name.RETURN CODE: valuefile_system specific message	A file system error occurs when CLEANUP tries to rename a file. Go to step 18.

Action

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

Expanding recording file space on disk in the DIRP utility (continued)

Summary of Expanding recording file space on disk in the DIRP utility



Expanding recording file space on disk in the DIRP utility (continued)

Expanding recording file space on disk in the DIRP utility

At the MAP terminal

1



CAUTION

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. 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 Determine which files to clean up.

If you	Do
clean up all R files on all regular disk volumes in table DIRP-POOL	step 3
clean up all R files on the regular disk volumes of the subsystem.	step 6
clean up all R files on the regular disk volumes of the pool	step 9
clean up a specified volume	step 12
clean up a specified file	step 15

3 To clean up all R files on all regular disk volumes in table DIRPPOOL, type

```
>CLEANUP ALL YYYY mm dd
```

and press the Enter key.

where

yyyy

is the year of the date parameter. This field is optional. Does not apply to parallel files.

mm

is the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Expanding recording file space on disk in the DIRP utility (continued)

dd

is the day of the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Note: When you specify the date parameter of the CLEANUP command, the system terminates an R file. The system terminates an R file if the file date is earlier than or equal to the date specified. When you do not specify the date parameter of the CLEANUP command, the system terminates an R file if the retention period passes. Set the retention period in table DIRPSSYS.

Example of a MAP response:

```
THE RETENTION PERIOD IN DIRPSSYS WILL BE USED TO
DETERMINE WHICH "R" FILE(S) ARE TERMINATED.
THE TIME REQUIRED TO COMPLETE CLEANUP DEPENDS ON THE
NUMBER OF VOLUMES AFFECTED AND THE NUMBER OF "R"
FILES ON THOSE VOLUMES
DO YOU WISH TO CONTINUE?
PLEASE CONFIRM ("YES" OR "NO"):
```

- 4 To confirm the CLEANUP, type

>YES

and press the Enter key.

Example of a MAP response:

```
IN VOLUME D000AMA1:
0 2K DIRP BLOCKS WERE RENAMED
0 OF THOSE BLOCKS ARE IN EXPIRED "P" FILES
```

If the CLEANUP command	Do
was successful	step 19
was not successful	step 5

- 5 Refer to the table on page to determine the action required.
 6 To clean up all R files on the regular disk volumes of a subsystem, type

```
>CLEANUP SUBSYSTEM ssys yyyy mm dd
```

and press the Enter key.

where

ssys

is the subsystem you must clean up

yyyy

is the year of the date parameter. This field is optional. Does not apply to parallel files.

mm

is the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Expanding recording file space on disk in the DIRP utility (continued)

dd

is the day of the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Note: When you specify the date parameter of the CLEANUP command, the system terminates an R file. The system terminates an R file if the file date is earlier than or equal to the date specified. When you do not specify the date parameter of the CLEANUP command, the system terminates an R file if the retention period passes. Set the retention period in table DIRPSSYS.

- 7 To confirm the CLEANUP command, type

>YES

and press the Enter key.

If the CLEANUP command	Do
was successful	step 19
was not successful	step 8

- 8 Refer to the table on page to determine the action required.

- 9 To clean up all R files on the regular disk volumes of a pool, type

>CLEANUP POOL pool_name yyyy mm dd

and press the Enter key.

where

pool_name

is the pool you must clean up

yyyy

is the year of the date parameter. This field is optional. Does not apply to parallel files.

mm

is the month of the date parameter. If you use the year, you must fill this field. Does not apply to parallel files.

dd

is the day of the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Note: When you specify the date parameter of the CLEANUP command, the system terminates an R file. The system terminates an R file if the file date is earlier than or equal to the date specified. When you do not specify the date parameter of the CLEANUP command, the system terminates an R file if the retention period passes. Set the retention period in table DIRPSSYS.

- 10 To confirm the CLEANUP command, type

>YES

Expanding recording file space on disk in the DIRP utility (continued)

and press the Enter key.

If the CLEANUP command	Do
was successful	step 19
was not successful	step 11

11 Refer to the table on page to determine the action required.

12 To clean up all R files on the regular disk volume, type
>CLEANUP VOLUME vol_name yyyy mm dd
 and press the Enter key.

where

vol_name

is the name of the volume you must clean up

yyyy

is the year of the date parameter. This field is optional. Does not apply to parallel files.

mm

is the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

dd

is the day of the month of the date parameter. If you use the year field, you must fill this field. Does not apply to parallel files.

Note: When you specify the date parameter of the CLEANUP command, the system terminates an R file. The system terminates an R file if the file date is earlier than or equal to the date specified. When you do not specify the date parameter of the CLEANUP command, the system terminates an R file if the retention period passes. Set the retention period in table DIRPSSYS.

13 To confirm the CLEANUP, type

>YES

and press the Enter key.

If the CLEANUP command	Do
was successful	step 19
was not successful	step 14

14 Refer to the table on page to determine the action required.

15 To rename a regular R file to a P file or erase a parallel file on a demounted disk volume, type

>CLEANUP FILE file_name yyyy mm dd

and press the Enter key.

where

Expanding recording file space on disk in the DIRP utility (end)

file_name

is the name of the file you must rename or erase

yyyy

is the year of the date parameter. This field is optional. Does not apply to parallel files.

mm

is the month of the date parameter. If you use the the year field, you must fill this field. Does not apply to parallel files.

dd

is the day of the month of the date parameter. If you use the year field you must fill this field. Does not apply to parallel files.

Note: When you specify the date parameter of the CLEANUP command, the system terminates an R file. The system terminates an R file if the file date is earlier than or equal to the date specified. When you do not specify the date parameter of the CLEANUP command, the system terminates an R file if the retention period passes. Set the retention period in table DIRPSSYS.

- 16** To confirm the CLEANUP command, type

>**YES**

and press the Enter key.

If the CLEANUP command	Do
was successful	step 19
was not successful	step 17

- 17** Refer to the table on page to determine the action required.
- 18** For additional help, contact the next level of support.
- 19** The procedure is complete.

Fan removal and replacement procedure

Application

Use this procedure to remove and replace an NTLX56AA DMS-Spectrum Peripheral Module (SPM) fan unit assembly.

Definition

Perform the specific steps located in the action section to remove and replace a faulty SPM cooling-fan assembly.

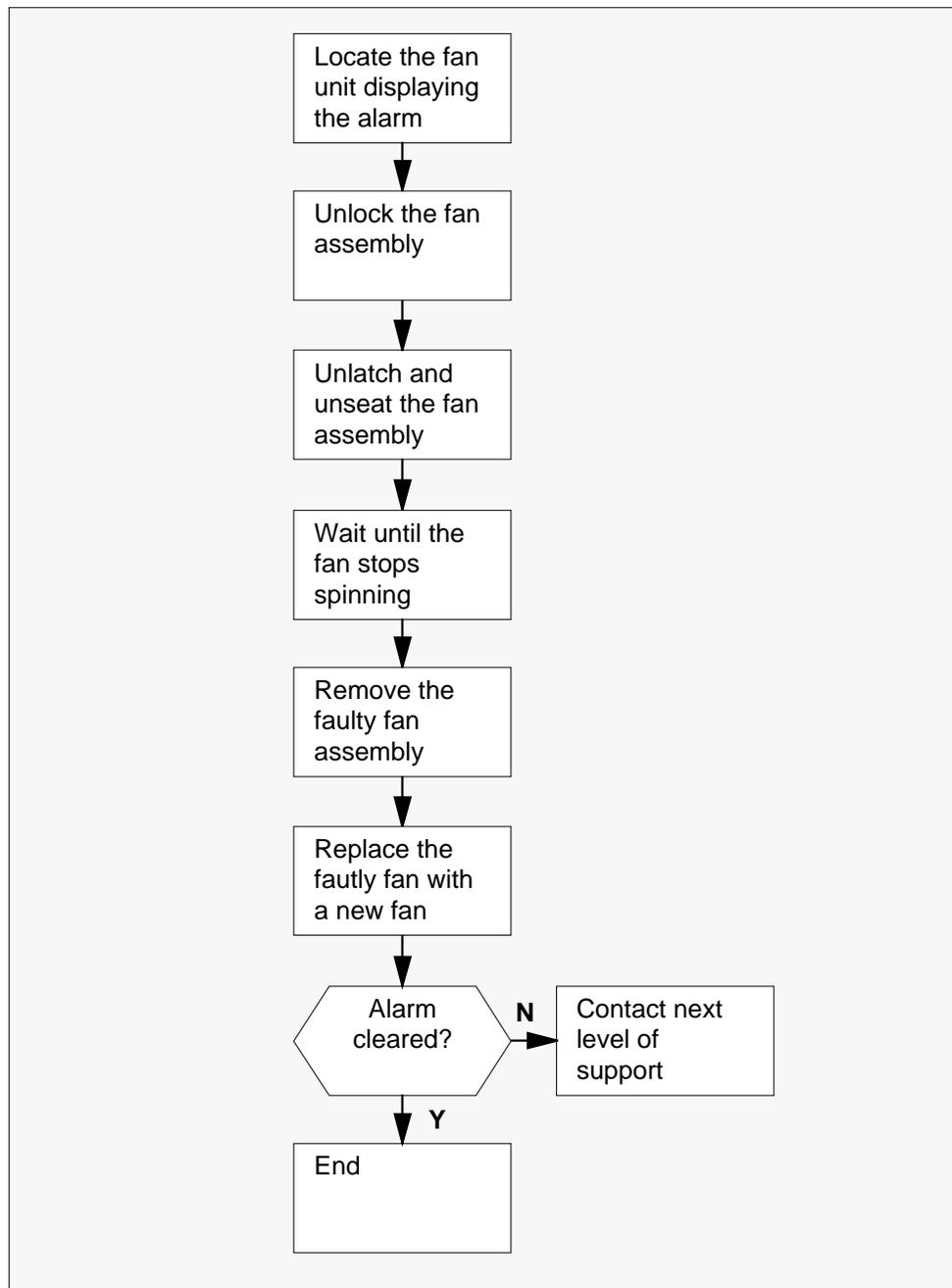
Common procedures

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.

Fan removal and replacement procedure (continued)

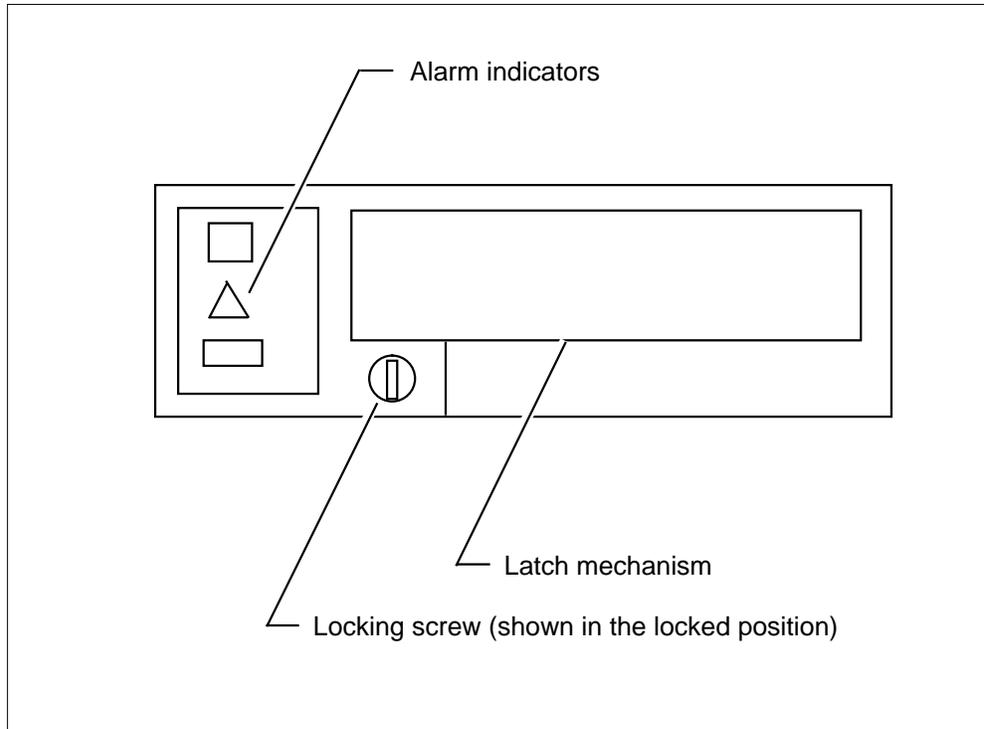


Fan removal and replacement procedure (continued)

Fan removal and replacement procedure

At the SPM frame

- 1 Obtain a new NTLX56AA fan unit assembly to use as a replacement. Use the alarm indicators, as shown in the following figure, to locate the fan assembly that is reporting the alarm.



2



DANGER

Fan may still be spinning

To avoid injury, wait until the fan stops spinning before you remove the fan assembly.

Unlock the fan assembly by turning the locking screw one half-turn counter clockwise.

Fan removal and replacement procedure (continued)

3



CAUTION

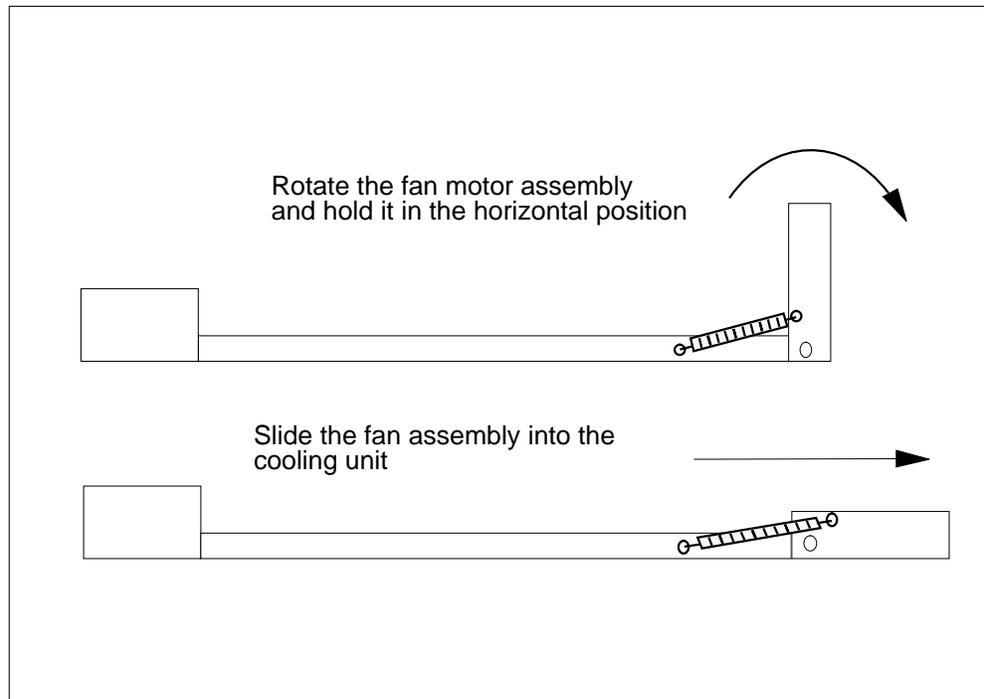
Equipment damage due to empty fan slots

All fan slots must be equipped with NTLX56AA fan unit assemblies to maintain electromagnetic interference (EMI) integrity and to maintain shelf airflow patterns to ensure proper cooling.

Unlatch the fan assembly by placing your hand into the fan's faceplate handle and squeezing the latch mechanism. Unseat the fan assembly by pulling it toward you until the handle is clear of the cooling-unit frame. Wait until the fan stops spinning.

4 Remove the faulty fan unit from the cooling unit frame.

5 Immediately replace the faulty fan assembly with a new NTLX56AA fan unit assembly. Rotate the fan to the horizontal position and insert the fan unit into the cooling unit frame, as shown in the following figure.



6 Push the fan assembly into the frame until it latches.

If	Do
the alarm lamps are off	step 7
an alarm lamp is on	contact the next level of support

Fan removal and replacement procedure (end)

- 7 Turn the locking screw one half-turn clockwise to lock the fan assembly. You have completed this procedure.

Increasing QP database volume size

Application

Use this procedure to increase the size of the query processor (QP) database volume from 200 Mbytes to 600 Mbytes.

Interval

Perform this procedure one time for each QP. The system upgrades all QPs when the system upgrades the update processor (UP).

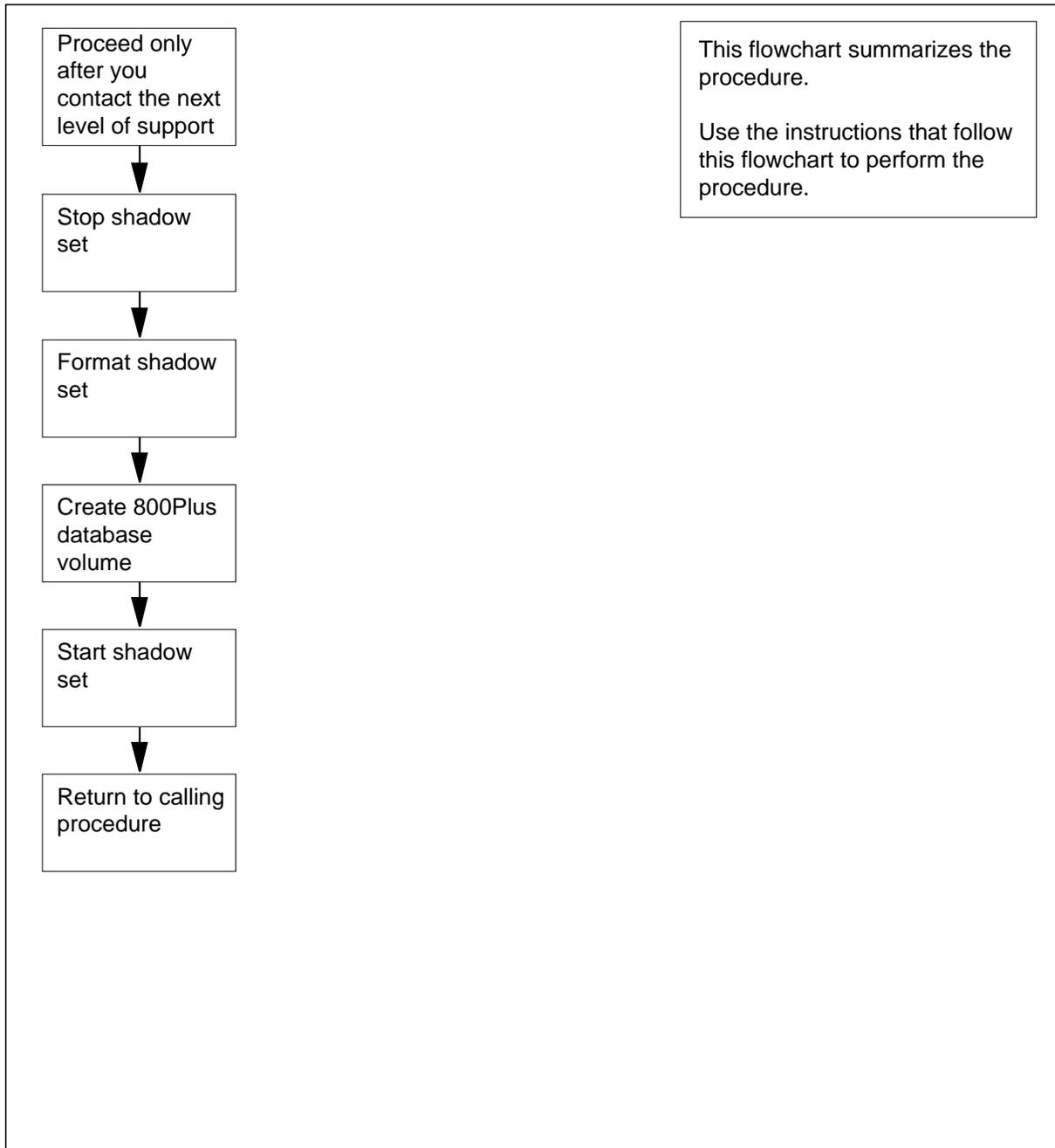
Common procedures

There are no common procedures.

Action

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

Increasing QP database volume size (continued)

Summary of Increasing AP database volume size

Increasing QP database volume size (continued)

Increasing QP database volume size

At the MAP terminal

1



CAUTION

Contact the next level of support

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



DANGER

Possible equipment damage

Proceed only if a step in another maintenance procedure directed you to this procedure. If you use this procedure separately, this procedure can cause equipment damage or service interruption.

To post the QPI, type

```
>POST QPI instance_no
```

and press the Enter key.

where

instance_no

is the QPI number that you obtained in the procedure that sent you to this procedure

Example of a MAP display:

```
      CCS7      SCP
      .         1 SCPLC
Service: 800PLUS      State: ISTb
SMS Status Logged Out  UPD: All Susp RET: All Susp
SCP Local              111111  11112222 22222233
Components 01234567 89012345  67890123 45678901
UPI          .-----  -----  -----  -----
QPI         -IIIIIIII III-----  -----  -----
UBH         .-----  -----  -----  -----
CRMI        -----  -----  -----  -----
Instance    Function(s)                RP
QPI 1:SysB  NORMAL:SysB                FP0:InSv
Instances in POSTed set: 1
```

2 Record the number of the file processor (FP) that contains the QPI.

Note: The FP number displays under the RP header on the MAP display.

Increasing QP database volume size (continued)

- 3** Determine the state of the FP that contains the QPI.
Note: The FP state displays on the right side of the FPn header on the MAP display.
- | If the state of the FP | Do |
|---------------------------|--------|
| is InSv | step 5 |
| is other than listed here | step 4 |
- 4** Determine if alarms are present under the PM header of the alarm banner. Perform the appropriate PM alarm clearing procedures listed in *Alarm and Performance Monitoring Procedures*. Complete the procedures and return to this point.
- 5** To force the QPI to busy, type
>BSY FORCE
 and press the Enter key.
Example of a MAP response:
- ```

QPI 1 : WARNING: Will reduce overall service query
capacity.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):

```
- | If the MAP response                    | Do     |
|----------------------------------------|--------|
| indicates you must confirm the command | step 6 |
| indicates the command passed           | step 7 |
- 6** To confirm the command, type  
**>YES**  
 and press the Enter key.  
*Example of a MAP response:*  
 QPI 1 : Passed.
- 7** To offline the QPI, type  
**>OFFL**  
 and press the Enter key.  
 QPI 1 : Passed.
- 8** To access the shadow utility, type  
**>SHADOWUT FP fp\_no**  
 and press the Enter key.  
*where*

## Increasing QP database volume size (continued)

**fp\_no**  
is the FP number that you recorded at step 2

*Example input:*

>SHADOWUT FP 1

- 9** To stop shadowing, type  
>STOPSHADOW SS00  
and press the Enter key.

*MAP response:*

```

*** WARNING: ***
*** File Processing will no longer be available on ***
*** the shadow set: SS00 on FP1 ***

```

Do you wish to proceed?

Please confirm ("YES", "Y", "NO", or "N"):

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

*MAP response:*

Ok, Shadow Set Stop initiated.

1-10 minutes to complete.

Please wait for Stop Shadow Completion Log.

| If the response                                             | Do      |
|-------------------------------------------------------------|---------|
| is OK, Shadow Set Stop initiated. 1-10 minutes to complete. | step 11 |
| is Request FAILED<br>Set not running                        | step 12 |
| is other than listed here                                   | step 29 |

- 11** To check the summary of log information on the shadow set state at normal intervals, type

>DISPLAYSET SS00

and press the Enter key.

*Example of a MAP display:*

---

## Increasing QP database volume size (continued)

---

Information about shadow set #0:

```

Node name: FP1
Shadow set name: SS00
Set definition state: DEFINING/STOPPED
Set operational state: MANUAL BUSY
Synchronization status: Not SYNCHRONIZED
Multi-Writes: Serial
Capacity (blocks): 1244655
Transfer Length: Optimal
Interval: 0

```

```

=====
Information about member disks:
 Name State Syncstate Reads Writes
Perm DK00 Not INSV No
 DK10 Not INSV No

```

---

| <b>If in 10 min the MAP display</b> | <b>Do</b> |
|-------------------------------------|-----------|
|-------------------------------------|-----------|

|                                                               |         |
|---------------------------------------------------------------|---------|
| indicates the shadow set is DE-FINING/STOPPED and MANUAL BUSY | step 12 |
|---------------------------------------------------------------|---------|

|                                                    |         |
|----------------------------------------------------|---------|
| indicates the shadow set is other than listed here | step 29 |
|----------------------------------------------------|---------|

**12** To quit the shadow utility, type

```
>QUIT
```

and press the Enter key.

**13** To access the disk administration utility for the shadow set, type

```
>DISKADM SS00 FP fp_no
```

and press the Enter key.

where

**fp\_no**

is the FP number that you recorded at step 2

*Example input:*

```
>DISKADM SS00 FP 1
```

*Example of a MAP response:*

Start up command sequence is in progress.

This may take a few minutes.

Administration of shadow set SS00 on FP1 is now active.

## Increasing QP database volume size (continued)

---

- 14 To format the disk, type  
**>FORMATDISK SS00 QUICK FORCE**  
and press the Enter key.  
*Example of a MAP response:*
- ```
***** WARNING *****

Formatting of SS00
will destroy the contents of the disk

The formatting will
  allocate 3 spare or alternate sectors per track
  allocate 16 spare or alternate tracks per disk
  use the G defect list
  assign SS00 as the name for the disk
  perform quick format
  include force option

Do you want to continue?
Please confirm ("Yes", "Y", "NO", or "N"):
```
- 15 To confirm the command, type
>YES
and press the Enter key.
Example of a MAP response:
- ```
Initializing the system data structures on the disk.
Formatting and initialization of the disk is completed.
```
- 16 From office records or from operating company personnel, obtain the new size of the volume (in megabytes) for the 800Plus database (800PDB).  
*Note:* The size of the volume is identical to the the size of the volume for the 800Plus database on the UPI.
- 17 To create the 800Plus database volume, type  
**>CREATEVOL 800PDB vol\_size FTFS**  
and press the Enter key.  
*where*  
**vol\_size**  
is the size of the volume in megabytes that you obtained at step 16  
*Example input:*  
**>CREATEVOL 800PDB 600 FTFS**  
*Example of a MAP response:*

---

**Increasing QP database volume size** (continued)

---

FTFS volume 800PDB will be created on SS00.

Volume size: 600 megabytes  
First FID table extent size: 32754 entries  
Volume Free Space Map size: 7936 segments

Do you want to continue?  
Please confirm ("Yes", "Y", "NO", or "N"):

- 18** To confirm the command, type

>YES

and press the Enter key.

*Example of a MAP response:*  
Creation of the volume is completed.

*Example of a MAP response:*  
CREATEVOL command is aborted.

*Example of a MAP response:*  
Volume size exceeds the size of the disk.

- 19** To quit the disk administration utility, type

>QUIT

and press the Enter key.

- 20** To access the shadow utility, type

>SHADOWUT FP fp\_no

and press the Enter key.

where

**fp\_no**

is the FP number that you recorded at step 2

- 21** To start shadowing, type

>STARTSHADOW SS00

and press the Enter key.

*Example of a MAP response:*

## Increasing QP database volume size (continued)

---

The shadow set will be started with the following parameter settings:

```
Node name : FP1
Shadow set name: SS00
New Master :
Transfer length: Optimal
Interval : 0
Synchronization: Default
Force : NO
```

Only members that are in a Manual Busy state can be started.

Do you want to continue?

Please confirm ("Yes", "Y", "NO", or "N"):

- 22** To confirm the command, type

**>YES**

and press the Enter key.

---

| <b>If the response</b>                                       | <b>Do</b> |
|--------------------------------------------------------------|-----------|
| is OK, Shadow Set start initiated. 1-45 minutes to complete. | step 23   |
| is Request FAILEDNonexistent set name.                       | step 24   |

---

- 23** To check the summary of log information on the shadow set state at normal intervals, type

**>DISPLAYSET SS00**

and press the Enter key.

*Example of a MAP display:*

---

## Increasing QP database volume size (continued)

---

Information about shadow set #0:

```

Node name: FPl
Shadow set name: SS00
Set definition state: RUNNING
Set operational state: IN SERVICE
Synchronization status: Not SYNCHRONIZED
Multi-Writes: Serial
Capacity (blocks): 1244655
Transfer Length: Optimal
Interval: 0

```

```

=====
Information about member disks:
 Name State Syncstate Reads Writes
Perm DK00 INSV Yes 393 499
 DK10 INSV Fsync 0% 0 0

```

---

|                                     |           |
|-------------------------------------|-----------|
| <b>If in 10 min the MAP display</b> | <b>Do</b> |
|-------------------------------------|-----------|

---

indicates the shadow set runs and is in service      step 28

does not indicate the shadow set runs and is in service      step 29

---

- 24** Make sure that you enter the set name correctly. To enter the STARTSHADOW command again, type

```
>STARTSHADOW SS00
```

and press the Enter key.

- 25** To confirm the command, type

```
>YES
```

and press the Enter key.

---

|                        |           |
|------------------------|-----------|
| <b>If the response</b> | <b>Do</b> |
|------------------------|-----------|

---

is OK, Shadow Set start initiated. 1-45 minutes to complete.      step 23

is other than listed here      step 29

---

- 26** You must wait until the set action completes. To enter the STARTSHADOW command at normal intervals, type

```
>STARTSHADOW SS00
```

and press the Enter key.

## Increasing QP database volume size (end)

---

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

---

| <b>If in 10 min the STARTSHADOW command</b> | <b>Do</b> |
|---------------------------------------------|-----------|
|---------------------------------------------|-----------|

---

|           |         |
|-----------|---------|
| initiates | step 23 |
|-----------|---------|

|                   |         |
|-------------------|---------|
| does not initiate | step 29 |
|-------------------|---------|

---

- 28** To quit the shadow set utility, type  
>**QUIT**  
and press the Enter key.  
Go to step 30.

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

- 30** Return to the procedure that sent you to this procedure and continue as directed.

## Increasing UP database volume

---

### Application

Use this procedure to increase update processor (UP) database volume from 200 Mbytes to 600 Mbytes.

### Interval

Perform this procedure one time.

### Common procedures

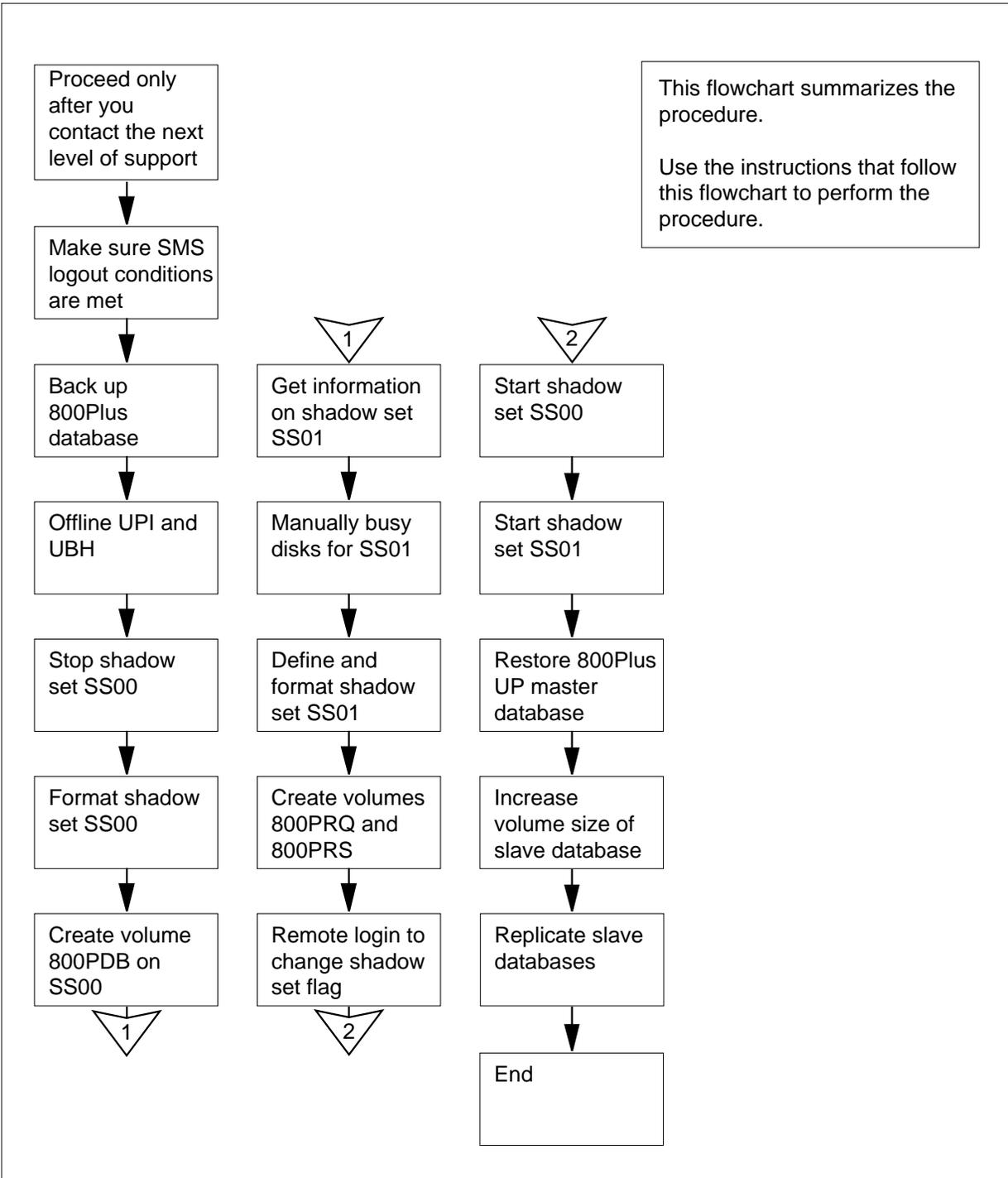
There are no common procedures.

### Action

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

## Increasing UP database volume (continued)

### Summary of Increasing UP database volume size



---

## Increasing UP database volume (continued)

---

### Increasing UP database volume size

*At your current location:*

1



**CAUTION**

**Contact the next level of support**

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



**CAUTION**

**Loss of service**

Perform this procedure during a low traffic period. This procedure suspends emergency and normal updates to the 800Plus master database.



**DANGER**

**Potential damage to the UP master database**

Do not proceed until the SMS has received all SMS service orders and an SCPII response for each service order. The SMS must not require retransmissions for response files. The system must back up the SMS database immediately before you continue with this procedure. You must also log out the SMS.

Contact personnel at the Service Management System (SMS) to make sure of the following:

- all pending SMS service orders have been applied
- the SMS received all SCPII responses to updates
- the SMS does not need to transmit response files again from the SCPII
- the system backed up the SMS database immediately before you start this procedure
- the SMS logs out of the SCPII during this procedure

2

Determine the following from office records or from operating company personnel:

- the number of the file processor (FP) that contains the update processing instance (UPI)
- the UPI number
- the update batch handler (UBH) number

## Increasing UP database volume (continued)

---

- 3 Perform the procedure *Backing up an 800Plus database to DAT* in this document. Complete the procedure and return to this point.

---

| <b>If the backup procedure</b>                   | <b>Do</b> |
|--------------------------------------------------|-----------|
| produced a backup tape of the UP database        | step 4    |
| did not produce a backup tape of the UP database | step 90   |

---

### ***At the MAP terminal***

- 4 To access the SCP level of the MAP display, type  
`>MAPCI ;MTC ;CCS ;SCP`  
and press the Enter key.
- 5 To post the 800Plus service, type  
`>POST 800PLUS`  
and press the Enter key.
- 6 To access the SCPLOC level of the MAP display, type  
`>SCPLOC`  
and press the Enter key.
- 7 To post the UPI, type  
`>POST UPI instance_no`  
and press the Enter key.  
*where*  
**instance\_no**  
is the UPI number that you recorded at step 2
- Example input:*  
`>POST UPI 0`
- Example of a MAP display:*

---

## Increasing UP database volume (continued)

---

```

 CCS7 SCP
 . .
Service: 800PLUS State: InSv
SMS Status Logged Out UPD: All Susp RET: All Susp
SCP Local 111111 11112222 22222233
Components 01234567 89012345 67890123 45678901
UPI .-----
QPI -..... ...-----
UBH .-----
CRMI -----
Instance Function(s) RP
UPI 0:InSv EMERG:InSv NORMAL:InSv FP0:InSv
Instances in POSTed set: 1

```

- 8** To force the UPI to busy, type

```
>BSY FORCE
```

and press the Enter key.

*Example of a MAP response:*

```

UPI 0 : WARNING: Emergency and Normal updates will be
suspended.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):

```

---

| If the MAP response                         | Do      |
|---------------------------------------------|---------|
| indicates that you must confirm the command | step 9  |
| indicates that the command passed           | step 10 |

---

- 9** To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP response:*

```
UPI 0 : Passed.
```

- 10** To offline the UPI, type

```
>OFFL
```

and press the Enter key.

*MAP response:*

```
UPI 0 : Passed.
```

- 11** To post the UBH, type

```
>POST UBH instance_no
```

## Increasing UP database volume (continued)

---

and press the Enter key.

*where*

**instance\_no**

is the UBH number that you recorded at step 2

- 12** To force the UBH to busy, type

**>BSY FORCE**

and press the Enter key.

*MAP response:*

UBH 0 : WARNING: Emergency and Normal updates will be suspended.

Do you wish to continue?

Please confirm ("YES", "Y", "NO", or "N"):

---

**If the MAP response**

**Do**

indicates that you must confirm the command step 13

indicates that the command passed step 14

---

- 13** To confirm the command, type

**>YES**

and press the Enter key.

*MAP response:*

UBH 0 : Passed.

- 14** To offline the UBH, type

**>OFFL**

and press the Enter key.

*MAP response:*

UBH 0 : Passed.

- 15** To access the shadow utility, type

**>SHADOWUT FP fp\_no**

and press the Enter key.

*where*

**fp\_no**

is the FP number that you recorded at step 2

*Example input:*

**>SHADOWUT FP 0**

- 16** To stop shadowing, type

**>STOPSHADOW SS00**

---

## Increasing UP database volume (continued)

---

and press the Enter key.

*MAP response:*

```

*** WARNING: ***
*** File Processing will no longer be available on ***
*** the shadow set: SS00 on FP0 . ***

Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 17** To confirm the command, type

**>YES**

and press the Enter key.

*MAP response:*

```
Ok, Shadow Set Stop initiated.
1-10 minutes to complete.
Please wait for Stop Shadow Completion Log.
```

| If the response                                             | Do      |
|-------------------------------------------------------------|---------|
| is Ok, Shadow Set Stop initiated. 1-10 minutes to complete. | step 18 |
| is Request FAILEDSet not running                            | step 19 |
| is other than listed here                                   | step 90 |

- 18** To check the summary of log information on the shadow set state at normal intervals, type

**>DISPLAYSET SS00**

and press the Enter key.

*Example of a MAP response:*

---

## Increasing UP database volume (continued)

---

Information about shadow set #0:

```
Node name: FP2
Shadow set name: SS00
Set definition state: DEFINING/STOPPED
Set operational state: MANUAL BUSY
Synchronization status: Not SYNCHRONIZED
Multi-Writes: Serial
Capacity (blocks): 1244655
Transfer Length: Optimal
Interval: 0
```

Information about member disks:

|      | Name | State    | Syncstate | Reads | Writes |
|------|------|----------|-----------|-------|--------|
| Perm | DK00 | Not INSV | No        |       |        |
|      | DK10 | Not INSV | No        |       |        |

---

**If in 10 min, the MAP display      Do**

---

indicates that the step 19 shadow set is DEFINING/STOPPED and MANUAL BUSY

indicates that the shadow set is step 90 other than listed here

---

- 19** To quit the shadow utility, type  
>QUIT  
and press the Enter key.
- 20** To access the disk administration utility for the shadow set, type  
>DISKADM SS00 FP fp\_no  
and press the Enter key.

where

**fp\_no**  
is the FP number that you recorded at step 2

Example input:

```
>DISKADM SS00 FP 0
```

Example of a MAP response:

---

## Increasing UP database volume (continued)

---

Start up command sequence is in progress.  
 This may take a few minutes.  
 Administration of shadow set SS00 on FP0 is now active.  
 WARNING: In this mode, Certifydisk cannot be executed,  
 and Formatdisk can be executed only with the (default)  
 quick option.

- 21** To format the disk, type  
**>FORMATDISK SS00 QUICK FORCE**  
 and press the Enter key.

*Example of a MAP response:*

\*\*\*\*\* WARNING \*\*\*\*\*

Formatting of SS00  
 will destroy the contents of the disk

The formatting will  
     allocate 3 spare or alternate sectors per track  
     allocate 16 spare or alternate tracks per disk  
     use the G defect list  
     assign SS00 as the name for the disk  
     perform quick format  
     include force option

Do you want to continue?  
 Please confirm ("YES", "Y", "NO", or "N"):

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

*MAP response:*

Initializing the system data structures on the disk.  
 Formatting and initialization of the disk is completed.

- 23** From office records or from operating company personnel, obtain the new volume size (in megabytes) for the 800Plus database (800PDB).

- 24** To create the 800Plus database volume, type  
**>CREATEVOL 800PDB vol\_size FTFS**  
 and press the Enter key.

*where*

**vol\_size**  
 is the size of the volume in megabytes that you obtained at step 23

## Increasing UP database volume (continued)

---

*Example input:*

```
>CREATEVOL 800PDB 600 FTFS
```

*Example of a MAP response:*

FTFS volume 800PDB will be created on SS00.

```
Volume size: 600 megabytes
First FID table extent size: 32754 entries
Volume Free Space Map size: 7936 segments
```

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

- 25** To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP response:*

Creation of the volume is completed.

*Example of a MAP response:*

CREATEVOL command is aborted.

*Example of a MAP response:*

Volume size exceeds the size of the disk.

- 26** To quit the disk administration utility, type

```
>QUIT
```

and press the Enter key.

- 27** From the office records or operating company personnel, record the following information for the UBH shadow set (SS01):

- the name of each disk in shadow set SS01
- the function of each disk (permanent, master, or slave)
- the SCSI bus number (scsi\_no) of each disk
- the device number (dev\_no) of each disk

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

```
>PM
```

and press the Enter key.

*Example of a MAP display:*

```
FP 0: FP0_R256 Plane Devices
InSv . .
```

- 29** To post the FP, type

```
>POST FP fp_no
```

and press the Enter key.

---

## Increasing UP database volume (continued)

---

where

**fp\_no**  
is the FP number that recorded at step 2

Example input:

>POST FP 0

Example of a MAP display:

```
FP 0: FP0_R256 Plane Devices
InSv . .
```

- 30** To access the Devices level of the MAP display, type

>DEVICES

and press the Enter key.

Example of a MAP display:

```
FP 0: FP0_R256 Plane Devices
InSv . .

 CTRL0 CTRL1 DEVICE
DABM . . 0 1 2 3 4 5
SCSI 0 . (EN) . (EN) . . . - - -
SCSI 1 . (DIS) . (DIS) . . . - - -
```

- 31** Identify the devices for use in the new shadow set.

| If both devices             | Do      |
|-----------------------------|---------|
| are in service (.)          | step 33 |
| are other than listed here. | step 32 |

- 32** To return both devices to service, contact the next level of support. When both devices are in service, complete the procedure.

- 33** To manually busy the first device that will belong to the new shadow set, type

>BSY DEV scsi\_no dev\_no

and press the Enter key.

where

**scsi\_no**  
is the SCSI number of the first disk that you recorded at step 27

**dev\_no**  
is the device number of the first disk that you recorded at step 27

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 34 |
| failed             | step 90 |

## Increasing UP database volume (continued)

---

- 34** To manually busy the second device that will belong to the new shadow set, type

```
>BSY DEV scsi_no dev_no
```

and press the Enter key.

*where*

**scsi\_no**

is the SCSI number of the second disk that you recorded at step 27

**dev\_no**

is the device number of the second disk that you recorded at step 27

---

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 35 |
| failed             | step 90 |

---

- 35** To quit the Devices level of the MAP display, type

```
>QUIT
```

and press the Enter key.

- 36** To access the shadow utility, type

```
>SHADOWUT FP fp_no
```

and press the Enter key.

*where*

**fp\_no**

is the FP number that you recorded at step 2

- 37** To define the shadow set, type

```
>DEFINESET SS01 mstr_name
```

and press the Enter key.

*where*

**mstr\_name**

is the name of the master disk that you recorded at step 27

*Example input:*

```
>DEFINESET SS01 DK00
```

*MAP response:*

Ok, Shadow Set defined

- 38** To add a slave member to the shadow set, type

```
>ADDMEMBER SS01 disk_name
```

and press the Enter key.

*where*

**disk\_name**

is the name of the slave disk that you recorded at step 27

---

## Increasing UP database volume (continued)

---

*Example input:*

>ADDMEMBER SS01 DK10

*MAP response:*

Ok, Shadow Set Member added

39 To quit the shadow utility, type

>QUIT

and press the Enter key.

40 To access the disk administration utility for the shadow set, type

>DISKADM SS01 FP fp\_no

and press the Enter key.

*where*

**fp\_no**

is the FP number that you recorded at step 2

41 To format the disk, type

>FORMATDISK SS01 QUICK FORCE

and press the Enter key.

42 To confirm the command, type

>YES

and press the Enter key.

43 From office records or from operating company personnel, obtain the volume size (in megabytes) for the 800Plus request volume (800PRQ). Obtain the volume size for the 800Plus response volume (800PRS).

44 To create the 800Plus request volume, type

>CREATEVOL 800PRQ vol\_size FTFS

and press the Enter key.

*where*

**vol\_size**

is the size of the volume in megabytes obtained at step 43

45 To confirm the command, type

>YES

and press the Enter key.

---

| If the command | Do      |
|----------------|---------|
| passed         | step 46 |
| failed         | step 90 |

---

46 To set the cache size for the request volume, type

>SETCACHESIZE 800PRQ SYSTEM 250

and press the Enter key.

## Increasing UP database volume (continued)

---

*Example of a MAP response:*

```
250 system cache pages will be created for 800PRQ.
Do you want to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 47** To confirm the command, type

```
>YES
```

and press the Enter key.  
The volume cache size is set.

- 48** To create the 800Plus response volume, type

```
>CREATEVOL 800PRS vol_size FTFS
```

and press the Enter key.

*where*

**vol\_size**

is the size of the volume in megabytes that you obtained at step 43

- 49** To confirm the command, type

```
>YES
```

and press the Enter key.

---

| If the command | Do      |
|----------------|---------|
| passed         | step 50 |
| failed         | step 90 |

---

- 50** To set the cache size for the response volume, type

```
>SETCACHESIZE 800PRS SYSTEM 250
```

and press the Enter key.

- 51** To confirm the command, type

```
>YES
```

and press the Enter key.

- 52** To quit the disk administration utility, type

```
>QUIT
```

and press the Enter key.

- 53** To perform a remote login to the FP, type

```
>REMLOGIN FP fp_no
```

and press the Enter key.

*where*

**fp\_no**

is the FP number that you obtained in step 2

**Increasing UP database volume** (continued)

**54** To access the shadow set configuration utility, type  
**>CONFIGSS**  
 and press the Enter key.

| <b>If you</b>                      | <b>Do</b> |
|------------------------------------|-----------|
| can access the CONFIGSS utility    | step 56   |
| cannot access the CONFIGSS utility | step 55   |

**55** To turn ON access to CONFIGSS, contact the next level of support. When you have access, go to step 54.

**56** To choose the two shadow-set configuration, type  
**>CONFIG TWOSS**  
 and press the Enter key.

**57** To quit the shadow set configuration utility, type  
**>QUIT**  
 and press the Enter key.

**58** To perform a remote logout of the FP, type  
**>REMLOGOUT**  
 and press the Enter key.

**59** To manually busy the FP, type  
**>BSY**  
 and press the Enter key.

*MAP response:*

Warning: The application on this node will no longer be available for processing. Do you wish to continue? Please confirm ("YES", "Y", "NO", or "N"):

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

*Example of a MAP response:*

FP 0 Busy PM: Request has been submitted  
 FP 0 Busy PM: Command completed. The PM is manually busy

| <b>If the BSY command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed                    | step 61   |

---

## Increasing UP database volume (continued)

---

|           | <b>If the BSY command</b>                                                                                                                                                                                                                       | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed                                                                                                                                                                                                                                          | step 90   |
| <b>61</b> | To reset the FP, type<br><b>&gt;PMRESET RELOAD</b><br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>FP0 Reset PM: Request has been submitted.<br>FP0 Reset PM: Command completed. Reload restart completed successfully. |           |
|           | <b>If the PPMRESET command</b>                                                                                                                                                                                                                  | <b>Do</b> |
|           | passed                                                                                                                                                                                                                                          | step 62   |
|           | failed                                                                                                                                                                                                                                          | step 90   |
| <b>62</b> | To return the FP to service, type<br><b>&gt;RTS</b><br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>FP 0 RTS PM: Request has been submitted.<br>FP 0 RTS PM: Command completed. The PM is in-service trouble.           |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                                                       | <b>Do</b> |
|           | passed                                                                                                                                                                                                                                          | step 63   |
|           | failed                                                                                                                                                                                                                                          | step 90   |
| <b>63</b> | To access the shadow utility, type<br><b>&gt;SHADOWUT FP fp_no</b><br>and press the Enter key.<br><i>where</i><br><b>fp_no</b><br>is the FP number that you recorded at step 2                                                                  |           |
| <b>64</b> | To start shadowing, type<br><b>&gt;STARTSHADOW ss_name</b><br>and press the Enter key.<br><i>where</i>                                                                                                                                          |           |

---

## Increasing UP database volume (continued)

---

**ss\_name**  
is the name of the shadow set

**Note:** Start shadow set SS00 first. When you must repeat the STARTSHADOW routine, start shadow set SS01.

*Example of a MAP response:*

The shadow set will be started with the following parameter settings:

```
Node name : FP2
Shadow set name: SS00
New Master :
Transfer Length: Optimal
Interval : 0
Synchronization: Default
Force : NO
```

Only members that are in a Manual Busy state can be started.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

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

---

| If the response                                              | Do      |
|--------------------------------------------------------------|---------|
| is OK, Shadow Set start initiated. 1-45 minutes to complete. | step 66 |
| is Request FAILEDNon-existent Set name                       | step 67 |
| is Request FAILEDSet reserved by another application         | step 69 |
| is Request FAILEDSet already running                         | step 71 |

---

- 66** To check the summary of log information on the shadow set state at normal intervals, type  
**>DISPLAYSET ss\_name**  
and press the Enter key.  
*where*

## Increasing UP database volume (continued)

**ss\_name**  
is the name of the shadow set

*Example of a MAP response:*

Information about shadow set #0:

```
Node name: FP2
Shadow Set name: SS00
Set definition state: RUNNING
Set operational state: IN SERVICE
Synchronization status: Not SYNCHRONIZED
Multi-Writes: Serial
Capacity (blocks): 1244655
Transfer Length: Optimal
Interval: 0
```

Information about member disks:

|      | Name | State | Syncstate | Reads | Writes |
|------|------|-------|-----------|-------|--------|
| Perm | DK00 | INSV  | Yes       | 393   | 499    |
|      | DK10 | INSV  | Fsync 0%  | 0     | 0      |

| If in 10 min the MAP display | Do |
|------------------------------|----|
|------------------------------|----|

|                                                 |         |
|-------------------------------------------------|---------|
| indicates the shadow set runs and is in service | step 71 |
|-------------------------------------------------|---------|

|                                                         |         |
|---------------------------------------------------------|---------|
| does not indicate the shadow set runs and is in service | step 90 |
|---------------------------------------------------------|---------|

- 67** Make sure you entered the set name correctly. To enter the STARTSHADOW command again, type

```
>STARTSHADOW ss_name
```

and press the Enter key.

where

**ss\_name**  
is the name of the shadow set

- 68** To confirm the command, type

```
>YES
```

and press the Enter key.

| If the response | Do |
|-----------------|----|
|-----------------|----|

|                                                              |         |
|--------------------------------------------------------------|---------|
| is Ok, Shadow Set start initiated. 1-45 minutes to complete. | step 66 |
|--------------------------------------------------------------|---------|

---

## Increasing UP database volume (continued)

---

| If the response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Do      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| is other than listed here                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | step 90 |
| <b>69</b> You must wait until the set action is completed. To enter the STARTSHADOW command, type<br>>STARTSHADOW <b>ss_name</b><br>and press the Enter key.<br><i>where</i><br><b>ss_name</b><br>is the name of the shadow set                                                                                                                                                                                                                                                                                                                                                          |         |
| <b>70</b> To confirm the command, type<br>>YES<br>and press the Enter key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| If within 10 min the START-SHADOW command                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Do      |
| initiates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | step 66 |
| does not initiate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | step 90 |
| <b>71</b> Repeat steps 64 to 69 for shadow set SS01.<br>When both shadow sets initiate, complete the procedure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| <b>72</b> To quit the shadow set utility, type<br>>QUIT<br>and press the Enter key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |
| <b>73</b> Restore the master database. Perform the correct recovery procedure in <i>Recovery Procedures</i> . Complete the procedure and return to this point.                                                                                                                                                                                                                                                                                                                                                                                                                           |         |
| <b>74</b> From the MAP display, record the instance number of each QPI. Record instances in the order of fault priority, as follows: <ul style="list-style-type: none"> <li>• S means system busy</li> <li>• R means resource busy</li> <li>• M means manual busy</li> <li>• I means in-service trouble</li> <li>• C means in-service trouble congested</li> <li>• D means in-service trouble discarding</li> <li>• N means in-service trouble not accessible</li> <li>• dot (.) means in-service</li> </ul> <p><b>Note:</b> S has highest priority and dot (.) has lowest priority.</p> |         |

## Increasing UP database volume (continued)

- 75** For the QPI with the most severe fault, perform the procedure *How to Increase QP database volume size*. Complete the procedure and return to this point.
- Note:** If a minimum of two QPIs have the same fault priority, work from left to right.
- 76** Restore the slave database. Perform the correct recovery procedure in *Recovery Procedures*.
- 77** Repeat steps 75 and 76 for each QPI on the list that you recorded at step 74. When the database volume size in each QPI increases, and the system replicates each database, go to step 91.
- 78** Repeat steps 75 and 76 for each QPI. When the system has replicated the database in each QPI, which includes in-service QPIs, continue the procedure.
- 79** To post the UPI, type
- ```
>POST UPI instance_no
```
- and press the Enter key.
- where
- ```
instance_no
```
- is the UPI number that you recorded at step 2
- 80** To manually busy the UPI, type
- ```
>BSY
```
- and press the Enter key.
- Example of a MAP response:*
UPI 0 : Passed.
- | If the response | Do |
|---|---------|
| indicates that you must confirm the command | step 81 |
| indicates the command passed | step 82 |
| indicates the command failed | step 90 |
- 81** To confirm the command, type
- ```
>YES
```
- and press the Enter key.  
UPI 0 : Passed.
- 82** To return the UPI normal update processing to service, type
- ```
>RTS NORMAL
```
- and press the Enter key.
- Example of a MAP response:*

Increasing UP database volume (continued)

UPI 0 : Passed.

If the RTS command	Do
passed	step 83
failed	step 90

- 83** To display the number of pending updates for the UPI, type
>QUERYUPD
 and press the Enter key.
 Record the number of pending updates.
Example of a MAP response:

```
UPI      Updates In Queue   21:00
          Emerg    Normal
0         1,033     212
```

- 84** Wait 5 min. To display the number of pending updates for the UPI, type
>QUERYUPD
 and press the Enter key.

If the number of pending normal updates	Do
is zero	step 87
is not zero and decreases	step 85
increases or does not change	step 86

- 85** Repeat step 84. If after 2 h, the number of pending updates remains constant or increases, go to step 90.
- 86** Repeat step 84. If after 2 h, the number of pending updates remains constant or increases, go to step 90.
- 87** To return the UPI emergency update processing to service, type
>RTS EMERG
 and press the Enter key.
Example of a MAP response:
 UPI 0 : Passed.

If the RTS command	Do
passed	step 88
failed	step 90

Increasing UP database volume (end)

- 88** Determine the UPI state, and the normal and emergency update states.
- Note:** The UPI state appears on the right side of the UPI header on the MAP display. The normal update state appears on the right side of the NORMAL header. The emergency update state appears on the right side of the EMERG header.

Example of a MAP display:

```
Instance      Function(s)                RP
UPI 0:InSv    EMERG:InSv NORMAL:InSv FP0:InSv
Instances in POSTed set: 1
```

If the UPI state	Do
is InSv, and the NORMAL and states are InSv	step 89
is other than listed here	step 89

- 89** Contact the next level of support to inform the SMS office that updates from the SMS office can begin.
Go to step 91.
- 90** For additional help, contact the next level of support.
- 91** The procedure is complete.

Inspecting cooling unit filters

Application

Use this procedure to inspect cooling unit filters in the following types of frames.

- NTMX89FA Cabinetized Remote Switching Center/Line Card Module (CRSC/LCM)
- NTMX89FB Cabinetized Remote Switching Center/Integrated Services Digital Network (CRSC/ISDN)
- NTMX90AB Global Peripheral Platform (GPP) cabinet
- NTRX89FC Cabinetized Extension Module (CEXT)

Interval

Perform this procedure for each two week interval.

Common procedures

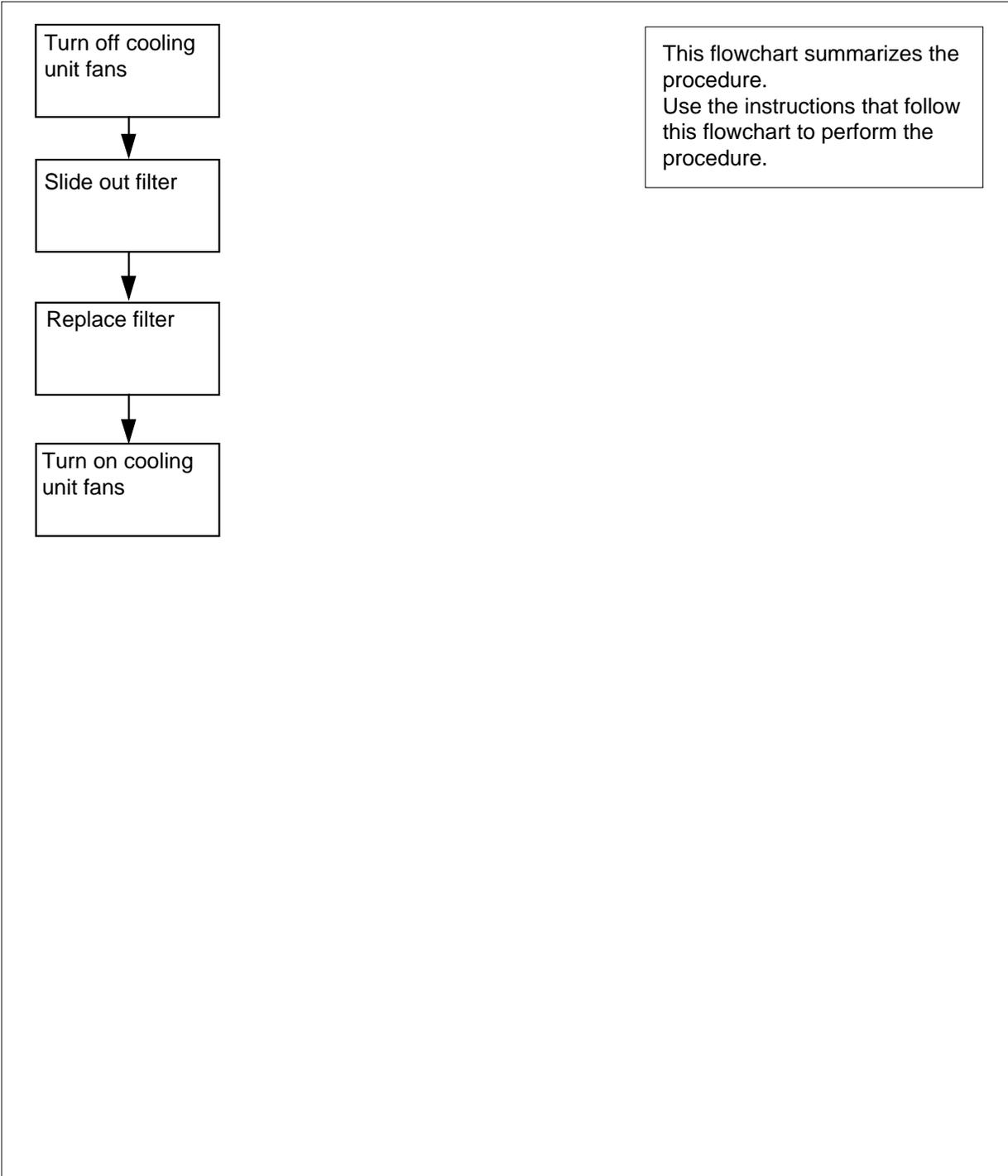
There are no common procedures.

Action

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

Inspecting cooling unit filters (continued)

Summary of Inspection cooling unit filters



Inspecting cooling unit filters (continued)

Inspecting cooling unit filters

At the frame

1



DANGER

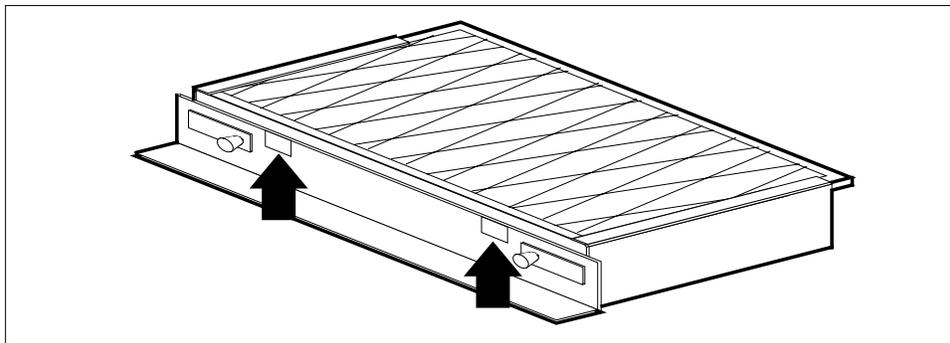
To prevent overheating

Do not leave the cooling unit fans off for longer than 30 min.

To make sure the cooling unit fans are OFF, remove the two fuses on the face plate of the modular supervisory panel (MSP).

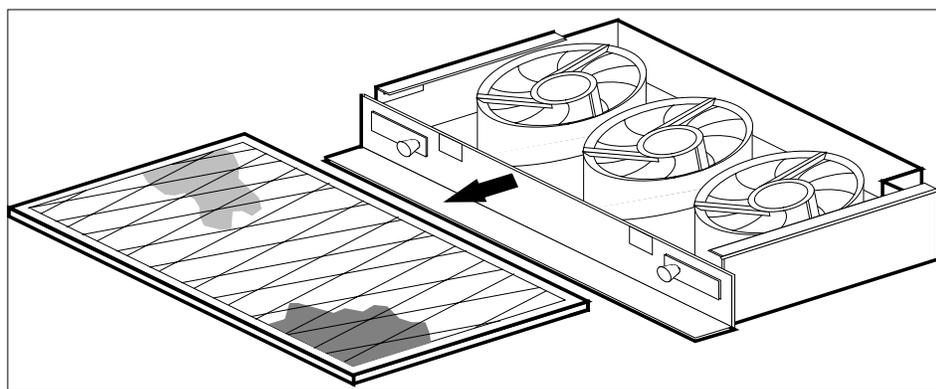
2

Use the two filter access tabs to grip the filter.



3

Slide the filter out of the cabinet.



If filter surfaces

appear dirty

appear clean

Do

step 4

step 5

Inspecting cooling unit filters (end)

- 4 Replace the filter with part number A0346842. Go to step 6.
- 5 Reinstall the filter in the cabinet.
- 6 Replace the two fuses that you removed in step 1.
- 7 The procedure is complete.

Moving an XSG to a spare XLIU

Application

Use this procedure to move an X.25 service group (XSG) assigned from the X.25/X.75 link interface unit (XLIU). Move the X.25 service group when the XLIU requires maintenance.

The following restrictions apply:

- the intended XLIU must be a spare and loaded with the current load
- the assigned XLIU and the spare XLIU must be on the same shelf
- a BCS one-night process (ONP) application or a dump and restore cannot be in progress when the you issue the SWTCH command.

Failure time is normally 1 min.

Interval

Perform this procedure as required. Use this procedure when you remove XLIUs from service for maintenance purposes.

Common procedures

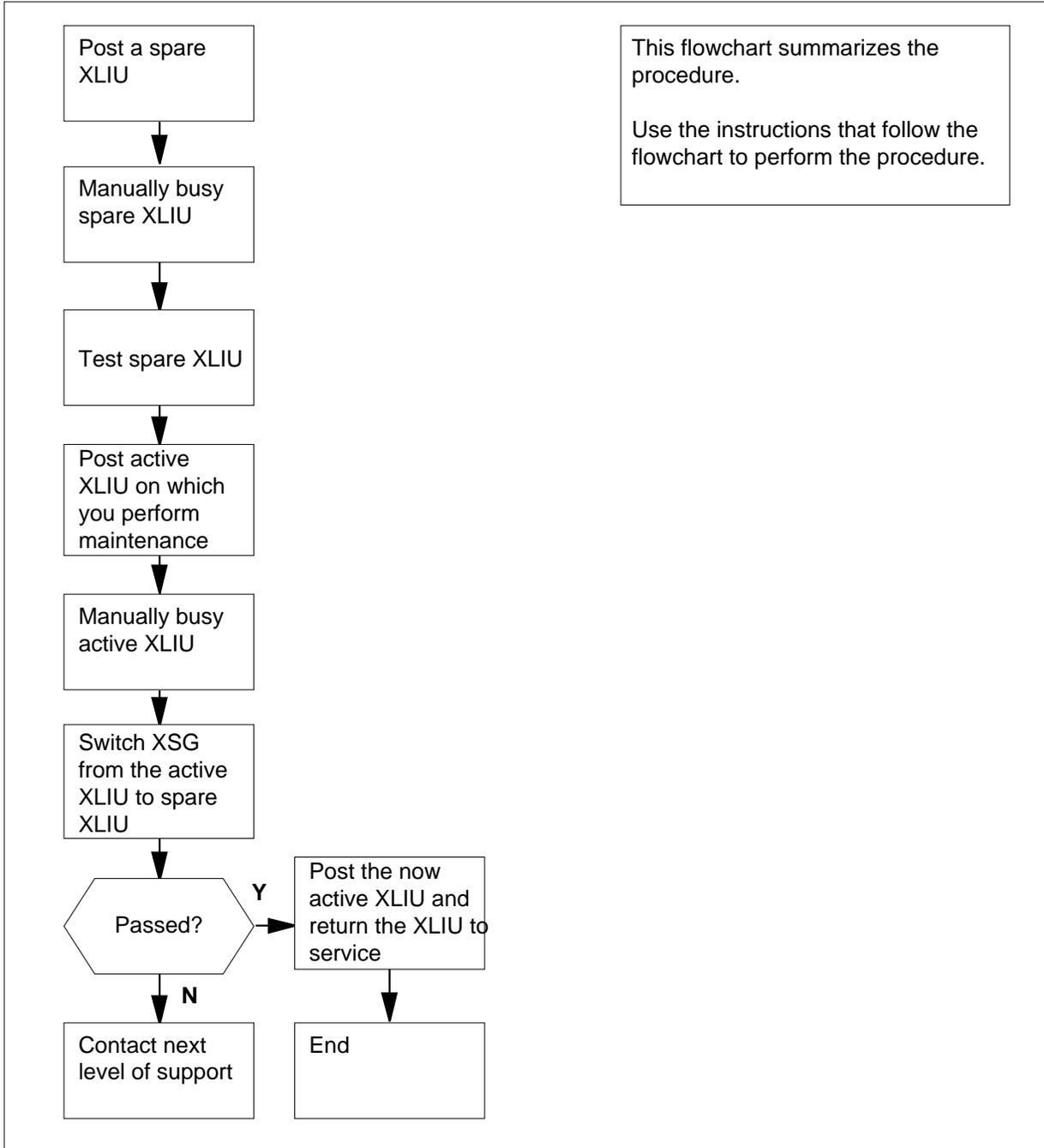
There are no common procedures.

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.

Moving an XSG to a spare XLIU (continued)

Summary of Moving an XSG to a spare XLIU



Moving an XSG to a spare XLIU (continued)

Moving an XSG to a spare XLIU

At the MAP terminal

1



CAUTION

Potential loss of service

This procedure removes an XLIU from service and temporarily interrupts traffic on the associated X.25/X.75 channels. If you are switching activity from an in-service XLIU, perform this procedure during a period of low traffic.

Your next step depends on how you came to this procedure.

If you	Do
came to this procedure from an XLIU card replacement procedure	step 3
came to this procedure from any other maintenance procedure	step 5
came to this procedure from other than listed here	step 2

- 2 Determine from office records or from operating company personnel the number of the XLIU number on which you perform maintenance.
- 3 Determine from office records or from operating company personnel the number of a spare XLIU.

Note: The spare XLIU must be on the same shelf as the out-of-service XLIU.

- 4 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	7	0	0	0	10	87

- 5 To post a spare XLIU, type

>POST XLIU xliu_no

and press the Enter key.

where

Moving an XSG to a spare XLIU (continued)

xliu_no
is the number of the spare XLIU

Example of a MAP display

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	7	0	0	0	10	87
XLIU	1	0	0	0	4	32

XLIU 132 InSv Spre

If state of the spare XLIU	Do
is InSv or OFFl	step 6
is Offl	step 6
is ManB	step 10
is other than listed here, and another spare is available for the shelf	step 3
is other than listed here, and another spare is not available for the shelf	step 22

- 6** To manually busy the spare XLIU, type
>BSY
and press the Enter key.

If the response is	Do
XLIU 132 BSY Passed	step 10
Warning: XLIU 132 is currently being imaged. The BSY command will be aborted unless the FORCE option is used.	step 7

- 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"):
```

Moving an XSG to a spare XLIU (continued)

8 Determine if it is safe to continue with this procedure.

If it is	Do
safe to proceed with BSY FORCE request	step 9
not safe, abort BSY FORCE request	step 23

9 To force bsy the XLIU, type

>YES

and press the Enter key.

Example of a MAP response:

Imaging will be aborted on XLIU 132.

10 To test the spare XLIU, type

>TST

and press the Enter key.

Example of a MAP response

XLIU 132 TST Passed

If the TST command	Do
passed	step 13
failed	step 11

11 To reset the XLIU, type

>PMRESET

and press the Enter key.

If the PMRESET command	Do
passed	step 13
failed	step 12

12 To load the XLIU, type

>LOADPM

and press the Enter key.

If the LOADPM command	Do
passed	step 13
failed	step 22

Moving an XSG to a spare XLIU (continued)

- 13** To post the provisioned XLIU to which an XSG is assigned, type
>POST XLIU xliu_no
 and press the Enter key.
where
xliu_no
 is the number of the XLIU on which you must perform maintenance.

- 14** To manually busy the XLIU, type
>BSY FORCE
 and press the Enter key.
Example of a MAP response

Busying XLIU 131 will take XSG channels out of service.
 Please confirm ("YES", "Y", "NO", or "N"):

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

- 16** To switch the service from the provisioned XLIU to the spare XLIU, type
>SWTCH xliu_no
 and press the Enter key.
where

xliu_no
 is the number of the spare XLIU

Example of a MAP response
 Takeover passed XLIU 131 to XLIU 132 XSG 5

If the SWTCH command	Do
passed	step 18
failed	step 17

- 17** To return the XLIU to service, use the FORCE option. Type
>RTS FORCE
 and press the Enter key.
 Go to step 22.

- 18** To post the now active XLIU, type
>POST XLIU xliu_no
 and press the Enter key.
where
xliu_no
 is the number of the XLIU to which the XSG is assigned

Moving an XSG to a spare XLIU (end)

- 19** To return the XLIU to service use the FORCE option, type
>RTS FORCE
 and press the Enter key.

If the RTS command	Do
passed	step 20
failed	step 22

- 20** Your next step depends on how you came to this procedure.

If you	Do
came to this procedure from another maintenance procedure	step 21
came to this procedure from other than listed here	step 24

- 21** Return to the procedure that sent you here and continue as directed.

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

- 23** To abort BSY FORCE request, type
>NO
 and press the Enter key.

BSY command aborted due to imaging in progress.

- 24** The procedure is complete.

Obtaining CIR statistics

Application

Use this procedure to obtain committed information rate (CIR) statistics for a frame relay interface unit (FRIU).

Interval

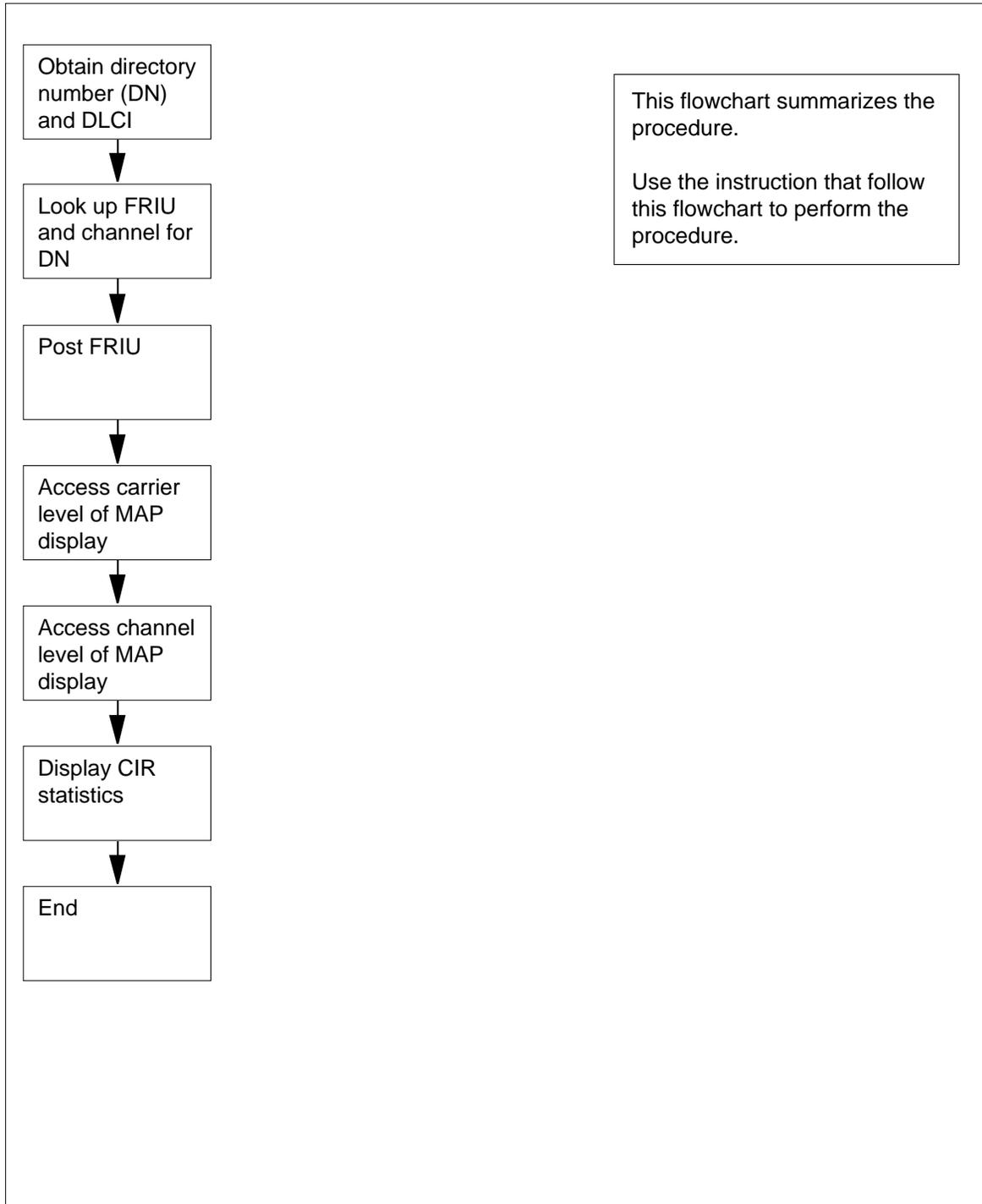
Perform this procedure as required.

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.

Obtaining CIR statistics (continued)

Summary of Obtaining CIR statistics



Obtaining CIR statistics (continued)

Obtaining CIR statistics

At your current location

- 1 From office records or from operating company personnel, obtain the directory number (DN) for the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display, type
`>PVDNCI`
and press the Enter key.

Example of a MAP response

PVDNCI :

- 3 To identify the agent ID associated with the DN that you obtained from the customer, type

`>FRSDISP DN NO dir_no`

and press the Enter key.

where

dir_no

is the DN supplied by the customer

Response:

Example of a MAP response

PVDNCI :

DN 6132263770 belongs to FRS Agent 1

Note: The agent ID appears at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type

`>FRSDISP AGENT ID agent_no`

and press the Enter key.

where

agent_no

is the agent ID that you obtained in step 4

```
AGENT DN      NP   SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel assigned to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

Obtaining CIR statistics (end)

5 To return to the CI level of the MAP display, type

>QUIT

and press the Enter key.

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	2	0	0	0	0	70

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key.

where

friu_no

is the number of the FRIU you obtained in step 4

Example of a MAP response

FRIU	121	InSv	Rsvd
------	-----	------	------

8 To access the Carrier level of the MAP display, type

>CARR

and press the Enter key.

9 To access the Channel level of the MAP display, type

>CHAN

and press the Enter key.

10 To display CIR statistics, type

>QUERYCH

and press the Enter key.

Example of a MAP display:

```
QueryCH
Speed: LS_1536KBS Mode: LAPD A/B sig: NO Agent ID: 5
Connected device: NIL DN: 12245678005
Total SIR Provisioned: 0 (bits/sec)
```

11 The procedure is complete.

Obtaining SIR statistics

Application

Use this procedure to obtain summary information rate (SIR) statistics for a frame relay interface unit (FRIU) and channel.

Interval

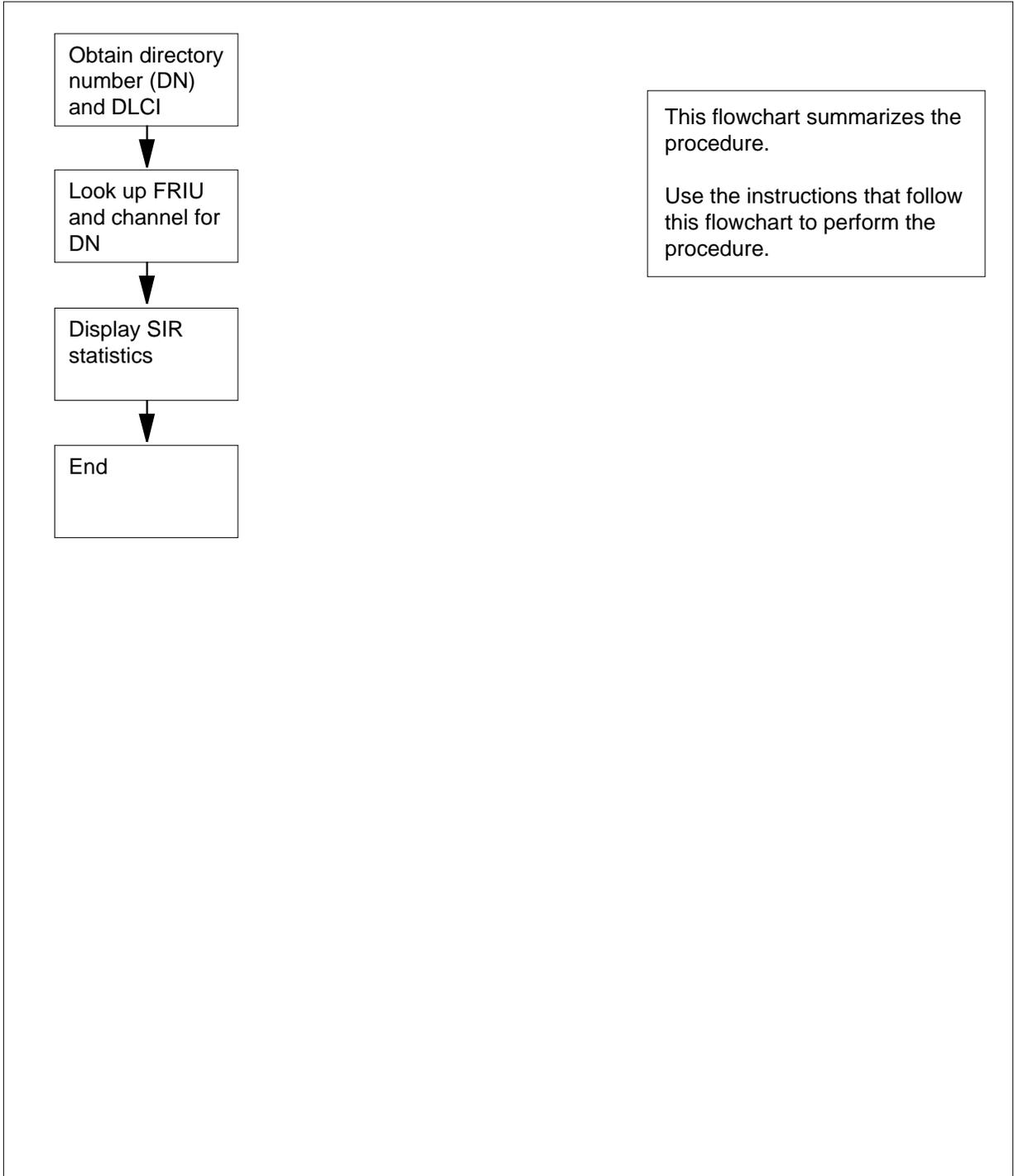
Perform this procedure as required.

Action

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

Obtaining SIR statistics (continued)

Summary of Obtaining SIR Statistics



Obtaining SIR statistics (continued)

Obtaining SIR statistics

At your current location

- 1 From office records or from operating company personnel, obtain the directory number (DN) for the customer.

At the MAP

- 2 To access the PVDNCI level of the MAP display, type
>PVDNCI
and press the Enter key.

Example of a MAP response

PVDNCI :

- 3 To identify the agent ID that associates with the DN that you obtained from the customer, type

```
>FRSDISP DN NO dir_no
```

and press the Enter key.

where

dir_no

is the DN supplied by the customer

Example of a MAP response

PVDNCI :

```
DN 6132263770 belongs to FRS Agent 1
```

Note: The agent ID appears at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type

```
>FRSDISP AGENT ID agent_no
```

and press the Enter key.

where

agent_no

is the agent ID that you obtained in step 4

Example of a MAP response

```
AGENT DN NP SPEED CONDEV AB CUSTOMER CONNECT TO  
1 6132263770 NATL LS_1536KBS NIL N1 FRIU 121 7
```

Note: The FRIU number and channel assigned to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

- 5 To display SIR statistics for the FRIU, type

```
>SIRTRACK friu_no chan_no
```

Obtaining SIR statistics (end)

and press the Enter key.

where

friu_no

is the number of the FRIU that you obtained in step 4

chan_no

is the number of the channel that you obtained in step 4

Response:

```

***** DLCIs and associated SIRs for FRIU 121 Channel 7 *****
DLCI:   101   102   103   104   105   106   107
SIR(bit/s):No Enf No Enf
DLCI:   108   109   110   111   112   113   114
SIR(bit/s):No Enf No Enf
DLCI:   115   116   117   118   119   120   121
SIR(bit/s):No Enf No Enf
DLCI:   122   123   124
SIR(bit/s):No Enf No Enf No Enf
Total SIRs for this channel : 0 (bits/sec)

```

- 6** To return to the CI level of the MAP display, type
>QUIT
and press the Enter key.
- 7** The procedure is complete.

Performing a DDU interference and file transfer test

Application

Use this procedure to check file changes and noise immunity of new 14-in. (356-mm), 8-in. (203-mm), 5.25-in. (133-mm) or 2.5-in. (63.5 mm) disk drive units (DDU).

Interval

Perform this procedure when you install a new 14-in., 8-in., 5.25-in. or 2.5-in. DDU.

Common procedures

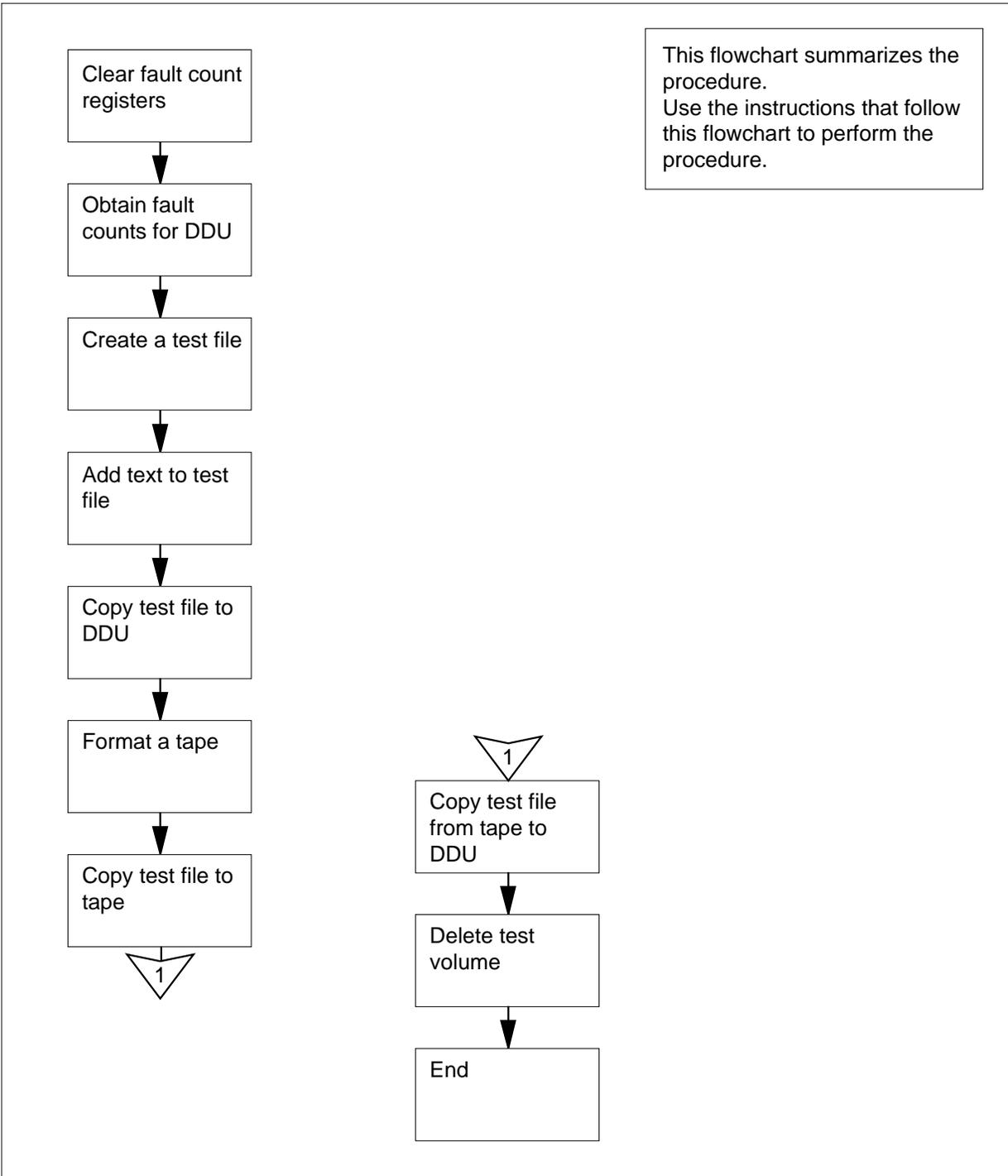
There are no common procedures.

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 DDU interference and file transfer test (continued)

Summary of Performing a DDU interference and file transfer test



Performing a DDU interference and file transfer test (continued)

Performing a DDU interference and file transfer test



CAUTION

Risk of service interruption

Contact the next level of support before you start this procedure.

At your current location

- 1 The first step depends on the reason to perform this procedure.

If you	Do
---------------	-----------

perform this procedure because a DDU replacement procedure directed you here	step 7
--	--------

perform this procedure for any other reason	step 2
---	--------

- 2 From local office records, determine and record the number of the DDU you must test.

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 To post the IOC that associates with the DDU, type

```
>IOC ioc_no
```

and press the Enter key.

where

ioc_no

is the number of the IOC (0 to 19) that holds the controller card for the DDU

Example of a MAP display:

Performing a DDU interference and file transfer test (continued)

```

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
    
```

5 Record the number of the controller card for the DDU in use.

6 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 that you recorded in step 5

Example of a MAP display:

```

Card 8  Unit      0
       User      SYSTEM  Drive_State
       Status    BSY     spinning
    
```

7 To clear the firmware counter registers, type

```
>CLRFCNT ALL
```

and press the Enter key.

8 Continue this procedure when you receive the MAP response `Disk physical fcnt cleared`.

9 To obtain the firmware counter values for the DDU, type

```
>FCNT ALL
```

and press the Enter key.

Example of a MAP terminal response:

```

# 1=    1# 2=    0# 3=    18754# 4=    297# 5=    172
# 6=    0# 7=    1# 8=    0# 9=    0#10=    0
#11=    0#12=    0#13=    0#14=    201#15=    0
#16=    0#17=    0#18=    0#19=    0#20=    0
#21=    0#22=    0#23=    0#24=    101#25=    0
    
```

10 From the standards listed in local office records, determine if the registers indicate a high number of fault counts.

For additional information on firmware counter registers, refer to *Disk Maintenance Subsystem Reference Manual*, 297-1001-526.

If the number of fault counts	Do
is high	step 11
is acceptable	step 13

Performing a DDU interference and file transfer test (continued)

- 11 Check that all ground connections are made and are tight.
- | If the ground connections | Do |
|---------------------------|---------|
| are tight | step 65 |
| are loose | step 12 |
- 12 Establish any broken ground connections again and tighten any loose connections.
Go to step 9.
- 13 The next step depends on the reason you perform this procedure.
- | If you | Do |
|--|---------|
| perform this procedure because a DDU replacement procedure directed you here | step 29 |
| perform this procedure for any other reason | step 15 |
- 14 To determine if files are open on the DDU, type
>ALLOC
and press the Enter key.
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 files | Do |
|--------------|---------|
| are open | step 64 |
| are not open | step 15 |
- 15 To manually busy the disk drive, type
>BSY

Performing a DDU interference and file transfer test (continued)

and press the Enter key.

- 16** To access the CI level of the MAP display, type

>QUIT ALL

and press the Enter key.

- 17** To access the allocation utility, type

>ALLOC ddu_no

and press the Enter key.

where

ddu_no

is the number of the DDU (0 to 9)

Example of a MAP response:

```
Volumes currently defined in store for unit 0
Can these be replaced?
Please confirm ("YES" or "NO"):
```

- 18** To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

Name	Open Address	Allocated ReadOnly	LabelModified RootDir	SerialNumber InitiSysfl	Size
IMAGE	D000	YES NO	YES YES	NO NO	2800 40000
AMA	D000	YES NO	YES YES	NO NO	2801 65535

Unused space on the disk: 141 Blocks

- 19** To add a test volume to the disk, type

>ADD TEST1 size

and press the Enter key.

where

size

is the size of the test volume, in blocks

Note: The name given to a DDU volume must start with a letter, not a number.

- 20** To add the test volume to the root directory, type

>DIRADD TEST1

and press the Enter key.

Example of a MAP response:

OK

Performing a DDU interference and file transfer test (continued)

- 21 To update the disk, 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.
Firmware Allocation Map Updated
Writing Label of Volume IMAGE
Successful
Writing Label of Volume AMA
Successful
Writing label of Volume TEST1
Successful
Update Done
```
- 22 To quit the disk allocation utility, type  
**>QUIT**  
and press the Enter key.
- 23 To post the controller card for the DDU, type  
**>MAPCI;MTC;IOD;IOC ioc\_no;CARD card\_no**  
and press the Enter key.  
*where*
- ioc\_no**  
is the number of the IOC (0 to 19) that holds the controller card for the DDU
- card\_no**  
is the number of the controller card (0 to 8)
- 24 To return the disk drive to service, type  
**>RTS**  
and press the Enter key.  
*Example of a MAP response:*
- ```
RTS process may take up to 3 Minutes.   OK
```
- 25 To access the CI level of the MAP display, type
>QUIT ALL
and press the Enter key.
- 26 To access the disk utility, type
>DSKUT
and press the Enter key.

Performing a DDU interference and file transfer test (continued)

27 To confirm the creation of the test volume, type

```
>DV ddu_no
```

and press the Enter key.

where

ddu_no

is the DDU number (0 to 9)

Example of a MAP response:

VolumeName	NumberOfFiles	VolumeSize	FreeSpace
IMAGE	201	40000	34320
AMA	10	5000	1374
TEST1	0	500	493

28 To quit the disk utility, type

```
>QUIT
```

and press the Enter key.

29 To create a test file, type

```
>EDIT ALPHA
```

and press the Enter key.

Example of a MAP response:

```
NEW FILE
EDIT:
```

Note: The test file can confirm the following:

- the system can copy a file from SFDEV on the disk in the new DDU
- the system can copy a file from disk to tape
- the system can copy a file from tape to disk
- the system can read out written in data

30 To enter input mode, type

```
>INPUT
```

and press the Enter key.

31 To enter text into the test file, type

```
>XXX
```

and press the Enter key.

32 To exit input mode, press the Enter key.

33 To indicate the end of the test text, type

```
>ALPHA ENDS
```

and press the Enter key.

Performing a DDU interference and file transfer test (continued)

- 34 To save the test file, type
>SAVE SFDEV
and press the Enter key.
- 35 To quit the edit mode, type
>QUIT
and press the Enter key.
- 36 To make sure the test file is on the SFDEV, type
>LISTSF
and press the Enter key.
Example of a MAP response:
- ALPHA
- 37 To copy the test file to the disk, type
>COPY ALPHA D0ddu_no0TEST1
and press the Enter key.
where
 ddu_no
 is the DDU number
Example input:
>COPY ALPHA D000TEST1
- 38 To access the disk utility, type
>DSKUT
and press the Enter key.
- 39 To locate the test file on the DDU, type
>LIV D0ddu_no0TEST1
and press the Enter key.
where
 ddu_no
 is the DDU number
Example of a MAP response:
- ALPHA
- 40 To verify that the file is the test file you just created, type
>PRINT ALPHA
and press the Enter key.
Example of a MAP response:
- XXXXX . . .
ALPHA ENDS

Performing a DDU interference and file transfer test (continued)

- 41** To quit the disk utility, type
>QUIT
 and press the Enter key.
- 42** Locate a tape with a write ring to use as a scratch tape and mount the tape on an MTD.

- 43** To format the tape as a scratch tape, type
>MOUNT mtd_no FORMAT JUNK
 and press the Enter key.

where

mtd_no

is the number of the magnetic tape drive (0 or 1)

Example of a MAP response:

```
Volume = 'Blank'
Formatting tape as 'JUNK'
OK
```

If the MOUNT command	Do
passed	step 45
failed	step 44

- 44** To erase the contents of the tape, type
>ERASTAPE mtd_no
 and press the Enter key.

where

mtd_no

is the number of the magnetic tape drive (0 or 1)

Go to step 43.

- 45** To list volumes on the SF, type
>LISTSF ALL
 and press the Enter key.

Example of a MAP response:

```
ALPHA
```

- 46** To copy the test file to the tape, type
>COPY ALPHA Tmtd_no
 and press the Enter key.

where

mtd_no

is the number of the magnetic tape drive (0 or 1)

Performing a DDU interference and file transfer test (continued)

- 47 To erase the volume from the SFDEV, type
>ERASESF ALPHA
and press the Enter key.
- 48 To confirm that the test file is on the magnetic tape, type
>LIST Tmtd_no
and press the Enter key.
where
mtd_no
is the number of the magnetic tape drive (0 or 1)
- 49 To copy the test file back on to the DDU, type
>COPY ALPHAD 0ddu_no0TEST1
and press the Enter key.
where
ddu_no
is the DDU number
- 50 To access the disk utility, type
>DSKUT
and press the Enter key.
- 51 To locate the test volume on the magnetic tape drive, type
>LIV D0ddu_no0TEST1
and press the Enter key.
where
ddu_no
is the DDU number
- Example of a MAP response:*
- 2 files in the volume.
ListVol command may take up to 2
seconds.
ALPHA
- 52 To verify that the file is the test file that you created, type
>PRINT ALPHA
and press the Enter key.
Example of a MAP terminal response:
- XXXX...
ALPHA ENDS
- 53 To demount the scratch tape, type
>DEMOUNT Tmtd_no

Performing a DDU interference and file transfer test (continued)

and press the Enter key.

where

mtd_no

is the number of the magnetic tape drive (0 or 1)

- 54** To post the controller card for the DDU, type

>MAPCI;MTC;IOD;IOC ioc_no;CARD card_no

and press the Enter key.

where

ioc_no

is the number of the IOC (0 to 19) that holds the controller card for the DDU

card_no

is the number of the controller card (0 to 8)

- 55** To manually busy the controller card, type

>BSY

and press the Enter key.

- 56** To access the CI level of the MAP display, type

>QUIT ALL

and press the Enter key.

- 57** To access the allocation utility, type

>ALLOC ddu_no

and press the Enter key.

where

ddu_no

is the number of the DDU (0 to 9)

Example of a MAP response:

Volumes currently defined in store for unit 0

Can these be replaced?

Please confirm ("YES" or "NO")

- 58** To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

Performing a DDU interference and file transfer test (continued)

Name	Open Address	Open ReadOnly	Allocated RootDir	LabelModified	SerialNumber	InitiSysfl	Size		
IMAGE	D000	YES	NO	YES	YES	NO	NO	2800	40000
AMA	D000	YES	NO	YES	YES	NO	NO	2801	65535

Unused space on the disk: 141 Blocks

59 To delete the test volume on the disk, type

>DELETE TEST1

and press the Enter key.

Note: If the disk contains another test volume, delete the second volume after you create the working volumes.

60 To enforce the test volume deletion, 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.

Firmware Allocation Map Updated

Writing Label of Volume IMAGE

Successful

Writing Label of Volume AMA

Successful

Update Done

If a DDU replacement procedure	Do
directed you to this procedure	step 61
did not direct you to this procedure	step 62

61 Return to the DDU replacement procedure and continue as directed.

62 To quit the allocation utility, type

>QUIT

and press the Enter key.

63 To return the disk drive to service, type

>RTS

Performing a DDU interference and file transfer test (end)

and press the Enter key.

If the RTS command	Do
passed	step 66
failed	step 65

- 64** You cannot busy the controller if files are open, because this can result in loss of billing data. For additional help, contact the next level of support.
- 65** For additional help, contact the next level of support.
- 66** The procedure is complete.

Performing a demand audit in the DIRP utility

Application

Use this procedure to perform a manual audit on the DIRP utility. Use this command when you manually create file space by deletion or erasure. There are two types of demand audits: disk and tape.

The demand disk audit performs the following tasks:

- recovers disk volumes after a restart
- scans volumes for current DIRP utility files. Scans occur if any new volumes are mounted in the DIRPPool table or change allocation after a reload-restart. All files named DIRP_FILESEG are put in the FILESEGS table. For all other DIRP utility files, the demand audit does the following:
 - for available files: verifies that a contributing subsystem records on the ACTIVE file, or that the file is a STANDBY. If the file does not meet one of these conditions, the system sets the file to OLDOPEN to be closed
 - for files that are not processed: verifies that the DIRPHOLD table lists all files that are not processed. If the table does not list any files, the system adds the file identification of the files to the table. For files that the table lists, the audit makes sure that the file name in the DIRPHOLD table is the correct file name
 - for processed files: checks the expiration date and adds the amount of available space in these files to the total expired space available. The system used this function if the DIRP utility has to erase files to reclaim space
 - checks for open files on all TO_BE_DELETED volumes
 - deallocates TO_BE_DELETED volumes not in use by any subsystem
 - gets additional FILESEGS if any volume has less than four FILESEGS
- checks the alarms for all pools. The demand disk audit posts or clears alarms that warn when not enough recording space is present
- closes active files that the system is not recording to. The audit closes the file when the system recovers files after a reload-restart or from a system busy state

The demand tape audit performs the following tasks:

- recovers DIRP utility tapes after a warm or cold restart
- checks for free tapes. Free tape are tapes that you mounted but the system does not use

Performing a demand audit in the DIRP utility (continued)

- removes allocation from TO_BE_DELETED volumes that are not in use by any subsystem
- rewinds all parallel files marked REWINDING, and marks the tape volume READY

Use this procedure with the DIRP101 logs. For more information about DIRP101 logs, refer to *Trouble Locating and Clearing Procedures*.

Interval

Perform this procedure when you must perform a manual audit. Perform manual audits in addition to scheduled audits.

Common procedures

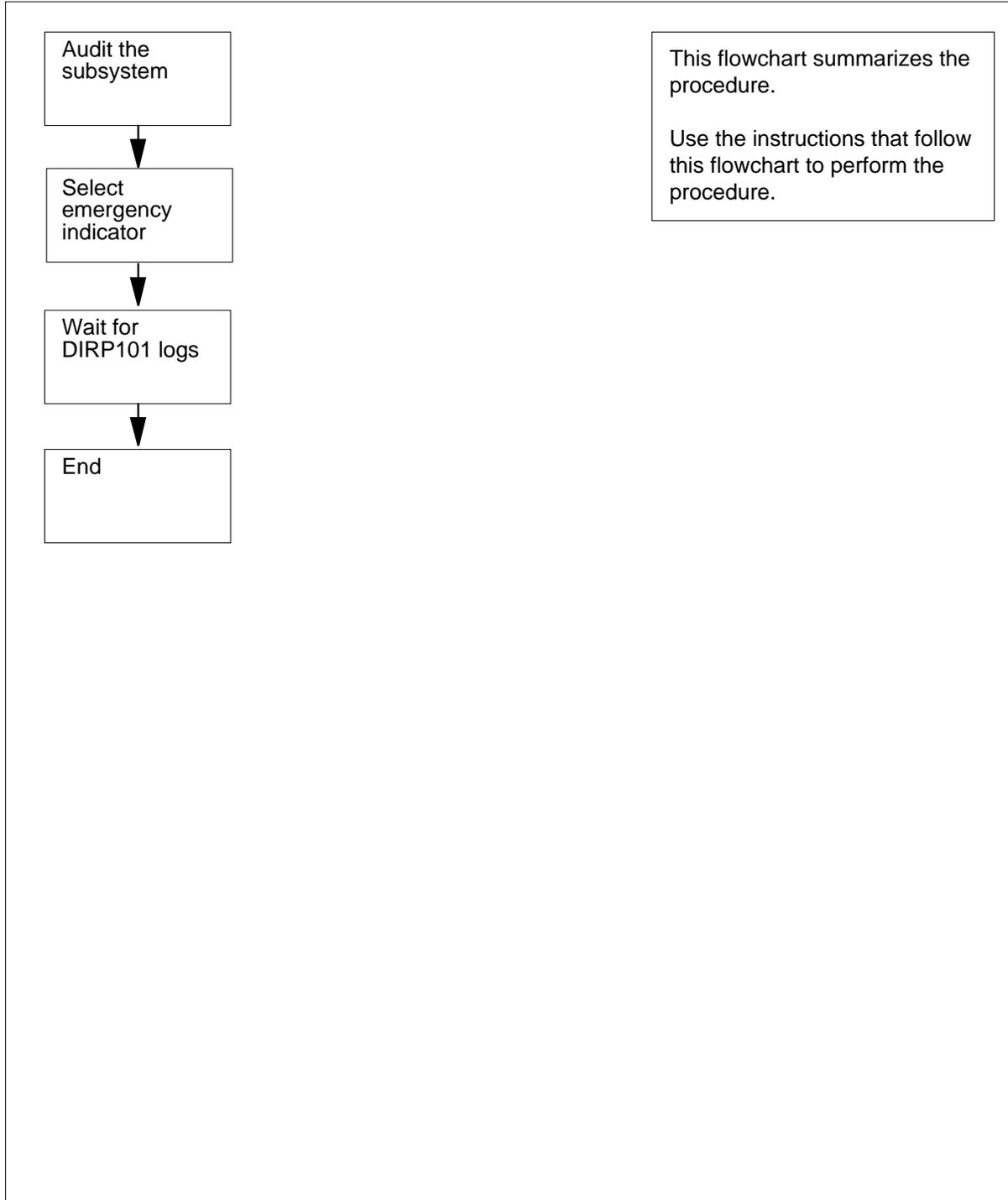
There are no common procedures.

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 demand audit in the DIRP utility (continued)

Summary of Performing demand audits in the DIRP utility



Performing a demand audit in the DIRP utility (continued)

Performing a demand audit in the DIRP utility

At the MAP terminal

1



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. Loss or damage of AMA data results in revenue loss for the operating company.

To access the DIRP level of the MAP terminal, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

2

To audit the subsystem, type

>AUDIT ssys

and press the Enter key.

where

ssys

is the subsystem you must audit

MAP response:

```
SENDING REQUEST TO SUBSYSTEM
DO YOU WANT THE SUBSYSTEM EMERGENCY INDICATOR TURNED
OFF?
PLEASE CONFIRM ("YES" OR "NO"):
```

3

Determine if the subsystem emergency indicator must be ON or OFF.

If the indicator	Do
must be ON	step 4
must be OFF	step 5

4

To confirm the emergency indicator must be ON, type

>YES

and press the Enter key.

MAP response:

```
REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR
DETAILS
```

Go to step 6.

Performing a demand audit in the DIRP utility (end)

5 To confirm the emergency indicator must be OFF, type
>NO
and press the Enter key.

6 Wait for a DIRP101 log report to confirm the audit.

MAP response:

REQUEST HAS BEEN SENT TO THE SUBSYSTEM.
CHECK DIRP LOGS FOR RESULTS.

Example of a MAP response for an audit that is not successful:

SUBSYSTEM HAS NOT REPLIED WITHIN 30 SEC LIMIT.
WATCH DIRP LOGS FOR RESULTS.
IF NONE FOUND, TRY AGAIN LATER.

If the audit	Do
is successful	step 8
is not successful	step 2
is not successful after several at- tempts	step 7

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

8 The procedure is complete.

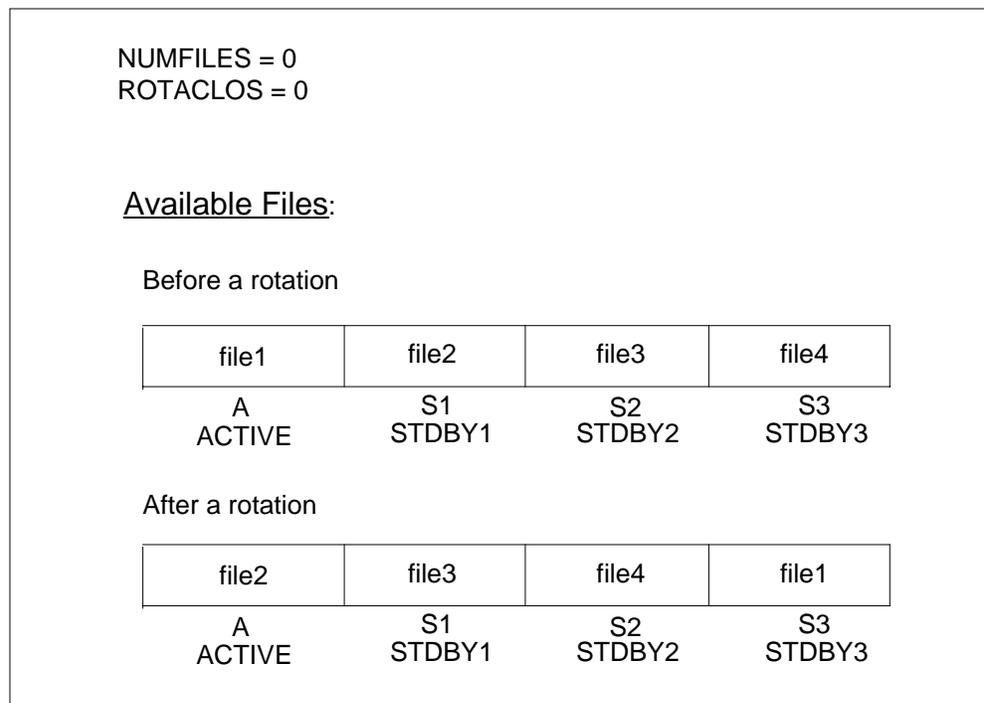
Performing a manual file rotation in the DIRP utility

Application

Use this procedure to rotate regular or parallel files. Manual regular file rotation rotates the active and standby files of a contributing subsystem. Manual parallel file rotation rotates the parallel files of a contributing subsystem. The **BOTH** option of the **ROTATE** command rotates both regular and parallel files.

Note: A parallel volume contains only one file. The terms *parallel volume* and *parallel file* have the same meaning.

The following diagram illustrates a normal file rotation.



Use this procedure with the DIRP101 logs. For more information on DIRP logs, refer to *Trouble Locating and Clearing Procedures*.

Interval

Perform this procedure according to operating company policies.

Common procedures

There are no common procedures.

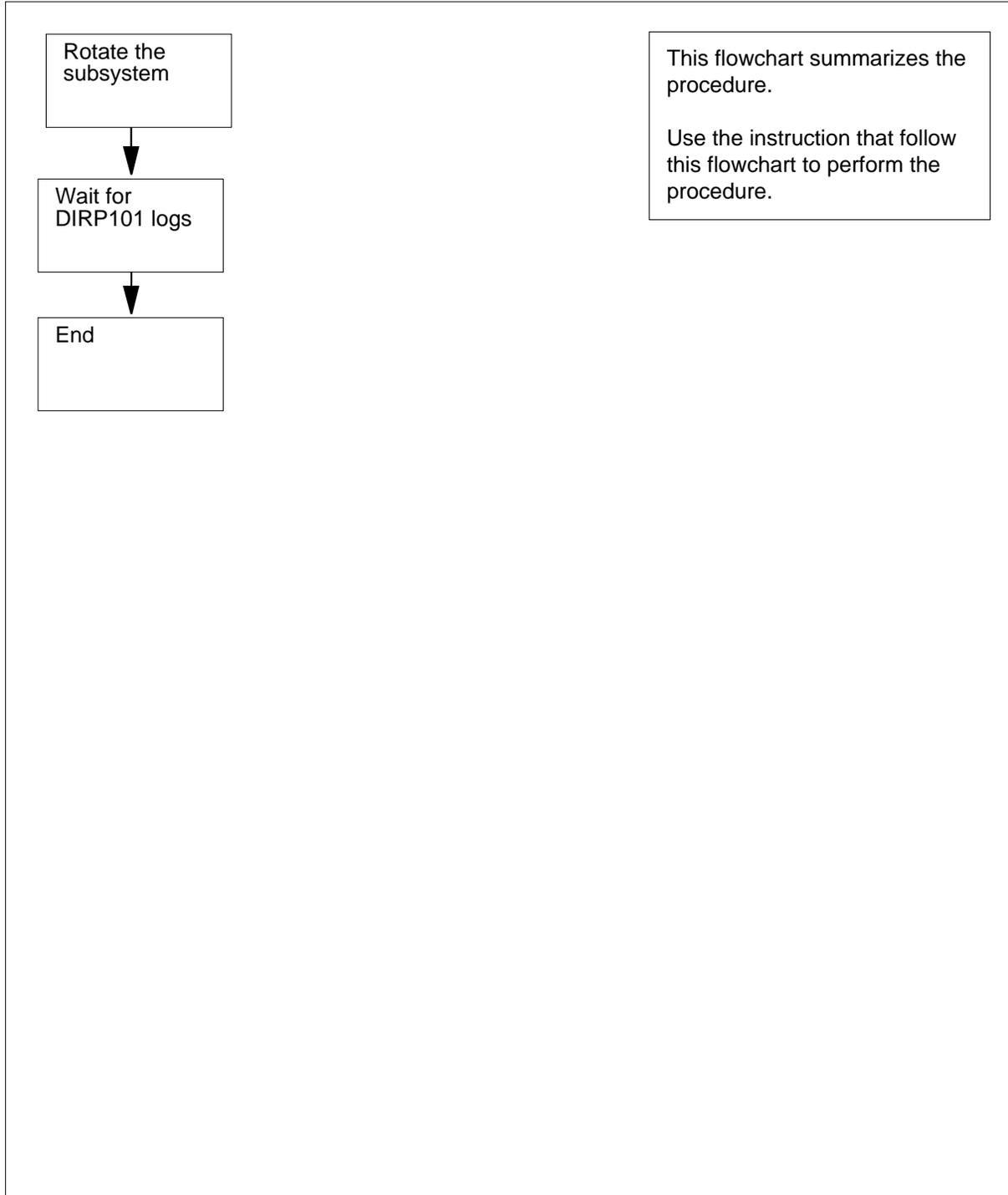
Performing a manual file rotation in the DIRP utility (continued)

Action

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

Performing a manual file rotation in the DIRP utility (continued)

Summary of Performing a manual file rotation in the DIRP utility



Performing a manual file rotation in the DIRP utility (continued)

Performing a manual file rotation in the DIRP utility

At the MAP

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. 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



CAUTION

Manual parallel rotations reduce data retention

Manual parallel rotations reduce the total amount of parallel data that the switch retains. The switch can lose parallel data.

To rotate the subsystem, type

```
>ROTATE ssys file_type
```

and press the Enter key.

where

ssys

is the subsystem that you rotate.

file_type

is the file type. The file can be either regular or parallel, or both regular and parallel file. The default is regular.

Example of a MAP response:

```
SENDING REQUEST TO SUBSYSTEM  
PLEASE CONFIRM ("YES" OR NO) :
```

Example of a MAP response to a parallel rotation:

```
**WARNING--MANUAL PARALLEL ROTATIONS REDUCE THE TOTAL  
**AMOUNT OF PARALLEL DATA RETENTION ON THE SWITCH  
SENDING REQUEST TO SUBSYSTEM  
PLEASE CONFIRM ("YES" OR NO) :
```

Performing a manual file rotation in the DIRP utility (continued)

- 3 To confirm the information, type
>YES
and press the Enter key.
MAP response:
- REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR DETAILS
- 4 Wait for a DIRP101 log to confirm the rotation.
- | If the system | Do |
|--|---------|
| confirms the rotation | step 12 |
| does not confirm the rotation | step 5 |
| does not confirm the rotation after several attempts | step 11 |
- 5 Determine why the rotation was not complete.
- | If system response | Do |
|---|---------|
| is insufficient files to do rotation | step 6 |
| is insufficient parallel volumes or files | step 7 |
| is multiple parallel volume feature not present | step 8 |
| is parallel rotation not completed | step 9 |
| is rotation not synchronized | step 10 |
| is no subsystem response after several attempts | step 11 |
- 6 Mount additional volumes. Use one of the following options.
Refer to *Allocating recording volumes in the DIRP utility* in this document. Go to step 2.
Increase the NUMFILES value as needed. Go to step 2.
- 7 Mount or reset other volumes in the parallel pool. Refer to *Allocating recording volumes in the DIRP utility* in this document. Go to step 2.
- 8 The office cannot support multiple volumes in parallel pools. Go to step 11.
- 9 You specified the BOTH option, but only the normal rotation occurred. To determine why the rotation failed, look at the DIRP logs. If necessary, go to step 11.

Performing a manual file rotation in the DIRP utility (end)

- 10 You specified the BOTH option, but the DIRP utility was not able to synchronize the normal file rotation with the parallel file rotation. Check the DIRP logs for explanation. If necessary, go to step 11.
- 11 For additional help, contact the next level of support.
- 12 The procedure is complete.

Performing a manual line test

Application

Use the following procedure to test lines at times that are not scheduled for automatic line testing (ALT).

Access each of the following tests from the main ALT menu:

- extended diagnostic tests (DIAG)
- short diagnostic tests (SDIAG)
- on-hook balance network tests (BAL)
- line insulation tests (LIT)
- keyset line circuit tests (CKTTST)

Extended diagnostic tests (DIAG) include:

- transhybrid loss
- channel loss for remote concentrator SLC-96 (RCS) lines
- attenuation pad
- talk battery
- noise
- loop signal at line card
- self test
- loop signal at keyset
- add-on and extension
- flux cancellation
- echo return loss for RCS
- loop detector
- loop detector for remote concentrator terminal (RCT)
- loop detector for RCS
- metering test
- two-party automatic number identification (ANI) for RCT
- equalization current detector
- buffer full flag
- battery feed resistor
- reversal relay

Performing a manual line test (continued)

- +48 volt reversal relay
- ground start detector
- cutoff relay
- ring and supervision
- ringing test for RCS
- test access relay
- isolation relay test

Short diagnostic tests (SDIAG) are a part of the following DIAG tests:

- transhybrid loss
- attenuation pad
- noise
- loop signal at line card
- self test
- loop signal at keyset
- loop detector for RCT
- ring and supervision

On-hook balance network tests (BAL) determine if a subscriber loop is loaded or unloaded. Line insulation tests (LIT) detect foreign potential and inadequate conductor leakage resistance on the loop facility. Keyset line circuit tests (CKTTST) test keyset lines.

You can create and modify testing schedules from the ALT level at the MAP terminal. For additional information on ALT, refer to *Lines Maintenance Guide*. For additional information on table ALTSCHEd, refer to the *Translations Guide*.

Interval

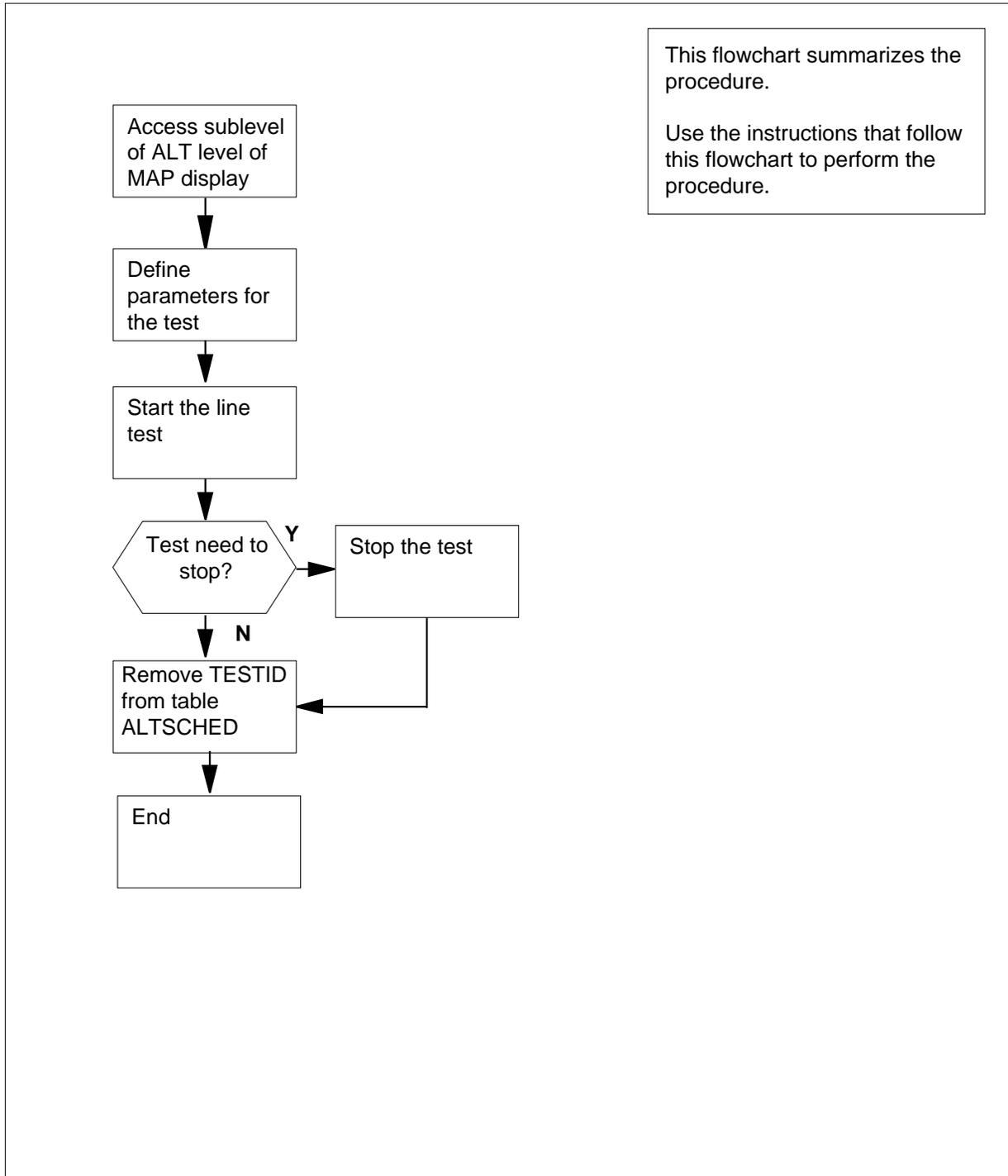
Perform this procedure to test a line or lines outside the ALT.

Action

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

Performing a manual line test (continued)

Summary of Performing a manual line test



Performing a manual line test (continued)

Performing a manual line test

At your current location:

- 1 From office records, determine what sublevel you must access.

If you	Do
must run an extended diagnostic test	the DIAG sublevel
must run a short diagnostic test	the SDIAG sublevel
must run an on-hook balance network test	the BAL sublevel
must run a line insulation test	the LIT sublevel
must run a keyset line circuit test	the CKTTST sublevel

At the CI level of the MAP display:

- 2 To access the ALT level of the MAP display, type
`>MAPCI ;MTC ;LNS ;ALT`
 and press the Enter key.
- 3 To access the appropriate sublevel of the MAP display, type,
`>sublevel`
 and press the Enter key.
where
 sublevel
 is one of SDIAG, DIAG, LIT, BAL, or CKTTST
- 4 To access the level, type
`>DEFMAN`
 and press the Enter key.
- 5 To define the line type, type
`>DEFINE LINETYPE type`
 and press the Enter key.
where
 type
 is the line type you must test, STANDARD, ISDN, or ALL
- 6 To define the lines you must test, type
`>DEFINE STARTLEN frame unit drawer circuit ENDLIN frame
 unit drawer circuit`
 and press the Enter key.
where

Performing a manual line test (continued)

frame
is the frame number (00 to 99)

unit
is the unit number (0 to 9)

drawer
is the drawer number (00 to 31)

circuit
is the circuit number (00 to 31)

Note: The frame, unit, drawer, and circuit after STARTLEN define where the test is to begin. The frame, unit, drawer, and circuit after ENDLEN define where the test is to end.

Example of a MAP response

```

TESTID: MANUAL02                Status: Stopped
                                Linetype: Standard
STARTLEN                        ENDLEN
HOST 00 0 00 00                HOST 00 0 00 02
    
```

- 7 The next action depends on the type of test you must define.

If the test type	Do
is LIT	step 8
is CKTTST	step 11
is other than listed here	step 12

- 8 To define the test schedule for a LIT test, type

>DEFINE EMF

and press the Enter key.

where

EMF

specifies that the system must perform the electromotive force test at the default values of EMFDCV and EMFACV (2V)

Example of a MAP response

```

TESTID: MANUAL02                Status: Defined
                                Linetype: ISDN
STARTLEN                        ENDLEN      Test
HOST 00 0 00 02                HOST 00 0 00 03 EMFDCV Dft AC Dft
    
```

- 9 To define any additional parameters for the LIT test, type,

>DEFINE [EMFDCV volts] [EMFACV volts] [TG] [RG] [TR]
[RESVALUE <TG mct lct> <RG mct lct> <TR mct lct>] [CAP
<thresh>]

and press the Enter key.

where

Performing a manual line test (continued)

EMFDCV

changes the default value for EMFDCV voltage

EMFACV

changes the default value for EMFACV voltage

volts

specifies the voltage limit (1 V to 300 V)

TG

specifies that the system must perform a tip-to-ground resistance test at the default values (mct=40k Ω , lct=200k Ω)

RG

specifies that the system must perform a ring-to-ground resistance test at the default values (mct=40k Ω , lct=200k Ω)

TR

specifies that the system must perform a tip-to-ring resistance test at the default values (mct=40k Ω , lct=200k Ω)

RESVALUE

changes the most and least critical resistance value for the TG, RG or TR test, 100- Ω units over the range 1 to 9990

mct

specifies the most critical resistance threshold in increments of 100 Ω from 1 to 9990

lct

specifies the least critical resistance threshold in increments of 100 Ω from 1 to 9990

CAP

specifies that the system must perform the capacitance test (default threshold = 0.1 μ F)

thresh

specifies the capacitance threshold in increments of 0.001 μ F from 1 to 5000

Example of a MAP response

```
TESTID: MANUAL02      Status: Defined
                        Linetype: ISDN
STARTLEN              ENDLEN      Test
HOST 00 0 00 02      HOST 00 0 00 03 EMFDCV 51 AC Dft
                        TG Default
                        RG Default
```

10 Go to step 12.

11 To define the test schedule for a CKTTST test, type
>**DEFINE NUMMSG number SERVICE service LOCATION location**
and press the Enter key.
where

Performing a manual line test (continued)

number

specifies the number of messages (1 to 50) to send during the CKTTST (default is the value in office parameter CIRCUIT_TEST_NUMBER_MESSAGES)

service

specifies the type of keyset lines on which the test must run, VOICE, DATA or ALL

location

specifies where the test is to run, TERMINAL or LINECARD

Note: For additional information on office parameters, refer to *Office Parameters Reference Manual*.

Example of a MAP response

```

TESTID: MANUAL02                Status: Stopped
                                Linetype: ISDN
                                Test
STARTLEN          ENDLEN
HOST 00 0 00 02  HOST 00 0 00 03  NUMMSG  44
                                SERVICE All
                                LOCATION Linecard

```

- 12** To start the line test, type

>START len log_type

and press the Enter key.

where

len

specifies where to start the test, BEGINLEN or LASTLEN

log_type

specifies what type of log is output when the test finishes, FULL or SUMMARY

Note: If you do not specify any parameters, the test starts at the first LEN in the block of defined LENs and outputs a detailed ALT109 log.

Example of a MAP response

```

Start LEN is to start from "BEGINLEN".
Please confirm ("YES" or "NO"):

```

- 13** To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response

Performing a manual line test (continued)

```
TESTID:MANUAL02 Status:Active
  Linetype: Standard
STARTLEN          ENDLEN
HOST 00 0 00 00  HOST 00 0 04 04
```

	PASS	FAIL	N/A	TOTAL
Total	2	0	0	2
Current	2	0	0	2

- 14** While the test status is Inactive or Active, you can check the status of a test.

If you	Do
check the test status	step 15
do not check the test status	step 17

- 15** To post the TESTID, type

>POST testid

and press the Enter key.

where

testid

is the name the system assigned to the test. A manual TESTID is always MANUAL followed by a number. For example, in the following MAP response, the TESTID is MANUAL02.

Example of a MAP response

```
TESTID : MANUAL02  Test type: CKTTST
Start LEN          End LEN          Stream  Vert  Testing status
HOST 00 0 00 02   HOST 00 0 00 03   0      ---  WAITING
```

- 16** To check the status, type

>STATUS format

and press the Enter key.

where

format

is STREAM for information displayed in the test stream format, or LCDTESTSET for information in the LCD test set format

Example of a MAP response

```
TESTID : MANUAL02  Test type: CKTTST
Start LEN          End LEN          Stream  Vert  Testing status
HOST 00 0 00 02   HOST 00 0 00 03   0      ---  WAITING
```

Performing a manual line test (end)

- 17** If you must perform additional work, you can stop a manual line test at any time.

If you	Do
stop the manual line test	step 18
do not stop the manual line test	step 22

- 18** To stop the test, type:
>STOP
 and press the Enter key.
Example of a MAP response

Asking for manual TESTID to be stopped.

- 19** Wait until the test status changes from Active to Inactive.
Example of a MAP response

TESTID:MANUAL02 Status:Active
 TESTID:MANUAL02 Status:Inactive

- 20** To enter a second STOP command, type
>STOP
 and press the Enter key.
Example of a MAP response

TESTID:MANUAL01 Status:Stopped

- 21** To remove the TESTID and corresponding data from memory, type
>REMOVE
 and press the Enter key.

- 22** The procedure is complete.

Performing a manual REx test on an LCM

Application

Use the following procedure to perform a manual routine exercise (REx) test on a line concentrating module (LCM) and the LCM variants.

LCM variants include the following:

- international LCM (ILCM)
- integrated services digital network LCM (LCMI)
- enhanced LCM (LCME)

You can use the procedure to perform a manual REx test on a line module, and the variants of a line module, like enhanced line module (ELM).

Interval

Perform this procedure as required.

Common procedures

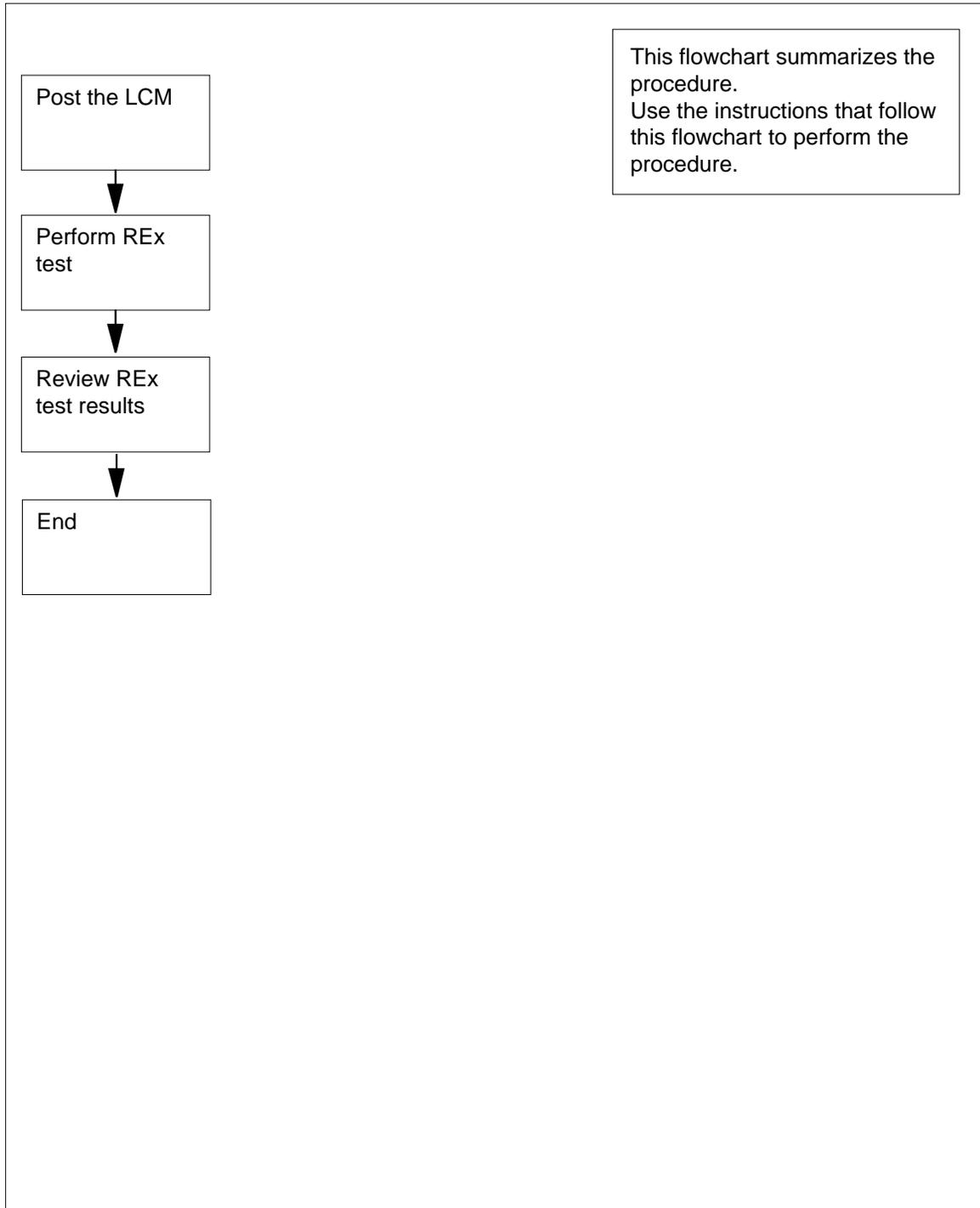
There are no common procedures

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 LCM (continued)

Summary of Performing a manual REx test on an LCM



Performing a manual REx test on an LCM (end)

Performing a manual REx test on an LCM

At the CI level of the MAP display

- 1 To access the PM level, type
`>MAPCI ;MTC ;PM`
and press the Enter key.
- 2 To post the LCM for which you require a report, type
`>POST LCM site frame bay`
and press the Enter key.
where
site
is the four-character string that indicates the location of the LCM
frame
is the number of the frame that contains the LCM (0 to 511)
bay
is the number of the bay
- 3 To perform a manual REx test on the posted LCM, type
`>TSTREXNOW`
and press the Enter key.

Example of a MAP terminal response:

```
LCM 2 will be put into takeover mode during the REX.  
Do you want to continue with the REX test?  
Please confirm ("YES" or "NO"):
```

- 4 To confirm the test, type
`>YES`
and press the Enter key.
- 5 Refer to *Reviewing REx test results on an LCM* in this document to review the test results.
- 6 The procedure is complete.

Performing a manual REx test on an XPM

Application

Use this procedure to perform a manual routine exercise (REx) test on the XMS-based peripheral modules (XPM) that follow.

The line group controller (LGC), message and switching buffer (MSB), and remote cluster controller (RCC) node types all support REx tests.

LGC nodes include the following variants:

- integrated services digital network (ISDN) LGC (LGCI)
- international LGC (ILGC)
- offshore LGC (LGCO)
- PCM-30 LGC (PLGC)
- Global Peripheral Platform (GPP)
- Turkish LGC (TLGC)
- Australian LGC (ALGC)
- line trunk controller (LTC)
- international LTC (ILTC)
- Turkish LTC (TLTC)
- digital trunk controller (DTC)
- ISDN DTC (DTCI)
- PCM-30 DTC (PDTC)
- Turkish DTC (TDTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMSR)
- subscriber module access (SMA)
- integrated cellular peripheral (ICP)
- traffic operator position system (TOPS) message switch (TMS)

MSB nodes include MSB6 and MSB7.

Performing a manual REx test on an XPM (continued)

RCC nodes including the following variants: Turkey RCC (TRCC), ISDN RCC (RCCI), Australian RCC (ARCC), PCM30 RCC (PRCC), RCC2, SRCC, and RCO2.

Interval

Perform this procedure as required.

Common procedures

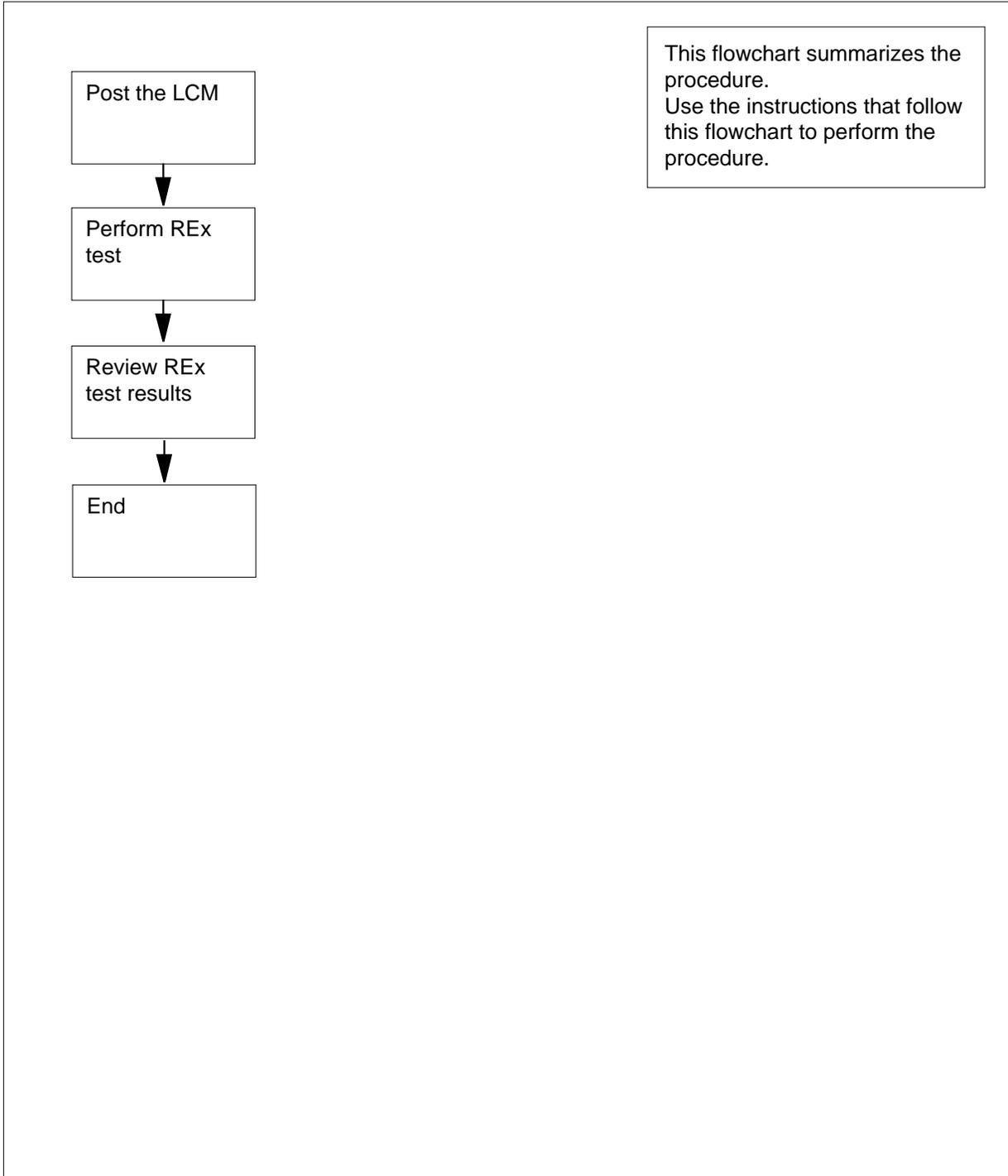
There are no common procedures

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 XPM (continued)

Summary of Performing a manual REx test on an LCM



Performing a manual REx test on an XPM (end)

Performing a manual REx test on an XPM

At the MAP

- 1 To access the PM level of the MAP, type
>MAPCI ;MTC ;PM
and press the Enter key.
- 2 To post the XPM for which you require a report, type
>POST LCM site frame bay
and press the Enter key.
where
xpm_type
is the type of XPM to be tested (for example, LGC)
type_no
is the number of the XPM (0 to 2047)
- 3 To perform a manual REx test on the posted XPM, type
>TSTREXNOW
and press the Enter key.

Example of a MAP terminal response:

REX not performed - Node ISTb

- 4 Refer to *Reviewing REx test results on an XPM* in this document to review the test results.
- 5 The procedure is complete.

Performing a manual trunk test

Application

Refer to the correct procedure in *Trouble Locating and Clearing Procedures* to diagnose any of the following problems on a trunk:

- receive-level problems
- transmit-level problems
- noise that occurs at intervals
- supervision problems
- amount of trunk test failures that is not normal

Interval

Perform the correct procedure when any of these problems occur.

Common procedures

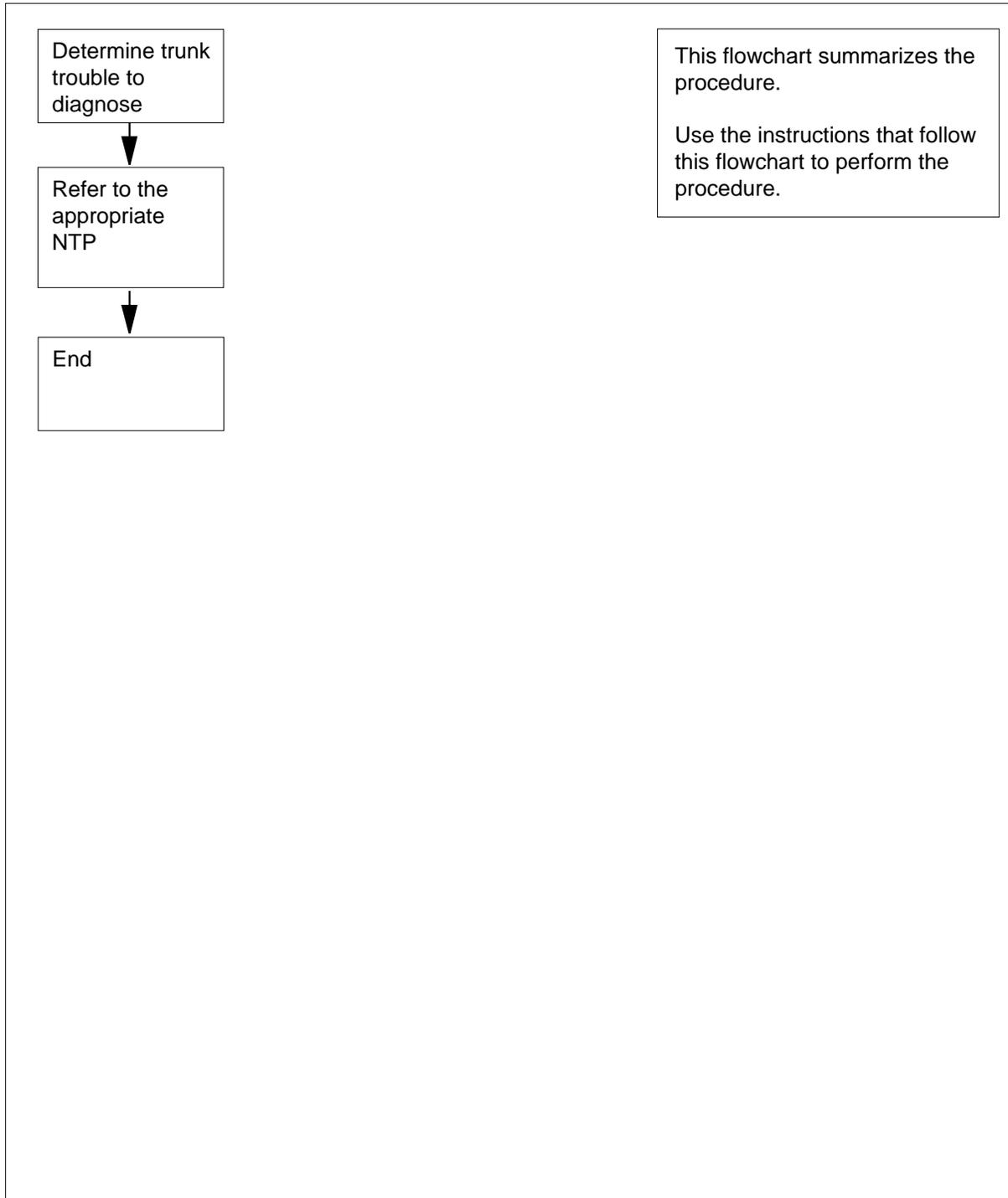
There are no common procedures.

Action

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

Performing a manual trunk test (continued)

Summary of Performing a manual trunk test



Performing a manual trunk test (end)

Performing a manual trunk test

At your current location

- 1 From office records, determine which trunk test you need to perform.
- 2 Refer to the correct procedure in *Trouble Locating and Clearing Procedures*. Use the following table.

If the problem	Refer to the procedure(s)
is a reception-level problem	<i>Correcting receive-level trouble on T1 trunks</i>
is a transmission-level problem	<i>Correcting transmission-level trouble on T1 trunks</i>
is noise that occurs at intervals	<i>Monitoring call processing busy trunk circuits</i>
is a supervision problem	<i>Correcting supervision trouble on intertoll T1 trunks</i>
is an amount of trunk test failures that is not normal	one or more of the following: <ul style="list-style-type: none"> • <i>Correcting digital test unit trouble</i> • <i>Correcting line test unit trouble</i> • <i>Correcting metallic test unit trouble</i> • <i>Correcting transmission test trunk trouble</i> • <i>Correcting transmission test unit trouble</i>

Placing MP position in service (integrated)

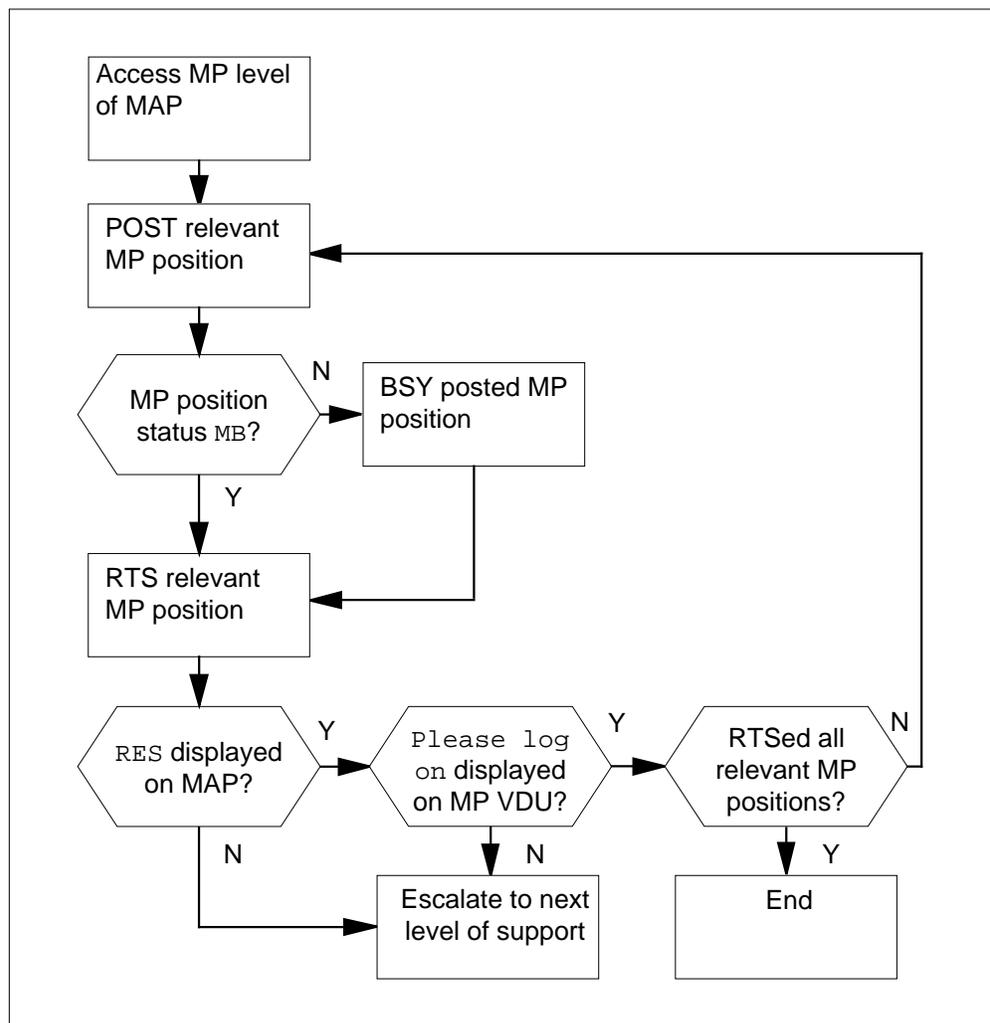
Application

Use this procedure to return integrated Traffic Operator Position System (TOPS) Multipurpose (MP) positions to service.

Action

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

Summary of how to replace an MP position in service (integrated)



Placing MP position in service (integrated) (continued)

How to place MP position in service (integrated)

At your Current Location

- 1 Proceed if a step in a maintenance procedure directs you to this procedure. Use of this procedure separately can cause equipment damage or service interruption.

At the MAP display:

- 2 To access the MP level, type

>MAPCI ;MTC ;PM

and press the Enter key.

>POST TPC x;MP

and press the Enter key.

where

x

is the TOPS position controller (TPC) number.

- 3 To post the MP position that applies, type

>POST P n

and press the Enter key.

Example of a MAP display response:

CM	MS	IOD	Net	PM	CCS	LNS	Trks	Ext	EIO
.
MP		SysB	ManB	OffL	CBSy	ISTb	InSv		
0	Quit	PM	0	0	10	0	0	130	
2	Post_	TPC	0	0	0	0	0	4	
3									
4		TPC 0	InSv						
5	Trnsl								
6	Tst	Status	VTB	SB	MB	PMB	RES	RTRN	INB
7	Bsy	MP	0	0	1	0	5	0	2
8	RTS								
9		POS	201	TPC	0	MP	1	MB	
10		Size of Post set:				1			
11	Disp_								
12	Next								
13	FRls								
14	QueryMP								
15									
16									
17									
18									

MP position number and status

Placing MP position in service (integrated) (continued)

where

n
is the MP position number, 0, 1, 2, or 3.

If MP position status	Do
is MB	step 5
is SB	step 4

- 4 To busy the MP position, type
>BSY
and press the Enter key.
- 5 To return the MP position to service, type
>RTS
and press the Enter key.

Example of a MAP display response:

```

CM      MS      IOD      Net      PM      CCS      LNS      Trks      Ext      EIO
.      .      .      .      .      .      .      .      .      .

MP
0  Quit  PM  0      0      10     0      0      130
2  Post_ TPC  0      0      0      0      0      4
3
4      TPC 0  InSv
5  Trnsl
6  Tst      Status  VTb  SB  MB  PMb  RES  RTRN  INB
7  Bsy      MP      0  0  1  0  5  0  2
8  RTS
9      POS  201  TPC  0  MP  1  RES
10     Size of Post set: 1
11  Disp_
12  Next
13  FRls
14  QueryMP
15
16
17
18
    
```

MP position number and status

- 6 Determine if the MP position returns to service.

If MP position	Do
returns to service and RES appeared on MAP	step 8
failed to return to service	step 7

Placing MP position in service (integrated) (end)

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

At the affected position:

8 Examine the MP VDU.

If the system	Do
displays Please log on	step 9
displays message other than listed here	step 7

9 Determine if the system returns all MP that apply positions to service.

If the system	Do
returned all MP positions that apply to service	step 10
did not return all MP positions that apply to service	step 3

10 The procedure is complete. Return to the procedure that sent you to this procedure and continue.

Placing MP position in service (standalone)

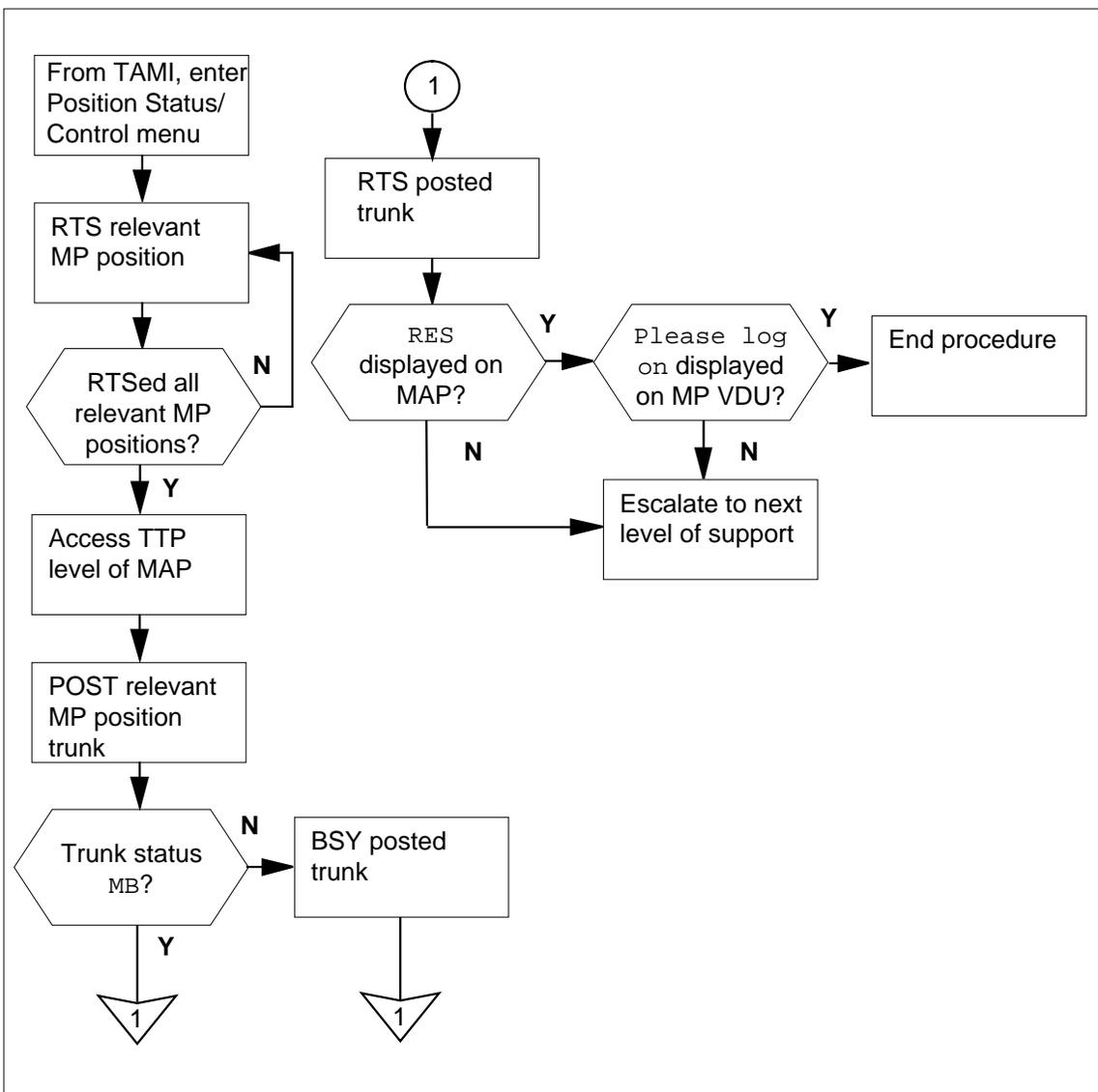
Application

Use this procedure to place a standalone Traffic Operator Position System (TOPS) Multipurpose (MP) position in service.

Action

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

Summary of How to place MP position in service (standalone)



Placing MP position in service (standalone) (continued)

How to place MP position in service (standalone)

At the TAMI:

1

ATTENTION

Proceed if a step in a maintenance procedure directs you to this procedure. If you use this procedure separately, equipment damage or service interruption can occur.

To access the Position Status/Control menu from the TAMI main menu, enter

>3

and press the Enter key.

TAMI response:

POSITION STATUS/CONTROL

1. Bsy
2. RTS
3. OfFL
4. RTS ALL POSITIONS

POSITION NUMBER	STATUS	CARD PRESENT
0.	InSv	YES
1.	InSv	YES
2.	InSv	YES
3.	ManB	YES

MAKE CHOICE:

2 To return to service (RTS) the MP position that applies, enter

>2

and press the Enter key.

>n

and press the Enter key.

where

n

is the MP position number 0, 1, 2, or 3

Note: Repeat this step until all positions that applies are RTS.

Placing MP position in service (standalone) (continued)

At the MAP display:

- 3** To access the TTP level, enter
>MAPCI ;MTC ;TRKS ;TTP
 and press the Enter key.
- 4** To post the MP position trunk that applies, enter
>POST T TOPSPOS n
 and press the Enter key.
where

n
 is the MP position number (0, 1, 2, or 3)

- 5** Note the status of the trunk circuits.

If the trunk status	Do
is MBLink problems encountered	step 7
is SB	step 6

- 6** To busy the posted trunk, enter
>BSY
 and press the Enter key.

7



WARNING

Trunk goes system busy

Do not RTS the TOPSPOS trunk until the MP position has completely downloaded (VDU displays Link problems encountered).

The trunk goes system busy if the trunk is RTSed before Link problems encountered appears on the VDU.

To return the MP position to service that apply, enter
>RTS
 and press the Enter key.

- 8** Determine if trunk RTS.

If trunk	Do
RTS when RES appears on MAP	step 10

Placing MP position in service (standalone) (end)

	If trunk	Do
	fails to RTS	step 9
9	For additional help contact the next level of support.	
<i>At the affected position:</i>		
10	Examine the MP VDU.	
	If	Do
	Please log on appears	step 11
	any other message appears	step 9
11	The procedure is complete. Return to the main procedure and continue as the procedure directs.	

Preparing a routine maintenance schedule

Application

Use this table to help you prepare a routine maintenance schedule for your office.

(Sheet 1 of 3)

Task	Interval
Add an LCM to a REx test schedule	as required
Add an XPM to a REx test schedule	as required
Allocate recording volumes in the DIRP utility	as required
Allocate test volumes on 8-in. and 5.25-in. DDU's	at installation
Allocate test volumes on 14-in. DDU's	at installation
Back up an in-service UP 800 Plus database to DAT	daily
Back up an FP image file on an SLM disk	as required
Change AMA tapes	daily
Clean digital audio tape drive heads	every 8 hours of DAT drive use
Clean SLM tape drive heads in a DMS SuperNode	every 8 hours of tape drive use
Clean the magnetic tape drive	daily
Convert devices from tape to disk in the DIRP utility	as required
Copy an office image from SLM disk to SLM tape	weekly
Daily replacement of magnetic tapes in the DIRP utility	daily
Deallocate recording volumes in the DIRP utility	daily
Exclude an LCM from a REx test schedule	as required
Exclude an XPM from a REx test schedule	as required
Expand recording file space on disk in the DIRP utility	as required
Increase size of QP database volume	one time

Preparing a routine maintenance schedule (continued)

(Sheet 2 of 3)

Task	Interval
Increase size of UP database volume	one time
Inspect cooling unit filters	2 weeks
Perform a manual file rotation in the DIRP utility	determined by operating company
Perform a manual REx test on an LCM	as required
Perform a manual REx test on an XPM	as required
Perform DDU interference and file transfer tests	at installation
Perform demand audits in the DIRP utility	when you must perform a manual audit
Prevent dust accumulation in a 42-in. cabinet	6 weeks
Record an EIU/FRIU/XLIU image on an SLM disk	when you perform a software upgrade
Record an FP image on an SLM disk	when you perform a software upgrade
Record an NIU image on an SLM disk	when you perform a software upgrade
Record an office image on an SLM disk	daily, if auto-image not enabled. As required if auto-image enabled
Format an IOC base disk drive unit again	12 months
Replace a cooling unit filter CPC A0351174	6 weeks
Replace a cooling unit filter CPC A0377837	6 weeks
Replace a cooling unit filter in a 42-in. cabinet	6 weeks
Replace a fan in a 42-in. cabinet	as required
Return a card or assembly in Canada	as required
Review REx test results on an LCM	after REx test
Review REx test results on an XPM	after REx test
Schedule an automatic REx test on an FP	as required

Preparing a routine maintenance schedule (end)

(Sheet 3 of 3)

Task	Interval
Schedule an automatic REx test on an LCM	as required
Schedule an automatic REx test on an XPM	as required
Schedule and store daily office image backups	daily
Schedule and store monthly office image backups	monthly
Schedule and store office image backups	as required
Schedule and store weekly office image backups	weekly
Schedule magnetic tape drive maintenance	6 months
Set up parallel recording on an MTD in the DIRP utility	as required
Set up parallel recording on disk in the DIRP utility	as required
Test a dead system alarm	30 days
Test a LIM unit	as required
Test a VPU	as required
Test an EIU	as required
Test an LIU7	as required
Test an HLIU	as required
Test an MLIU	as required
Test an HSLR	as required
Test F-bus taps on an LPP or ELPP	daily
Test power converter voltages	6 months
Test wrist-strap grounding cords	monthly
Verify and adjust the time-of-day clock	daily

Preventing dust accumulation in a 42-in. cabinet

Application

Use this procedure to prevent dust accumulation in a 42-in. (1.07-m) cabinet.

Interval

Perform this procedure every 42 days (6 weeks).

Common procedures

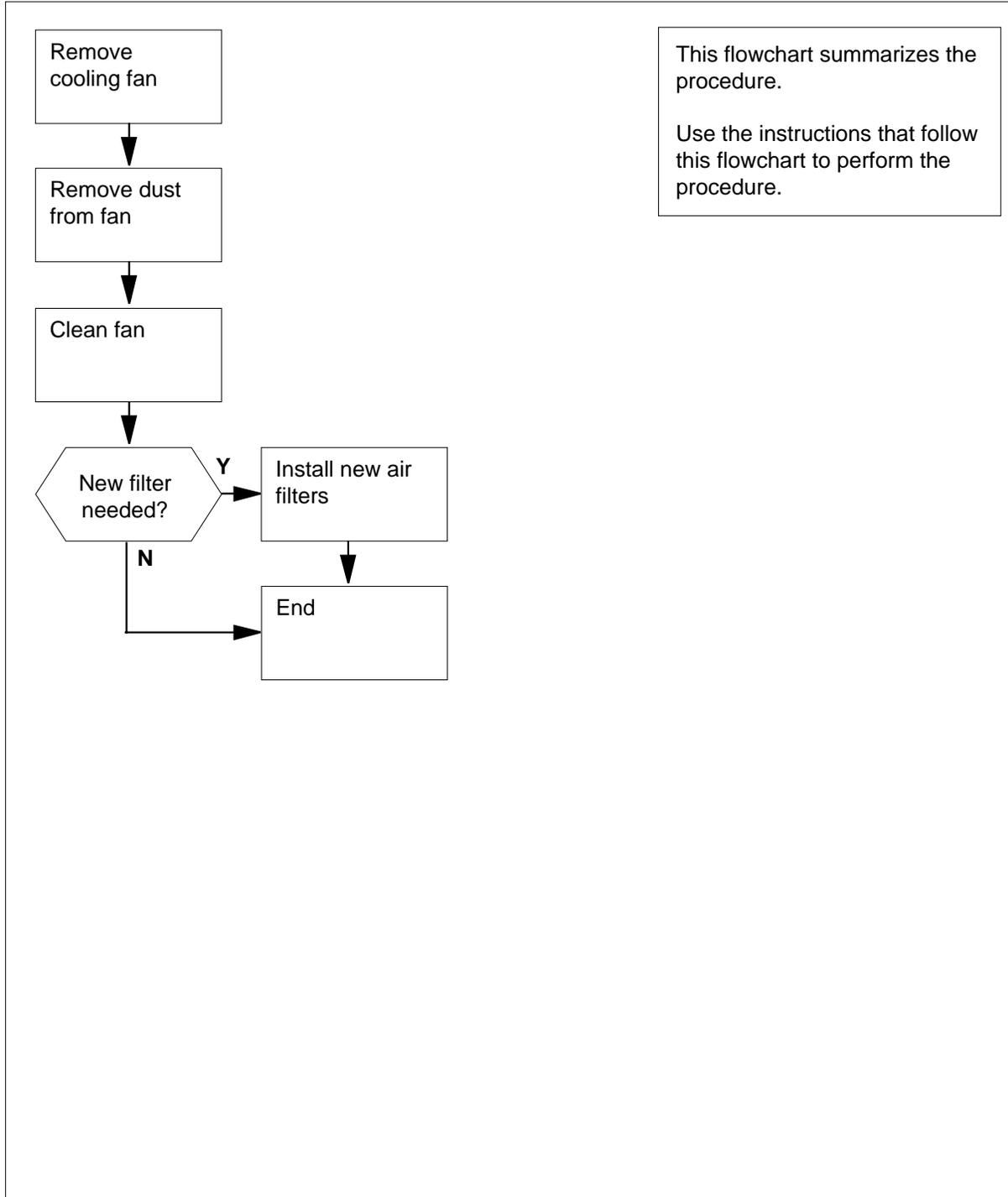
There are no common procedures.

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.

Preventing dust accumulation in a 42-in. cabinet (continued)

Summary of Preventing dust accumulation in a 42-in. cabinet



Preventing dust accumulation in a 42-in. cabinet (continued)

Preventing dust accumulation in a 42-in. cabinet

At your current location

1



DANGER

Lack of cooling causes danger to the frame.

Do not disconnect all of the fans for more than 30 min at a time. Lack of cooling can cause service degradation or equipment damage.

Identify the type of power distribution center connected to the 42-in. cabinet.

If the cabinet	Do
connects to a PDC	step 2
connects to a CPDC	step 5

At the front of the PDC

2



DANGER

Risk of injury

Fuse holder removal can cause arcs. Wear eye protection when you remove cooling unit fuse holders.



WARNING

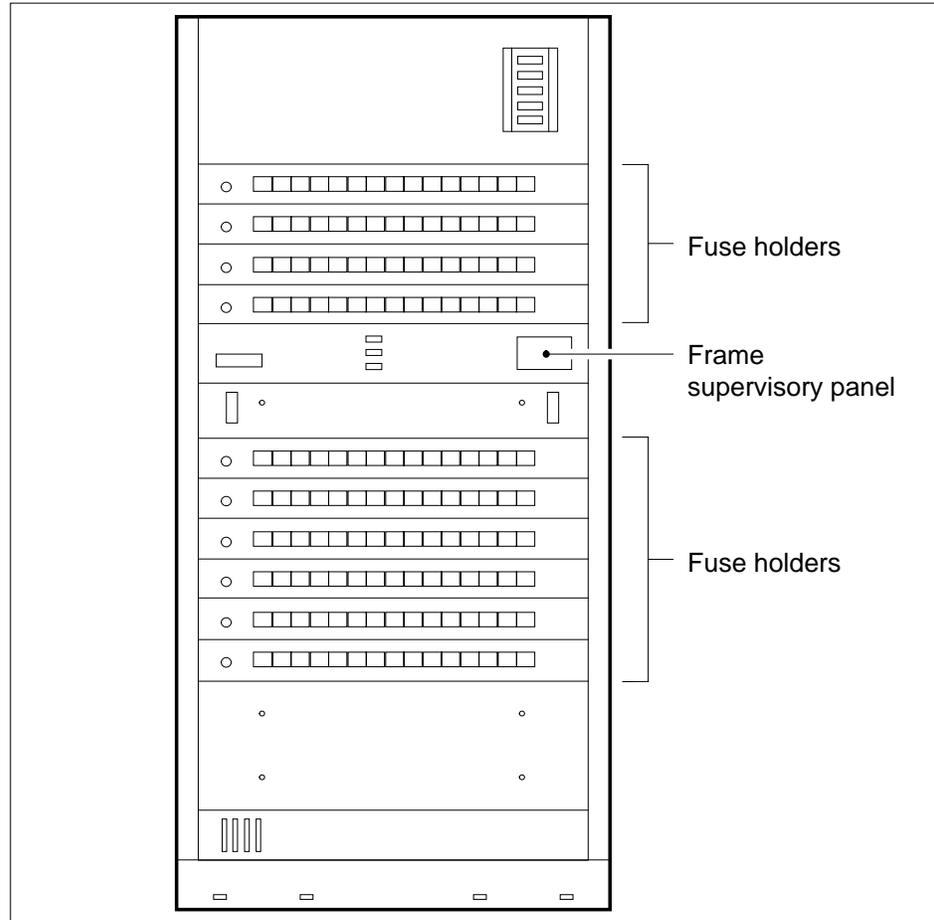
Possible loss of service

Before you remove a fuse, make sure that the fuse you remove is the cooling unit fuse. Removal of the wrong fuse can disconnect power to a critical hardware component and cause loss of service.

Locate the cooling unit fuse.

Note: The cooling unit fuse holder is on the front panel of the PDC. The cooling unit fuse holder shows the cabinet number (above the fuse holder) and the cooling unit number (below the fuse holder).

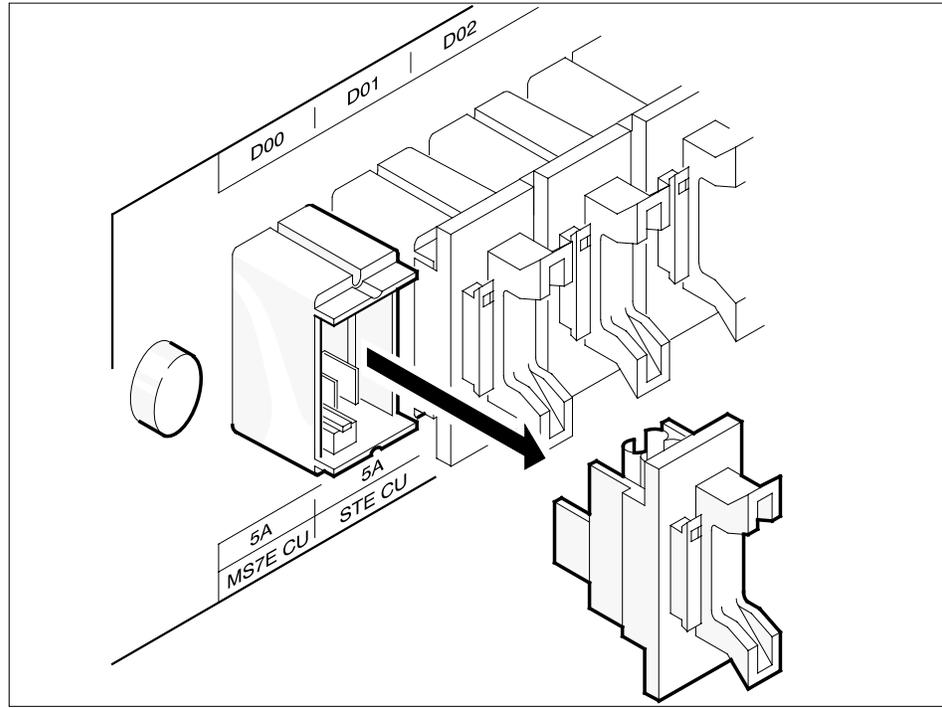
Preventing dust accumulation in a 42-in. cabinet (continued)



- 3 To remove the cooling unit fuse, pull the fuse holder out of the front panel of the PDC.

Note: When power to the cooling unit disconnects, the fan failure light is lit. The fan failure light is at the top of the cabinet between the doors.

Preventing dust accumulation in a 42-in. cabinet (continued)



4 Go to step 7.

Preventing dust accumulation in a 42-in. cabinet (continued)

At the front of the CPDC

5



DANGER

Risk of injury

If you throw a breaker you can cause an electrical discharge.
Wear eye protection when you throw a cooling unit breaker.



WARNING

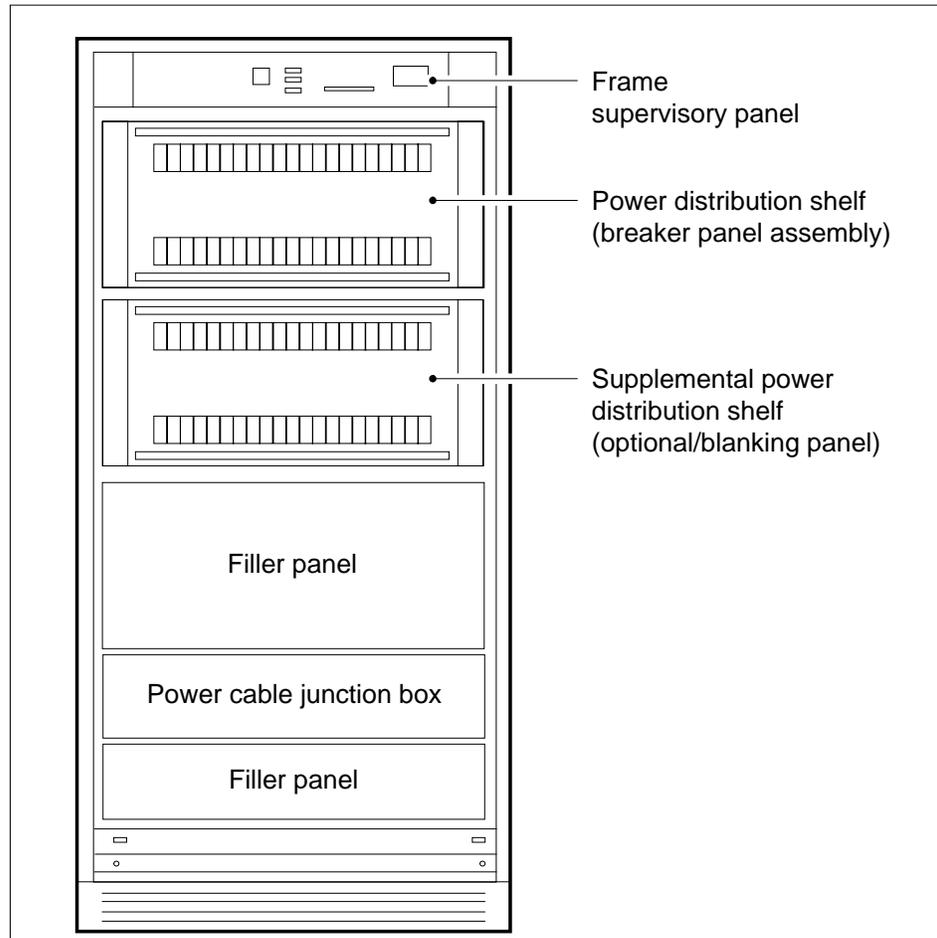
Possible loss of service

Before you throw the cooling unit breaker, make sure that you disconnect power to the cooling unit. To throw the wrong breaker can disconnect power to a critical hardware component and cause loss of service.

Locate the cooling unit circuit breaker.

Note: The cooling unit circuit breaker is on the front panel of the CPDC. The cooling circuit breaker has the cabinet number above the breaker and the cooling unit number below the breaker.

Preventing dust accumulation in a 42-in. cabinet (continued)



- 6 Throw the cooling unit circuit breaker.

Note: When power to the cooling unit disconnects, the fan failure light is lit. The fan failure light is at the top of the cabinet between the doors.

At the front of the cabinet

- 7 Examine the diagrams of the two 42-in. DMS cabinet cooling units in steps 8 and 29 and return to this point.

If the fan you	Do
are cleaning is the one in step 8	step 8
are cleaning is the one in step 29	step 29

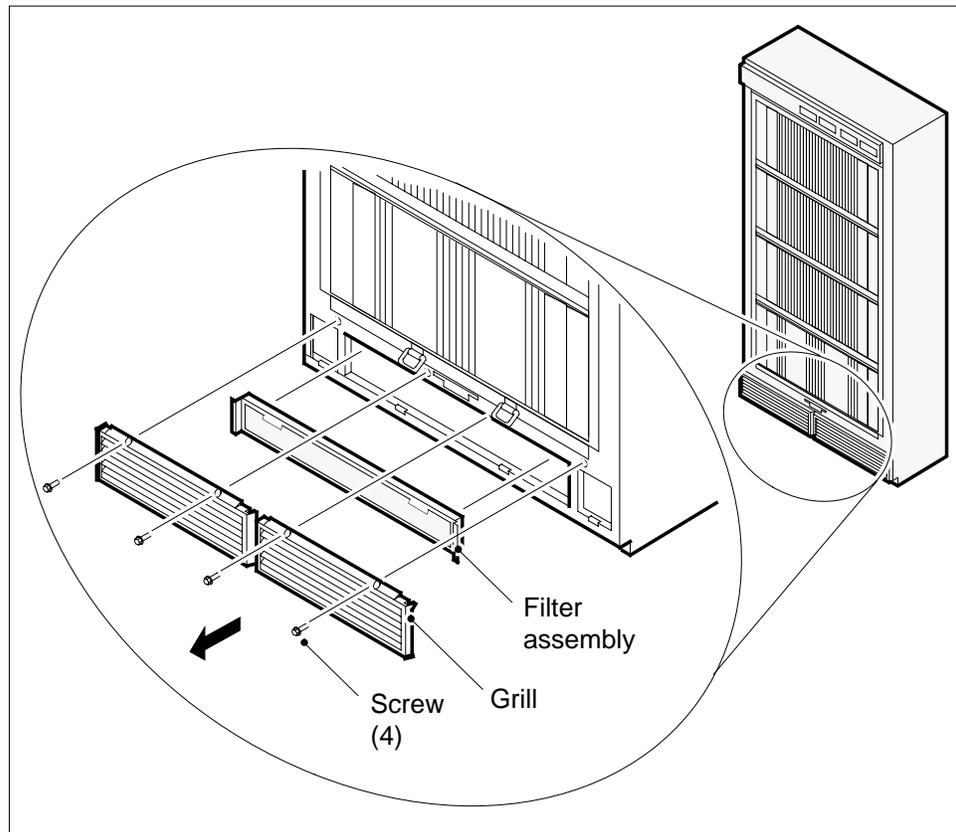
Preventing dust accumulation in a 42-in. cabinet (continued)

8



DANGER
Electrocution
Do not touch the cabinet wiring.

To remove the two cooling unit grills at the bottom of the cabinet front, remove the screws that hold the grills in place.



- 9 To remove the filter assembly, pull on the handles.
- 10 To remove the kickplate assembly, remove the bolts that hold the kickplate in place.

Preventing dust accumulation in a 42-in. cabinet (continued)

11



WARNING

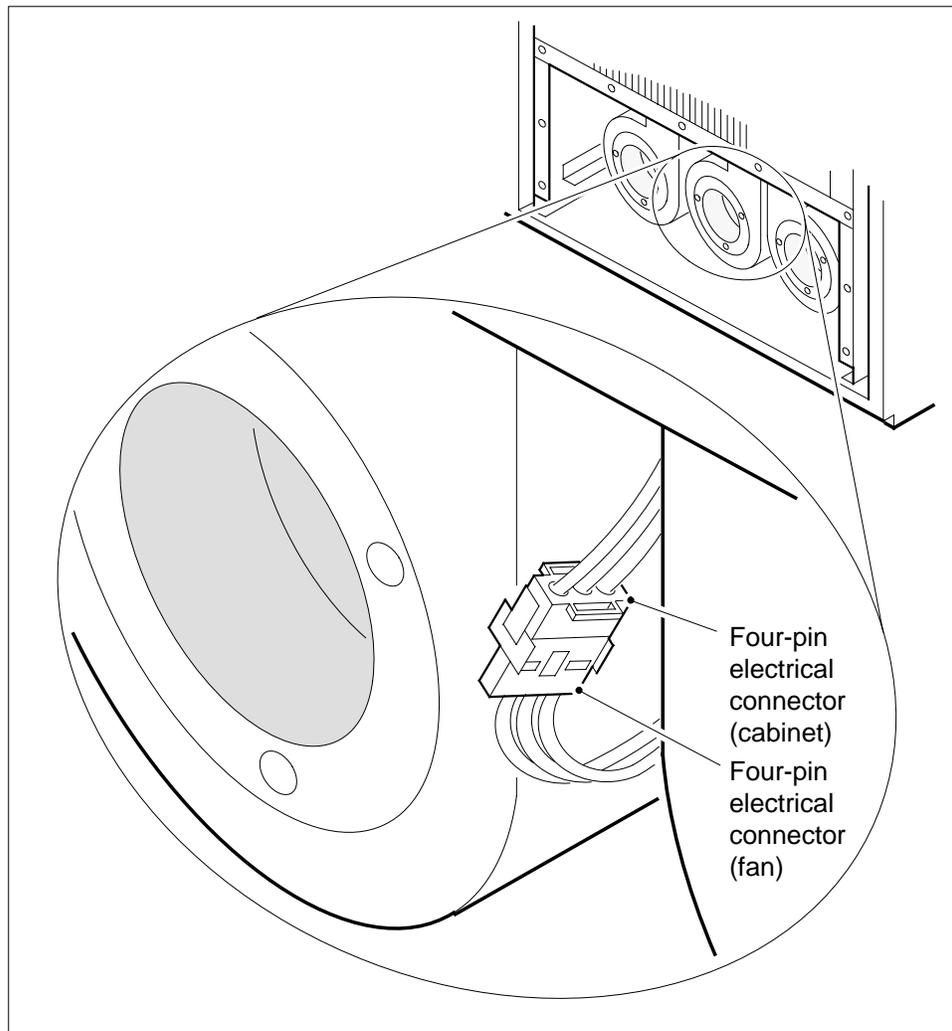
Lack of cooling causes danger to the frame

Do not disconnect all of the fans for more than 30 min at a time. Lack of cooling can degrade service or damage equipment.

Locate the cooling fan on the far left.

12

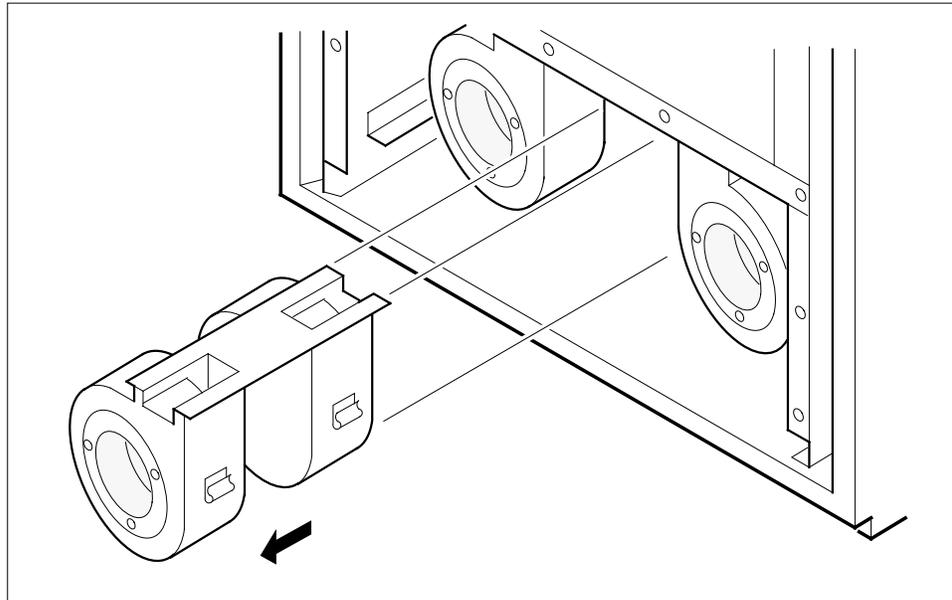
Disconnect the four-pin electrical connector of the cooling fan from the corresponding four-pin connector of the cabinet.



13

Slide the fan out of the cabinet.

Preventing dust accumulation in a 42-in. cabinet (continued)



14 Remove the dust from the intake area of the cooling fan.

If the filter	Do
requires replacement	step 15
does not require replacement	step 16

15 Perform the procedure *Replacing a cooling filter in a 42-in. cabinet* in this document. Complete the procedure and return to this point.

16 Slide the cooling fan into the cabinet.

17 Reconnect the four-pin electrical connector of the fan with the corresponding four-pin electrical connector of the cabinet .

18 Determine if you must clean more fans. Three cooling fans are present.

If you	Do
must clean more fans	step 19
do not have to clean more fans	step 20

19 Locate the next cooling fan on the far left. Go to step 12.

20 Identify the type of power distribution center to which the 42-in. cabinet connects.

If the cabinet	Do
connects to a PDC	step 21

Preventing dust accumulation in a 42-in. cabinet (continued)

If the cabinet	Do
connects to a CPDC	step 22

At the PDC

- 21** To reinsert the cooling unit fuse again, push the fuse holder straight into the front panel of the PDC.
Go to step 23.

At the CPDC

22



DANGER
Risk of injury
 If you throw a breaker, you can cause an electrical discharge.
 Wear eye protection when you throw a cooling unit breaker.

Throw the cooling unit circuit breaker.

At the 42-in. cabinet

- 23** Check if the fan works.

If the fan	Do
works	step 26
does not work	step 24

- 24** Check the connections in the four-pin electrical connector of the replacement fan with the corresponding four-pin electrical connector of the cabinet. Also check the connections in the PDC or CPDC.

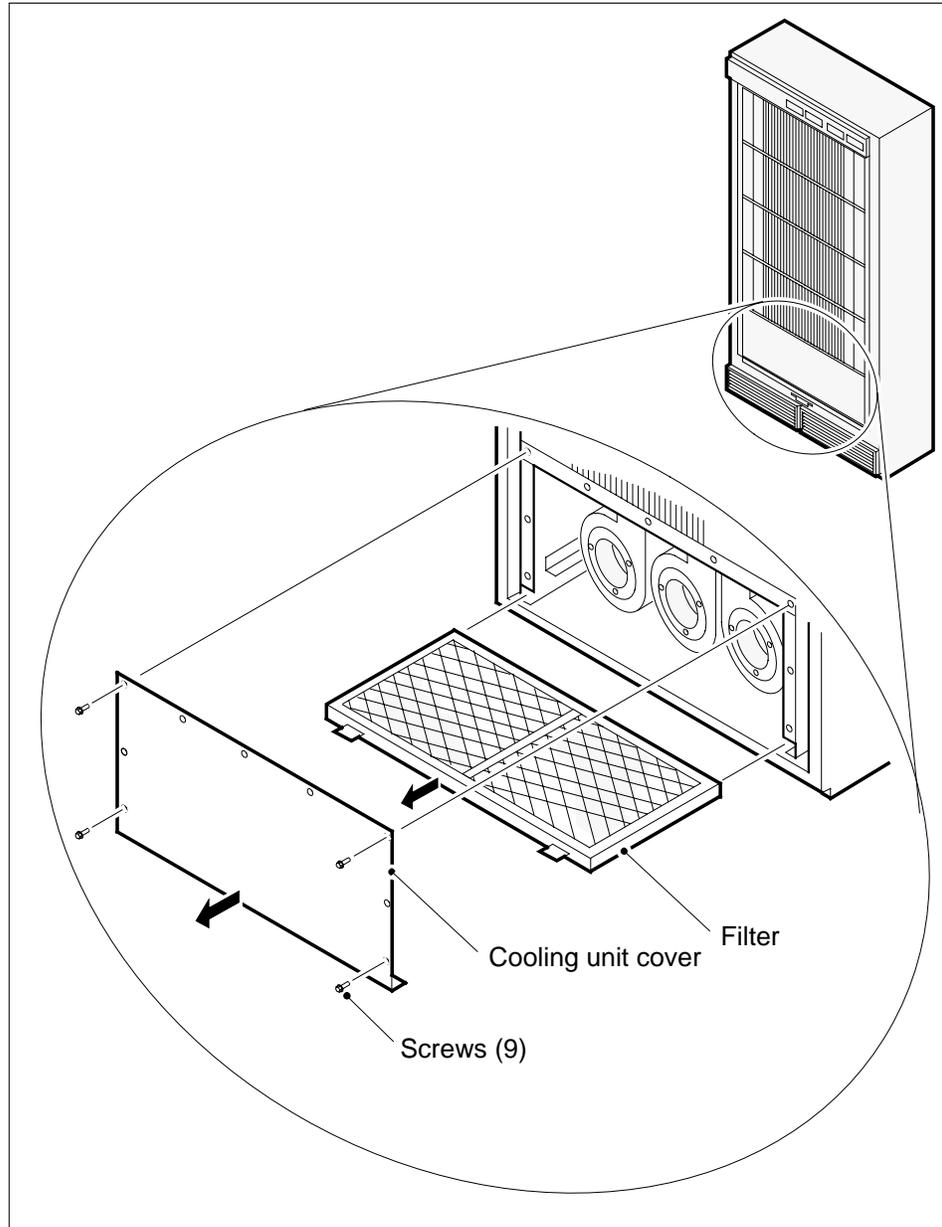
If	Do
all connections are correct	step 26
all connections are not correct	step 25

- 25** Correct any connections that are not correct. Go to step 23.
- 26** To install the kickplate assembly again, insert the bolts again that hold the kickplate assembly in place.
- 27** To reinstall the filter assembly, push on the handles.
- 28** Reinstall the cooling unit grills. Go to step 51.

Preventing dust accumulation in a 42-in. cabinet (continued)

At the front of the cabinet

29 Open the cabinet doors.



Preventing dust accumulation in a 42-in. cabinet (continued)

30



DANGER
Electrocution
Do not touch the cabinet wiring.

To remove the cooling unit cover, located over the two unit grills, remove the nine inner screws of the cover.

Note: Do not remove the four bolts located on the outer edge of the cooling unit cover.

At the front of the cabinet

31



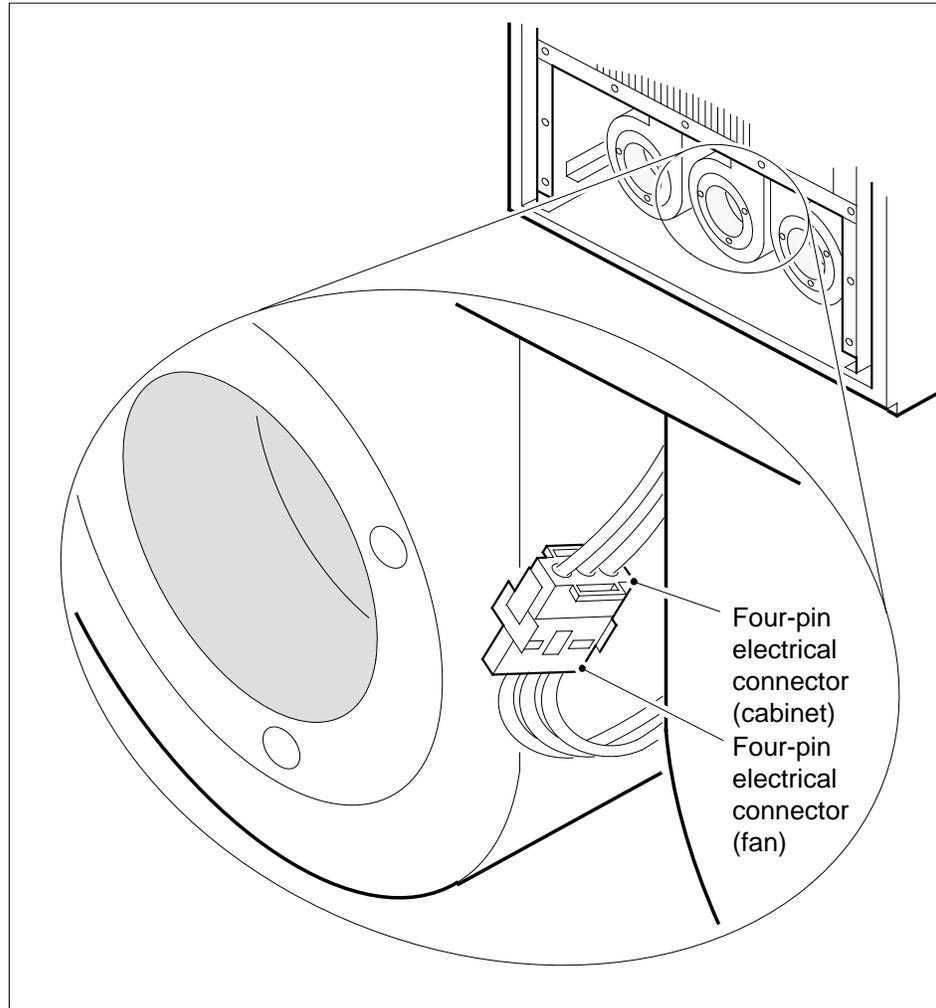
WARNING
Lack of cooling causes danger to the frame
Do not disconnect all of the fans for more than 30 min at a time. Lack of cooling can degrade service or damage equipment.

Locate the cooling fan on the far left.

32

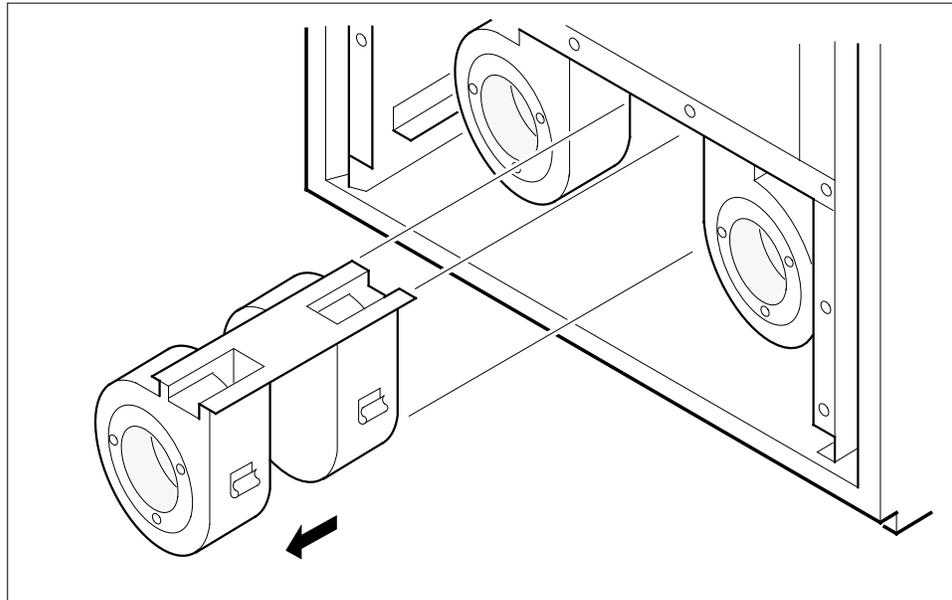
Slide the fan far enough out of the cabinet that you can disconnect the four-pin electrical connector of the fan without strain to the wiring harness.

Preventing dust accumulation in a 42-in. cabinet (continued)



- 33 Disconnect the four-pin connector of the fan from the corresponding four-pin connector of the cabinet.
- 34 Slide the fan the rest of the way out of the cabinet.

Preventing dust accumulation in a 42-in. cabinet (continued)



35 Remove the dust from the intake area of the cooling fan.

If the filter	Do
requires replacement	step 36
does not require replacement	step 37

36 Perform the procedure *Replacing a cooling filter in a 42-in. cabinet* in this document to replace the filter. Complete the procedure and return to this point.

37 Slide the fan part way into the cabinet.

38 Connect the four-pin electrical connector of the replacement fan with the corresponding four-pin electrical connector of the cabinet.

39 Slide the fan the rest of the way into the cabinet.

40 Identify the type of power distribution center to which the 42-in. cabinet connects.

If the cabinet	Do
connects to a PDC	step 41
connects to a CPDC	step 42

At the PDC

41 To reinsert the cooling unit fuse, push the fuse holder straight into the front panel of the PDC.
Go to step 43.

Preventing dust accumulation in a 42-in. cabinet (end)

At the CPDC

42



DANGER

Risk of injury

If you throw a breaker, you can cause an electrical discharge.

Wear eye protection when you throw a cooling unit breaker.

Throw the cooling unit circuit breaker.

At the 42-in. cabinet

43 Determine if you must clean more fans. Three cooling fans are present.

If you	Do
must clean more fans	step 44
do not have to clean more fans	step 45

44 Locate the next cooling fan on the far left.

If the replacement fan	Do
works	step 47
does not work	step 45

45 Check the connections in the four-pin electrical connector of the replacement fan with the corresponding four-pin electrical connector of the cabinet. Also check the connections in the PDC or CPDC.

If	Do
all connections are correct	step 51
some connections are not correct	step 46

46 Correct any connections that are not correct. Go to step 51.

At the rear of the cabinet

47 Close the cabinet doors.

At the front of the cabinet

48 Install the cooling unit cover.

49 Close the cabinet doors. Go to step 51.

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

51 The procedure is complete.

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk

Application

Use this procedure to record an image of the following application specific units (ASU) on one or both SLM disks:

- EIU
- FRIU
- XLIU
- APU
- VPU

Interval

Perform this procedure when you apply a software upgrade or patch to the listed ASUs.

Note: Perform this procedure before you perform the procedure *Recording an office image on an SLM disk* in this document. When you perform the procedure *Recording an office image on an SLM disk*, you can modify the content of table PMLOADS. The content of table PMLOADS is part of the computing module image, which is one of the subsystems in a DMS SuperNode.

Common procedures

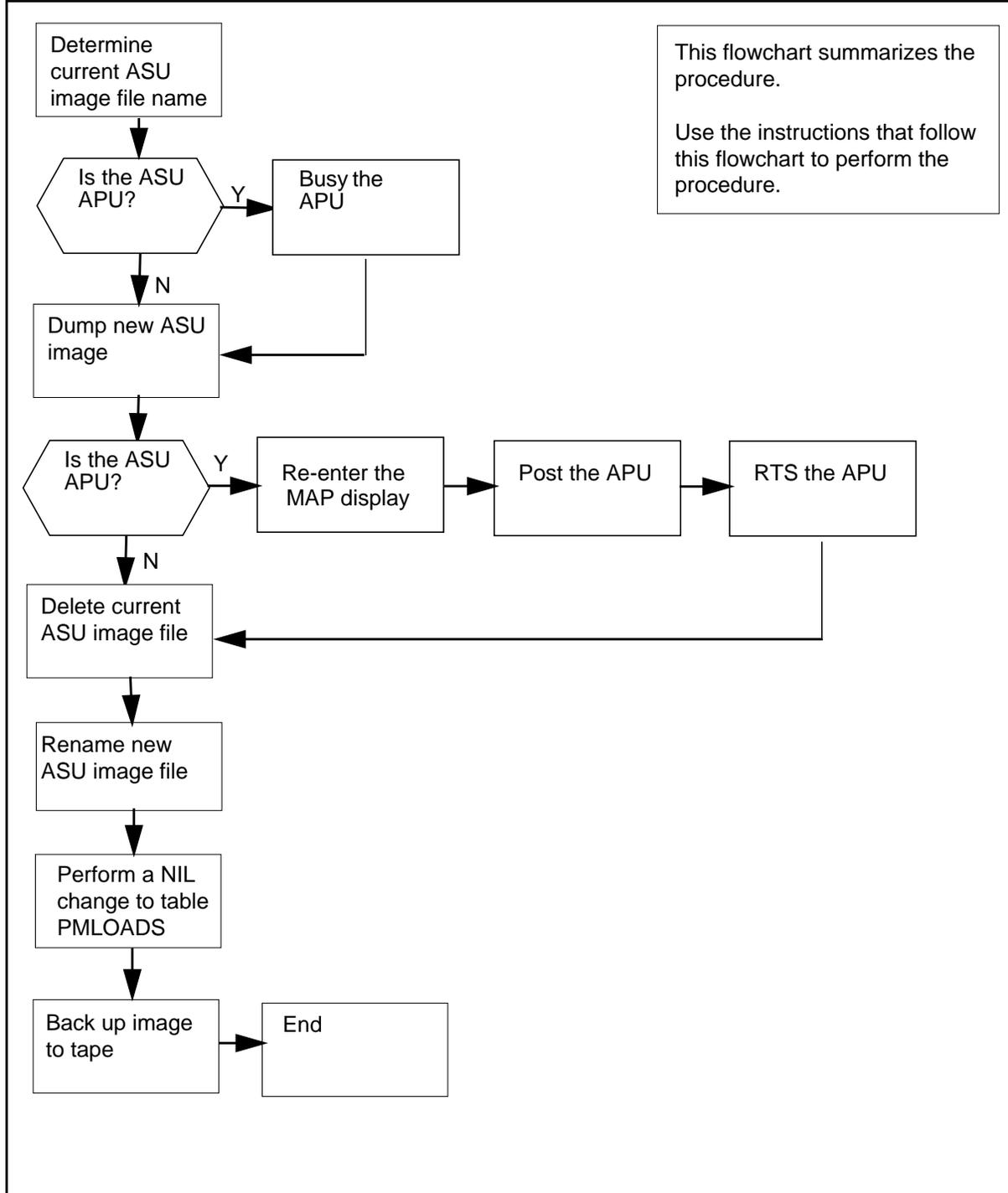
There are no common procedures.

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.

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

Summary of Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk



Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk

At your current location

- 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	0	0	2	4	13

- 2 To post the ASU you must take an image of, type

```
>POST node_name node_no
```

and press the Enter key.

where

node_name

specifies the ASU type (EIU, FRIU, XLIU, APU, VPU)

node_no

is the ASU number (0 to 511)

Example of a MAP response:

	SysB	ManB	Offl	CBsy	IStb	InSv
PM	1	0	0	2	4	13
XLIU	1	0	0	0	0	5

```
XLIU 121 InSv Rsvd
```

- 3 To determine the active load in the ASU, type

```
>QUERYPM
```

and press the Enter key.

Example of a MAP response:

```
PM type: XLIU PM No.: 121 Status: InSv
Node Number 52 XSG 1
LIM: 0 Shelf: 2 Slot: 12 XLIU FTA: 4246 1000
Default load: XRX35CQ
Running load: XRX35CR
Potential service affecting conditions:
Loadname Mismatch
```

Note: The name of the active load appears on the right of the Running load header. In the example, the active load in XLIU121 is XRX35CR.

- 4 Record the filename of the current software load and the datafilled filename.
5 Choose one SLM disk on which to store the image.

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

- 6 To access table LIUINV in order to determine the current ASU image file name, type

>TABLE LIUINV

and press the Enter key.

MAP response:
TABLE: LIUINV

- 7 To determine the current ASU image file name contained in table LIUINV, type

>LIST ALL

and press the Enter key.

Example of a MAP response:

```

TOP
  LIUNAME      LOCATION      LOAD      PROCINFO      CARDINFO
-----
LIU7 119      LIM 0 2 9  LRC36BY      NTEX22BB
                        NT9X76CA NT9X78CA  FBUS 56000  NIL
XLIU 121      LIM 0 2 12  XR35CQ      NTEX22BB
                        NTFX10AA NTFX09AA
XLIU 122      LIM 0 2 15  XR35CQ      NTEX22BB
                        NTFX10AA NTFX09AA
    
```

- 8 Record the file name that appears under the LOAD heading. These are the current ASU file names, which should be identical for each type of ASU.

- 9 To confirm that the current ASU image file name contained in table LIUINV is identical to the current ASU image file name contained in table PMLOADS, type

>TABLE PMLOADS; POS file_name

and press the Enter key.

where

file_name

is the current ASU image file name that you determined in step 8

Example input:

>POS XR35CQ

Example of a MAP response:
XR35CQ S00DISLOADS

If the file name	Do
is identical	step 10
is not identical	step 57

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

10 Proceed based on the following:

If the ASU	Do
is APU	step 11
is not APU	step 13

11 To manually busy the APU, type
>**bsy**

and press the Enter key.

12 To access the CI level of the MAP display, type

>**QUIT ALL**

and press the Enter key.

13 To access the disk utility, type

>**DISKUT**

and press the Enter key.

MAP response:
Disk utility is now active.DISKUT:

14 To take a new image of the ASU and store the image on the chosen SLM disk, type

>**DUMP IMAGE disk_volume_name ACTIVE RETAIN NODE
node_name node_number unit_number**

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 to which you are to dump (for example, S00DLIU)

node_name

is the ASU type (EIU, FRIU, XLIU, APU, VPU)

node_number

is the ASU number (0 to 511)

unit_number

is the inactive unit number (0 or 1)

Note: The name of the volume on the SLM disk cannot exceed eight characters. All nodes of the same ASU type should have identical loads. You only need to dump the image of one instance of an ASU type.

Example input:

>**DUMP IMAGE S00DNIU ACTIVE RETAIN NODE XLIU 0 0**

If the ASU	Do
is APU	step 15

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

	If the ASU	Do
	is not APU	step 20
15	To reenter the PM level of the MAP display, type >MAPCI ;MTC ;PM and press the Enter key.	
16	To post the APU used to dump an image, type >POST APU node_no and press the Enter key.	
17	To return the APU to service, type >RTS NOWAIT and press the Enter key.	
18	To access the CI level of the MAP display, type >QUIT ALL and press the Enter key.	
19	To access the disk utility, type >DISKUT and press the Enter key. <i>MAP response:</i> Disk utility is now active.DISKUT:	
20	To list the files stored on the SLM volume to determine the new ASU image file name, type >LISTFL disk_volume_name and press the Enter key. <i>where</i> disk_volume_name is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk to which you are to dump (for example, S00DLIU)	

Example of a MAP response:

File information for volume S00DLIU:
{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	49364	4682	1020	IMAGE_XLIU
930214	0 I F	72190	6095	1020	XR35CQ

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

- 21** Record the new file name that appears in the list of filenames (for example, IMAGE_XLIU).
- 22** To delete the current ASU image file, type
>DDF file_name
 and press the Enter key.
where
file_name
 is current ASU image file name as recorded in step 8
Example of a MAP response:
- ```
TUPLE TO BE DELETED:
 XR35CQ S00DISLOADS
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```
- 23** To confirm the command, type  
**>Y**  
 and press the Enter key.  
*Example of a MAP response:*  
 TUPLE DELETED
- 24** To rename the new ASU image file as the current ASU image and record the new name, type  
**>RENAMEFL new\_file\_name current\_file\_name**  
 and press the Enter key.  
*where*  
**new\_file\_name**  
 is new ASU image file name as recorded in step 21  
**current\_file\_name**  
 is current ASU image file name which must be identical to the ASU image file name as recorded in step 8  
*Example input:*  
**>RENAMEFL IMAGE\_XLIU XR35CQ**  
*Example of a MAP response:*  
 File IMAGE\_XLIU, volume S00DLIU, node CM has been renamed to XR35CQ.
- 25** To list the files stored on the SLM volume to verify the current ASU image file name is correct, type  
**>LISTFL disk\_volume\_name**  
 and press the Enter key.  
*where*

## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk (for example, S00DLIU)

*Example of a MAP response:*

File information for volume S00DLIU:  
{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 49364 4682 1020 XRX35CQ

```

**26** To quit from the disk utility, type

**>QUIT**

and press the Enter key.

**27** The next action depends on your telephone company operating procedures.

| If procedures require                  | Do      |
|----------------------------------------|---------|
| two ASU images (one for each SLM disk) | step 28 |
| one ASU image                          | step 35 |

**28** To list the files stored on the second SLM volume to determine the new ASU image file name, 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 to which you are to dump (for example, S01DLIU)

*Example of a MAP response:*

File information for volume S01DLIU:  
{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

930214 0 I F 72190 6095 1020 XRX35CQ

```

---

## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

---

**Note:** In the MAP display examples used in the procedure the first SLM disk volume designated for the storage of LIU images is S00DLIU and the second SLM disk volume designated for the storage of LIU images is S01DLIU.

**29** Record the file name, which should be identical to the file name recorded in step 8 (for example, XRX35CQ).

**30** To delete the current ASU image file, type

**>DDF file\_name**

and press the Enter key.

*where*

**file\_name**

is the current ASU image file name that you determined in step 29

*Example of a MAP response:*

```
TUPLE TO BE DELETED:
 XRX35CQ S01DISLOADS
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

**31** To confirm the command, type

**>Y**

and press the Enter key.

*Example of a MAP response:*

```
TUPLE DELETED
```

**32** To copy the new image of the ASU taken in step 14 and store the image on the chosen SLM disk, type

**>COPY file\_name disk\_volume\_name**

and press the Enter key.

*where*

**file\_name**

is the current ASU image file name that you determined in step 29

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk to which you are to copy (for example, S01DLIU)

*Example of a MAP response:*

```
File XRX35CQ, volume S00DLIU, has been copied to File XRX35CQ, volume S01DLIU.
```

**33** To list the files stored on the SLM volume to verify the current ASU image file name is correct, type

**>LISTFL disk\_volume\_name**

and press the Enter key.

*where*

## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk (for example, S01DLIU)

*Example of a MAP response:*

File information for volume S01DLIU:  
{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   | 49364   | 4682 1020 | XRX35CQ   |

- 34** To quit from the disk utility, type

>QUIT

and press the Enter key.

- 35** To access table PMLOADS, type

>TABLE PMLOADS

and press the Enter key.

*MAP response:*

TABLE: PMLOADS

- 36** To perform a NIL change to table PMLOADS, type

>POS file\_name

and press the Enter key.

where

**file\_name**

is the current ASU image file name that you determined in step 8

*Example input:*

>POS XRX35CQ

*Example of a MAP response:*

XRX35CQ S00DISLOADS

- 37** To perform a NIL change to the first field of table PMLOADS, type

>CHA

and press the Enter key.

*Example of a MAP response:*

ACTFILE: XRX35CQ

- 38** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*

ACTVOL: S00DLIU

## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

- 39** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
BKPFILE: XRX35CQ

- 40** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
BKPVOL: S00DLIU

- 41** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
UPDACT: N

- 42** To complete the NIL change to table PMLOADS, press the Enter key.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED
 XRX35CQ
 XRX35CQ S00DLIU
 XRX35CQ S00DLIU
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 43** To confirm the command, type

>Y

and press the Enter key.

*MAP response:*  
TUPLE CHANGEDWRITTEN TO JOURNAL FILE AS JF NUMBERR 13576

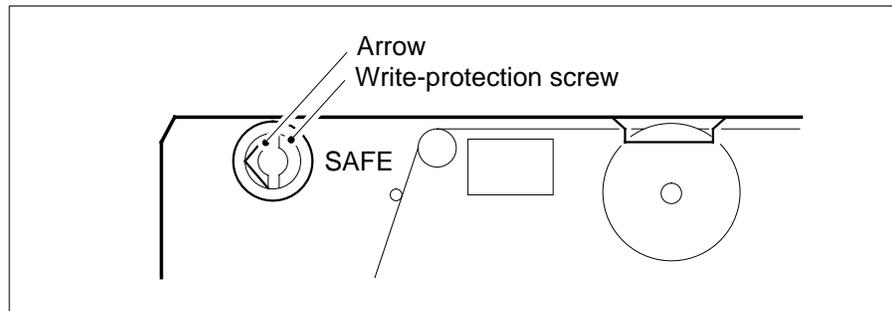
- 44** To quit table PMLOADS, type

>QUIT

and press the Enter key.

- 45** Obtain a backup tape.

- 46** Use a slot head screwdriver to rotate the tape cartridge write-protection screw 180° from the SAFE position.



## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

---

### *At the SLM*

- 47 Insert the backup tape in the appropriate SLM tape drive unit.

### *At the MAP terminal*

- 48 To insert the tape, type

```
>INSERTTAPE device_name WRITELABEL label_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

**label\_name**

is an alphanumeric name for the tape, up to six characters long

*Example input:*

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

*Example of a MAP terminal response:*

Writing the label IMGBUP to tape volume S00T on node CM will destroy all files stored on this tape volume.

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

- 49 To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP terminal response:*

The INSERT operation may take up to 5 minutes to tension the tape.

A tape is now available to user on unit 1, node CM. Name IMGBUP has been written to the tape label.

- 50 To list the files on the SLM volume that contains the latest NIU image files, 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 to which you are to backup (for example, S01DLIU)

---

## Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

---

- 51 To copy the ASU image file from the disk to the tape, type
- ```
>BACKUP FILE image_file_name tape_device_name
tape_file_name
```
- and press the Enter key.
- where
- image_file_name**
is the name of the current ASU image file
- tape_device_name**
is S00T if SLM 0 is in use, or S01T if SLM 1 is in use
- tape_file_name**
is the name you use for the ASU image file stored on tape
- Note:** The tape file name is optional. If you do not enter a tape file name the system assigns a default file name.

Example input:

```
>BACKUP FILE XRX35CQ S01T XRX35CQ
```

Example of a MAP terminal response:

```
STD file XRX35CQ on disk volume S00DIMAGE, node CM is
opened.
Tape file XRX35CQ on tape device S01T, node CM has been
created.
The copy operation may take several minutes.
Std file XRX35CQ on volume IMAGE1, node CM is copied to
tape file XRX35CQ on tape device S01T, node CM.
```

If the response indicates	Do
the command was successful	step 53
the tape does not have enough capacity to back-up the image file	step 52
something else	step 57

- 52 The WARNING that follows is output when the tape file is not listed or the file or volume being backed-up exceeds the 140 Mbyte threshold
- Example of a MAP terminal response:*

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (continued)

SLM3 supports 140/240/500 Mbytes normalized size tape.

Notes: The amount of free space left on the tape can not be determined. The STD volume backup from ss00dvoll requires 12345 free blocks on tape. The backup will fail if the free space is smaller than the size of the volume that is to be backed-up.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

SLM2/SLM1A supports 140/240 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the threshold for 140 Byte tapes. There is 2000000 blocks already used up on the tape. The STD volume requires 120000 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

SLM3 supports 140/240/500 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the tape normalized capacity (123 blocks) left on the tape. The STD volume requires 150 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

53 To list the files on the tape to confirm creation of the image file, type

>LISTFL device_name

and press the Enter key.

where

device_name

is either S00T or S01T

Recording an EIU/FRIU/XLIU/APU/VPU image on an SLM disk (end)

- 54** To eject the tape, type
`>EJECTTAPE 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

At the SLM

- 55** Remove the tape from the SLM and store it.

At the MAP terminal

- 56** To quit the disk utility, type
`>QUIT`
and press the Enter key.
- 57** For additional help, contact the next level of support.
- 58** The procedure is complete.

Recording an ENET image on an SLM disk

Application

Use this procedure to take an enhanced network (ENET) image and store the image on one or both system load module (SLM) disks.

Interval

Perform this procedure after each ENET software upgrade or patch.

Common procedures

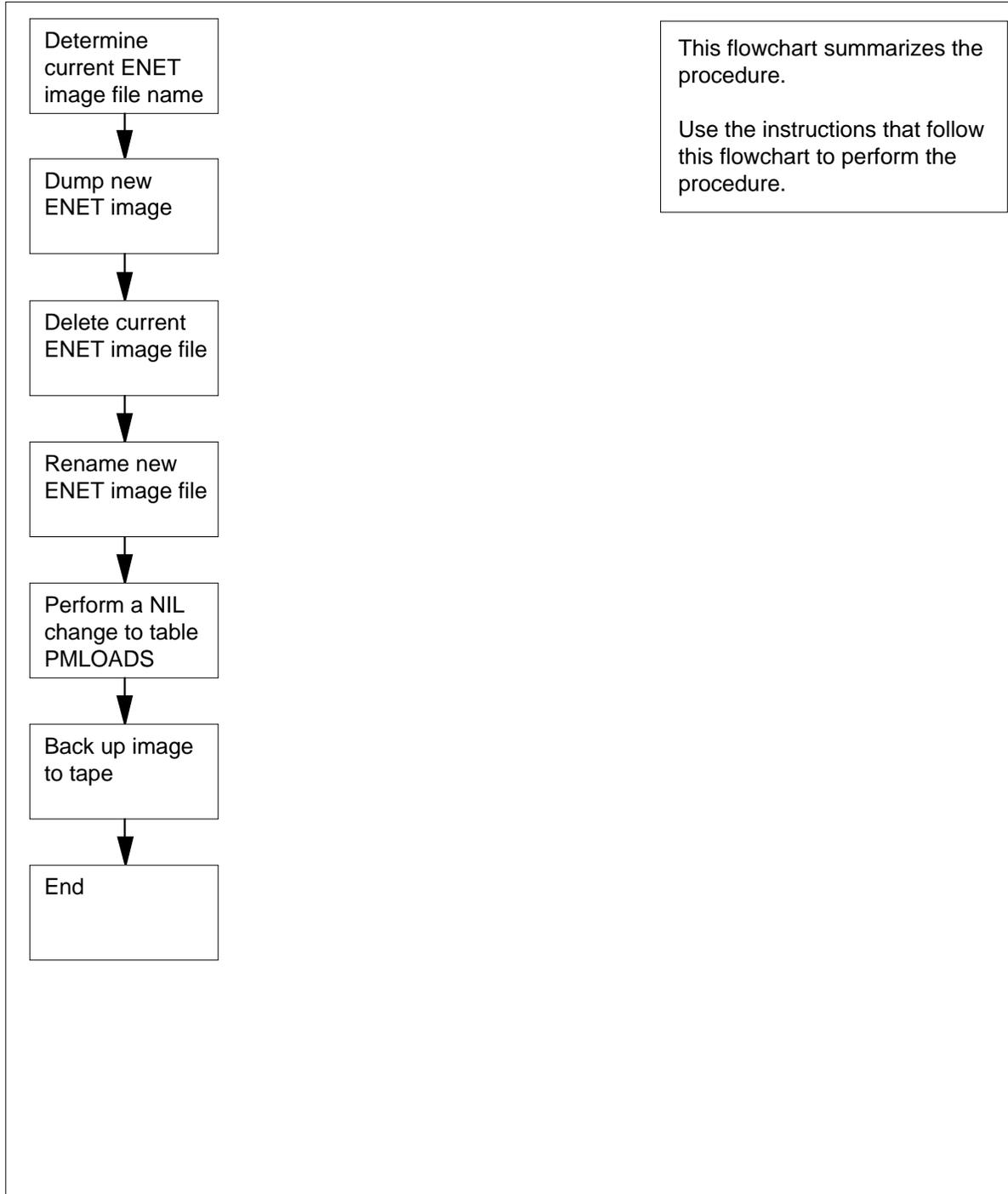
There are no common procedures.

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.

Recording an ENET image on an SLM disk (continued)

Summary of Recording an ENET image on an SLM disk



Recording an ENET image on an SLM disk (continued)

Recording an ENET image on an SLM disk

At your current location

- 1 Choose an SLM disk and volume on which to store the image.

Note: Create a disk volume in each SLM, designated only for the storage of ENET images. In the following MAP display examples used in the procedure that follows, the disk volumes designated for the storage of ENET images are S00DENET and S01DENET.

At the MAP terminal

- 2 To access table ENINV in order to determine the current ENET image file name, type

```
>TABLE ENINV
```

and press the Enter key.

MAP response:
TABLE: ENINV

- 3 To determine the current ENET image file name contained in table ENINV, type

```
>LIST ALL
```

and press the Enter key.

Example of a MAP response:

FRTYPE	FRNO	FRPEC	SHPEC	MSCARD0	MSLINK0	MSPORT0
SHELF0				LOAD0	MSCARD1	MSLINK1
FRPOS1	SHELF1				LOAD1	
ENC	0	NT9X05AB	NT9X0801	6	0	0
39				ENC07BM	8	0
5	13				ENC07BM	
ENC	0	NT9X05AB	NT9X0801	10	0	0
26				ENC07BM	12	0
5	00				ENC07BM	

Note: In the example, the first two columns and the last column do not appear because of space restrictions.

- 4 Record the file name that appears under the LOAD0 and LOAD1 headings. These are the current ENET file names, which should be identical.
- 5 To confirm that the current ENET image file name contained in table ENINV is identical to the current ENET image file name contained in table PMLOADS, type

```
>TABLE PMLOADS; POS file_name
```

and press the Enter key.

where

file_name

is the current ENET image file name that you determined in step 4

Example input:

```
>POS ENC07BM
```

Recording an ENET image on an SLM disk (continued)

Example of a MAP response:
ENC07BM S00DENET

If the file name	Do
is identical	step 6
is not identical	step 54

6 To access the CI level of the MAP display, type

>QUIT ALL

and press the Enter key.

7 To access the disk utility, type

>DISKUT

and press the Enter key.

MAP response:
Disk utility is now active.DISKUT:

8 To take a new image of the ENET and store the image on the chosen SLM disk, type

>DUMP filename disk_volume_name NODE ENET plane_number shelf_number

and press the Enter key.

where

filename

is the name of the existing ENET load

disk_volume_name

is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk to which you are to dump (for example, S00DENET)

plane_number

is the ENET plane number (0 or 1)

shelf_number

is the ENET shelf number (0 or 1)

Note: The name of the volume on the SLM disk cannot exceed eight characters. All ENET nodes have identical loads. You only need to dump an image of one ENET node. A node is a plane and shelf identification in the ENET subsystem.

Example input:

>DUMP ENC07BM S00DENET NODE ENET 0 0

Example response:

ENETOSHO:Estimated image size is 3513 Kbytes.ENETOSHO:Unloading modules that are loaded as TEMPORARY...

ENETOSHO:None found.

ENETOSHO:

ENETOSHO:Dumping Data Store

Recording an ENET image on an SLM disk (continued)

```

ENETOSHO:
ENETOSHO:Dumping Program Store.
ENETOSHO:Dumping Entry Record.
ENETOSHO:
ENETOSHO:Checking Data Store.
ENETOSHO:
ENETOSHO:Checking Program Store
ENETOSHO:Checking Entry Record
ENETOSHO:Successful DUMP and CHECK
ENETOSHO:3512 blocks with 30 corrections.
Dump finished: Dump completed successfully
    
```

- 9 To list the files stored on the SLM volume to determine the new ENET image file name, 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 to which you are to dump (for example, S00DENET)

Example of a MAP response:

```

File information for volume S00DENET:
{NOTE: 1 BLOCK = 512 BYTES }
    
```

LAST MODIFY DATE	FILE CODE G C O E	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		49364	4682	1020	ENC07BM_ENET
930214	0 I F		72190	6095	1020	ENC07BM

- 10 Record the new file name that appears in the list of filenames (for example, ENC07BM_ENET).

- 11 To delete the current ENET image file, type

```
>DDF file_name
```

and press the Enter key.

where

file_name

is the current ENET image file name that you determined in step 4

Example of a MAP response:

Delete ENC07BM from volume S00DENET, node CM??

Please confirm ("YES", "Y", "NO", or "N"):

- 12 To confirm the command, type

```
>Y
```

and press the Enter key.

Recording an ENET image on an SLM disk (continued)

Example of a MAP response:

File ENC07BM has been deleted from volume S00DENET, node CM.

- 13** To rename the new ENET image file as the current ENET image and record the new name, type

```
>RENAMEFL new_file_name current_file_name
```

and press the Enter key.

where

new_file_name

is new ENET image file name as recorded in step 10

current_file_name

is current ENET image file name which must be identical to the ENET image file name as recorded in step 4

Example input:

```
>RENAMEFL ENC07BM_ENET ENC07BM
```

Example of a MAP response:

File ENC07BM_ENET, volume S00DENET, node CM has been renamed to ENC07BM.

- 14** To list the files stored on the SLM volume to verify the current ENET image file name is correct, 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 (for example, S00DENET)

Example of a MAP response:

File information for volume S00DENET:

{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      49364      4682  1020  ENC07BM
```

- 15** To quit from the disk utility, type

```
>QUIT
```

and press the Enter key.

Recording an ENET image on an SLM disk (continued)

- 16 The next action depends on your telephone company operating procedures.

If procedures require	Do
two ENET images (one for each SLM disk)	step 17
one ENET image	step 24

- 17 To list the files stored on the second SLM volume to determine the new ENET image file name, 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 to which you are to dump (for example, S01DENET)

Example of a MAP response:

```
File information for volume S01DENET:
{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
-----
930214     0 I F          72190      6095 1020 ENC07BM
```

Note: In the MAP display examples used in the procedure the first SLM disk volume designated for the storage of ENET images is S00DENET and the second SLM disk volume designated for the storage of ENET images is S01DENET.

- 18 Record the file name, which should be identical to the file name recorded in step 4 (for example, ENC07BM).

- 19 To delete the current ENET image file, type

```
>DDF file_name
```

and press the Enter key.

where

file_name

is the current ENET image file name that you determined in step 18

Example of a MAP response:

```
Delete ENC07BM from volume S00DENET, node CM??
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

- 20 To confirm the command, type

```
>Y
```

and press the Enter key.

Recording an ENET image on an SLM disk (continued)

Example of a MAP response:

File ENC07BM has been deleted from volume S00DENET, node CM.

- 21** To copy the new image of the ENET taken in step 8 and store the image on the chosen SLM disk, type

>COPY **file_name disk_volume_name**

and press the Enter key.

where

file_name

is the current ENET image file name that you determined in step 18

disk_volume_name

is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk to which you are to copy (for example, S01DENET)

Example input:

>COPY **ENC07BM S01DENET**

Example of a MAP response:

File ENC07BM, volume S00DENET, has been copied to File ENC07BM, volume S01DENET.

- 22** To list the files stored on the SLM volume to verify the current ENET image file name is correct, 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 (for example, S01DENET)

Example of a MAP response:

File information for volume S01DENET:

{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          49364      4682 1020  ENC07BM
```

- 23** To quit from the disk utility, type

>QUIT

and press the Enter key.

- 24** To access table PMLOADS, type

>TABLE **PMLOADS**

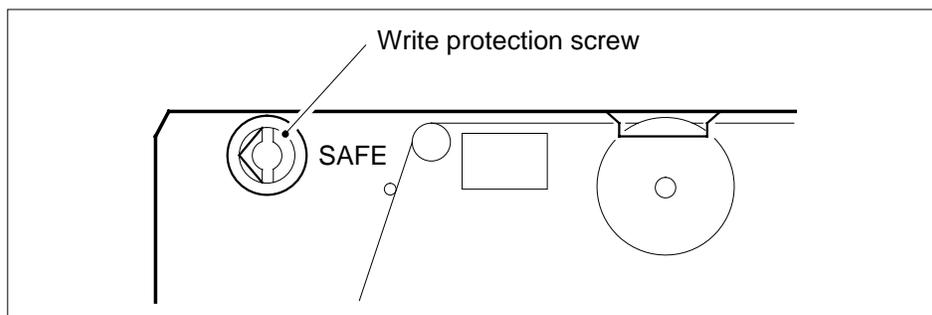
and press the Enter key.

Recording an ENET image on an SLM disk (continued)

- MAP response:*
TABLE: PMLOADS
- 25** To perform a NIL change to table PMLOADS, type
>POS **file_name**
and press the Enter key.
where
file_name
is the current ENET image file name that you determined in step 4
Example input:
>POS **ENC07BM**
- Example of a MAP response:*
ENC07BM S00DISLOADS
- 26** To perform a NIL change to the first field of table PMLOADS, type
>CHA
and press the Enter key.
Example of a MAP response:
ACTFILE: ENC07BM
- 27** To perform a NIL change to the next field of table PMLOADS, press the Enter key.
Example of a MAP response:
ACTVOL: S00DENET
- 28** To perform a NIL change to the next field of table PMLOADS, press the Enter key.
Example of a MAP response:
BKPFIL: ENC07BM
- 29** To perform a NIL change to the next field of table PMLOADS, press the Enter key.
Example of a MAP response:
BKPVOL: S00DENET
- 30** To perform a NIL change to the next field of table PMLOADS, press the Enter key.
Example of a MAP response:
UPDACT: N
- 31** To complete the NIL change to table PMLOADS, press the Enter key.
Example of a MAP response:
- ```
TUPLE TO BE CHANGED
ENC07BM
ENC07BM S00DENET
ENC07BM S00DENET
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

## Recording an ENET image on an SLM disk (continued)

- 32 To confirm the command, type  
`>Y`  
 and press the Enter key.  
*MAP response:*  
 TUPLE CHANGEDWRITTEN TO JOURNAL FILE AS JF NUMBERR 13576
- 33 To quit table PMLOADS, type  
`>QUIT`  
 and press the Enter key.
- 34 Obtain a backup tape for the ENET image.
- 35 Use a slot-head screwdriver to rotate the tape cartridge write protection screw 180° from the SAFE position.



**At the SLM**

- 36 Insert the backup tape into the correct SLM tape drive.

| If the tape      | Do      |
|------------------|---------|
| is formatted     | step 37 |
| is not formatted | step 38 |

**At the MAP terminal**

- 37 To mount the tape cartridge, type  
`>INSERTTAPE device_name`  
 and press the Enter key.  
*where*  
     **device\_name**  
     is S00T if SLM 0 is in use, or S01T if SLM 1 is in use
- 38 To format the tape, type  
`>INSERTTAPE tape_device_name WRITELABEL label_name`  
 and press the Enter key.  
*where*

---

## Recording an ENET image on an SLM disk (continued)

---

**tape\_device\_name**

is S00T if SLM 0 is in use, or S01T if SLM 1 is in use

**label\_name**

is an alphanumeric name for the tape, up to six characters in length (for example, ENIMG)

*Example input:*

```
>INSERTTAPE S01T WRITELABEL ENIMG
```

- 39** To list the files on the SLM volume that contains the latest ENET image files, 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 to which you are to backup (for example, S01DENET)

- 40** To backup the ENET image file from the disk to the tape, type

```
>BACKUP FILE image_file_name tape_device_name
tape_file_name
```

and press the Enter key.

*where*

**image\_file\_name**

is the name of the current ENET image file

**tape\_device\_name**

is S00T if SLM 0 is in use, or S01T if SLM 1 is in use

**tape\_file\_name**

is the name you use for the ENET image file stored on tape

**Note:** The tape file name is optional. If you do not enter a tape file name the system assigns a default file name.

*Example input:*

```
>BACKUP FILE ENC07BM S01T
```

---

| If the response                                                           | Do      |
|---------------------------------------------------------------------------|---------|
| indicates the command was successful                                      | step 50 |
| indicates the tape does not have enough capacity to backup the image file | step 41 |
| is other than listed here                                                 | step 54 |

---

- 41** To cancel the command, type

```
>NO
```

---

## Recording an ENET image on an SLM disk (continued)

---

and press the Enter key.

*Example of a MAP terminal response:*  
BACKUP command is aborted.Operation aborted by user.

- 42** To demount the tape, type  
**>EJECTTAPE tape\_device\_name**  
 and press the Enter key.  
*where*  
**tape\_device\_name**  
 is S00T if you work on SLM 0, or S01T if you work on SLM 1

### **At the SLM**

- 43** To release the tape cartridge, press the locking lever up.
- 44** To withdraw the tape cartridge, pull the cartridge straight out from the tape drive.
- 45** Obtain a new DC6250 (250-M byte) tape cartridge or DC6525 (500 Mbyte) cartridge tape if it is an SLM3.
- | <b>If you</b>                  | <b>Do</b> |
|--------------------------------|-----------|
| can obtain a tape cartridge    | step 46   |
| cannot obtain a tape cartridge | step 54   |
- 46** Use a slot-head screwdriver to rotate the SLM tape cartridge write protection screw 180° from the SAFE position.
- 47** Insert the DC6250 tape cartridge into the SLM tape drive.

### **At the MAP terminal**

- 48** To mount the inserted tape, type  
**>INSERTTAPE tape\_device\_name WRITELABEL label\_name**  
 and press the Enter key.  
*where*  
**tape\_device\_name**  
 is the tape drive (S00T or S01T) that contains the tape  
**label\_name**  
 is an alphanumeric name for the tape, up to six characters long

*Example input:*

**>INSERTTAPE S01T WRITELABEL ENETIMG**

*Example of a MAP response:*

## Recording an ENET image on an SLM disk (end)

---

Writing the label ENETIMG to tape volume S00T on node CM will destroy all files stored on this tape volume.

Do you want to continue?  
Please confirm ("YES", "Y", "NO", or "N"):

- 49** To confirm the command, type

**>YES**

and press the Enter key.

*Example of a MAP response:*

The INSERT operation may take  
up to 5 minutes to tension the tape.

A tape is now available to user on unit 1, node CM.  
Name ENETIMG has been written to the tape label.

Go to step 40.

- 50** To list the files on the tape to confirm that the system copied the ENET image file, type

**>LISTFL *tape\_device\_name***

and press the Enter key.

*where*

***tape\_device\_name***

is S00T if SLM 0 is in use, or S01T if SLM 1 is in use

- 51** To demount the tape, type

**>EJECTTAPE *tape\_device\_name***

and press the Enter key.

*where*

***tape\_device\_name***

is S00T if SLM 0 is in use, or S01T if SLM 1 is in use

### ***At the SLM***

- 52** Remove the tape from the SLM and store the tape.

### ***At the MAP terminal***

- 53** To quit from the disk utility, type

**>QUIT**

and press the Enter key.

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

- 55** The procedure is complete.

## Recording an FP image on an SLM disk

---

### Application

Use this procedure to record a file processor (FP) image on one or both system load module (SLM) disks.

### Interval

Perform this procedure after each FP software upgrade or patch.

### Common procedures

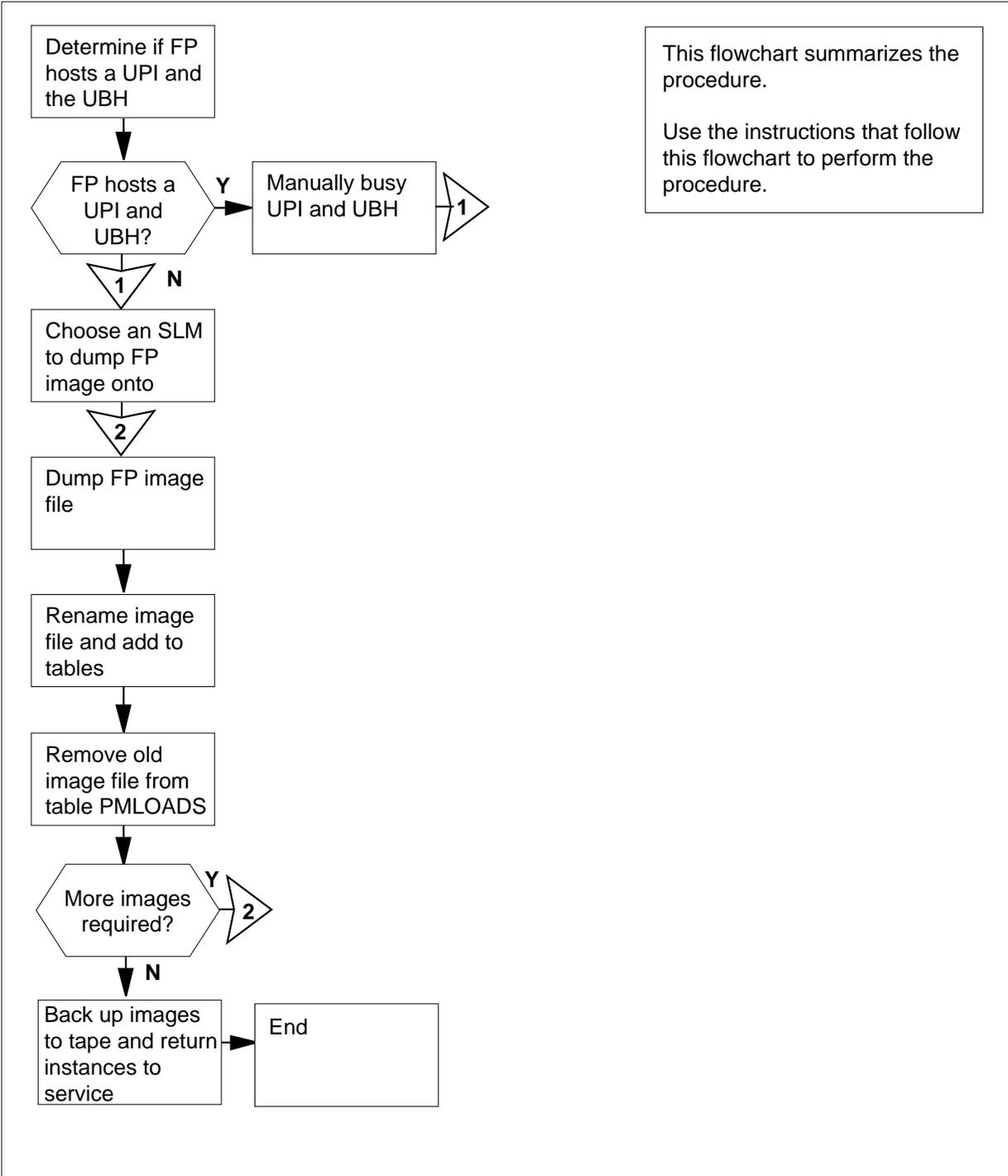
There are no common procedures.

### 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.

## Recording an FP image on an SLM disk (continued)

### Summary of Recording an FP image on an SLM disk



---

## Recording an FP image on an SLM disk (continued)

---

### Recording an FP image on an SLM disk

#### *At your current location:*

- 1 Determine if the FP hosts an update processing instance (UPI) and an update batch handler (UBH).

| If the FP                     | Do      |
|-------------------------------|---------|
| hosts a UPI and a UBH         | step 2  |
| does not host a UPI and a UBH | step 11 |

#### *At the MAP terminal*

- 2 To access the SCP level of the MAP display, type

```
>MAPCI ;MTC ;CCS ;SCP
```

and press the Enter key.

*Example of a MAP response:*

```

 CCS7 CCIS6 DPNSS SCP
Service: E008 State: InSv
SMS Status: Logged Out UPD: All Susp RET: All Susp

```

- 3 To post the service, type

```
>POST service
```

and press the Enter key.

*where*

**service**

is E008 or VPN (Virtual Private Network)

*Example of a MAP response:*

```

Service: E008 State: InSv
SMS Status: Logged Out UPD: All Susp RET: All Susp

```

- 4 To access the SCPLOC level of the MAP display, type

```
>SCPLOC
```

and press the Enter key.

*Example of a MAP response:*

---

## Recording an FP image on an SLM disk (continued)

---

```

Service: E008 State: InSv
SMS Status Logged Out UPD: All Susp RET: All Susp
SCP Local 111111 11112222 22222233
Components 01234567 89012345 67890123 45678901
UPI .----- ----- ----- -----
QPI -..... ...----- ----- -----
UBH .----- ----- ----- -----
CRMI ----- ----- ----- -----
Instance Function(s) RP

```

Instances in POSTed set: 1

- 5** To post the UPI, type  
**>POST UPI instance\_no**  
 and press the Enter key.  
 where

**instance\_no**  
 is the UPI number

*Example of a MAP response:*

```

 CCS7 SCP
 . .
Service: E008 State: InSv
SMS Status Logged Out UPD: All Susp RET: All Susp
SCP Local 111111 11112222 22222233
Components 01234567 89012345 67890123 45678901
UPI .----- ----- ----- -----
QPI -..... ...----- ----- -----
UBH .----- ----- ----- -----
CRMI ----- ----- ----- -----
Instance Function(s) RP
UPI 0:InSv EMERG:InSv NORMAL:InSv FP0:InSv
Instances in POSTed set: 1

```

- 6** To manually busy the UPI, type  
**>BSY FORCE**  
 and press the Enter key.

*Example of a MAP response:*

---

## Recording an FP image on an SLM disk (continued)

---

```
UPI 0 : WARNING: Emergency and Normal updates will be
suspended.
Do you wish to continue?
Please confirm ("YES" or "NO"):
```

| If the response                             | Do     |
|---------------------------------------------|--------|
| indicates that you must confirm the command | step 7 |
| indicates that the command passed           | step 8 |

- 7** To confirm the command, type  
**>YES**  
 and press the Enter key.  
*Example of a MAP response:*

```
UPI 0 : Passed.
```

- 8** To post the UBH, type  
**>POST UBH instance\_no**  
 and press the Enter key.  
*where*  
     **instance\_no**  
     is the UBH number

- 9** To manually busy the UBH, type  
**>BSY FORCE**  
 and press the Enter key.  
*Example of a MAP response:*

```
UBH 0 : WARNING: Emergency and Normal updates will be
suspended.
Do you wish to continue?
Please confirm ("YES" or "NO"):
```

| If the response                             | Do      |
|---------------------------------------------|---------|
| indicates that you must confirm the command | step 10 |
| indicates that the command passed           | step 11 |

## Recording an FP image on an SLM disk (continued)

---

- 10 To confirm the command, type

**>YES**

and press the Enter key.

*Example of a MAP terminal response:*

```
UBH 0 : Passed.
```

- 11 Choose one SLM disk on which to store the image.

- 12 To take an image of the FP and store the image on an SLM disk, type

**>DUMP file\_name volume\_name NODE FP fp\_num**

and press the Enter key.

*where*

**file\_name**

is the name you give the file (a string of alphanumeric characters)

**volume\_name**

is the name of the volume on the SLM disk (up to 12 alphanumeric characters). The first four characters are the name of the device (S00D or S01D). The next eight characters are the name of the volume on the disk.

**fp\_num**

is the file processor number (0 to 12)

*Example input:*

```
>DUMP FP110992 S01DPERM NODE FP 2
```

*Example of a MAP terminal response:*

```
DUMP FP110992 S01DPERM NODE FP 2
FP2: Estimated image size is 15116 Kbytes.
FP2:
FP2: Dumping Data Store.
FP2:
FP2: Dumping Program Store.
FP2:
FP2: Dumping Entry Record.
FP2:
FP2: Checking Data Store.
FP2:
Dump completed successfully.
```

- 13 Record the appended file name assigned by the DUMP command.

- 14 To access the entry table PMLOADS, type

**>TABLE PMLoads**

and press the Enter key.

*Example of a MAP response:*

```
TABLE: PMLoads
```

---

## Recording an FP image on an SLM disk (continued)

---

- 15** To add the new FP image file name to table PMLOADS, type  
**>ADD file\_name volume\_name**  
 and press the Enter key.  
*where*  
**file\_name**  
 is the new file name that you recorded in step 13  
**volume\_name** is the name of the volume on the SLM disk (up to 12 alphanumeric characters). The first four characters are the name of the device (S00D or S01D). The next eight characters are the name of the volume on the disk.  
*Example of a MAP response:*
- ```
TUPLE TO BE ADDED:
  <new_file_name>   S00DPMLOAD
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```
- 16** To confirm the command, type
>Y
 and press the Enter key.
Example of a MAP response:
- ```
TUPLE ADDED
```
- 17** To quit the table PMLOADS, type  
**>QUIT**  
 and press the Enter key.
- 18** To access the datafill table APINV, type  
**>TABLE APINV**  
 and press the Enter key.  
*Example of a MAP response:*
- ```
TABLE: APINV
```
- 19** To display the first tuple in table APINV, type
>LIST
 and press the Enter key.
- 20** Record the file name that appears under the LOADNAME heading.
- 21** To change the load name in the first tuple, type
>CHANGE LOADNAME file_name
 and press the Enter key.
where
file_name
 is the new file name you gave in step 12

Recording an FP image on an SLM disk (continued)

- 22 To access the next tuple, type
>DOWN
and press the Enter key.
- 23 To change the load name in the next tuple, type
>CHANGE LOADNAME **file_name**
and press the Enter key.
where
file_name
is the new file name you gave in step 12
- 24 To access the next tuple, type
>DOWN
and press the Enter key.

If this tuple	Do
is the last tuple	step 25
is not the last tuple	step 23

- 25 To quit table APINV, type
>QUIT
and press the Enter key.
- 26 To access table PMLOADS, type
>TABLE PMLOADS
and press the Enter key.
Example of a MAP terminal response:
- TABLE: PMLOADS
- 27 To position on the file name that you recorded in step 20, type
>POSITION **old_file_name**
and press the Enter key.
where
old_file_name
is the file name that you recorded in step 20
Example of a MAP terminal response:
- <old_file_name> S01DPMLOAD
- 28 Record the volume name that associates with the image file.
- 29 To delete the tuple, type
>DELETE
and press the Enter key.

Recording an FP image on an SLM disk (continued)

Example of a MAP response:

```
TUPLE TO BE DELETED:
  <old_file_name>  S01DPMLoad
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 30** To confirm the command, type
>Y
 and press the Enter key.

Example of a MAP response:

```
TUPLE DELETED
```

- 31** To quit table PMLOADS, type
>QUIT
 and press the Enter key.

- 32** To access the disk utility, type
>DISKUT
 and press the Enter key.

Example of a MAP response:

```
Disk utility is now active.
DISKUT:
```

- 33** To delete the old FP image file, type
>DDF old_file_name
 and press the Enter key.

where

old_file_name

is the file name that you recorded in step 20

Example of a MAP response:

```
Delete <old_file_name> from volume S01DIMAGE, node CM??
Please confirm ("YES", "Y", "NO", or "N"):
```

- 34** To confirm the command, type
>Y
 and press the Enter key.

Example of a MAP response:

```
File <old_file_name> has been deleted from volume
S01DIMAGE, node CM.
```

Recording an FP image on an SLM disk (continued)

- 35 Determine how many FP images you require (the number of FP images required depends on your telephone company operating procedures).

If you

Do

require two FP images (one for each SLM disk) step 36

require one FP image step 37

- 36 To take an image of the FP and store the image on the other SLM disk, type
`>DUMP file_name volume_name NODE FP fp_num`
 and press the Enter key.

where

file_name

is the name you give the file (a string of alphanumeric characters)

volume_name

is the name of the volume on the SLM disk (up to 12 alphanumeric characters). The first four characters are the name of the device (S00D or S01D). The next eight characters are the name of the volume on the disk.

fp_num

is the file processor number (0 to 12)

- 37 Determine if the FP hosts a UPI and a UBH.

If the FP

Do

hosts a UPI and a UBH step 38

does not host a UPI and a UBH step 45

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

- 39 To post the service, type
`>POST service`
 and press the Enter key.

where

service

is E008 or VPN

- 40 To access the SCPLOC level of the MAP display, type
`>SCPLOC`
 and press the Enter key.

- 41 To post the UPI, type
`>POST UPI instance_no`

Recording an FP image on an SLM disk (end)

and press the Enter key.

where

instance_no
is the UPI number

- 42** To return the UPI to service, type

>RTS

and press the Enter key.

Example of a MAP response:

UPI 0 : Passed

- 43** To post the UBH, type

>POST UBH instance_no

and press the Enter key.

where

instance_no
is the UBH number

- 44** To return the UBH to service, type

>RTS

and press the Enter key.

Example of a MAP response:

UBH 0 : Passed

- 45** The procedure is complete.

Recording an HLIU image on an SLM disk

Application

Use this procedure to record an image of current high-speed link interface unit (HLIU) data on one or both system load module (SLM) disks. After the image is recorded on disk, back up the image on tape.

Backing up HLIU images speeds up the reload of the DMS-STP data tables during system recovery.

Note: The high-speed link router (HSLR) uses the same image as the HLIU. Record the HLIU image only.

Interval

Perform this procedure before procedure *Recording an office image on an SLM disk*, as you may be modifying the content of table PMLOADS. The content of table PMLOADS is a part of the computing module (CM) image, which is one of the subsystems in a DMS SuperNode switch.

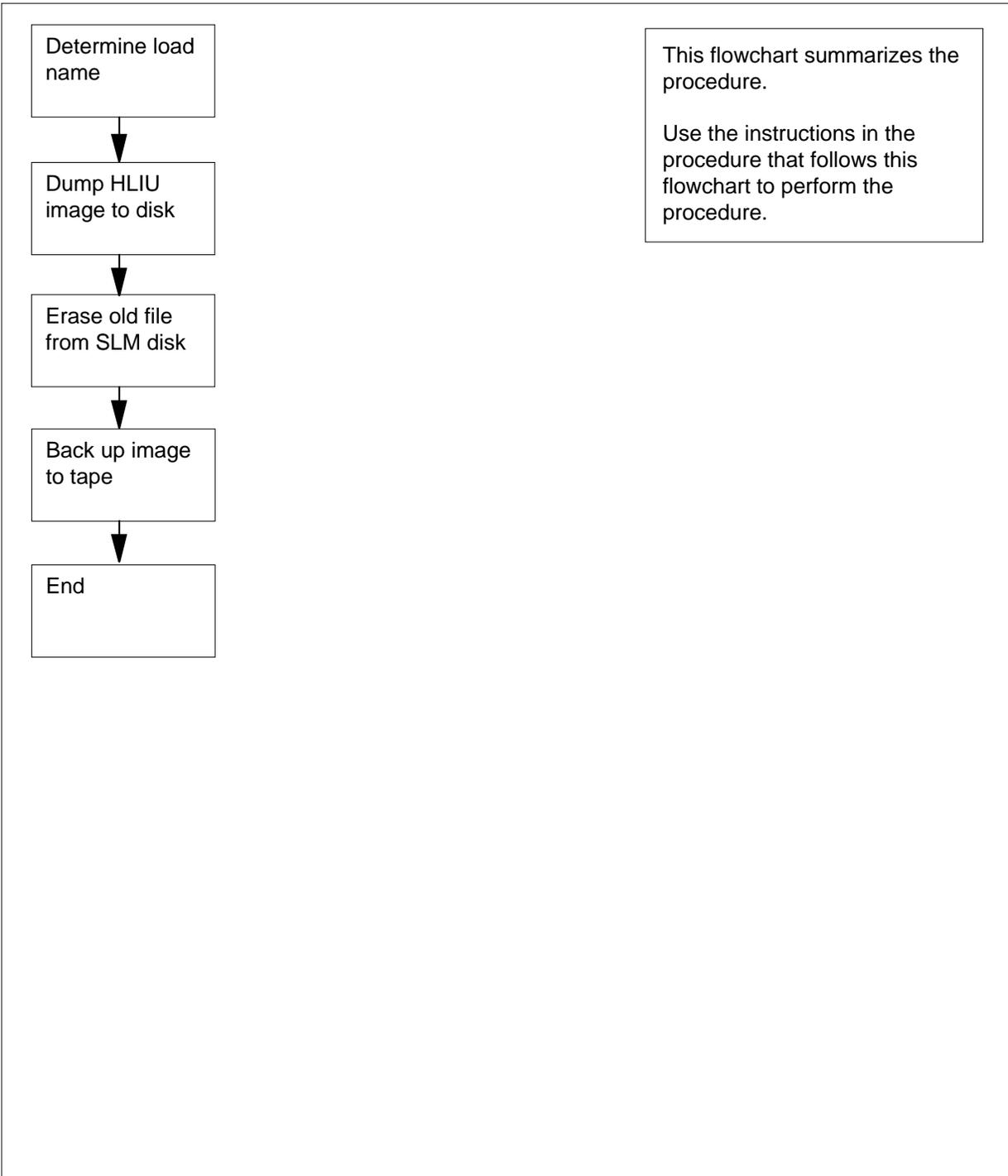
Common procedures

None

Action

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

Recording an HLIU image on an SLM disk (continued)

Summary of Recording an HLIU image on an SLM disk

Recording an HLIU image on an SLM disk (continued)

Recording an HLIU image on an SLM disk



CAUTION

Possible service degradation

If this procedure is not performed regularly, and the number of datafill changes to the previously mentioned tables is greater than 0 since the last HLIU image was taken, the specified recovery time for a dead system may be exceeded.

At the MAP terminal

- 1 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	1	0	0	0	0	39

- 2 Post the HLIU you are taking an image of by typing

```
>POST HLIU liu_no
```

and pressing the Enter key.

where

liu_no

is the number of the HLIU to be posted (0 to 511)

Example of a MAP display:

```
HLIU101 InSvRsvd
```

- 3 Determine the active load in the HLIU by typing

```
>QUERYPM
```

and pressing the Enter key.

MAP response:

Recording an HLIU image on an SLM disk (continued)

```

HLIU  101 InSv    Rsvd
querypm
PM TYPE: HLIU   PM No.: 101   Status: InSv
LIM: 1 Shelf: 1 Slot: 9     LIU FTA: 4290 1000
Default Load: HCA04AX
Running Load: HCA04AX
LMS States  : InSv           InSv
Auditing    : Yes           Yes
Msg Channels: Acc           Acc
TAP 0      : .             .
Reserved HLIU forms part of CCS7 Linkset : LS000101 SLC : 0
LIU is allocated

```

- 4 Record the name of the default load and the running load. The default load is the software load name datafilled in table LIUINV. The running load is the software load that is active in the HLIU. Unless a software upgrade is in progress, the two names are the same.

- 5 Choose an SLM disk and volume on which to store the HLIU image.

Note: Creation of a disk volume in each SLM, designated exclusively for storing HLIU images, is recommended. In the MAP display examples used in this procedure, the disk volumes designated for storing HLIU images are S00DLIU and S01DLIU.

- 6 Take an image of the HLIU and store it on the SLM disk by typing

```
>DUMP loadname  Sslm_noDvolume_name  TERSE  NODE  HLIU
liu_no
```

and pressing the Enter key.

where

loadname

is the running load name recorded in step 4 (for example, HCA04AX is used throughout this procedure)

slm_no

is the SLM number (00 or 01)

volume_name

is a 12-character (maximum) string

liu_no

is the HLIU number (0 to 511)

Example input:

```
DUMP HCA04AX S00DLIU TERSE NODE HLIU 101
```

Note: You must dump an image of only one HLIU with an identical load name, for example, HCA04AX. If another HLIU has a different load name, dump its image too.

Example of a MAP response:

Recording an HLIU image on an SLM disk (continued)

```

HLIU101: Estimated image size is 3318 Kbytes.
HLIU101: Dumping Data Store.
HLIU101: Dumping Program Store.
HLIU101: Dumping Entry Record.
HLIU101:
HLIU101: Checking Data Store.
HLIU101: Checking Program Store.
HLIU101: Checking Entry Record.
HLIU101: Successful DUMP and CHECK.
HLIU101: 3317 blocks with 14 corrections.
Dump completed successfully
    
```

- 7 Access the disk utility by typing

```
>DISKUT
```

and pressing the Enter key.

MAP response:
 Disk utility is now active.
 DISKUT:

- 8 List the files stored on the SLM volume to determine the HLIU image file name by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

where

disk_volume

is the SLM disk and volume name used in step 6

Example input:

```
LISTFL S00DLIU
```

Example of a MAP response:

```

File information for volume S00DLIU:
{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	9364	4682	1020	LPX34CR
940810	0 I F	6630	4095	1020	HCA04AX_HLIU

Note: The system appends _HLIU to the image file name. In the preceding example, the HLIU image file name is HCA04AX_HLIU.

Recording an HLIU image on an SLM disk (continued)

- 9 Determine if any old HLIU image files are present on the SLM volume.

Note: Image files are listed in the file name field.

If old HLIU image files are	Do
present	step 10
not present	step 12

- 10 Delete the old image file from the volume by typing

```
>DELETEFL old_file_name
```

and pressing the Enter key.

where

old_file_name
is the old file name

Example input:

```
DELETEFL HCA04AX
```

MAP response:
Delete HCA04AX from volume S00DLIU??
Please confirm ("YES" or "NO"):

- 11 Confirm the deletion by typing

```
>YES
```

and pressing the Enter key.

MAP response:
File HCA04AX has been deleted from volume S00DLIU.

- 12 Rename the dumped HLIU image file by typing

```
>RENAMEFL dumped_file_name running_load_name
```

and pressing the Enter key.

where

dumped_file_name
is the file name generated by the dump

running_load_name
is the running load name recorded in step 4

Example input:

```
RENAMEFL HCA04AX_HLIU HCA04AX
```

MAP response:
File HCA04AX_HLIU on volume S00DLIU has been renamed to HCA04AX.

- 13 Verify the running load name on the SLM volume by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

where

Recording an HLIU image on an SLM disk (continued)

disk_volume

is the SLM disk and volume name used in step 6

Example input:

LISTFL S00DLIU

Example of a MAP response:

File information for volume S00DLIU:

{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
-----
940810      0 I F          6630      4095 1020 HCA04AX
  
```

- 14** Determine whether HLIU image backups are required on one or two SLM disks, based on your company's operating procedures.

If image backups are required on Do

one SLM disk	step 22
two SLM disks	step 15

- 15** Copy the dumped image to the second SLM disk by typing
>COPY filename Sslm_noDvolume_name
 and pressing the Enter key.

where

filename

is the file name shown in step 13

slm_no

is the number of the second SLM disk (00 or 01)

volume_name

is a 12-character (maximum) string

Example input:

COPY HCA04AX S01DLIU

- 16** List the files stored on the second SLM volume by typing

>LISTFL disk_volume

and pressing the Enter key.

where

disk_volume

is the SLM number used in step 15

Example input:

LISTFL S01DLIU

Example of a MAP response:

Recording an HLIU image on an SLM disk (continued)

File information for volume S01DLIU:
 {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
940810	0 I F	6630	4095	1020	HCA04AX
940610	0 I F	6620	4095	1020	HCA04AC

- 17** Determine if any old HLIU image files are present on the SLM volume.

If old HLIU image files are	Do
present	step 18
not present	step 20

- 18** Delete the old image file from the volume by typing

>DELETEFL old_file_name

and pressing the Enter key.

where

old_file_name

is the old file name (for example, HCA04AC)

Example input:

DELETEFL HCA04AC

MAP response:

Delete HCA04AC from volume S01DLIU??

Please confirm ("YES" or "NO"):

- 19** Confirm the command by typing

>YES

and pressing the Enter key.

Example of a MAP response:

File HCA04AC has been deleted from volume S01DLIU.

- 20** Verify the running load name on the SLM volume by typing

>LISTFL disk_volume

and pressing the Enter key.

where

disk_volume

is the SLM disk and volume name used in step 15

Example input:

LISTFL S01DLIU

Recording an HLIU image on an SLM disk (continued)

Example of a MAP response:

File information for volume S01DLIU:
 {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
-----
940810      0 I F      6630      4095  1020  HCA04AX
    
```

21 Quit the disk utility by typing

>QUIT

and pressing the Enter key.

22 Determine whether datafill changes are required to tables PMLOADS and LIUINV. Table changes are required if

- the file name listed in step 13 is different from the default load name recorded in step 4
- backups are being made to both SLM disks for the first time

If datafill changes to tables PMLOADS and LIUINV are	Do
required	step 23
not required	step 39

23 Access table PMLOADS by typing

>TABLE PMLOADS

and pressing the Enter key.

MAP response:
 TABLE: PMLOADS

24 Add the new HLIU image file name to table PMLOADS by typing

**>ADD new_loadname new_file_name disk_volume
 new_file_name backupvol N**

and pressing the Enter key.

where

new_loadname

is the load name to be used in table LIUINV

new_file_name

is the file name you are using for the image

disk_volume

is the SLM disk and volume name used in step 6

backupvol

is the SLM number and volume of the backup disk

Recording an HLIU image on an SLM disk (continued)

Example input:

```
ADD HCA04AX HCA04AX S00DLIU HCA04AX S01DLIU N
```

Note: The disk_volume and backupvol entries can differ only if the procedure starting at step 15 was performed.

Example of a MAP response:

```
TUPLE TO BE ADDED:
  HCA04AX  HCA04AX  S00DLIU  HCA04AX  S01DLIU  N
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 25** Confirm the command by typing

```
>Y
```

and pressing the Enter key.

MAP response:
TUPLE ADDED

- 26** Quit table PMLOADS by typing

```
>QUIT
```

and pressing the Enter key.

- 27** Access table LIUINV by typing

```
>TABLE LIUINV
```

and pressing the Enter key.

MAP response:
TABLE: LIUINV

- 28** Display all tuples in table LIUINV by typing

```
>LIS ALL
```

and pressing the Enter key.

Example of a MAP response:

```
TOP
  LIUNAME      LOCATION      LOAD      PROCINFO
-----
  HLIU 119     LIM 0 2 9     HCA04AC      NTEX22BB
                        NT9X76CA NT9X78CA      FBUS 56000  NIL
  HLIU 263     LIM 0 3 7     HCA04AC      NT9X13CA
                        NT9X75AA NT9X76AA      $ 56000  ABI
-----
                                CARDINFO
```

- 29** Identify the loads used by each HLIU. Perform steps 30 and 31 on each tuple in which the LIU name is HLIU and the load name requires changing.

- 30** Select the appropriate tuple by typing

```
>POS HLIU liu_no
```

and pressing the Enter key.

where

Recording an HLIU image on an SLM disk (continued)

- liu_no**
is the number of the HLIU to be posted (0 to 511)
- 31** Change the load name by typing
`>CHA LOAD new_loadname`
 and pressing the Enter key.
where
new_loadname
 is the load name entered in step 24
- 32** Determine if there are more tuples to be changed.
- | If there are | Do |
|---------------------|-----------|
| more tuples | step 30 |
| no more tuples | step 33 |
-
- 33** Quit table LIUINV by typing
`>QUIT`
 and pressing the Enter key.
- 34** Access table PMLOADS by typing
`>TABLE PMLOADS`
 and pressing the Enter key.
MAP response:
 TABLE: PMLOADS
- 35** Search for the old loadname by typing
`>POS old_loadname`
 and pressing the Enter key.
where
old_loadname
 is the old load name listed in the example in step 28
- 36** Delete the old tuple by typing
`>DEL`
 and pressing the Enter key.
Example of a MAP response:
- ```
TUPLE TO BE DELETED:
HCA04AC
HCA04AC S01DLIU
HCA04AC S01DLIU N
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```
- 37** Confirm the command by typing  
`>Y`

## Recording an HLIU image on an SLM disk (continued)

and pressing the Enter key.

*MAP response:*  
TUPLE DELETED

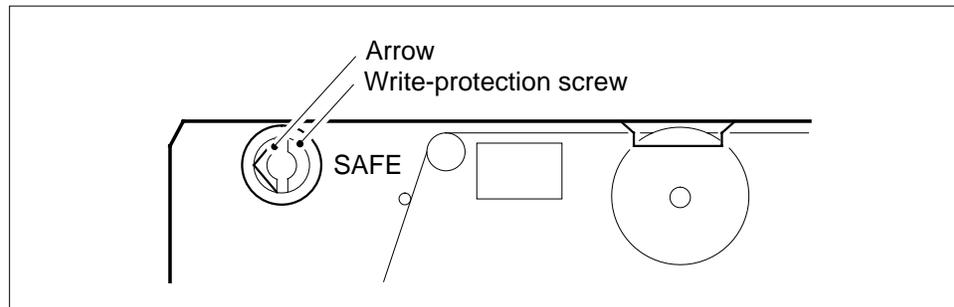
- 38 Quit table PMLOADS by typing

>QUIT

and pressing the Enter key.

- 39 Obtain a backup tape.

- 40 On the SLM cartridge case, check the setting of the write protection screw. Using a slot-head screwdriver, rotate the screw so that the arrow points away from the word SAFE.



### At the SLM

- 41 Insert the backup tape into the appropriate SLM tape drive. Determine whether the tape has been formatted.

| If the tape is | Do      |
|----------------|---------|
| not formatted  | step 42 |
| formatted      | step 43 |

### At the MAP terminal

- 42 Erase the tape by typing

>INSERTTAPE device\_name WRITELABEL label\_name

and pressing the Enter key.

where

**device\_name**

is S00T if you are working on SLM 0, or S01T if you are working on SLM 1

## Recording an HLIU image on an SLM disk (continued)

---

**label\_name**

is an alphanumeric name for the tape, up to six characters in length (for example, IMGBUP)

*Example input:*

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

Go to step 44.

- 43** Mount the tape cartridge by typing

```
INSERTTAPE device_name
```

and pressing the Enter key.

*where*

**device\_name**

is S00T if you are working on SLM 0, or S01T if you are working on SLM 1

- 44** List the files on the SLM volume that contains the latest image files by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

*where*

**disk\_volume**

is the SLM disk and volume name used in step 13

- 45** Back up the HLIU image file from the disk to the tape by typing

```
>BACKUP FILE loadname device_name tape_file_name
```

and pressing the Enter key.

*where*

**loadname**

is the running load name recorded in step 4

**device\_name**

is the tape device name (S00T or S01T)

**tape\_file\_name**

is the name you are assigning to the HLIU image file being copied to tape (maximum 32 characters)

**Note:** Use a date stamp to record the date the HLIU image file is taken when copying the HLIU image file to tape.

*Example input:*

```
BACKUP FILE HCA04AX S00T HCA04AX_0814
```

- 46** Verify that the HLIU image file was copied by typing

```
>LISTFL device_name
```

and pressing the Enter key.

*where*

**device\_name**

is either S00T or S01T

---

**Recording an HLIU image on an SLM disk (end)**

---

- 47** Eject the tape by typing  
>**EJECTTAPE** **device\_name**  
and pressing the Enter key.  
*where*  
**device\_name**  
is either S00T or S01T

***At the SLM***

- 48** Remove the tape from the SLM and store it.

***At the MAP terminal***

- 49** Quit the disk utility by typing  
>**QUIT**  
and pressing the Enter key.
- 50** You have completed this procedure.

## Recording an HSLR image on an SLM disk

---

### Application

The high-speed link router (HSLR) uses the same image as the high-speed link interface unit (HLIU). Record the HLIU image only. Refer to the procedure *Recording an HLIU image on an SLM disk* in this document for the description of how to record an HLIU image.

## Recording an LIM image on an SLM disk

---

### Application

Use this procedure to record an image of a link interface module (LIM).

*Note:* This is a Nortel recommended procedure. If this procedure differs from the guidelines provided by the local operating company, please refer to your company policy.

### Interval

Perform this procedure after you have performed a Post Release Software Manager (PRSM) procedure.

### Common procedures

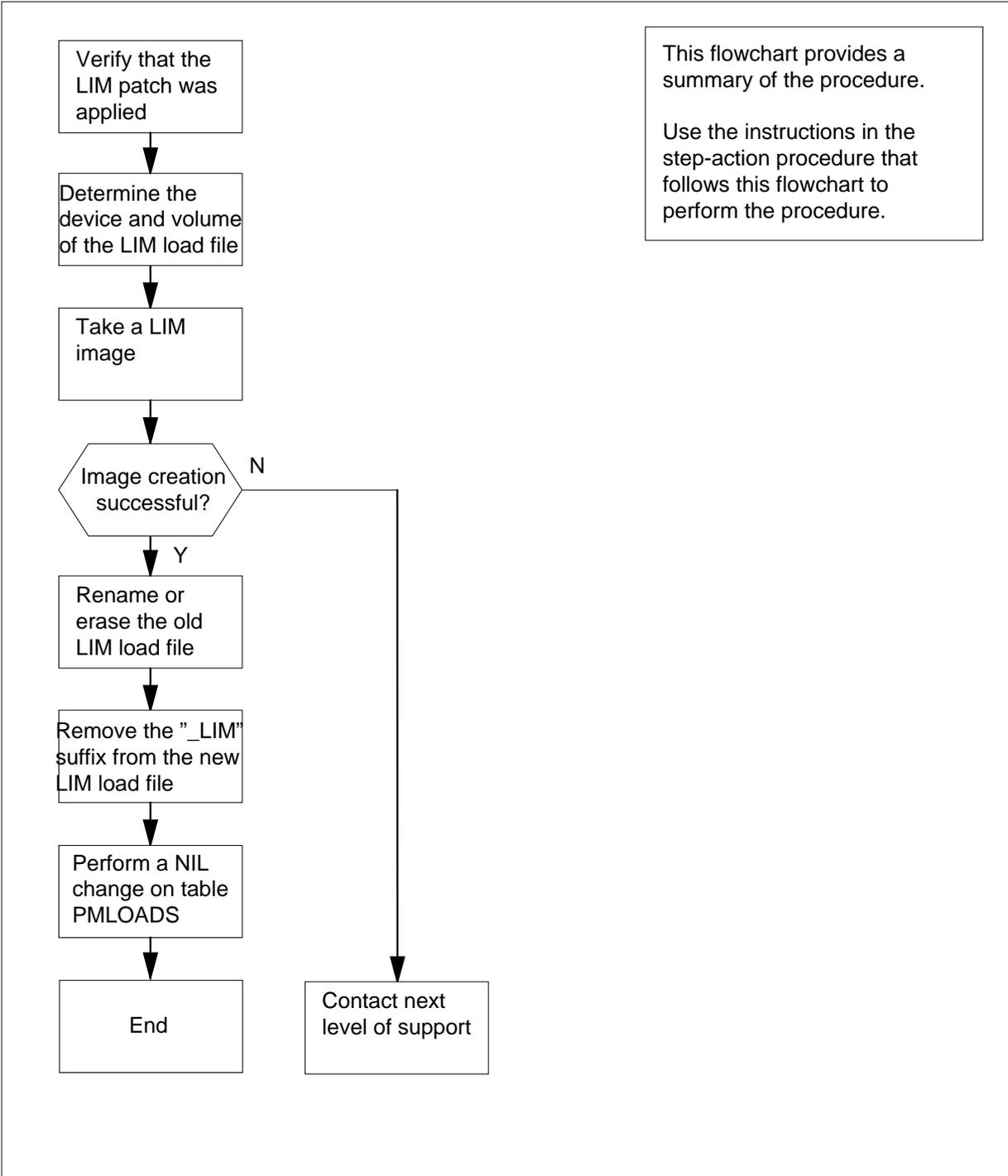
This procedure does not refer to any common procedures.

### Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the routine maintenance procedure.

## Recording an LIM image on an SLM disk (continued)

### Summary of recording a LIM image on SLM disk



---

## Recording an LIM image on an SLM disk (continued)

---

### Recording an LIM image on SLM disk

#### *At the CI level of the MAP*

- 1 Access the PRSM utility by typing  
**>PRSM**  
 and press the Enter key.  
 Example of a MAP response:  
 PRSM:
  
- 2 Choose a LIM that you can use to take an image of and to verify that all required patches were applied to the LIM by typing  
**>REPORT DEST LIM limno unitno**  
 and press the Enter key.  
*where*  
     **limno**  
         is the node number of the LIM (0 to 15)  
     **unitno**  
         is the LIM unit ( ) or 1)  
 Example of a MAP response:  
 76/01/01 23:22 MBCS30BO STPM CO IMAGE \*RTM\* 90?04?11  
 1990/11/08 18:21:45.848 THU.  
 Uses load set LPC30BO  
 DHV57130 A NE
  
- 3 Quit from the PRSM utility by typing  
**>QUIT**  
 and pressing the Enter key.  
 Example of a MAP response:  
 CI:
  
- 4 Access table PMLOADS by typing  
**>TABLE PMLOADS**  
 and pressing the Enter key.  
 Example of a MAP response:  
 TABLE: PMLOADS
  
- 5 Determine which storage device contains the current LIM load by typing  
**>LIST ALL**  
 and pressing the Enter key.  
 Example of a MAP response:  
 LOADNAME  
 ACTFILEACTVOL  
 BKPFILBKPVOLUPDACT  
 -----

## Recording an LIM image on an SLM disk (continued)

---

```
LPC30BO
LPC30BOSOODXPMLOADS
LPC30BOSOODXPMLOADS N
```

In the preceding example, the device S00D (SLM) in volume XPMLOADS stores the LIM load LPC30BO.

- 6 Quit from table PMLOADS by typing

```
>LEAVE
```

and pressing the Enter key.

Example of a MAP response:  
CI:

- 7 Take a LIM image by typing

```
>DUMP filename device vol NODE LIM limno unitno
```

and pressing the Enter key.

*where*

**filename**

is an 8-character name for the image

**devicevol**

is a string consisting of the device and volume names(for example, D000XPMLOADS)

**limno**

is the node number of the LIM (0 to 15)

**unitno**

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

Example input:

```
>DUMP LPC30BO S00DXPMLOADS NODE LIM 0 0
```

Example of a MAP display:

LIM1U0: Estimated image size is 4293 Kbytes.

LIM1U0:

LIM1U0: Dumping Data Store

LIM1U0:

LIM1U0: Dumping Entry Record

LIM1U0:

LIM1U0: Checking Data Store

LIM1U0:

LIM1U0: Checking Program Store

LIM1U0: Checking Entry Record

LIM1U0: Successful DUMP and CHECK

LIM1U0: 4293 blocks with 16 corections

Dump completed successfully

---

| If procedure is | Do |
|-----------------|----|
|-----------------|----|

---

|            |        |
|------------|--------|
| successful | step 8 |
|------------|--------|

---

## Recording an LIM image on an SLM disk (continued)

|           | <b>If procedure is</b>                                                                                                                                                                                                                                                                    | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | unsuccessful                                                                                                                                                                                                                                                                              | step 32   |
| <b>8</b>  | Enter the SLM disk utility by typing<br>> <b>DISKUT</b><br>and pressing the Enter key.                                                                                                                                                                                                    |           |
| <b>9</b>  | Ensure that you stored the LIM image on the correct device and in the volume specified in step 7. List the SLM volume by typing<br>> <b>LISTFL S0xDn</b><br>and pressing the Enter key.<br><i>where</i><br><b>x</b><br>is the number of the disk<br><b>n</b><br>is the name of the volume |           |
| <b>10</b> | The system appends the file name with <b>_LIM</b> .                                                                                                                                                                                                                                       |           |



**CAUTION**

If you do not erase the load file, you must rename it. Failure to rename the load file will result in failure to receive future patches released for this load.

Erase or rename the LIM load file that does not contain the patches applied.

|           | <b>If</b>                                                                                                                                                                                                                                                                                                                                          | <b>Do</b> |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | erase the LIM load file that does not contain the patches                                                                                                                                                                                                                                                                                          | step 11   |
|           | rename the LIM load file that does not contain the patches                                                                                                                                                                                                                                                                                         | step 13   |
| <b>11</b> | Erase the LIM load file that does not contain the patches applied. If you are in DISKUT accessing the SLM, erase the load file by typing<br>> <b>DELETEFL filename</b><br>and pressing the Enter key.<br><i>where</i><br><b>filename</b><br>is the name of the LIM load file that does not have the patches applied.<br>Example of a MAP response: |           |

## Recording an LIM image on an SLM disk (continued)

---

File LPC30BO has been deleted from volume S00DXPMLOADS.

**12** Proceed to step 18.

**13** Rename the LIM load file that does not contain the patches that you applied. If you are in DISKUT accessing the SLM, rename the file by typing

```
>RENAMEFL oldname newname
```

and pressing the Enter key.

Example of a MAP response:

File LPC30BO on volume S00DXPMLOADS has been renamed to  
LPC30BO\_OLD.

Choose a name that is different from the LIM load name entered in table PMLOADS.

**14** Remove the characters "\_LIM" appended to the LIM image file that contains the patches. If you are in DISKUT accessing the SLM, remove the characters by typing

```
>RENAMEFL oldname newname
```

and pressing the Enter key.

*where*

**oldname**

is the name of the LIM image file with the patches applied

**newname**

is the load name in table PMLOADS (for example, LCC30BO)

Example of a MAP response:

File LPC30BO\_LIM on volume S00DXPMLOADS has been renamed to  
LPC30BO.

**15** Quit from the disk utility by typing

```
>QUIT
```

and pressing the Enter key.

Example of a MAP response:

CI:

**16** Access table PMLOADS by typing

```
>TABLE PMLOADS
```

and pressing the Enter key.

Example of a MAP response:

TABLE: PMLOADS

**17** Position on the LIM load name by typing

```
>POSITION loadname
```

and pressing the Enter key.

*where*

**loadname**

is the LIM load name (for example, LPC30BO)

Example of a MAP response:

---

**Recording an LIM image on an SLM disk (end)**

---

- LPC30BOS00DXPMLOADS
- 18** Begin the process of a NIL change to table PMLOADS by typing  
>**CHANGE**  
and pressing the Enter key.  
Example of a MAP response:  
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
- 19** Indicate that you wish to continue processing by typing  
>**Y**  
and pressing the Enter key.  
Example of a MAP response  
ACTFILE: LPC30b0
- 20** List the active volume by pressing the Enter key.  
Example of a MAP response:  
ACTVOL:S00DPMLOADS
- 21** List the backup file by pressing the Enter key.  
Example of a MAP response:  
BKPFIL:LPC30b0
- 22** List the backup volume by pressing the Enter key.  
Example of a MAP response:  
BKPVOL:S01DPMLOADS
- 23** Show if the update is active by pressing the Enter key.  
Example of a MAP response:  
UPDACT:N
- 24** Complete the NIL change by typing  
>**Y**  
and pressing the Enter key.  
Example of a MAP response:  
TUPLE CHANGEDJOURNAL FILE INACTIVE
- 25** Quit from the table editor by typing  
>**QUIT**  
and pressing the Enter key.  
Example of a MAP response:  
CI:
- 26** Proceed to step 33.
- 27** For further assistance, contact the personnel support for the next level of support.
- 28** You have completed this procedure.

## Recording an LIU7 image on an SLM disk

---

### Application

Use this procedure to record an image of current LIU7 data on one or both SLM disks, and back up the data to tape.

Backing up LIU7 images helps to ensure that data tables are reloaded quickly during system recovery.

### Interval

Perform this procedure before performing the procedure *Recording an office image on an SLM disk*, as you may be modifying the content of table PMLOADS. The content of table PMLOADS is part of the computing module (CM) image, which is one of the subsystems in a DMS SuperNode switch.

### Common procedures

None

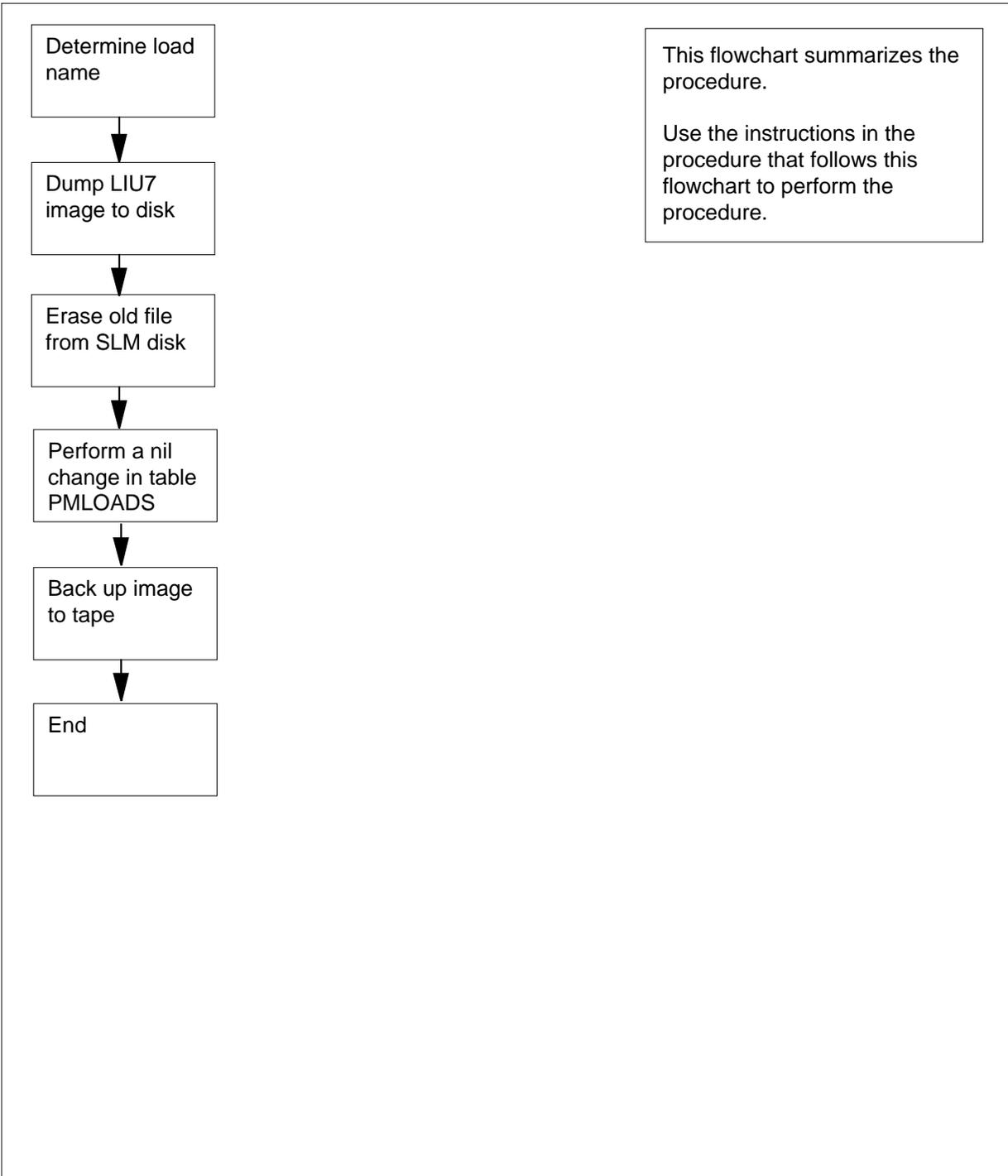
### Action

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

---

**Recording an LIU7 image on an SLM disk** (continued)

---

**Summary of Recording an LIU7 image on an SLM disk**

## Recording an LIU7 image on an SLM disk (continued)

---

### Recording an LIU7 image on an SLM disk



#### **CAUTION**

##### **Possible service degradation**

If this procedure is not performed regularly, and the number of datafill changes to the above mentioned tables is greater than 0 since the last LIU7 image was taken, the specified recovery time for a dead system may be exceeded.

#### **At the MAP**

- 1 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 | 1    | 0    | 0    | 0    | 0    | 39   |

- 2 Post the LIU7 you are taking an image of by typing

```
>POST LIU7 liu_no
```

and pressing the Enter key.

*where*

**liu\_no**

is the number of the LIU7 to be posted (0 to 511)

*Example of a MAP display:*

```
LIU7101 InSvRsvd
```

- 3 Determine the active load in the LIU7 by typing

```
>QUERYPM
```

and pressing the Enter key.

*MAP response:*

---

## Recording an LIU7 image on an SLM disk (continued)

---

```

LIU7 101 InSv Rsvd
querypm
PM TYPE: LIU7 PM No.: 101 Status: InSv
LIM: 1 Shelf: 1 Slot: 9 LIU FTA: 4290 1000
Default Load: LRS21AX
Running Load: LRS21AX
LMS States : InSv InSv
Auditing : Yes Yes
Msg Channels: Acc Acc
TAP 0 : . .
Reserved LIU7 forms part of CCS7 Linkset : LS000101 SLC : 0
LIU is allocated

```

- 4 Record the name of the default load and the running load. The default load is the software load name datafilled in table LIUINV; the running load is the software load that is active in the LIU7. Unless a software upgrade is in progress, the two names should be the same.

- 5 Choose an SLM disk and volume on which to store the LIU7 image.

**Note:** Creation of a disk volume in each SLM, designated exclusively for storing LIU7 images, is recommended. In the MAP display examples used in this procedure, the disk volumes designated for storing LIU7 images are S00DLIU and S01DLIU.

- 6 Take an image of the LIU7 and store it on the SLM disk by typing

```
>DUMP loadname Sslm_noDvolume_name TERSE NODE LIU7
liu_no
```

and pressing the Enter key.

where

**loadname**

is the running load name recorded in step 4 (for example, LRS21AX is used throughout this procedure)

**slm\_no**

is the SLM number (00 or 01)

**volume\_name**

is a 12-character (maximum) string

**liu\_no**

is the LIU7 number (0 to 511)

*Example input:*

```
DUMP LRS21AX S00DLIU TERSE NODE LIU7 101
```

**Note:** It is necessary to dump an image of only one LIU7 having an identical load name, for example, LRS21AX. If another LIU7 has a different load name, its image should be dumped too.

*Example of a MAP response:*

## Recording an LIU7 image on an SLM disk (continued)

```

LIU7101: Estimated image size is 3318 Kbytes.
LIU7101: Dumping Data Store.
LIU7101: Dumping Program Store.
LIU7101: Dumping Entry Record.
LIU7101:
LIU7101: Checking Data Store.
LIU7101: Checking Program Store.
LIU7101: Checking Entry Record.
LIU7101: Successful DUMP and CHECK.
LIU7101: 3317 blocks with 14 corrections.
Dump completed successfully

```

- 7** Access the disk utility by typing

```
>DISKUT
```

and pressing the Enter key.

*MAP response:*

Disk utility is now active.

DISKUT:

- 8** List the files stored on the SLM volume to determine the LIU7 image file name by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

*where*

**disk\_volume**

is the SLM disk and volume name used in step 6

*Example input:*

```
LISTFL S00DLIU
```

*Example of a MAP response:*

```
File information for volume S00DLIU:
{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   | 9364   | 4682    | 1020 | LPX34CR      |
| 940810      | 0 I F   | 6630   | 4095    | 1020 | LRS21AX_LIU7 |

**Note:** The system appends “\_LIU7” to the image file name. In the above example, the LIU7 image file name is LRS21AX\_LIU7.

---

## Recording an LIU7 image on an SLM disk (continued)

---

- 9 Determine if any old LIU7 image files are present on the SLM volume.

**Note:** Image files are listed in the file name field.

| If old LIU7 image files are | Do      |
|-----------------------------|---------|
| present                     | step 10 |
| not present                 | step 12 |

- 10 Delete the old image file from the volume by typing

```
>DELETEFL old_file_name
```

and pressing the Enter key.

where

**old\_file\_name**  
is the old file name

*Example input:*

```
DELETEFL LRS21AX
```

*MAP response:*

Delete LRS21AX from volume S00DLIU, node CM??

Please confirm ("YES", "Y", "NO", or "N"):

- 11 Confirm the deletion by typing

```
>YES
```

and pressing the Enter key.

*MAP response:*

File LRS21AX has been deleted from volume S00DLIU, node CM.

- 12 Rename the dumped LIU7 image file by typing

```
>RENAMEFL dumped_file_name running_load_name
```

and pressing the Enter key.

where

**dumped\_file\_name**  
is the file name generated by the dump

**running\_load\_name**  
is the running load name recorded in step 4

*Example input:*

```
RENAMEFL LRS21AX_LIU7 LRS21AX
```

*MAP response:*

File LRS21AX\_LIU7, volume S00DLIU, node CM has been renamed to LRS21AX.

- 13 Verify the running load name on the SLM volume by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

where

## Recording an LIU7 image on an SLM disk (continued)

**disk\_volume**

is the SLM disk and volume name used in step 6

*Example input:*

**LISTFL S00DLIU**

*Example of a MAP response:*

File information for volume S00DLIU:  
{NOTE: 1 BLOCK = 512 BYTES }

| FILE NAME | O R I O O V | FILE | MAX  | NUM OF  | FILE   | LAST   |
|-----------|-------------|------|------|---------|--------|--------|
|           | R E T P L L | CODE | REC  | RECORDS | SIZE   | MODIFY |
|           | G C O E D D |      | LEN  | IN      | IN     | DATE   |
|           | C N         |      |      | FILE    | BLOCKS |        |
| LRS21AX   | I F         | 0    | 1020 | 4095    | 6630   | 940810 |

- 14** Determine whether LIU7 image backups are required on one or two SLM disks, based on your company's operating procedures.

| If image backups are required on | Do      |
|----------------------------------|---------|
| one SLM disk                     | step 22 |
| two SLM disks                    | step 15 |

- 15** Copy the dumped image to the second SLM disk by typing

**>COPY filename Sslm\_noDvolume\_name**

and pressing the Enter key.

*where*

**filename**

is the file name shown in step 13

**slm\_no**

is the number of the second SLM disk (00 or 01)

**volume\_name**

is a 12-character (maximum) string

*Example input:*

**COPY LRS21AX S01DLIU**

- 16** List the files stored on the second SLM volume by typing

**>LISTFL disk\_volume**

and pressing the Enter key.

*where*

**disk\_volume**

is the SLM number used in step 15

*Example input:*

**LISTFL S01DLIU**

*Example of a MAP response:*

---

## Recording an LIU7 image on an SLM disk (continued)

---

File information for volume S01DLIU:  
 {NOTE: 1 BLOCK = 512 BYTES }

| FILE NAME | O R I O O V<br>R E T P L L<br>G C O E D D<br>C N | FILE<br>CODE | MAX<br>REC<br>LEN | NUM OF<br>RECORDS<br>IN<br>FILE | FILE<br>SIZE<br>IN<br>BLOCKS | LAST<br>MODIFY<br>DATE |
|-----------|--------------------------------------------------|--------------|-------------------|---------------------------------|------------------------------|------------------------|
| LPX34CR   | I F                                              | 0            | 1020              | 4682                            | 9364                         | 930215                 |
| LRS21AX   | I F                                              | 0            | 1020              | 4095                            | 6630                         | 940810                 |

- 17** Determine if any old LIU7 image files are present on the SLM volume.

| If old LIU7 image files are | Do      |
|-----------------------------|---------|
| present                     | step 18 |
| not present                 | step 20 |

- 18** Delete the old image file from the volume by typing

**>DELETEFL old\_file\_name**

and pressing the Enter key.

where

**old\_file\_name**

is the old file name (for example, LRS21AX)

Example input:

**DELETEFL LRS21AX**

MAP response:

Delete LRS21AX from volume S01DLIU, node CM??  
 Please confirm ("YES", "Y", "NO", or "N"):

- 19** Confirm the command by typing

**>YES**

and pressing the Enter key.

Example of a MAP response:

File LRS21AX has been deleted from volume S01DLIU, node CM.

- 20** Verify the running load name on the SLM volume by typing

**>LISTFL disk\_volume**

and pressing the Enter key.

where

**disk\_volume**

is the SLM disk and volume name used in step 15

Example input:

**LISTFL S01DLIU**

## Recording an LIU7 image on an SLM disk (continued)

*Example of a MAP response:*

File information for volume S01DLIU:  
 {NOTE: 1 BLOCK = 512 BYTES }

| FILE NAME | O R I O O V | FILE | MAX  | NUM OF  | FILE   | LAST   |
|-----------|-------------|------|------|---------|--------|--------|
|           | R E T P L L | CODE | REC  | RECORDS | SIZE   | MODIFY |
|           | G C O E D D |      | LEN  | IN      | IN     | DATE   |
|           | C N         |      |      | FILE    | BLOCKS |        |
| LRS21AX   | I F         | 0    | 1020 | 4095    | 6630   | 940810 |

- 21** Quit the disk utility by typing

>QUIT

and pressing the Enter key.

- 22** Access table PMLOADS by typing

>TABLE PMLOADS

and pressing the Enter key.

*MAP response:*

TABLE: PMLOADS

**Note:** The disk\_volume and backupvol entries can differ only if the procedure starting at step 15 has been performed.

- 23** Position the new tuple on the existing tuple by typing

>POS loadname

and pressing the Enter key.

where

**loadname**

is the LOAD name to be used in table LIUINV

*Example input:*

POS LRS21AX

*Example of a MAP response:*

LRS09BE LRS09BE S00DLIU LRS09BE S01DLIU N

- 24** Perform nil change to table PMLOADS by typing

>CHA

and pressing the Enter key five times.

*Example of a MAP response:*

TUPLE TO BE CHANGED:

LRS09BE LRS09BE S01DPMLOADS LRS09BE S01DPMLOADS N  
 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

- 25** Confirm the command by typing

>Y

---

## Recording an LIU7 image on an SLM disk (continued)

---

and pressing the Enter key.

*MAP response:*  
TUPLE CHANGED

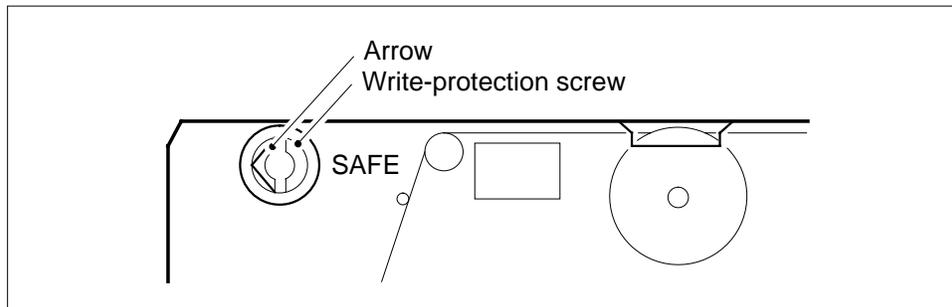
- 26** Quit table PMLOADS by typing

**>QUIT**

and pressing the Enter key.

- 27** Obtain a backup tape.

- 28** On the SLM cartridge case, check the setting of the write protection screw. Using a slot-head screwdriver, rotate the screw so that the arrow points away from the word SAFE.



**At the SLM**

- 29** Insert the backup tape into the appropriate SLM tape drive. Determine whether the tape has been formatted.

| If the tape is | Do      |
|----------------|---------|
| not formatted  | step 30 |
| formatted      | step 31 |

**At the MAP display**

- 30** Erase the tape by typing

**>INSERTTAPE device\_name WRITELABEL label\_name**

and pressing the Enter key.

where

**device\_name**

is S00T if you are working on SLM 0, or S01T if you are working on SLM 1

## Recording an LIU7 image on an SLM disk (continued)

---

**label\_name**

is an alphanumeric name for the tape, up to six characters in length (for example, IMGBUP)

*Example input:*

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

Go to step 28.

- 31** Mount the tape cartridge by typing

```
INSERTTAPE device_name
```

and pressing the Enter key.

*where*

**device\_name**

is S00T if you are working on SLM 0, or S01T if you are working on SLM 1

- 32** List the files on the SLM volume that contains the latest image files by typing

```
>LISTFL disk_volume
```

and pressing the Enter key.

*where*

**disk\_volume**

is the SLM disk and volume name used in step 13

- 33** Back up the LIU7 image file from the disk to the tape by typing

```
>BACKUP FILE loadname device_name
```

and pressing the Enter key.

*where*

**loadname**

is the running load name recorded in step 4

**device\_name**

is the tape device name (S00T or S01T)

**tape\_file\_name**

is the name you are assigning to the LIU7 image file being copied to tape (maximum 32 characters)

**Note:** Use a date stamp to record the date the LIU7 image file is taken when copying the LIU7 image file to tape.

*Example input:*

```
BACKUP FILE LRS21AX S00T
```

- 34** Verify that the LIU7 image file was copied by typing

```
>LISTFL device_name
```

and pressing the Enter key.

*where*

**device\_name**

is either S00T or S01T

---

**Recording an LIU7 image on an SLM disk (end)**

---

- 35 Eject the tape by typing  
>**EJECTTAPE** **device\_name**  
and pressing the Enter key.  
*where*  
**device\_name**  
is either S00T or S01T

***At the SLM***

- 36 Remove the tape from the SLM and store it.

***At the MAP***

- 37 Quit the disk utility by typing  
>**QUIT**  
and pressing the Enter key.
- 38 You have completed this procedure.

## Recording an NIU image on an SLM disk

---

### Application

Use this procedure to record an image of the network interface unit (NIU) on one or both system load modules (SLM) disks.

### Interval

Perform this procedure when there is a software upgrade or patch applied to the NIU.

Perform this procedure before you perform the procedure *Recording an office image on an SLM disk* in this document. When you perform this procedure, you can modify the content of table PMLOADS. The content of table PMLOADS is part of the computing module image. The computer module image is one of the subsystems in a DMS SuperNode switch.

### Common procedures

There are no common procedures.

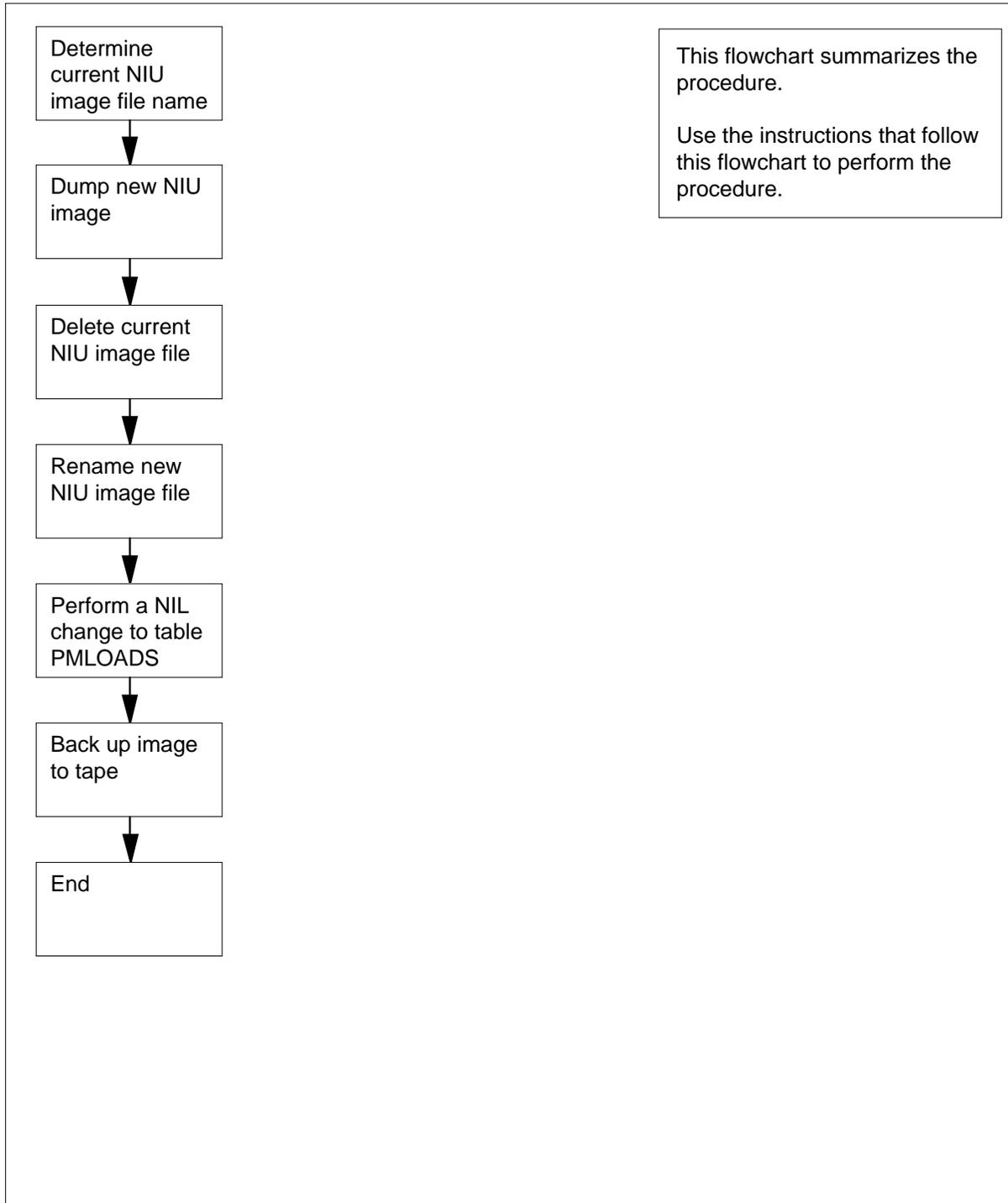
### Action

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.

---

**Recording an NIU image on an SLM disk** (continued)

---

**Summary of Recording an NIU image on an SLM disk**

---

## Recording an NIU image on an SLM disk (continued)

---

### Recording an NIU image on an SLM disk

#### 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 | 1    | 0    | 0    | 0    | 0    | 39   |

- 2 To post an NIU, type  
**>POST NIU niu\_no**  
 and press the Enter key.

*where*

**niu\_no**

is the number of the NIU to post (0 to 29 )

*Example of a MAP display:*

```

NIU 0: InSv
Unit 0: Act InSv
Unit 1: InAct InSv (NA)

```

- 3 To determine the active load in the NIU, type  
**>QUERYPM**  
 and press the Enter key.

*MAP terminal response:*

```

NIU 2 Query PM: Request has been submitted.
PM TYPE: NIU PM No.: 2 Status: InSv
UNIT 0 Status: { ,InSv}
UNIT 1 Status: { ,InSv}
Site Flr RPos Bay_id Shf Pos Description Slot_Range
HOST 1 A 0 3 NIU 2 18 - 22
Location: LIM 0 shelf 3
UNIT 0 Software Load. Datafilled: NRS34CQ Actual: NRS34CR
UNIT 1 Software Load. Datafilled: NRS34CQ Actual: NRS34CR

```

**Note:** In the above example, NRS34CR is the active load in both units of NIU2.

- 4 Record the file name of the current software load and the datafilled file name.
- 5 Choose one SLM disk on which to store the image.
- 6 To access table NIUINV in order to determine the current NIU image file name, type  
**>TABLE NIUINV**

---

## Recording an NIU image on an SLM disk (continued)

---

and press the Enter key.

*MAP response:*  
TABLE: NIUINV

- 7** To determine the current NIU image file name contained in table NIUINV, type

**>LIST ALL**

and press the Enter key.

*Example of a MAP response:*

```
TABLE: NIUINV
TOP
NUMBER LOCATION LOAD U0INFO U1INFO
 NETLINKS

1 LIM 0 1 NRS11BA NTEX22BB NTEX25AA NTEX28AA NTEX22BB NTEX25BA NTEX28AA
 (0 32 2 0) (0 30 2 0) (0 30 3 0) (0 31 3 0) $
2 LIM 0 2 NRS11BA NTEX22BB NTEX25AA NTEX28AA NTEX22BB NTEX25BA NTEX28AA
 (0 30 1 0) (0 31 1 0) (0 31 2 0) (0 32 1 0) $
```

**Note:** In the example, the first two columns and the last column do not appear because of space restrictions.

- 8** Record the file name that appears under the LOAD0 and LOAD1 headings. These are the current NIU file names, which should be identical.
- 9** To confirm that the current NIU image file name contained in table NIUINV is identical to the current NIU image file name contained in table PMLOADS, type

**>TABLE PMLoads; POS file\_name**

and press the Enter key.

*where*

**file\_name**

is the current NIU image file name that you determined in step 8

*Example input:*

**>POS NIU\_0210**

*Example of a MAP response:*  
NIU\_0210 S00DISLOADS

---

| If the file name | Do      |
|------------------|---------|
| is identical     | step 10 |
| is not identical | step 50 |

---

- 10** To access the CI level of the MAP display, type

**>QUIT ALL**

and press the Enter key.

---

**Recording an NIU image on an SLM disk** (continued)
 

---

- 11 To access the disk utility, type  
**>DISKUT**  
 and press the Enter key.  
*MAP response:*  
 Disk utility is now active.DISKUT:
- 12 To take a new image of the NIU and store the image on the chosen SLM disk, type  
**>DUMP IMAGE disk\_volume\_name ACTIVE RETAIN NODE NIU niu\_number unit\_number**  
 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 to which you are to dump (for example, S00DNIU)  
**niu\_number**  
 is the NIU number (0 to 29)  
**unit\_number**  
 is the inactive unit number (0 or 1)  
**Note:** The name of the volume on the SLM disk cannot exceed eight characters. All NIUs should have identical loads. You only need to dump an image of one NIU.  
*Example input:*  
**>DUMP IMAGE S00DNIU ACTIVE RETAIN NODE NIU 0 0**
- 13 To list the files stored on the SLM volume to determine the new NIU image file name, 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 to which you are to dump (for example, S00DNIU)  
*Example of a MAP response:*
- File information for volume S00DNIU:  
 {NOTE: 1 BLOCK = 512 BYTES }
- | LAST<br>MODIFY<br>DATE | FILE<br>CODE<br>G C O E<br>C N | O<br>R<br>E<br>T<br>P | I<br>O | FILE<br>SIZE<br>IN<br>BLOCKS | NUM OF<br>RECORDS<br>IN<br>FILE | MAX<br>REC<br>LEN | FILE NAME |
|------------------------|--------------------------------|-----------------------|--------|------------------------------|---------------------------------|-------------------|-----------|
| 930215                 | 0 I F                          |                       |        | 49364                        | 4682                            | 1020              | IMAGE_NIU |
| 930214                 | 0 I F                          |                       |        | 72190                        | 6095                            | 1020              | NIU_0210  |
- 14 Record the new file name that appears in the list of filenames (for example, IMAGE\_NIU).

---

## Recording an NIU image on an SLM disk (continued)

---

- 15** To delete the current NIU image file, type  
**>DDF file\_name**  
 and press the Enter key.  
*where*  
**file\_name**  
 is current NIU image file name as recorded in step 8  
*Example of a MAP response:*
- ```
TUPLE TO BE DELETED:
      NIU_0210      S00DISLOADS
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```
- 16** To confirm the command, type
>Y
 and press the Enter key.
Example of a MAP response:
 TUPLE DELETED
- 17** To rename the new NIU image file as the current NIU image and record the new name, type
>RENAMEFL new_file_name current_file_name
 and press the Enter key.
where
new_file_name
 is new NIU image file name as recorded in step 14
current_file_name
 is current NIU image file name which must be identical to the NIU image file name as recorded in step 8
Example input:
>RENAMEFL IMAGE_NIU NIU_0210
Example of a MAP response:
 File IMAGE_NIU, volume S00DNIU, node CM has been renamed to NIU_0210.
- 18** To list the files stored on the SLM volume to verify the current NIU image file name is correct, 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 (for example, S00DNIU)
Example of a MAP response:

Recording an NIU image on an SLM disk (continued)

File information for volume S00DNIU:
 {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          49364      4682  1020  NIU_0210
  
```

- 19 To quit from the disk utility, type

>QUIT

and press the Enter key.

- 20 The next action depends on your telephone company operating procedures.

If procedures require	Do
two NIU images (one for each SLM disk)	step 21
one NIU image	step 28

- 21 To list the files stored on the second SLM volume to determine the new NIU image file name, 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 to which you are to dump (for example, S01DNIU)

Example of a MAP response:

File information for volume S01DNIU:
 {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
-----
930214    0 I F          72190      6095  1020  NIU_0210
  
```

Note: In the MAP display examples used in the procedure the first SLM disk volume designated for the storage of NIU images is S00DNIU and the second SLM disk volume designated for the storage of NIU images is S01DNIU.

- 22 Record the file name, which should be identical to the file name recorded in step 8 (for example, NIU_0210).

Recording an NIU image on an SLM disk (continued)

- 23** To delete the current NIU image file, type
>DDF file_name
 and press the Enter key.
where
file_name
 is the current NIU image file name that you determined in step 22
Example of a MAP response:
- ```
TUPLE TO BE DELETED:
 NIU_0210 S01DISLOADS
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```
- 24** To confirm the command, type  
**>Y**  
 and press the Enter key.  
*Example of a MAP response:*  
 TUPLE DELETED
- 25** To copy the new image of the NIU taken in step 12 and store the image on the chosen SLM disk, type  
**>COPY file\_name disk\_volume\_name**  
 and press the Enter key.  
*where*  
**file\_name**  
 is the current NIU image file name that you determined in step 22  
**disk\_volume\_name**  
 is the name of the SLM disk (S00D or S01D) and the name of the volume on the disk to which you are to copy (for example, S01DNIU)  
*Example of a MAP response:*  
 File NIU\_0120, volume S00DNIU, has been copied to File NIU\_0120, volume S01DNIU.
- 26** To list the files stored on the SLM volume to verify the current NIU image file name is correct, 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 (for example, S01DNIU)  
*Example of a MAP response:*

---

**Recording an NIU image on an SLM disk (continued)**


---

File information for volume S01DNIU:  
 {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 49364 4682 1020 NIU_0210

```

- 27** To quit from the disk utility, type

**>QUIT**

and press the Enter key.

- 28** To access table PMLOADS, type

**>TABLE PMLOADS**

and press the Enter key.

*MAP response:*  
 TABLE: PMLOADS

- 29** To perform a NIL change to table PMLOADS, type

**>POS file\_name**

and press the Enter key.

*where*

**file\_name**

is the current NIU image file name that you determined in step 8

*Example input:*

**>POS NIU\_0210**

*Example of a MAP response:*  
 NIU\_0210 S00DISLOADS

- 30** To perform a NIL change to the first field of table PMLOADS, type

**>CHA**

and press the Enter key.

*Example of a MAP response:*  
 ACTFILE: NIU\_0210

- 31** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
 ACTVOL: S00DNIU

- 32** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
 BKPFIL: NIU\_0210

---

## Recording an NIU image on an SLM disk (continued)

---

- 33** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
BKPVOL: S00DNIU

- 34** To perform a NIL change to the next field of table PMLOADS, press the Enter key.

*Example of a MAP response:*  
UPDACT: N

- 35** To complete the NIL change to table PMLOADS, press the Enter key.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED
 NIU_0210
 NIU_0210 S00DNIU
 NIU_0210 S00DNIU
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 36** To confirm the command, type

>Y

and press the Enter key.

*MAP response:*  
TUPLE CHANGEDWRITTEN TO JOURNAL FILE AS JF NUMBERR 13576

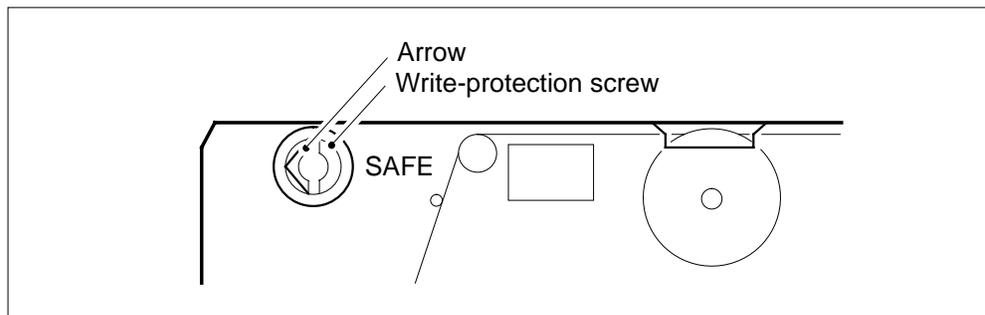
- 37** To quit table PMLOADS, type

>QUIT

and press the Enter key.

- 38** Obtain a back-up tape.

- 39** On the SLM cartridge casing, check the setting of the screw labeled SAFE. To allow recording on the read/write tape, set the screw slot with the arrow pointing away from the word SAFE.



### **At the SLM**

- 40** Mount the back-up tape on to the correct SLM tape drive unit.

## Recording an NIU image on an SLM disk (continued)

---

### *At the MAP terminal*

- 41 To insert the tape, type

```
>INSERTTAPE device_name WRITELABEL label_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

**label\_name**

is an alphanumeric name for the tape, up to six characters long

*Example input:*

```
>INSERTTAPE S00T WRITELABEL IMGBUP
```

*Example of a MAP terminal response:*

```
Writing the label IMGBUP to tape volume S00T on node CM
will destroy all files stored on this tape volume.
```

```
Do you want to continue?
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

- 42 To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP terminal response:*

```
The INSERT operation may take
up to 5 minutes to tension the tape.
```

```
A tape is now available to user on unit 1, node CM.
Name IMGBUP has been written to the tape label.
```

- 43 To list the files on the SLM volume that contains the latest NIU image files, 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 to which you are to backup (for example, S01DNIU)

- 44 To copy the NIU image file from the disk to the tape, type

```
>BACKUP FILE image_file_name tape_device_name
tape_file_name
```

and press the Enter key.

*where*

---

## Recording an NIU image on an SLM disk (continued)

---

**image\_file\_name**

is the name of the current NIU image file

**tape\_device\_name**

is S00T if SLM 0 is in use, or S01T if SLM 1 is in use

**tape\_file\_name**

is the name you use for the NIU image file stored on tape

**Note:** The tape file name is optional. If you do not enter a tape file name the system assigns a default file name.

*Example input:*

```
>BACKUP FILE NIU_0210 S01T NIU_0210
```

*Example of a MAP terminal response:*

```
STD file NIU_0120 on disk volume S00DIMAGE, node CM is
opened.
Tape file NIU_0120 on tape device S01T, node CM has been
created.
The copy operation may take several minutes.
Std file NIU_0120 on volume IMAGE1, node CM is copied to
tape file NIU_0120 on tape device S01T, node CM.
```

| If the response indicates                                        | Do      |
|------------------------------------------------------------------|---------|
| the command was successful                                       | step 46 |
| the tape does not have enough capacity to back-up the image file | step 45 |
| something else                                                   | step 50 |

- 45** The WARNING that follows is output when the tape file is not listed or the file or volume being backed-up exceeds the 140 Mbyte threshold

*Example of a MAP terminal response:*

```
SLM3 supports 140/240/500 Mbytes normalized size tape.
```

Notes: The amount of free space left on the tape can not be determined. The STD volume backup from ss00dvoll requires 12345 free blocks on tape. The backup will fail if the free space is smaller than the size of the volume that is to be backed-up.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

## Recording an NIU image on an SLM disk (continued)

---

SLM2/SLM1A supports 140/240 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the threshold for 140 Byte tapes. There is 2000000 blocks already used up on the tape. The STD volume requires 120000 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

or

SLM3 supports 140/240/500 Mbytes normalized size tape.

The STD volume backup from s00dvoll has exceeded the tape normalized capacity (123 blocks) left on the tape. The STD volume requires 150 free blocks on tape.

Please ensure you have enough free space on tape, or have inserted a large enough tape.

Do you wish to continue with the BACKUP? (Yes/No)

- 46** To list the files on the tape to confirm creation of the image file, type

**>LISTFL device\_name**

and press the Enter key.

*where*

**device\_name**

is either S00T or S01T

- 47** To eject the tape, type

**>EJECTTAPE 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

### ***At the SLM***

- 48** Remove the tape from the SLM and store it.

---

## Recording an NIU image on an SLM disk (end)

---

*At the MAP terminal*

- 49** To quit the disk utility, type  
    >QUIT  
    and press the Enter key.
- 50** For additional help, contact the next level of support.
- 51** The procedure is complete.

## **Recording an office image on an SLM disk**

---

### **Application**

Use this procedure to perform an image dump to a system load module (SLM) disk in a DMS SuperNode office.

### **Interval**

If automatic daily image-taking is enabled, perform this procedure as required. If automatic image-taking is not enabled, perform this procedure daily.

### **Common procedures**

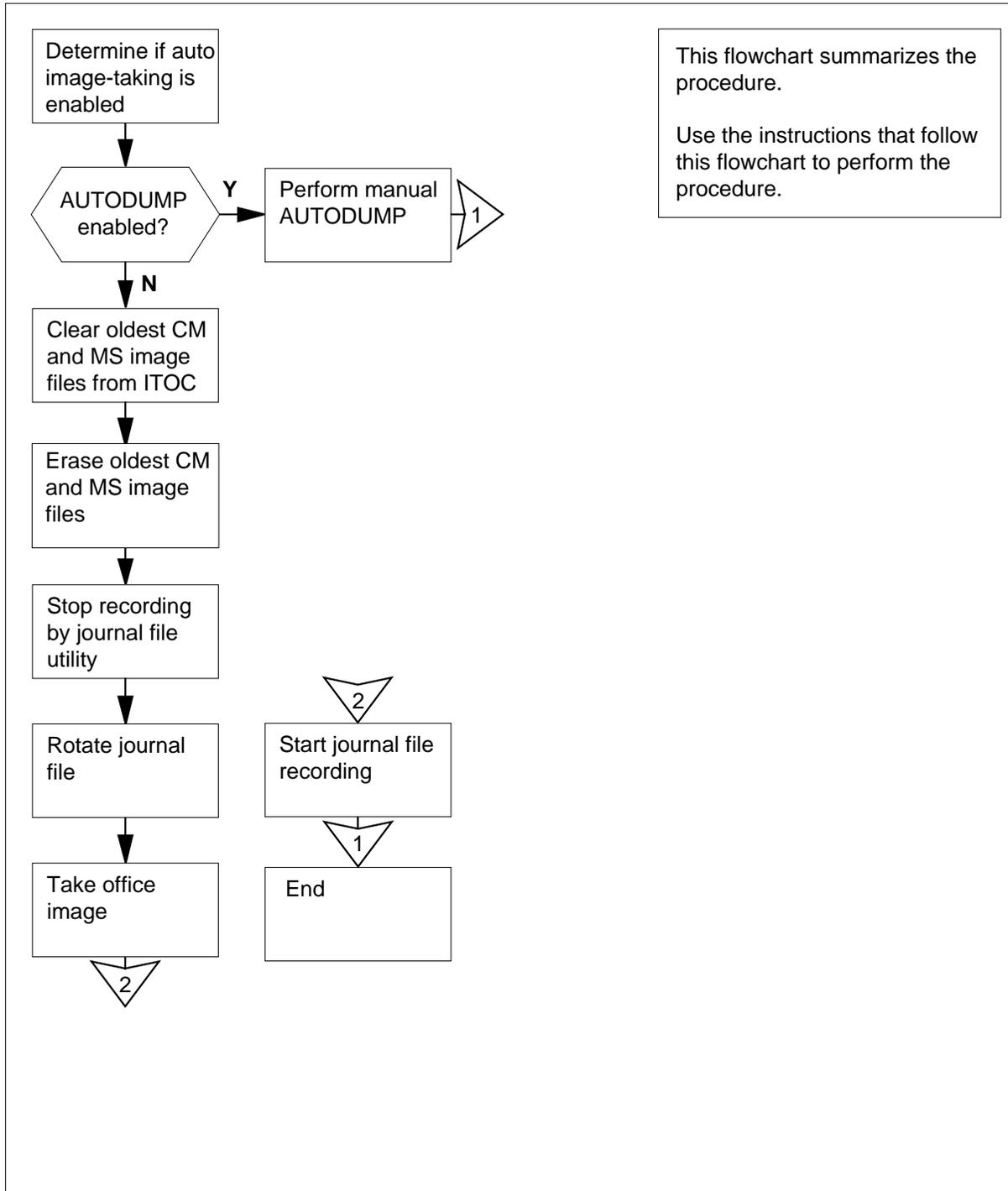
There are no common procedures.

### **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.

## Recording an office image on an SLM disk (continued)

### Summary of Recording an office image on an SLM disk



## Recording an office image on an SLM disk (continued)

---

### Recording an office image on an SLM disk

#### At the MAP terminal

- 1 To access the CI level of the MAP display, type  
    >QUIT ALL  
    and press the Enter key.
- 2 To determine if the automatic image-taking is enabled, type  
    >AUTODUMP STATUS  
    and press the Enter key.

#### Example of a MAP response:

```
Successful Image: S990218220590_CM
Taken: 1999/02/18 22:05:08.952 THU.
On Volume: S00DIMAGE
```

```
Last Image: S990218220590_CM
Taken: 1999/02/18 22:05:08.952 THU.
On Volume: S00DIMAGE
```

```
ISN Auto Imaging was last run on 1999/02/18 23:22:10.619 THU
0 images were requested by PRSM.
0 images were taken successfully.
0 images failed.
0 images were aborted.
```

```
The latest ISN Auto Imaging history file is S990218232HISISN
S00DIMAGE.
```

```
SCHEDULED-Image Dump is ON.
```

```
RETAIN option is OFF.
```

```
Next scheduled dump is FRIDAY at 22:00 hours.
Next image to be dumped S01DIMAGE.
```

---

| If the response      | Do     |
|----------------------|--------|
| is Image Dump is ON  | step 3 |
| is Image Dump is OFF | step 4 |

---

---

## Recording an office image on an SLM disk (continued)

---

- 3 To initiate an automatic image dump, type one of the following commands:
- >AUTODUMP MANUAL ALL to manually dump the computer module (CM), message switch (MS) and intelligent switch networks (ISNs)
  - >AUTODUMP MANUAL ISN to manually dump only the ISNs
  - >AUTODUMP MANUAL to manually dump the CM and the MS
  - >AUTODUMP MANUAL USESDM to manually dump the CM and the MS and use the SDM during the CM image taking process
- and press the Enter key.

**Note:** Use the parameter, USESDM to reduce the lockout period for recent changes to 15 minutes.

### Example of a successful history file listing:

```
18:53: SCHEDULED Image Dump in approximately 5 minutes...
18:53: Please refrain from using dump unsafe commands.
18:53: Quit to CI if necessary. Use the STOPDUMP command to ABORT.
18:51: SCHEDULED Imaged Dump in 2 minutes.
18:51: Use STOPDUMP command to ABORT.
18:51: Preparing to image to the ISN nodes.
Sending request to image the ISN nodes
HIS> 1997/05/24 16:12:35.395 SAT. ISN auto imaging started.
HIS> 1997/05/24 16:12:35.395 SAT. ISN auto imaging is running with SAC
approval.
HIS> 1997/05/24 16:14:41.722 SAT. Started imaging of
LIU7100 to ARS8AP_TMP on S00DIMAGE1.
HIS> 1997/05/24 16:14:43.487 SAT. Started imaging of LIU7228 to
LRS8AP_TMP on S00DIMAGE1.
HIS> 1997/05/24 16:14:43.722 SAT. Started imaging of NIU1U0 to
NRS08AP_TMP on S00DIMAGE1.
HIS> 1997/05/24 16:19:14.269 SAT. Completed imaging of LIU7100. Dump
completed successfully.
HIS> 1997/05/24 16:16:15.917 SAT. Completed imaging of LIU7228. Dump
completed successfully.
HIS> 1997/05/24 16:22:03.117 SAT. Completed imaging of NIU1U0. Dump
completed successfully.
HIS> 1997/05/24 16:23:01.894 SAT. Completed imaging of FRIU204. Dump
completed successfully.
HIS 19/05/24 16:23:37.825 SAT auto imaging finished.
16:23 ISN AUTO IMAGE successfully completed.
```

## Recording an office image on an SLM disk (continued)

---

### Example of an unsuccessful Image Dump history file listing:

```
18:53: SCHEDULED Image Dump in approximately 5 minutes...
18:53: Please refrain from using dump unsafe commands.
18:53: Quit to CI if necessary. Use the STOPDUMP command to ABORT.
18:51: SCHEDULED Imaged Dump in 2 minutes.
18:51: Use STOPDUMP command to ABORT.
18:51: Preparing to image to the ISN nodes.
An error encountered during ISN image dump.
Refer to ISN AUTOIMAGE history file for details.
```

---

| If the image dump is | Do      |
|----------------------|---------|
| successful           | step 32 |
| unsuccess            | step 27 |

---

- 4 To access the disk utility, type  
**>DISKUT**  
and press the Enter key.

### Example of a MAP response:

```
Disk utility is now active.
DISKUT:
```

- 5 Determine the disk and volume to which you want to dump the office image. This information is on the rotation schedule in the office routine maintenance schedule.

- 6 To list the files in the volume you chose, type  
**>LISTFL disk\_volume\_name**  
and press the Enter key.

*where*

**disk\_volume\_name**

is the name of the SLM disk and the volume chosen in step 5

*Example input:*

```
>LISTFL S00DIMAGE1
```

---

## Recording an office image on an SLM disk (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 Y 12744 6372 1020 930215_MS
930215 0 I F Y 188180 94090 1020 930215_CM
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 Y 1432 6372 1024 930212_MS
930212 0 I F Y 6272 94090 1024 930212_CM

```

- 7 Record the names of the oldest message switch (MS) and computing module (CM) image files recorded in the image table of contents (ITOC).

**Note:** In the example in step 6, the MS and CM image file names recorded are 930212\_MS and 930212\_CM.

- 8 To clear the oldest CM image file from the ITOC, type

```
>CLEARBOOTFL disk_device_name CM FILE disk_volume_name
old_file_name
```

and press the Enter key.

where

**disk\_device\_name**

is the SLM disk drive (S00D or S01D) that you chose in step 5

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) that you chose in step 5 and the name of the volume that contains the CM image file you want to erase

**old\_file\_name**

is the CM image file name that you recorded in step 7

Example input:

```
>CLEARBOOTFL S00D CM FILE S00DIMAGE1 930212_CM
```

Example of a MAP response:

```
File 930212_CM in volume IMAGE1 has been cleared from the
image Table of Contents for CM on SLM, unit 0.
```

- 9 To clear the oldest MS image file from the ITOC, type

```
>CLEARBOOTFL disk_device_name MS FILE disk_volume_name
old_file_name
```

and press the Enter key.

## Recording an office image on an SLM disk (continued)

where

**disk\_device\_name**

is the SLM disk drive (S00D or S01D) that you chose in step 5

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) you chose in step 5 and the name of the volume that contains the MS image file you want to erase

**old\_file\_name**

is the MS image file name that you recorded in step 7

Example input:

```
>CLEARBOOTFL S00D MS FILE S00DIMAGE1 930212_MS
```

Example of a MAP response:

File 930212\_MS in volume IMAGE1 has been cleared from the image Table of Contents for MS on SLM, unit 0.

- 10** To list the files in the volume that contains the CM and MS image files, type

```
>LISTFL disk_volume_name
```

and press the Enter key.

where

**disk\_volume\_name**

is the name of the SLM disk and volume you chose in step 5

**Example of a MAP response:**

File information for volume S00DIMAGE1:  
{NOTE: 1 BLOCK = 512 BYTES }

```

```

| LAST<br>MODIFY<br>DATE | FILE<br>CODE | O<br>R<br>G<br>C<br>N | I<br>R<br>E<br>T<br>P<br>P<br>O<br>E<br>N<br>C<br>N | FILE<br>SIZE<br>IN<br>BLOCKS | NUM OF<br>RECORDS<br>IN<br>FILE | MAX<br>REC<br>LEN | FILE NAME  |
|------------------------|--------------|-----------------------|-----------------------------------------------------|------------------------------|---------------------------------|-------------------|------------|
| 930215                 | 0            | I                     | F Y                                                 | 12744                        | 6372                            | 1020              | 930215_MS  |
| 930215                 | 0            | I                     | F Y                                                 | 188180                       | 94090                           | 1020              | 930215_CM  |
| 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 Y                                                 | 1432                         | 6372                            | 1024              | 930212_MS  |
| 930212                 | 0            | I                     | F Y                                                 | 6272                         | 94090                           | 1024              | 930212_CM  |

```

```

- 11** Determine the name of the oldest CM image file.

| If the name of the image file | Do      |
|-------------------------------|---------|
| begins with a letter          | step 12 |

---

**Recording an office image on an SLM disk** (continued)

---

|           | <b>If the name of the image file</b>                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | begins with a number                                                                                                                                                                                                                                                                                                                                                                                                                                             | step 14   |
| <b>12</b> | To erase the oldest CM image file from the SLM disk, type<br>> <b>DELETEFL</b> <b>old_file_name</b><br>and press the Enter key.<br><i>where</i><br><b>old_file_name</b><br>is the CM image file name that you recorded in step 7<br><i>Example of a MAP response:</i><br>Delete OLD_CM from volume S00DIMAGE1, node CM. Please confirm ("YES", "Y", "NO", or "N"):                                                                                               |           |
| <b>13</b> | To confirm the command, type<br>> <b>YES</b><br>and press the Enter key.<br>Go to step 16.                                                                                                                                                                                                                                                                                                                                                                       |           |
| <b>14</b> | To erase the oldest CM image file from the SLM disk, type<br>> <b>DELETEFL</b> ( <b>STRTOSYM</b> 'old_file_name')<br>and press the Enter key.<br><i>where</i><br><b>old_file_name</b><br>is the CM image file name that you recorded in step 7<br><i>Example input:</i><br>> <b>DELETEFL</b> ( <b>STRTOSYM</b> '930212_CM')<br><i>Example of a MAP response:</i><br>Delete 930212_CM from volume S00DIMAGE1, node CM. Please confirm ("YES", "Y", "NO", or "N"): |           |
| <b>15</b> | To confirm the command, type<br>> <b>YES</b><br>and press the Enter key.<br>Go to step 18.                                                                                                                                                                                                                                                                                                                                                                       |           |
| <b>16</b> | To erase the oldest MS image file from the SLM disk, type<br>> <b>DELETEFL</b> <b>old_file_name</b><br>and press the Enter key.<br><i>where</i><br><b>old_file_name</b><br>is the MS image file name that you recorded in step 7<br><i>Example of a MAP response:</i>                                                                                                                                                                                            |           |

## Recording an office image on an SLM disk (continued)

---

Delete file OLD\_MS from volume S00DIMAGE1, node MS.  
Please confirm ("YES", "Y", "NO", or "N"):

- 17 To confirm the command, type

>YES

and press the Enter key.

Go to step 20.

- 18 To erase the oldest MS image file from the SLM disk, type

>DELETEFL (STRTOSYM 'old\_file\_name')

and press the Enter key.

where

**old\_file\_name**

is of the MS image file name that you recorded in step 7

*Example input:*

>DELETEFL (STRTOSYM '930212\_MS')

*Example of a MAP response:*

Delete file 930212\_MS from volume S00DIMAGE1, node MS.  
Please confirm ("YES", "Y", "NO", or "N"):

- 19 To confirm the command, type

>YES

and press the Enter key.

- 20 To quit the disk utility, type

>QUIT

and press the Enter key.

- 21 To stop journal file recording, type

>JF STOP

and press the Enter key.

- 22 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

- 23 To rotate the journal file, type

>ROTATE JF

and press the Enter key.

### Example of a MAP response:

ACTIVE FILE WILL BE CLOSED IF POSSIBLE (ROTACLOS).  
SENDING REQUEST TO SUBSYSTEM  
Please confirm ("YES", "Y", "NO", or "N"):

---

## Recording an office image on an SLM disk (continued)

---

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

**Example of a MAP response:**

Maintenance Action Submitted.  
 Passed.

- 25** To return to the CI level of the MAP display, type  
**>QUIT ALL**  
 and press the Enter key.
- 26** Determine the next action.

| If the image process | Do      |
|----------------------|---------|
| uses the SDM         | step 28 |
| does not use the SDM | step 27 |

- 27** To start the image dump, type  
**>DUMP file\_name disk\_volume\_name ACTIVE UPDATE TOTAL  
 NOSDM**  
 and press the Enter key.  
*where*  
**file\_name**  
 is the file name that you chose for the image you want to dump  
**disk\_volume\_name**  
 is the name of the SLM disk (S00D or S01D) you chose in step 5 and  
 the name of the volume that contains the CM and MS image files

*Example input:*

**>DUMP NEWIMG\_0909 S00DIMAGE1 ACTIVE UPDATE TOTAL**

| If the image dump | Do      |
|-------------------|---------|
| passed            | step 30 |
| failed            | step 29 |

- 28** To start the image dump, type  
**>DUMP file\_name disk\_volume\_name ACTIVE UPDATE TOTAL  
 USESDM**  
 and press the Enter key.  
*where*  
**file\_name**  
 is the file name that you chose for the image you want to dump

## Recording an office image on an SLM disk (end)

---

**disk\_volume\_name**

is the name of the SLM disk (S00D or S01D) you chose in step 5 and the name of the volume that contains the CM and MS image files

*Example input:*

```
>DUMP NEWIMG_0909 S00DIMAGE1 ACTIVE UPDATE TOTAL
```

---

| <b>If the image dump</b> | <b>Do</b> |
|--------------------------|-----------|
|--------------------------|-----------|

|        |         |
|--------|---------|
| passed | step 30 |
| failed | step 29 |

---

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

**30** To start journal file recording, type

```
>JF START
```

and press the Enter key.

**31** To confirm the JF start, type

```
>YES
```

and press the Enter key.

**32** The procedure is complete.

---

## Reformatting an IOC- or IOM-based disk drive unit

---

### Application

Use this procedure to format input/output controller (IOC) and input/output module (IOM) based disk drive units (DDU) again. Use this procedure to format digital audio tapes (DAT) again. Contact the next level of support before you start this procedure.

### Interval

Perform this procedure in three-month intervals for 1X55DA or earlier units or in twelve-month intervals for 1X55FA units. Format at the suggested intervals to make IOC-or IOM-based disks more reliable, and last longer. This procedure covers only IOC- and IOM-based disk drives.

*Note:* Before you format the disks again, read all of the following:

- active early warning bulletins (EWBs)
- customer notification bulletins (CNBs)
- customer advisory bulletins (CABs) that concern billing, input/output devices (IOD), IOC or IOM, and disk issues

### Common procedures

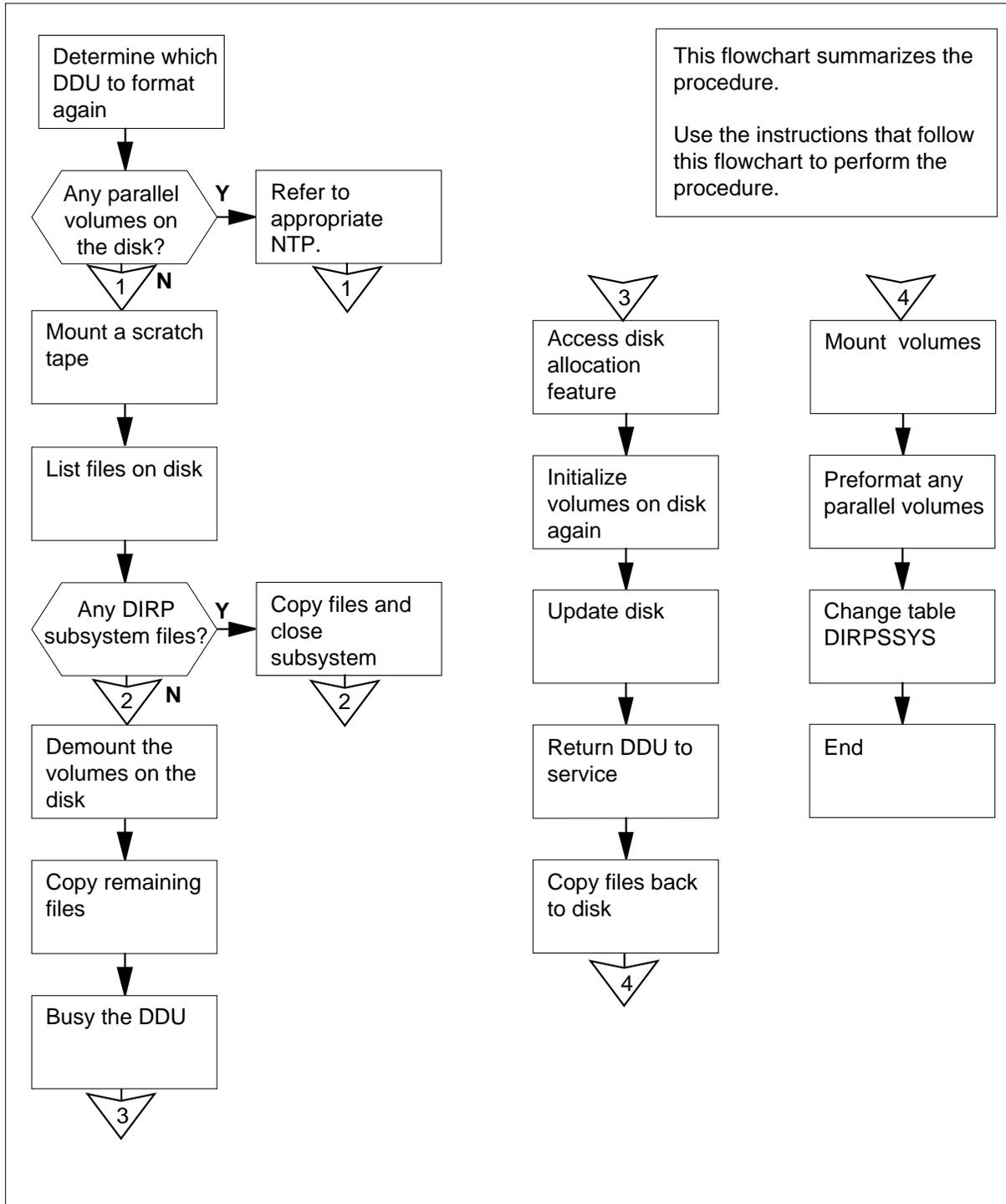
There are no common procedures.

### Action

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

## Reformatting an IOC- or IOM-based disk drive unit (continued)

### Summary of Reformatting an IOC- or IOM-based disk drive unit



## Reformatting an IOC- or IOM-based disk drive unit (continued)

### Reformatting an IOC- or IOM-based disk drive

#### *At your current location*

1



**CAUTION**

**Loss of service**

Disk reformatting is difficult and you can make severe errors. Contact the technical support group before you attempt this procedure.



**CAUTION**

**Loss of billing data**

The reformatting process erases all files. If you do not start an alternate device and copy files, the process can cause a loss of billing data.

From office records, determine the number of the disk drive unit (DDU) you must format again. Note if the DDU is a 14-in. (356-mm), 8-in. (203-mm), 5.25-in. (133-mm), or 3.5 in. (89 mm) DDU.

2 From office records, determine if the disk drive contains parallel volumes.

| <b>If the disk drive</b>          | <b>Do</b> |
|-----------------------------------|-----------|
| contains parallel volumes         | step 3    |
| does not contain parallel volumes | step 4    |

3 See *Setting up parallel recording on disk in the DIRP utility* or *Setting up parallel recording on an MTD in the DIRP utility* in this document. Assign each parallel volume on the drive you must format again, and return to this point.

4 Obtain a blank magnetic tape or digital audio tape (DAT).

5 Mount the tape on the magnetic tape drive or the DAT drive.

#### **At the CI level of the MAP display**

6 To record the session on a printer, type  
**>RECORD START ONTO dev\_name**  
 and press the Enter key.  
*where*  
**dev\_name**  
 is the name of the printer

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

- 7 To format the tape as backup, type  
**>MOUNT tape\_no FORMAT BACKUP**  
 and press the Enter key.  
*where*  
     **tape\_no**  
         is the number of the tape
- 8 To verify that the tape is rewound, type  
**>TAPE tape\_no REW**  
 and press the Enter key.  
*where*  
     **tape\_no**  
         is the number of the tape
- 9 To access table DIRPSSYS, type  
**>TABLE DIRPSSYS**  
 and press the Enter key.
- 10 To list all the subsystems, type  
**>LIS ALL**  
 and press the Enter key.
- 11 Record the names or numbers of all subsystems.
- 12 To quit table DIRPSSYS, type  
**>QUIT**  
 and press the Enter key.
- 13 To access the disk utility, type  
**>DSKUT**  
 and press the Enter key.
- 14 To list all the volumes on the disk drive to format again, type  
**>DV ddu\_no**  
 and press the Enter key.  
*where*  
     **ddu\_no**  
         is the number of the DDU you format again, from step 1  
     **Note:** Record the volume names and sizes.  
*Example of a MAP response:*
- | VolumeName | NumberOfFiles | VolumeSize | FreeSpace |
|------------|---------------|------------|-----------|
| =====      |               |            |           |
| IMAGE      | 1             | 40000      | 39921     |
- 15 To list all the files in each volume, type  
**>LIV D0ddu\_no0vol ALL**

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

and press the Enter key.

*where*

**ddu\_no**

is the number of the DDU that you format again, from step 1

**vol**

is the volume name

**Note:** Record the file names, and specify which volume each file is in. Record the names of any files in the device independent recording package (DIRP) subsystems noted in step 10 that start with the letter A. (This indicates files in downstream processing.)

*Example of a MAP response:*

A9202211905060M

- 16** Determine if you must list more volumes.

| <b>If you</b>                    | <b>Do</b> |
|----------------------------------|-----------|
| must list more volumes           | step 15   |
| do not have to list more volumes | step 17   |

- 17** Determine if any DIRP files remain in downstream processing. You can identify these files by the letter A at the start of the file name that the step 15 displays.

| <b>If DIRP files</b>             | <b>Do</b> |
|----------------------------------|-----------|
| are in downstream processing     | step 18   |
| are not in downstream processing | step 20   |

- 18** To copy any DIRP files that remain in downstream processing, type

`>COPY file_name Ttape_no`

and press the Enter key.

*where*

**file\_name**

is the file name that you created in step 15

**tape\_no**

is the number of the tape

- 19** Determine if you must copy any more DIRP files.

| <b>If you</b>                  | <b>Do</b> |
|--------------------------------|-----------|
| must copy more DIRP files      | step 18   |
| do not have to copy DIRP files | step 20   |

## Reformatting an IOC- or IOM-based disk drive unit (continued)

**20** To access the DIRP level of the MAP display, type  
**>MAPCI;MTC;IOD;DIRP**  
 and press the Enter key.

**21** Look at the list of DIRP subsystems you found in step 10 and recorded in step 11. To make sure that the disk drive you must format is not an active or standby volume for the DIRP subsystems, type

**>QUERY ssys**

and press the Enter key.

where

**ssys**

is the name or number of a subsystem on the list

**22** Determine if you must check more subsystems.

---

**If you**

**Do**

must check more subsystems to check step 21

do not have to check more subsystems step 23

---

**23** To post the controller system configured, type

**>IOC ioc\_no**

and press the Enter key.

where

**ioc\_no**

is the number of the affected IOC or IOM

*Example of a IOC MAP display:*

```
DIRP: SMDR B XFER: . SLM : . NPO: . NX25: .
MLP : . DPPP: . DPPU: . SCAI :
```

```
IOC CARD 0 1 2 3 4 5 6 7 8
0 PORT 0123 0123 0123 0123 0123 0123 0123 0123 0123
 STAT .--- .--- ...P ..-- ..-- --- --- --- ---
 TYPE MTD DDU CONS DLC CONS
```

*Example of a IOM MAP display:*

**Reformatting an IOC- or IOM-based disk drive unit** (continued)

```
DIRP: SMDR B XFER: . SLM : . NPO: . NX25: .
MLP : . DPPP: . DPPU: . SCAI :
```

```
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 M M M M M M M M M M M M M M
 O O O O T P P P P P P P P P P P P P P P P
 N N N N D C C C C C C C C C C C C C C C C
```

| If the controller | Do      |
|-------------------|---------|
| is IOC            | step 24 |
| is IOM            | step 25 |

**24** To post the DDU controller card, type

```
>CARD card_no
```

and press the Enter key.

where

**card\_no**

is the number of the terminal controller card (0 to 8)

Example of a MAP response:

```
Card 8 Unit 0
User system Drive_State
Status Ready Online
```

Go to step 26.

**25** To post the DDU port, type

```
>PORT port_no
```

and press the Enter key.

where

**port\_no**

is the port number of the DDU device

Example of a MAP response:

```
Port 16 Unit 0
(SCSI) User system Drive_State
Status Ready On_line
```

**26** To make sure that only DIRP subsystem files are open on the disk drive, type

```
>ALLOC
```

and press the Enter key.

Example of a MAP display response:

## Reformatting an IOC- or IOM-based disk drive unit (continued)

| VOLID | VOL NAME | SERIAL_NO | BLOCKS | ADDR | TYPE | R/O | FILES_OPEN |
|-------|----------|-----------|--------|------|------|-----|------------|
| 0     | IMAGE    | 2840      | 40000  | D020 | 0    | NO  | 0          |
| 0     | AMA      | 2845      | 1000   | D020 | 0    | NO  | 0          |

27 Determine if any other files are open.

| If other files | Do      |
|----------------|---------|
| are open       | step 28 |
| are not open   | step 31 |

28 To access the DIRP level of the MAP display, type  
>DIRP  
and press the Enter key.

29 To close the file, type  
>CLOSE **ssys state**  
and press the Enter key.

*where*

**ssys**

is the subsystem name or number

**state**

is ACTIVE or STDBY

**Note:** When a DIRP subsystem file closes, another file opens automatically. Ignore the new file, the new file does not contain information.

30 Determine if you must close more files.

| If you                          | Do      |
|---------------------------------|---------|
| must close more files           | step 29 |
| do not have to close more files | step 31 |

31 To demount any volumes on the disk, type  
>DMNT **ssys D0ddu\_no0vol**  
and press the Enter key.

*where*

**ssys**

is the subsystem name or number

**ddu\_no**

is the number of the DDU that you format again, from step 1

**vol**

is the volume name

*Example of a MAP response:*

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

WARNING - ALL DIRPHOLD FILES FOR VOLUME D0200M DELETED FROM TABLE DIRPHOLD, AND ARE THE USERS' RESPONSIBILITY.  
Regular volume D0200M will be taken out of DIRP as soon as possible.

- 32 Determine if you must demount more volumes.

| If you                              | Do      |
|-------------------------------------|---------|
| must demount more volumes           | step 31 |
| do not have to demount more volumes | step 33 |

- 33 To copy the first file on the list recorded in step 15, and exclude any DIRP subsystem files copied in step 18, type

```
>COPY file_name Ttape_no
```

and press the Enter key.

where

**file\_name**

is the file name created in step 15

**tape\_no**

is the number of the tape

- 34



### CAUTION

#### Loss of billing data

Do not allow total billing to exceed 28 000 blocks. This number is the maximum volume of the nine-track 732-m (2400-ft) tape . You will lose billing data when the blocks exceed 28 000.

Determine if you must copy more files.

| If you                         | Do      |
|--------------------------------|---------|
| must copy more files           | step 33 |
| do not have to copy more files | step 35 |

- 35 To make sure that the files are all on the other device, type

```
>LIST tape_no
```

and press the Enter key.

where

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

**tape\_no**  
is the number of the tape

**Note:** Compare the list of files on tape to the list that you recorded in step 15.

| If the file list  | Do      |
|-------------------|---------|
| is complete (IOC) | step 37 |
| is complete (IOM) | step 38 |
| is not complete   | step 36 |

**36** Record the names of the missing files, then go to step 33.

**37** To access the Card level of the MAP display, type

```
>IOC ioc_no;CARD card_no
```

and press the Enter key.

where

**ioc\_no**  
is the number of the input/output controller (0 to 19) that holds the controller card for the DDU

**card\_no**  
is the number of the controller card that you determined in step 23

Go to step 39.

**38** To access the port level of the MAP display, type

```
>IOC ioc_no;PORT port_no
```

and press the Enter key.

where

**ioc\_no**  
is the number of the input/output module that holds the port for the DDU

**port\_no**  
is the number of the input/output port that you determined in step 23

**39** To manually busy the DDU, type

```
>BSY
```

and press the Enter key.

*Example of MAP response:*

```
bsy
OK
```

**40** To return to the CI level of the MAP display, type

```
>QUIT ALL
```

and press the Enter key.

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

41

**CAUTION****Loss of billing data**

All files on the disk erase when you format the DDU again.  
If you do not start another device and make copies of files,  
you will lose billing data.

To access the disk allocation feature, type

```
>DSKALLOC ddu_no
```

and press the Enter key

where

**ddu\_no**

is the number of the DDU that you determined in step 1

*Example of a MAP response:*

```
Volumes currently defined in store for unit 2
Can these be replaced?
Please confirm ("YES" or "NO")
```

42

To initialize each volume on the disk again, type

```
>REINIT vol
```

and press the Enter key

where

**vol**

is the volume name

*Example of a MAP response:*

```
Done
```

43

Repeat step 42 until you initialize all the volumes on the DDU again, and return to this point.

44

To update the changes, type

```
>UPDATE
```

and press the Enter key.

*Example of a MAP response:*

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

```

WARNING: A break HX of this process may cause
severe corruption on the disk that may
require it to be reformatted.
Firmware Allocation Map Updated
Writing Label of Volume IMAGE
Successful
Starting initializing of Volume IMAGE
A break HX of this process may cause
severe corruption on the disk that may
require reinitialization of all non initialized
volumes.
Block in error: 8909
Number of Bad Blocks = 1
Successful
Update Done

```

- 45** Use the following table and the MAP response in step 44, to determine if the number of bad blocks is acceptable.

| <b>DDU size and model number</b>     | <b>Maximum allowed number of bad blocks</b> |
|--------------------------------------|---------------------------------------------|
| 14-in. (356-mm) - 3350               | 40                                          |
| 14-in. (356-mm) - 6650               | 100                                         |
| 14-in. (356-mm) - 15450              | 230                                         |
| 8-in. (203-mm) and 5.25-in. (133-mm) | 260                                         |
| 3.5-in. (89-mm)                      | 240                                         |

| <b>If the number of bad blocks</b> | <b>Do</b>                 |
|------------------------------------|---------------------------|
| is acceptable (IOC)                | Step 46                   |
| is acceptable (IOM)                | Step 48                   |
| is not acceptable                  | Step 68 or the new number |

- 46** To quit DSKALLOC, type.  
**>QUIT ALL**
- 47** To access the Card level of the MAP display, type  
**>MAPCI;MTC;IOD;IOC ioc\_no;CARD card\_no**  
 and press the Enter key.

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

where

**ioc\_no**

is the number of the input/output controller (0 to 19) that holds the controller card for the DDU

**card\_no**

is the number of the controller card that you determined in step 23

Go to step 50.

- 48 To quit DSKALLOC, type.

>QUIT ALL

- 49 To access the port level of the MAP display, type

>MAPCI;MTC;IOD;IOC ioc\_no;PORT port\_no

and press the Enter key.

where

**ioc\_no**

is the number of the input/output module that holds the port for the DDU

**port\_no**

is the number of the input/output module port that you determined in step 23

- 50 To return the disk drive to service, type

>RTS

and press the Enter key.

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 51 |
| failed             | step 68 |

- 51 To check the volumes allocated on the disk, type

>ALLOC

and press the Enter key.

| VOLID | VOL NAME | SERIAL_NO | BLOCKS | ADDR | TYPE | R/O | FILES_OPEN |
|-------|----------|-----------|--------|------|------|-----|------------|
| 0     | IMAGE    | 2840      | 40000  | D020 | 0    | NO  | 0          |
| 0     | AMA      | 2845      | 1000   | D020 | 0    | NO  | 0          |

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

>QUIT ALL

and press the Enter key.

- 53 To rewind the tape, type

>TAPE tape\_no REW

and press the Enter key.

where

---

## Reformatting an IOC- or IOM-based disk drive unit (continued)

---

- tape\_no**  
is the number of the tape
- 54** To copy the first file on the list from step 14 back to the DDU, type  
>COPY **file\_name** D0ddu\_no0volume  
and press the Enter key.

*where*

**file\_name**  
is the first file on the list from step 14

**ddu\_no**  
is the number of the DDU that you format again, from step 1

- 55** Determine if you must copy more files.

| <b>If you</b>                  | <b>Do</b> |
|--------------------------------|-----------|
| must copy more files           | step 54   |
| do not have to copy more files | step 56   |

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

- 57** To mount any volumes that you demounted in step 31, type  
>MNT **ssys** D0ddu\_no0volume  
and press the Enter key.

*where*

**ssys**  
is the subsystem name or number

**ddu\_no**  
is the number of the DDU that you format again from step 1

**vol**  
is the volume name

- 58** Determine if you must mount more volumes.

| <b>If you</b>                     | <b>Do</b> |
|-----------------------------------|-----------|
| must mount more volumes           | step 57   |
| do not have to mount more volumes | step 59   |

- 59** To return to the CI level of the MAP display, type  
>QUIT ALL  
and press the Enter key.

---

**Reformatting an IOC- or IOM-based disk drive unit** (continued)

---

60 Determine if a parallel volume on the disk drive was preformatted.

| <b>If a parallel volume</b> | <b>Do</b> |
|-----------------------------|-----------|
| was preformatted            | step 61   |
| was not preformatted        | step 66   |

61 To preformat the parallel volume, type

```
>DIRPPFMT D0ddu_no0vol
```

and press the Enter key.

*where*

**ddu\_no**

is the number of the DDU

**vol**

is the parallel volume you want to preformat

*Example of a MAP response*

```
WARNING - THIS COMMAND COULD TAKE ABOUT nn MINUTES TO EXECUTE
```

```
*** WARNING - PARALLEL VOLUME PREFORMATTING WILL ***
*** CONSUME A CONSIDERABLE AMOUNT OF CPU TIME AND ***
*** WILL SLOW DISK RESPONSE
```

```
Please confirm ("YES" OR "NO"):
```

62 To confirm the command, type

```
>Y
```

and press the Enter key.

63 To access the DIRP level of the MAP display, type

```
>MAPCI;MTC;IOD;DIRP
```

and press the Enter key.

64 To mount the parallel volume again, type

```
>MNT ssys vol PARALEL
```

and press the Enter key.

*where*

**ssys**

is the subsystem name or number

**vol**

is the name of the parallel volume from step 61

65 To exit the DIRP level of the MAP display, type

```
>QUIT
```

and press the Enter key.

## Reformatting an IOC- or IOM-based disk drive unit (end)

---

- 66** To stop recording on the printer, type  
>**RECORD STOP ONTO dev\_name**  
and press the Enter key.  
*where*  
**dev\_name**  
is the name of the printer in step 6
- 67** Record the session printout in the office log book.  
Go to step 69.
- 68** For additional help, contact the next level of support.
- 69** The procedure is complete.

## Reformatting an SLM-based disk drive unit

---

### Application

Use this procedure to format the system load module (SLM) disk drive unit (DDU) again. Contact the next level of support before starting this procedure.

### Interval

Perform this procedure when you must format the SLM DDU again. Format in intervals of a year to make SLM-based disks more reliable and last longer.

*Note:* Before you format the disks again, read:

- all active early warning bulletins (EWBs)
- customer notification bulletins (CNBs)
- and customer advisory bulletins (CABs) that concern SLM disk issues

### Common procedures

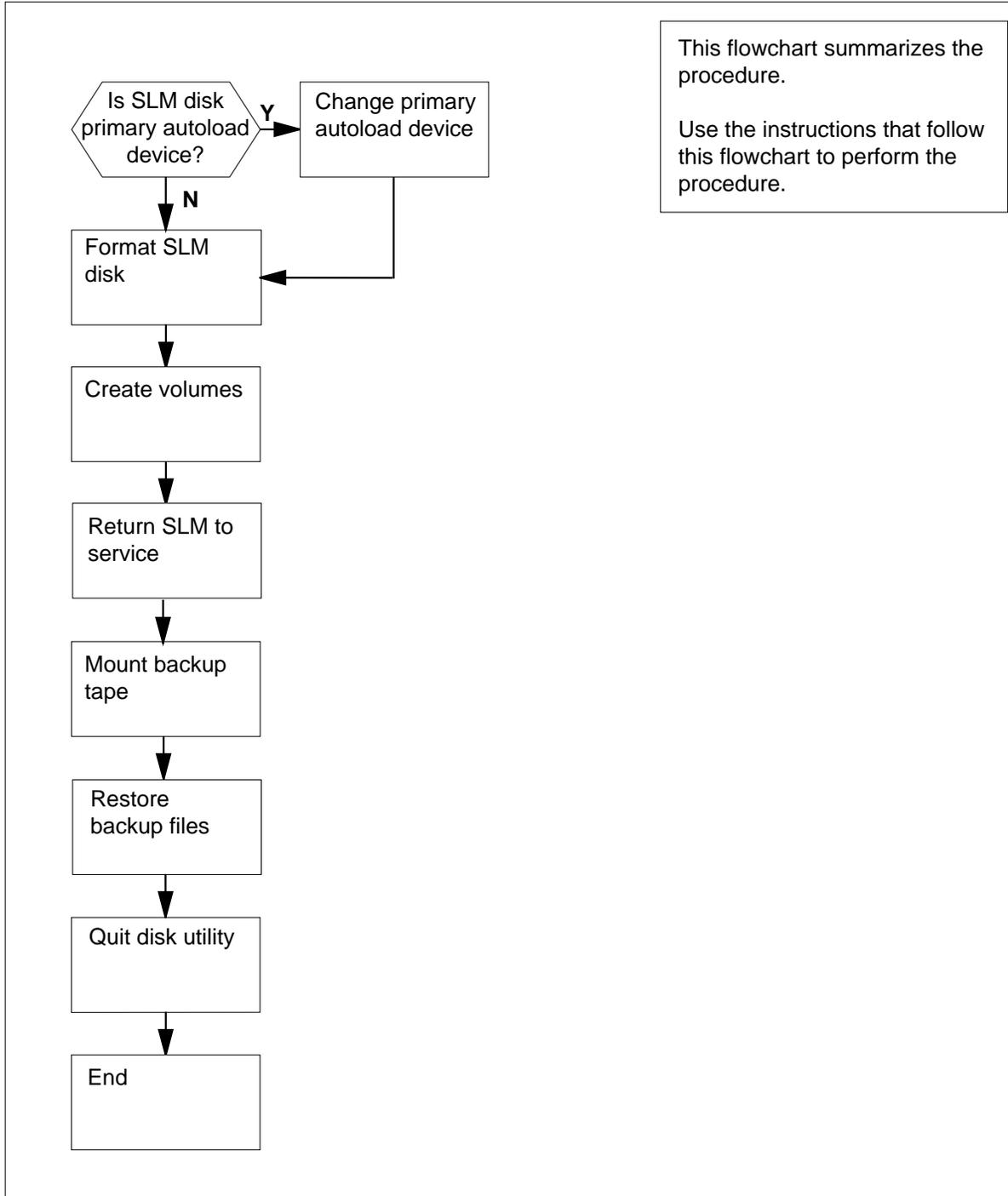
There are no common procedures.

### 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.

## Reformatting an SLM-based disk drive unit (continued)

### Summary of Reformatting an SLM-based disk drive unit



## Reformatting an SLM-based disk drive unit (continued)

### Reformatting an SLM-based disk drive unit



**CAUTION**

**Loss of data recording services**

This procedure formats the SLM disk unit again. Before you attempt this procedure, make sure another device can assume data recording services of the SLM you remove from service. Make sure that the other device has the data storage capacity to assume the recording services.

**At your current location**

- 1 Make sure that you have a backup SLM tape.

| If you                        | Do      |
|-------------------------------|---------|
| have a backup SLM tape        | step 3  |
| do not have a backup SLM tape | step 32 |

**Note:** The backup tape must contain copies of all of the disk files resident on the SLM you want to format again. Refer to *Backing up an FP image file on SLM disk to SLM tape* in this document.

**At the MAP terminal**

- 2 From office records, determine if the disk drive contains parallel volumes.
- 3 To access the CM level of the MAP display, type

`>MAPCI ;MTC ;CM`

and press the Enter key.

*Example of a MAP display:*

```

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC
0 no cpu 1 . . yes . . .

```

- 4 Determine if the SLM that contains the disk drive you want to format is in the computing module (CM) plane that contains the inactive CPU.

**Note:** The active CPU is the CPU shown under the Act header on the MAP display. In the example in step 3, the active CPU is CPU 1.

| If the SLM is in the CM plane that contains the | Do      |
|-------------------------------------------------|---------|
| inactive CPU                                    | step 5  |
| active CPU                                      | step 32 |

---

## Reformatting an SLM-based disk drive unit (continued)

---

**At the MAP terminal**

- 5** To access the CMMNT level of the MAP display, type

>CMMNT

and press the Enter key.

*Example of a MAP display:*

```

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC
0 no cpu 0 . . yes . . .

Traps: Per minute = 0 Total = 5

AutoLdev: Primary = SLM 0 DISK Secondary = SLM 1
DISK

Image Restartable = No image test since last restart

Next image restart type = WARM

Last CM REXTST executed

System memory in kbytes as of 14:39:07
Memory (kbytes): Used = 105984 Avail = 12800 Total =
118784

```

- 6** Determine if the primary autoload device is the CM plane that contains the active CPU or the inactive CPU.

**Note:** The primary autoload device appears on the right of the Primary header. In the example in step 5, the primary autoload device is the disk of SLM 0.

---

| <b>If the primary autoload device is</b> | <b>Do</b> |
|------------------------------------------|-----------|
| <b>in the CM plane that contains the</b> |           |
| active CPU                               | step 8    |
| inactive CPU                             | step 7    |

---

- 7** To change the primary autoload device to a device in the CM plane that contains the active CPU, type

>AUTOLD SLM **slm\_number** **device\_type**

and press the Enter key.

*where*

**slm\_number**

is the number of the active CPU (0 or 1)

**device\_type**

is the type of SLM device (DISK or TAPE)

*Example of a MAP response:*

---

## Reformatting an SLM-based disk drive unit (continued)

---

New autoloader route has been set.

- 8** To access the SLM that corresponds to the inactive CPU, type

**>IOD;SLM *slm\_number***

and press the Enter key.

*where*

***slm\_number***

is the number of the inactive CPU (0 or 1)

*Example of a MAP display:*

```

IOD
IOC 0 1 2 3
STAT

DIRP: . XFER: . DVI : . DPPP: . DPPU: .
NOP : . SLM : . NX25: . MLP : . SCAI: .

SLM 0 1
Stat . .

SLM 0 device TAPE DISK
 status . .
 drive idle on line
 user SYSTEM

```

**Note:** Dots to the right side of the SLM Stat header mean that the associated SLMs are in service.

- 9** To manually busy the SLM, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

SLM 0 busy passed.

*Example of a MAP display:*

```

SLM 0 1
Stat M .

```

**Note:** The letter M on the right of the SLM Stat header means that the associated SLM is manual busy.

---

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 10 |
| failed             | step 32 |

---

## Reformatting an SLM-based disk drive unit (continued)

---

### *At the MAP terminal*

- 10** To access the disk administration utility, type

```
>DISKADM disk_name
```

and press the Enter key.

*where*

**disk\_name**

is the name of the disk in the SLM you must format again(S00D for SLM 0, or S01D for SLM 1)

*Example of a MAP response:*

```
Start up command sequence is in progress.
This may take a few minutes.
Administration of device S00D on CM is now active.
DISKADM; CM
```

- 11** To format the disk, type

```
>FORMATDISK disk_name FORCE FULL
```

and press the Enter key.

*where*

**disk\_name**

is the name of the replaced disk in the SLM (S00D for SLM 0, or S01D for SLM 1)

*Example of a MAP response:*

```
***** WARNING *****
```

```
Formatting of S00D
will destroy the contents of the disk.
```

```
The formatting will:
```

```
allocate 3 spare or alternate sectors per track,
allocate 16 spare or alternate tracks per disk,
use the G defect list,
assign S00D as the name for the disk.
perform full format,
include force option.
```

```
Do you want to continue?
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

- 12** To confirm the command, type

```
>YES
```

and press the Enter key.

*Example of a MAP response:*

---

## Reformatting an SLM-based disk drive unit (continued)

---

Formatting of disk has started.  
 This may take 10 to 30 minutes.  
 Formatting of disk has finished.

- 13** Consult office records or operating company personnel to obtain a list of all the volumes required on the SLM disk.

- 14** To create a volume, type

```
>CREATEVOL volume_name volume_size STD
```

and press the Enter key.

*where*

**volume\_name**

is the name of the volume (maximum of eight characters)

**volume\_size**

is the size of the volume in megabytes

*Example input:*

```
>CREATEVOL VOL1 20 STD
```

*Example of a MAP response:*

STD volume VOL1 will be created on S00D.

```
Volume size: 20 megabytes
File Directory size: 128 files
Volume Free Space Map size: 64 segments
```

Do you want to continue?

Please confirm ("YES", "Y", "NO", or "N"):

- 15** To confirm the command, type

```
>YES
```

and press the Enter key.

*MAP response:*

Creation of the volume is completed.

- 16** Repeat steps 14 and 15 for each volume on the list that you obtained in step 13.

- 17** To quit the disk administration utility, type

```
>QUIT
```

and press the Enter key.

- 18** To access the SLM disk drive you formatted again, type

```
>IOD;SLM slm_number
```

and press the Enter key.

*where*

## Reformatting an SLM-based disk drive unit (continued)

---

**slm\_number**

is the number of the replacement SLM (0 or 1)

- 19** To return the SLM to service, type

>RTS

and press the Enter key.

*Example of a MAP response:*

SLM 0 return to service passed.

---

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 20 |
| failed             | step 32 |

---

**At the MAP terminal**

- 20** To access the disk utility, type

>DISKUT

and press the Enter key.

*MAP response:*

Disk utility is now active.

DISKUT:

- 21** To mount the backup tape cartridge, type

>INSERTTAPE **tape\_device\_name**

and press the Enter key.

*where*

**tape\_device\_name**

is the name of the tape device that contains the backup SLM tape (S00T for SLM 0, or S01T for SLM 1)

*Example of a MAP response:*

The INSERT operation may take up to 5 minutes to tension the tape.

- 22** To list the files stored on the back-up SLM tape, type

>LISTFL **tape\_device\_name**

and press the Enter key.

*where*

**tape\_device\_name**

is the name of the tape device containing the back-up SLM tape (S00T for SLM0 or S01T for SLM1)

---

## Reformatting an SLM-based disk drive unit (continued)

---

- 23 The next action depends on the name of the disk volume on tape.
- | If the disk volume name                             | Do      |
|-----------------------------------------------------|---------|
| is the same on the backup tape and the SLM disk     | step 24 |
| is not the same on the backup tape and the SLM disk | step 26 |
- 24 To copy the backup files to the disk you formatted again in the SLM, type
- ```
>RESTORE STDVOL disk_volume_name tape_device_name
tape_file_name
```
- and press the Enter key.
- where*
- disk_volume_name**
is the name of the disk (S00D or S01D), and the name of the volume on the disk to which the backup files will be restored
- tape_device_name**
is the name of the tape device (S00T or S01T) that contains the backup SLM tape
- tape_file_name**
is the name of the tape file that contains the backup files
- Example input*
- ```
>RESTORE STDVOL ROOTDIR.S00DPMLoads S00T S00DPMLoads
```
- 25 Repeat step 24 for each disk volume that you created and go to step 28.
- 26 To copy the backup files to the disk in the SLM you formatted again, type
- ```
>RESTORE STDVOL disk_volume_name tape_device_name
tape_file_name
```
- and press the Enter key.
- where*
- disk_volume_name**
is the name of the disk (S00D or S01D), and the name of the volume on the disk to which the backup files will be restored
- tape_device_name**
is the name of the tape device (S00T or S01T) that contains the backup SLM tape
- tape_file_name**
is the name of the tape file that contains the backup files
- Example input*
- ```
>RESTORE STDVOL S00DPMLoads S00T PMLoads
```
- 27 Repeat step 26 for each disk volume that you created.
- 28 To demount the tape cartridge, type
- ```
>EJECTTAPE tape_device_name
```
-

Reformatting an SLM-based disk drive unit (end)

and press the Enter key.

where

tape_device_name

is the name of the tape device (S00T or S01T) that contains the backup SLM tape

Example of a MAP response:

The eject operation may take up to 5 minutes to position the tape to the beginning.

29 To quit the disk utility, type

>QUIT

and press the Enter key.

30 Your next step depends on the reason that you perform this procedure.

If you

Do

perform this procedure as a result of another maintenance procedure

step 31

perform this procedure as a result of something other than listed here

step 33

31 Return to the maintenance procedure that sent you to this procedure and continue as directed.

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

33 The procedure is complete.

Removing a loop after a carrier remote loopback test

Application

Use this procedure to take the frame relay interface unit (FRIU) and its associated carrier out of the loopback mode.

Interval

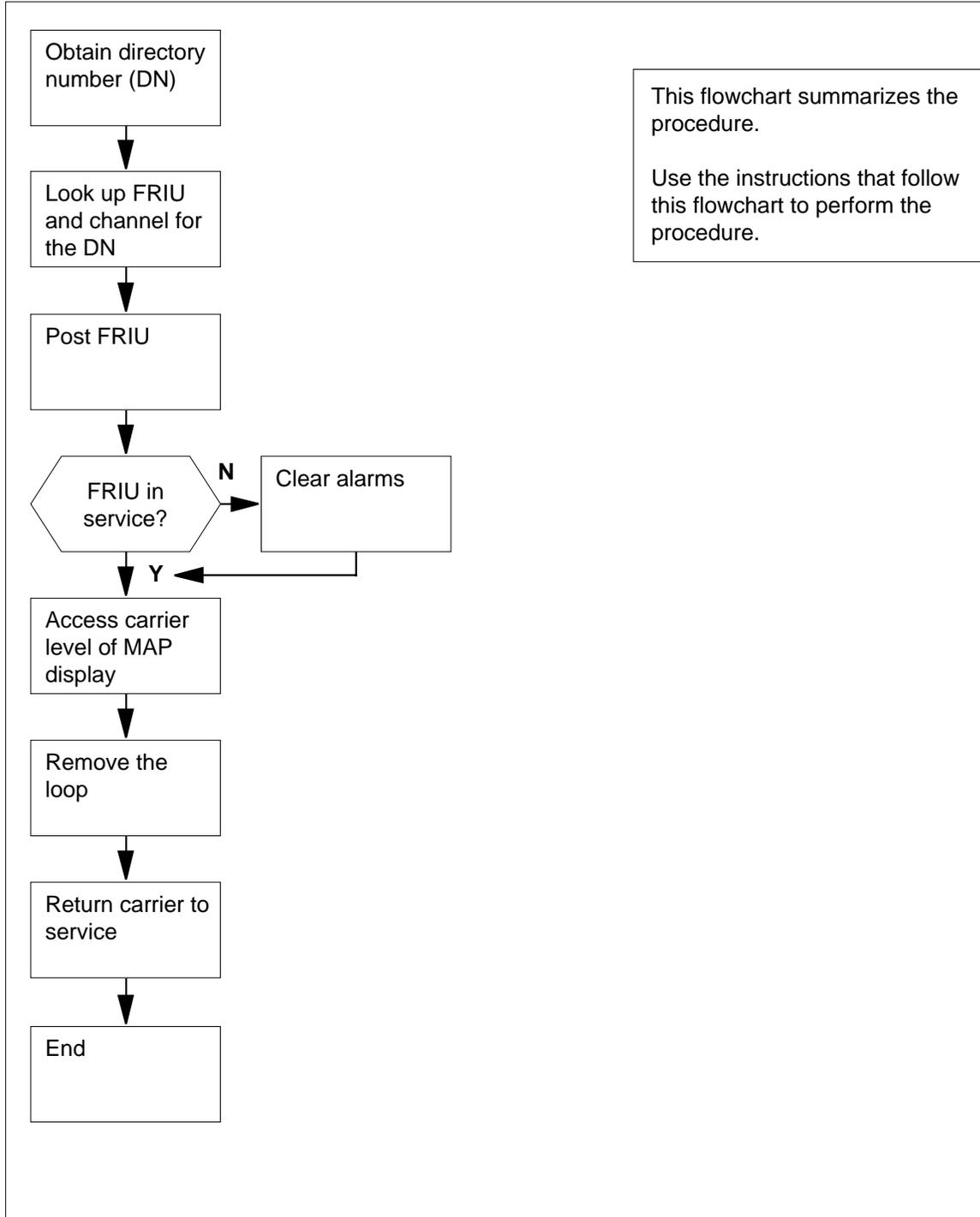
Perform this procedure after the customer completes loopback tests between the customer premises equipment and the FRIU.

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.

Removing a loop after a carrier remote loopback test (continued)

Summary of Removing a loop after a carrier remote loopback test



Removing a loop after a carrier remote loopback test (continued)

Removing a loop after a carrier remote loopback test

At your current location

- 1 Obtain the directory number (DN) from the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display, type

```
>PVDNCI
```

and press the Enter key.

Response:

```
PVDNCI :
```

- 3 To identify the agent ID that associates with the DN that you obtained from the customer, type

```
>FRSDISP DN NO dir_no
```

and press the Enter key.

where

dir_no

is the DN supplied by the customer

Response:

```
PVDNCI :
```

```
DN 6132263770 belongs to FRS Agent 1
```

Note: The agent ID appears at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type

```
>FRSDISP AGENT ID agent_no
```

and press the Enter key.

where

agent_no

is the agent ID that you obtained in step 4

Response:

```
AGENT DN      NP  SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel assigned to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

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

```
>QUIT
```

and press the Enter key.

Removing a loop after a carrier remote loopback test (continued)

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

>MAPCI;MTC;PM

and press the Enter key.

Response:

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	2	0	0	0	0	70

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key.

where

friu_no

is the number of the FRIU that you obtained at step 4

Response:

FRIU	121	InSv	Rsvd
------	-----	------	------

If the state of the FRIU

Do

is InSv or ISTb

step 9

is other than listed here

step 8

8 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

9 To access the Carrier level of the MAP display, type

>CARR

and press the Enter key.

10 To take the FRIU out of loopback mode, type

>LOOP CLEAR

and press the Enter key.

Note: The system sets the carrier state to manual busy in response to this command.

11 To return the carrier to service, type

>RTS

and press the Enter key.

If the state of the carrier

Do

is InSv

step 13

is other than listed here

step 12

Removing a loop after a carrier remote loopback test (end)

- 12 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.
Go to step 14.
- 13 To return to the PM level of the MAP display, type
>QUIT
and press the Enter key.
- 14 The procedure is complete.

Removing a loop after a channel remote loopback test

Application

Use this procedure to take the frame relay interface unit (FRIU) and specific channels out of loopback mode.

Interval

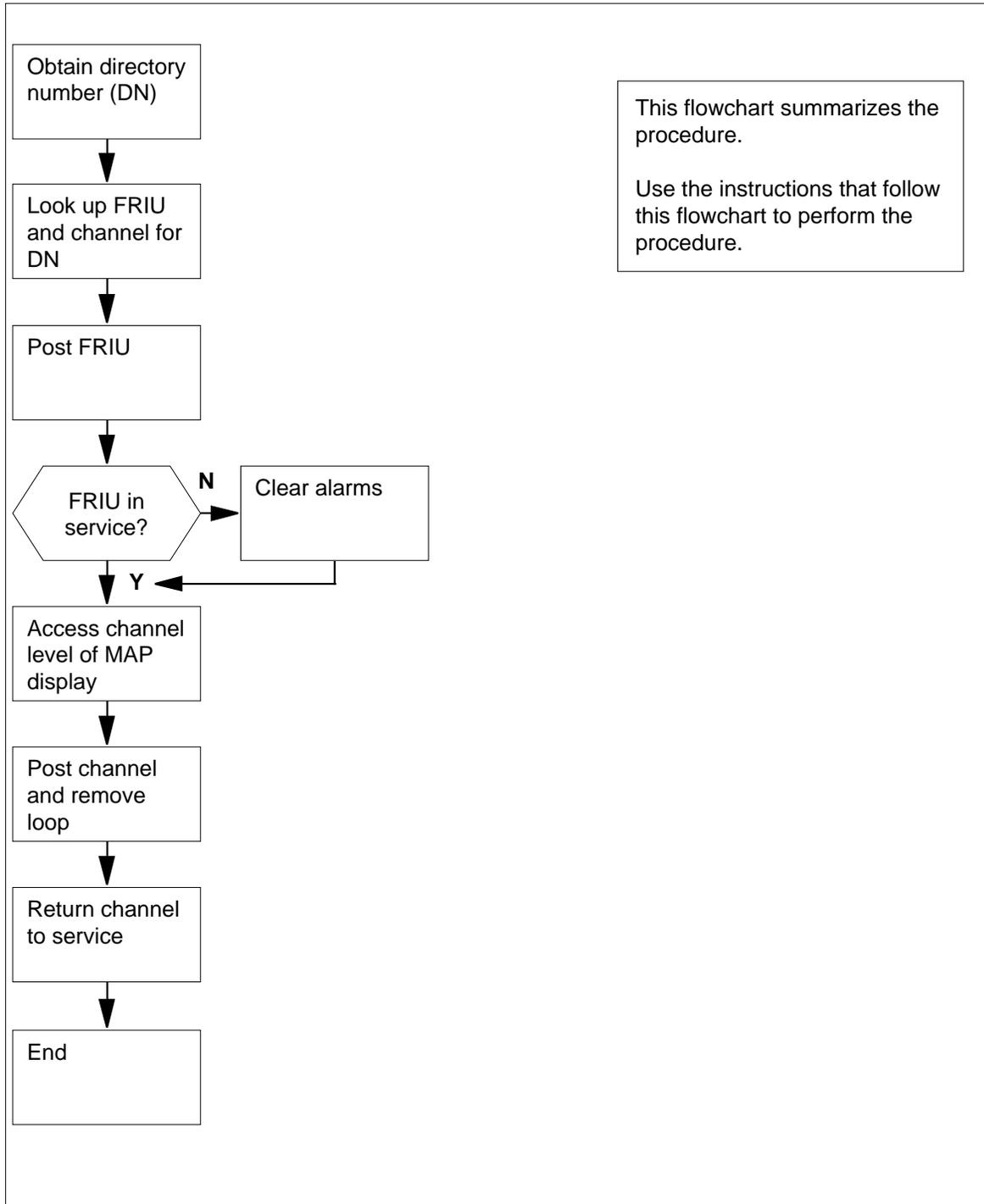
Perform this procedure after the customer completes tests on the carrier.

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.

Removing a loop after a channel remote loopback test (continued)

Summary of Removing a loop after a channel remote loopback test



Removing a loop after a channel remote loopback test (continued)

Removing a loop after a channel remote loopback test

At your current location

- 1 Obtain the directory number (DN) from the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display, type
>PVDNCI
and press the Enter key.
Response:

PVDNCI :

- 3 To identify the agent ID that associates with the DN that you obtained from the customer, type
>FRSDISP DN NO dir_no
and press the Enter key.
where
dir_no
is the DN supplied by the customer

Response:

PVDNCI :

DN 6132263770 belongs to FRS Agent 1

Note: The agent ID appears at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type
FRSDISP AGENT ID agent_no
and press the Enter key.
where
agent_no
is the agent ID that you obtained in step 4

Response:

```
AGENT DN      NP   SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel assigned to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

- 5 To return to the CI level of the MAP display, type
>QUIT
and press the Enter key.

Removing a loop after a channel remote loopback test (continued)

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

>MAPCI;MTC;PM

and press the Enter key.

Response:

```

                SysB   ManB   OffL   CBsy   ISTb   InSv
PM              2     0     0     0     0     70
    
```

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key.

where

friu_no

is the number of the FRIU that you obtained at step 4

Response:

```

FRIU   121 InSv      Rsvd
    
```

If the state of the FRIU

Do

is InSv or ISTb

step 9

is other than listed here

step 8

8 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

9 To access the Carrier level of the MAP display, type

>CARR

and press the Enter key.

10 To access the Channel level of the MAP display, type

>CHAN

and press the Enter key.

11 To post the channel, type

>POST chan_no

and press the Enter key.

where

chan_no

is the number of the channel

12 To remove the FRIU from loopback mode, type

>LOOP CLEAR

and press the Enter key.

Note: The system sets the channel state to manually busy in response to this command.

Removing a loop after a channel remote loopback test (end)

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

If the state of the channel	Do
is InSv	step 16
is other than listed here	step 14

- 14** Perform the correct FRIU alarm clearing procedure to clear any FRIU alarms. Complete the procedure and return to this point.
- 15** Go to step 17.
- 16** To return to the PM level of the MAP display, type
>**QUIT 2**
and press the Enter key.
- 17** The procedure is complete.

Removing MP position from service (integrated)

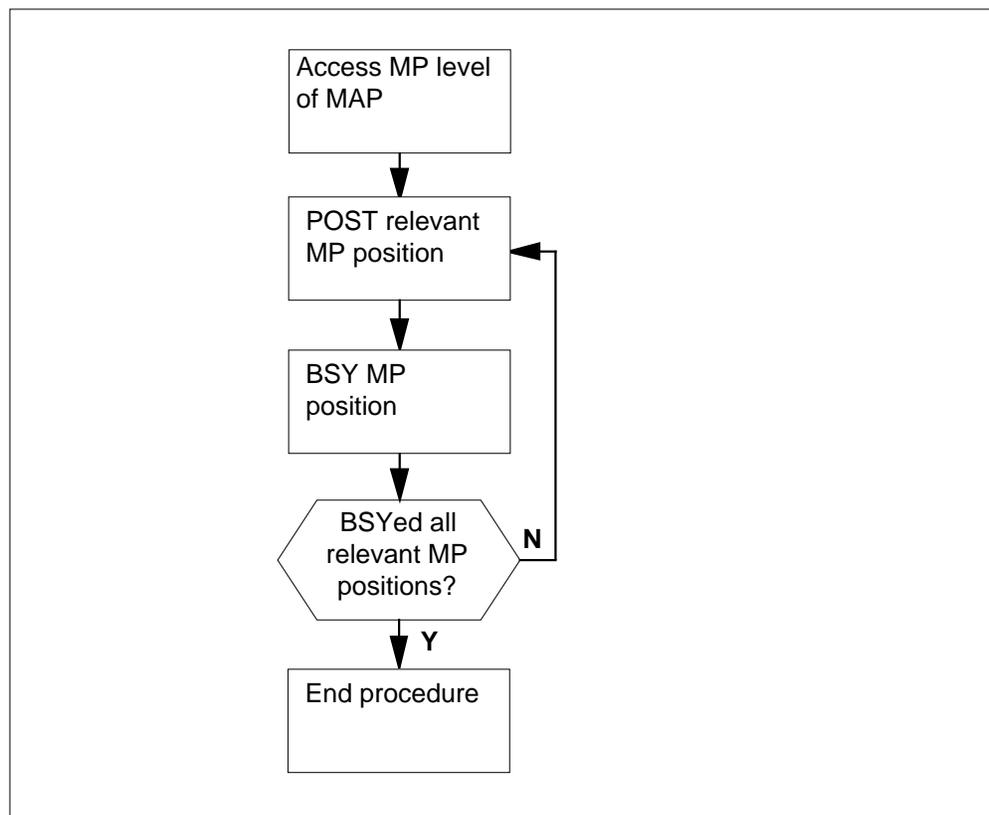
Application

Use this procedure to remove integrated Traffic Operator Position System (TOPS) Multipurpose (MP) positions from service.

Action

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

Summary of How to remove MP position from service (integrated)



How to remove MP position from service (integrated)

At your Current Location

- 1 Proceed if a step in a maintenance procedure directs you to this procedure. If you use this procedure separately, equipment damage or service interruption can occur.

Removing MP position from service (integrated) (continued)

At the MAP display:

- 2** To access the MP level, type

>MAPCI ;MTC ;PM

and press the Enter key.

>POST TPC *x* ;MP

and press the Enter key.

where

x

is the TPC number.

- 3** To post the MP position that applies, type

>POST P *n*

and press the Enter key.

where

n

is the MP position number 0, 1, 2, or 3.

Example of a MAP display response:

CM	MS	IOD	Net	PM	CCS	LNS	Trks	Ext	EIO
.
MP		SysB	ManB	OffL	CBsy	ISTb	InSv		
0	Quit	PM 0	0	10	0	0	130		
2	Post_	TPC 0	0	0	0	0	4		
3									
4		TPC 0	InSv						
5	Trnsl								
6	Tst	Status	VTB	SB	MB	PMB	RES	RTRN	INB
7	Bsy	MP	0	0	1	0	5	0	2
8	RTS								
9		POS 201	TPC 0	MP 1	RES				
10		Size of Post set:		1					
11	Disp_								
12	Next								
13	FRls								
14	QueryMP								
15									
16									
17									
18									

MP position number
and status

- 4** To busy the MP position, type

>BSY

and press the Enter key.

Example of a MAP display response:

Removing MP position from service (integrated) (end)

```

CM      MS      IOD      Net      PM      CCS      LNS      Trks      Ext      EIO
.      .      .      .      .      .      .      .      .      .

MP
0  Quit  PM  0      0      10     0      0      130
2  Post_ TPC 0      0      0      0      0      4
3
4
5      Trnsl
6      Tst      Status  VTB  SB  MB  PMB  RES  RTRN  INB
7  Bsy      MP      0  0  1  0  5  0  2
8  RTS
9
10     POS  201  TPC  0  MP  1  MB
11     Size of Post set:      1
12
13     Disp_
14     Next
15     FRls
16     QueryMP
17
18
  
```

MP position number
and status

5 Determine if removal from service for MP positions that apply occurs.

If removal from service of MP positions that apply	Do
occurs	step 6
does not occur	step 3

6 The procedure is complete. Return to the main procedure and continue as the procedure directs.

Removing MP position from service (standalone)

Application

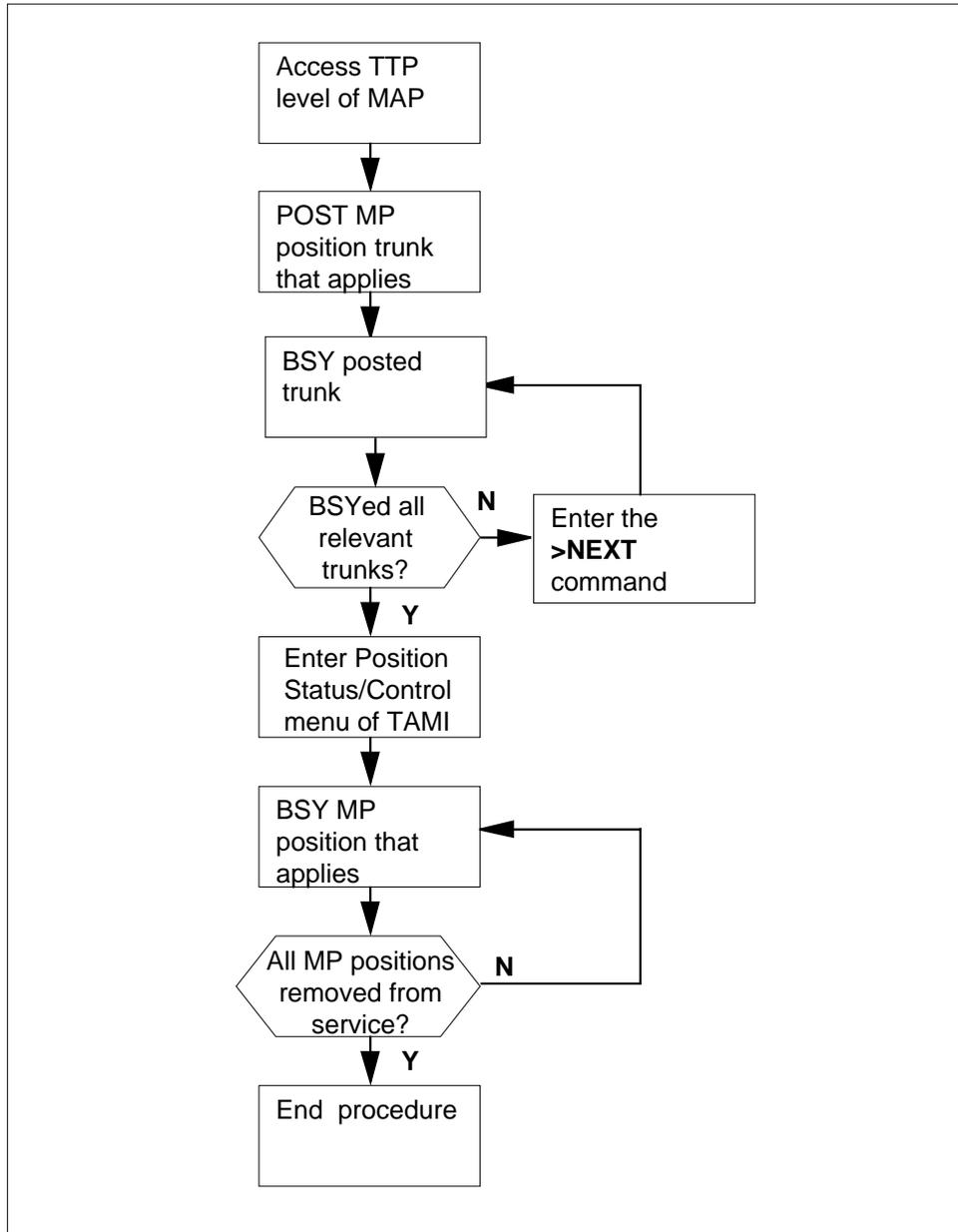
Use this procedure to remove a standalone Traffic Operator Position System (TOPS) Multipurpose (MP) position from service.

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.

Removing MP position from service (standalone) (continued)

Summary of How to remove MP position from service (standalone)



Removing MP position from service (standalone) (continued)

How to remove MP position from service (standalone)

At the MAP display:

1

ATTENTION

Proceed if a step in a maintenance procedure directs you to this procedure. If you use this procedure independently, equipment damage or service interruption can result.

To access the TTP level, type

>MAPCI;MTC;TRKS;TTP

and press the Enter key.

Example of a MAP display response:

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      EIO
.      .      .      .      .      .      .      .      .      .
TTP
0 Quit_  POST      DELQ      BUSYQ      DIG
2 Post_  TTP 16
3 Seize_ CKT TYPE  PM NO      COM LANG  STA   S R DOT TE  RESULT
4        DESK      TMS 0 5 18  TOPSPOS  221 STATE RES
5 Bsy_
6 RTS_
7 Tst_
8
9 CktInfo
10 CktLoc
11 Hold
12 Next_
13 Rls_
14 Ckt_
15 TrnslVf_
16 StkSdr_
17 Pads_
18 Level_
User ID
    
```

2 To post the MP position trunk that applies, type

>POST G TOPSPOS n

and press the Enter key.

where

n

is the MP position number 0, 1, 2, or 3.

3 To busy the posted trunk, type

>BSY

and press the Enter key.

Removing MP position from service (standalone) (continued)

Example of a MAP display response:

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      EIO
.      .      .      .      .      .      .      .      .      .
TTP
0 Quit_  POST  14  DELQ      BUSYQ      DIG
2 Post_  TTP   6-024
3 Seize_ CKT TYPE  PM NO.      COM LANG  STA  S R DOT TE RESULT
4        DESK   TM8  2 16  TOPSPOS  200  IDL
5 Bsy_
6 RTS_
7 Tst_
8
9 CktInfo
10 CktLoc
11 Hold
12 Next_
13 Rls_
14 Ckt_
15 TrnslVf_
16 StkSdr_
17 Pads_
18 Level_
User ID
    
```

- 4 Refer to step 3 to determine if all trunks that apply are busy from the MAP.

If all trunks that apply	Do
are busy	step 6
are not busy	step 5

- 5 To post the next trunk, type
>NEXT
 and press the Enter key. Return to step 3.

At the TAMI:

- 6 To access the Position Status/Control menu from the TAMI main menu, type
>3
 and press the Enter key.
TAMI response:

Removing MP position from service (standalone) (continued)

POSITION STATUS/CONTROL

1. Bsy

2. RTS

3. OffL

4. RTS ALL POSITIONS

POSITION NUMBER	STATUS	CARD PRESENT
0.	InSv	YES
1.	InSv	YES
2.	InSv	YES
3.	InSv	YES

MAKE CHOICE :

- 7** To busy the MP position that apply, use the following procedure:
- a** Type
>1
and press the Enter key.
where
1
is busy.
 - b** Type
>n
and press the Enter key.
where
n
is the MP position number 0, 1, 2, or 3.
 - c** Type
>y
and press the Enter key.
where
y
is yes, the user busied the position at the MAP.

Removing MP position from service (standalone) (end)

- 8** Determine if removal from service for all positions that apply occurs from the TAMI.
- | If removal of MP positions that apply | Do |
|--|-----------|
| occurs | step 9 |
| does not occur | step 7 |
- 9** To return to the TAMI main menu, press the PF3 key.
- 10** The procedure is complete. Return to the main procedure and continue as the procedure directs.

Replacing an air filter element PM UEN

Application

Use this procedure to change the air filter element in an NT4K15CA air filter unit in a Universal Edge 9000 (UEN) frame..

Interval

Perform this procedure every 6 months or sooner, if required.

Common procedures

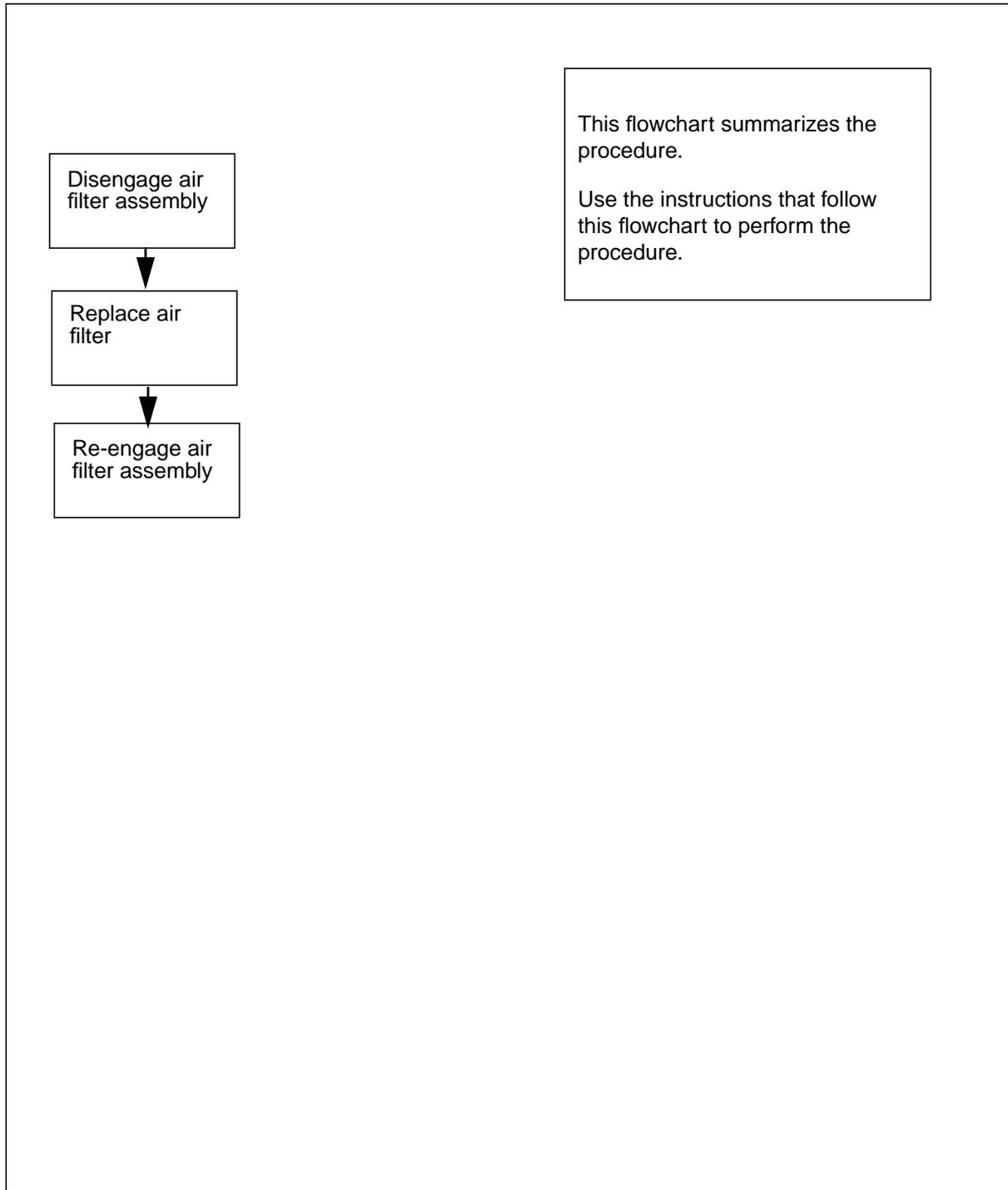
This procedure does not refer to any common procedures.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to perform the routine maintenance procedure.

Replacing an air filter element PM UEN (continued)

Summary of Replacing an NT4K17CA air filter



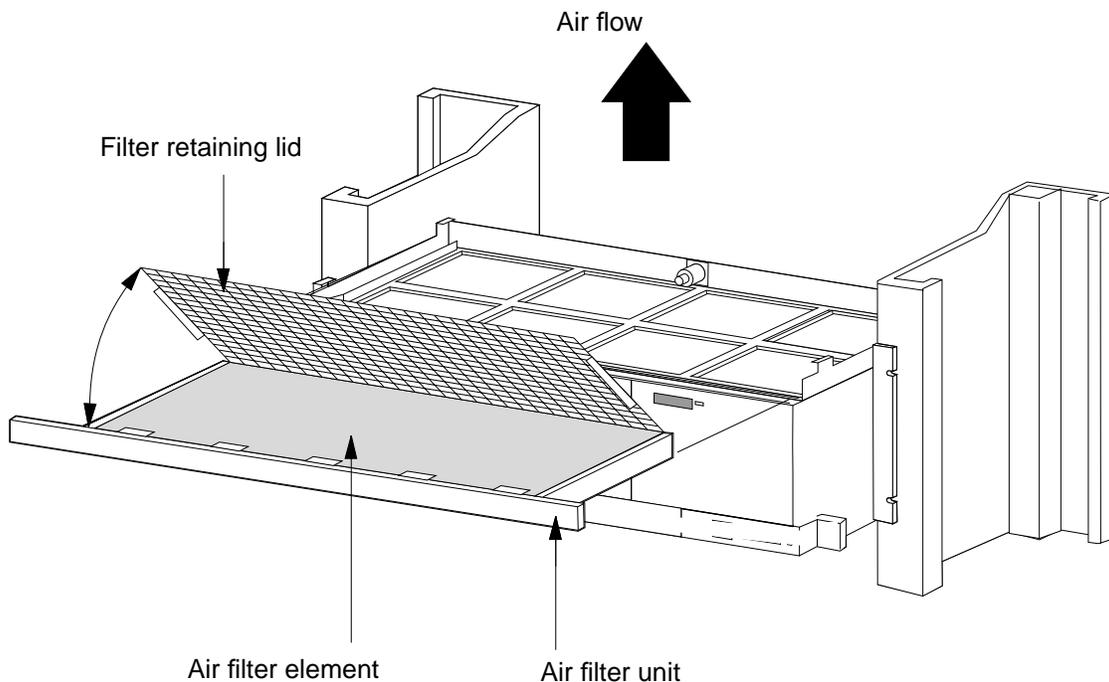
Replacing an air filter element PM UEN (end)

Replacing an NT4K15CA air filter

At the equipment frame

- 1 Disengage the air filter from its locking mechanism by quickly pushing and releasing the front face of the air filter unit.
- 2 Remove the air filter by pulling it outwards.
- 3 Lift the filter retaining lid, remove the old filter element and replace it with a new filter element.
Note: Make sure the new air filter element is positioned correctly for the air flow (in accordance with filter manufacturers' instructions).
- 4 Close the filter retaining lid, and reinsert the air filter unit into the shelf until it locks into place. Refer to the following figure that shows the filter element in the air filter unit.

Air filter unit and element



- 5 This procedure is complete.

Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet

Application

Use this procedure to replace a cooling unit filter in a 0.71-m (28-in.) cabinet. A cooling unit filter removes particles from air drawn into a cabinet by the cooling unit fans.

Interval

Perform this procedure every 42 days (6 weeks).

Common procedures

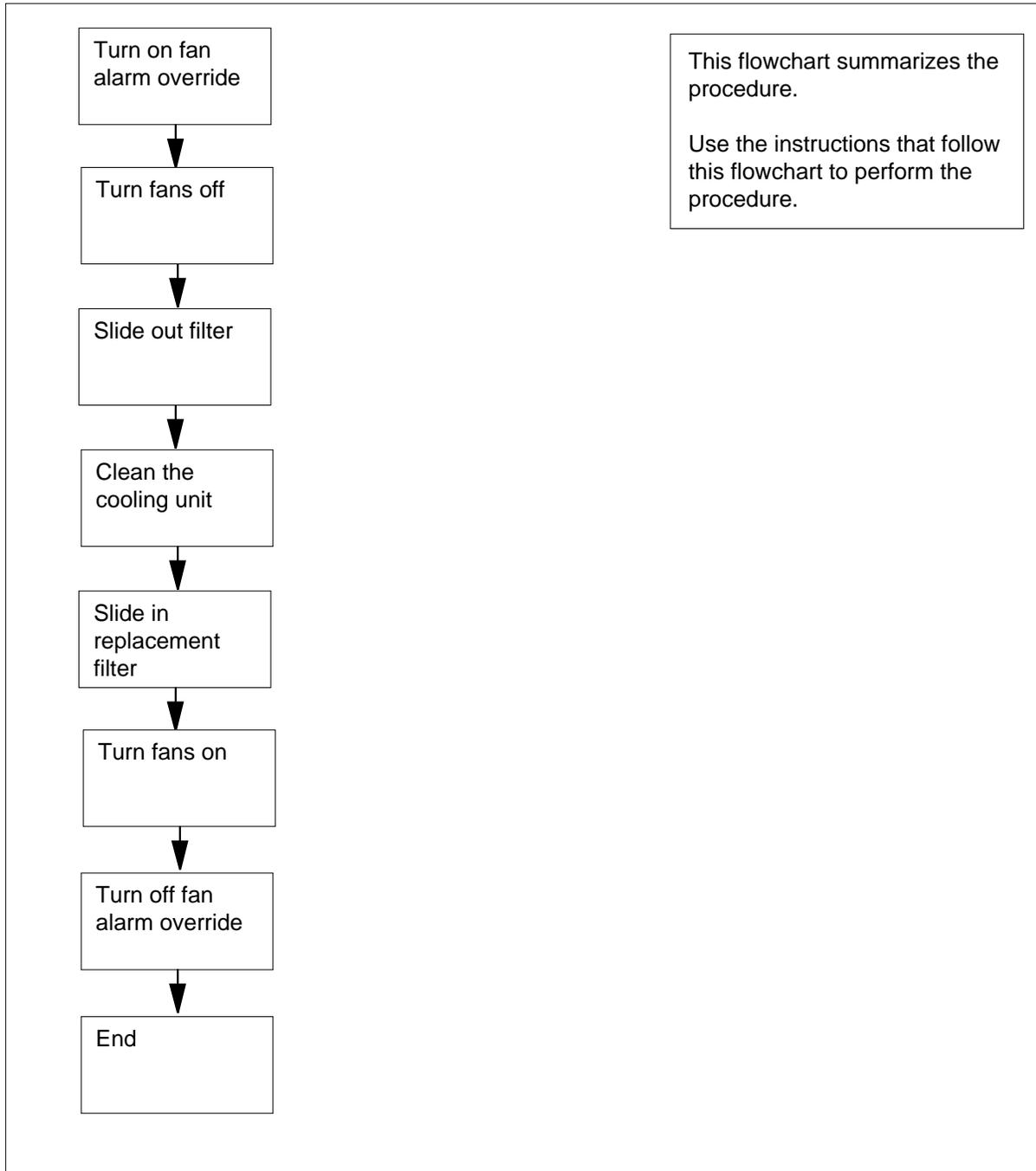
There are no common procedures.

Action

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

Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet (continued)

Summary of Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet



Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet (continued)

<Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet***At the front of the cabinet***

- 1 Toggle the fan alarm override switch to the ON position. You can locate the fan alarm override switch at the top of the cabinet.

At the rear of the cabinet**2****DANGER****Loss of cabinet cooling**

If you disconnect the fans for an extended period of time, the equipment in the cabinet can overheat.

Open the cabinet doors.

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

Contact with cabinet wiring that is not shielded can result in electric shock. Do not touch the cabinet wiring.

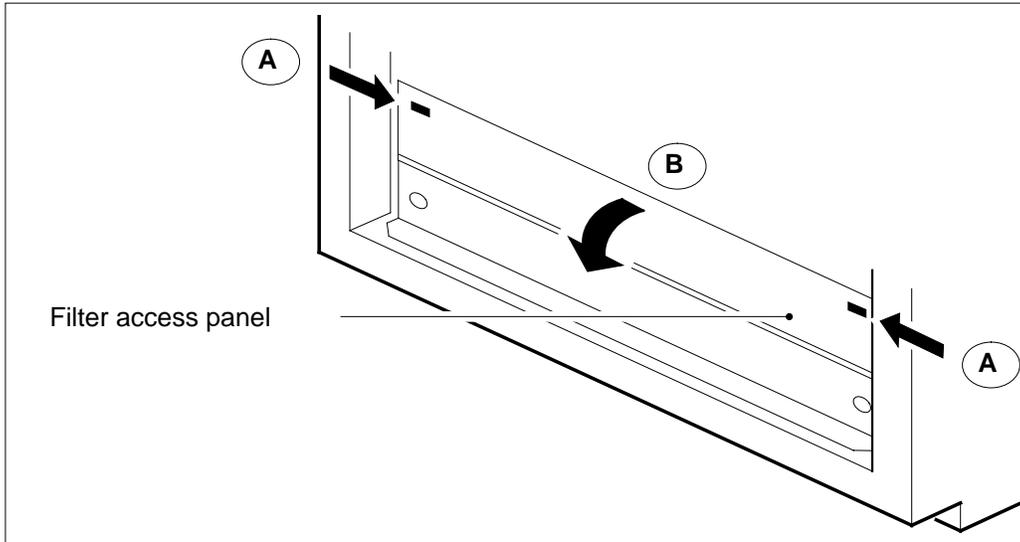
Perform the following actions to turn off the fans of the cooling unit. Find the 10-pin electrical connector for the fan tray at the bottom of the cabinet. Disconnect the 10-pin electrical connector of the fan tray from the corresponding 10-pin connector of the cabinet.

At the front of the cabinet

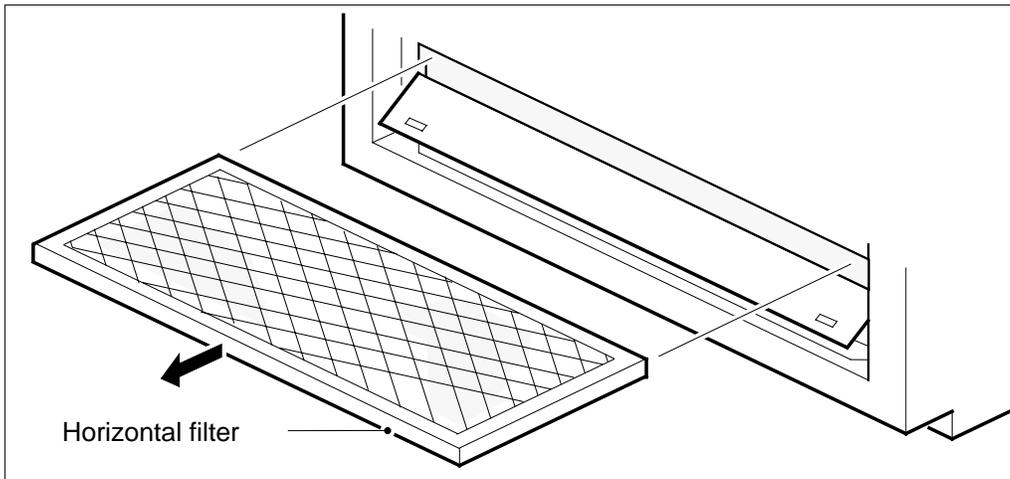
- 4 Open the filter access panel.

To open the filter access panel, slide the catches toward each other (A) and swing the panel down (B). You can find the filter access panel at the bottom of the cabinet

Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet (continued)



- 5 Slide the filter out of the cabinet.



- 6 Clean the cooling unit.
7 Slide the replacement filter back into the cabinet.
8 Close the filter access panel.

At the rear of the cabinet

- 9 Reconnect the 10-pin electrical connector of the fan tray.
10 Close the cabinet doors.

At the front of the cabinet

- 11 Toggle the fan alarm override switch to OFF.
12 Close the cabinet doors.

Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet (end)

- 13 The procedure is complete.
- 14 Open the cabinet doors.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet

Application

Use this procedure to replace air filters with the following common product codes (CPC), in 1.07-m (42-in.) cabinets:

- A0351174
- A0352802
- A0352805
- A0377837

Three types of air filters are present in 1.07-m (42-in.) cabinets with product engineering code (PEC) NT9X0101, NT9X0104, or NT9X0113:

- A0351174, which Nortel mounts horizontally at the top of the cooling unit

Note: A filter assembly (CPC B0223055) encloses the filter.

- A0352802, which Nortel mounts vertically at the front of the cooling unit
- A0352805, which Nortel mounts vertically at the back of the cooling unit

A single air filter is present in 1.07-m (42-in.) cabinets with PEC NT9X95AA or NT9X95BA. This filter is A0377837, which Nortel mounts horizontally at the bottom of the the cooling unit.

Interval

replace the filters at the following intervals:

- A0351174 - every 6 weeks
- A0352802 and A0352805 - as required

Note: To clean filters with CPC A0352802 and A0352805, you can wash the filters or remove the dust with compressed air.

- A0377837 - every 6 weeks

Common procedures

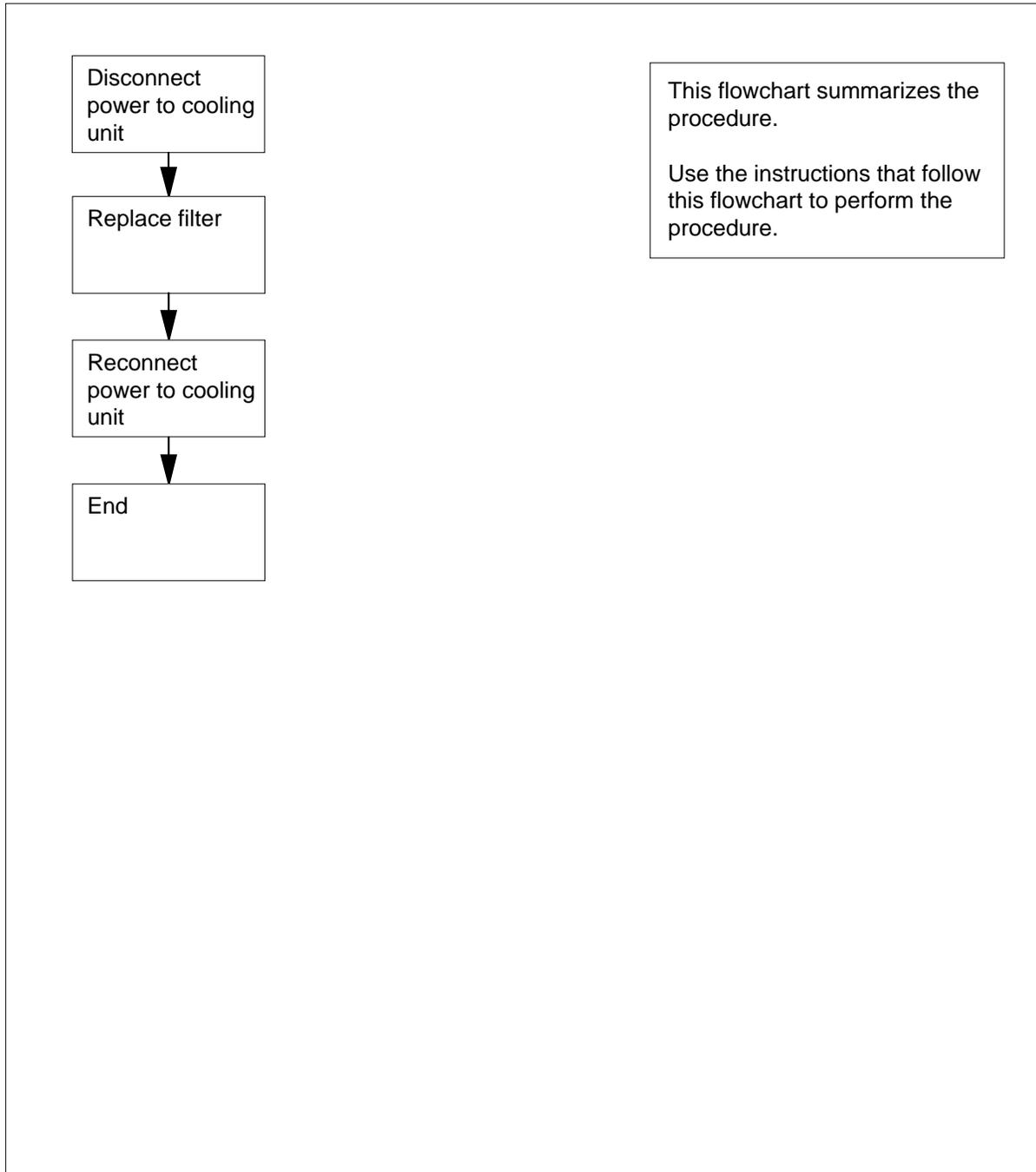
There are no common procedures.

Action

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

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

Summary of Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet



Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet

At your current location

1



DANGER

Risk of electrocution

Do not touch the cabinet wiring. Contact with cabinet wiring that is not shielded can result in electric shock.

Obtain a replacement filter.

At the front of the cabinet

2 Record the cabinet number.

Note: The cabinet number, for example D00, is on the front of the cabinet above the doors.

3 Determine if power to the cooling unit connects through a power distribution center (PDC) or a cabinetized PDC (CPDC). Determine the connection from office records or from operating company personnel.

If power to the cooling unit	Do
connects through a PDC	step 4
connects through a CPDC	step 7

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

At the front of the PDC

4

**DANGER****Risk of injury**

If you remove a fuse cartridge, the removal can cause electrical discharge. Wear eye protection when you remove cooling unit fuse cartridges.

**DANGER****Possible equipment damage**

Do not remove power to the cooling unit for longer than 30 min. The extended removal can cause equipment to overheat and become damaged.

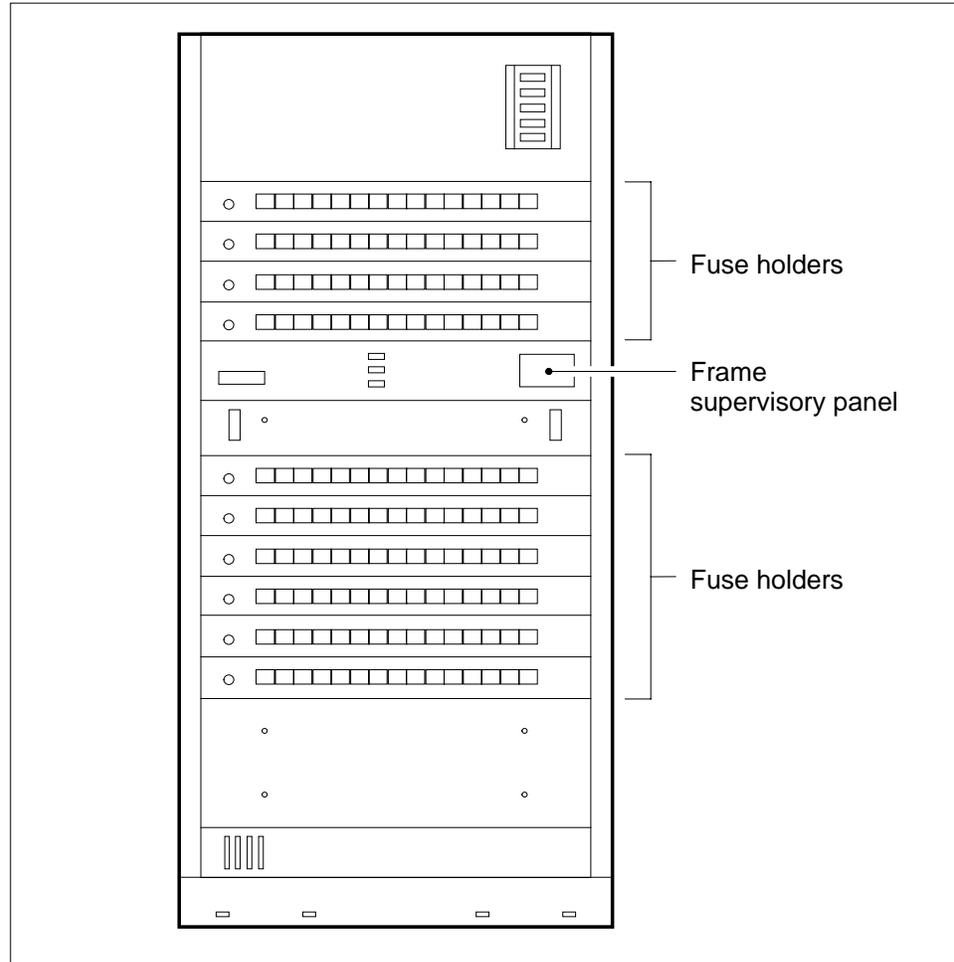
**CAUTION****Possible loss of service**

Before you remove the fuses, make sure that the fuses you remove are the cooling unit fuses. If you remove the wrong fuses, you can disconnect power to a critical hardware component and cause loss of service.

Locate the cooling unit fuse.

Note: You can find the cooling unit fuse cartridges on the front panel of the PDC. Two types of cooling unit fuses are present: one for the side A power feed and one for the side B power feed. Each cooling unit fuse cartridge shows the cabinet number (that you recorded in step 2) above the fuse cartridge. Each cooling unit fuse also shows the letters SN CU (SuperNode cooling unit) below the fuse cartridge.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

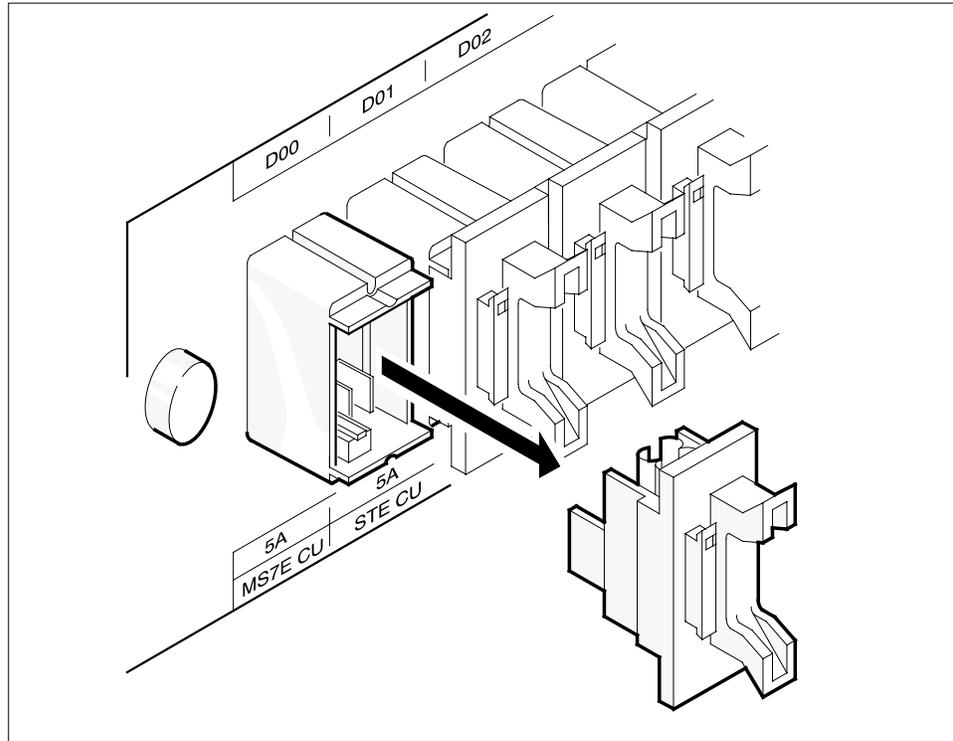


5 Remove the cooling unit fuses.

To remove the cooling unit fuses, pull the fuse cartridges out of the front panel of the PDC.

Note: When you remove the fuse cartridges, the cooling unit loses power. When the cooling unit loses power, the fan failure light is lit. You can locate the fan failure light at the top of the cabinet.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)



6 Go to step 9.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

At the front of the CPDC

7



DANGER

Risk of injury

If you throw a breaker, you can cause an electrical discharge to occur. Wear eye protection when you throw a cooling unit breaker.



WARNING

Possible equipment damage

Do not remove power to the cooling unit for longer than 30 min. Extended removal can cause equipment to overheat and become defective.



CAUTION

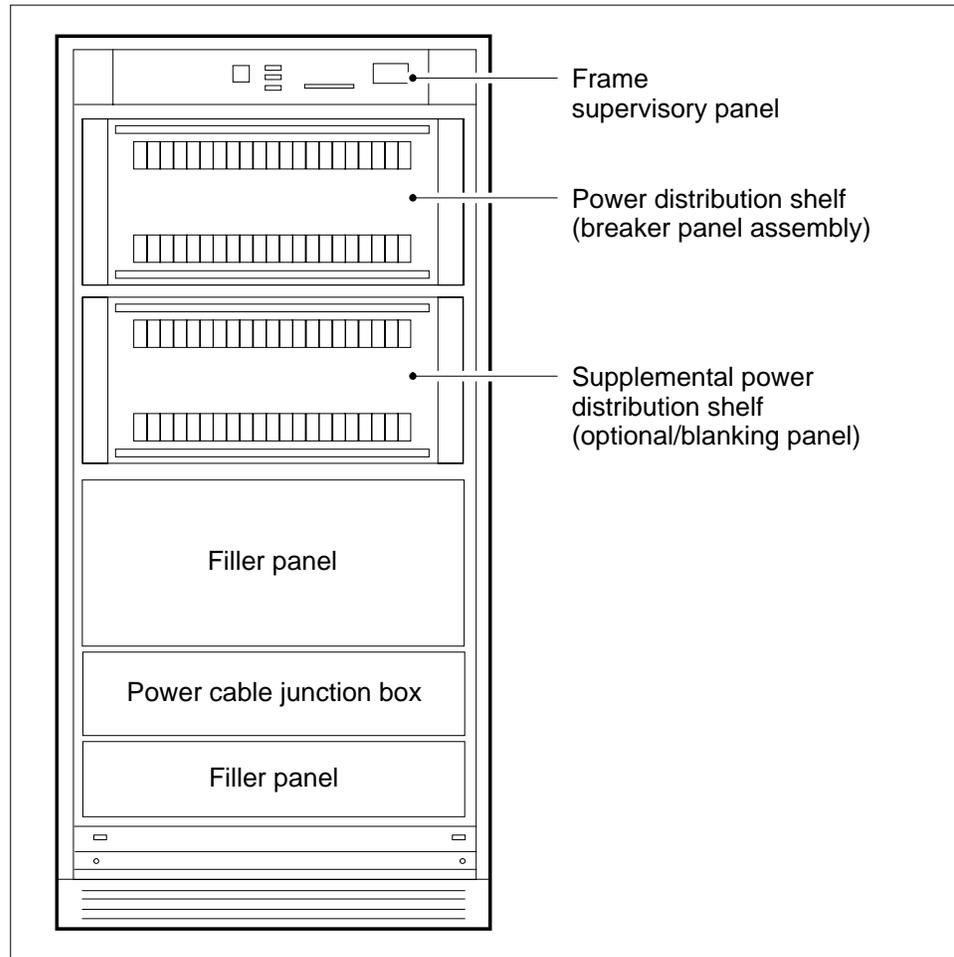
Possible loss of service

Before you open the breakers, make sure that you disconnect power from the cooling unit. If you open the wrong breakers, you can disconnect power to a critical hardware component and cause loss of service.

Find the cooling unit circuit breakers.

Note: You can find the cooling unit circuit breakers on the front panel of the CPDC. Two cooling unit circuit breakers are present. One breaker is for the side A power feed. The other breaker is for the side B power feed. Each cooling circuit breaker has the cabinet number (that you recorded in step 2) above the breaker. Each cooling circuit breaker also has the letters SN CU (SuperNode cooling unit) below the breaker.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)



- 8** Open the cooling unit circuit breakers.

Note: When you open the breakers, the cooling unit loses power. When the cooling unit loses power, the fan failure light is lit. You can find the fan failure light at the top of the cabinet.

At the front of the cabinet

- 9** Open the cabinet doors.
10 The next action depends on the type of filter that you replace.

If you	Do
replace a filter with CPC A0351174	step 11
replace a filter with CPC A0352802	step 17

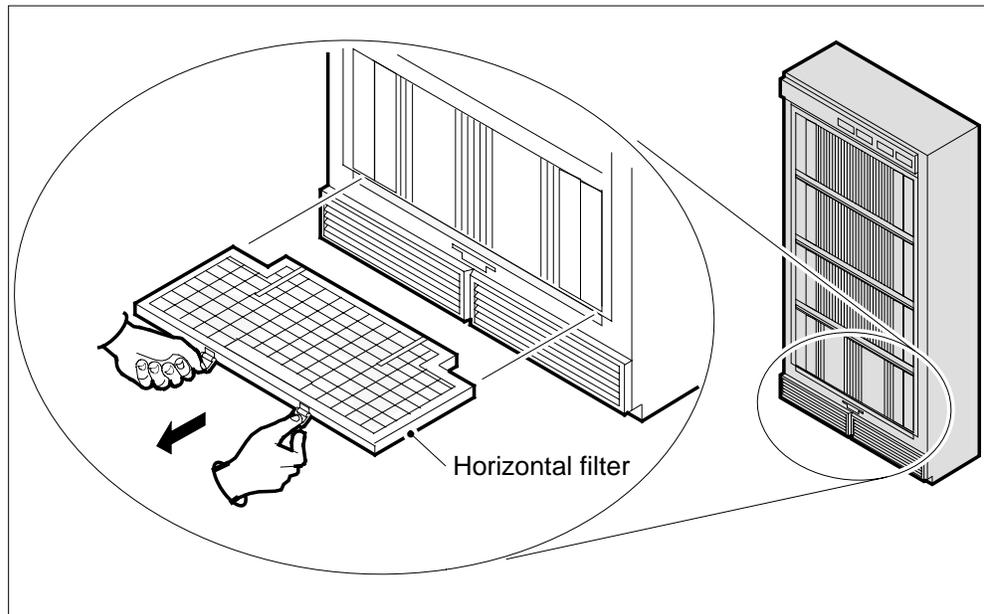
Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

If you	Do
replace a filter with CPC A0352805	step 23
replace a filter with CPC A0377837	step 30

At the front of the cabinet

- 11** Remove the air filter assembly.

To remove the air filter assembly, grasp the handles and pull the assembly out of the cabinet.

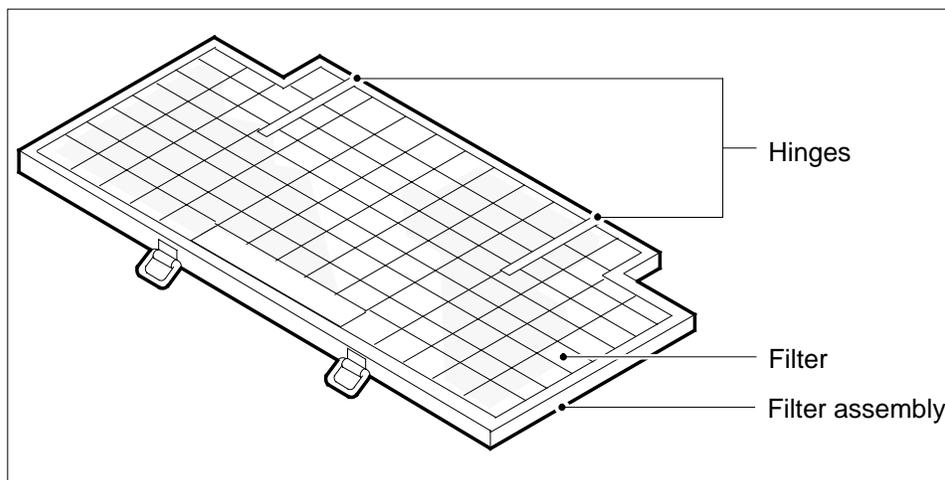


- 12** Open the air filter assembly.

To open the air filter assembly, grasp the wire mesh at the front of the assembly and pull up.

Note: The filter assembly hinges at the back edge. A friction fit holds the assembly closed. The friction fit is between the front edge of the frame and the inside of the panel. The panel is at the front of the assembly.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

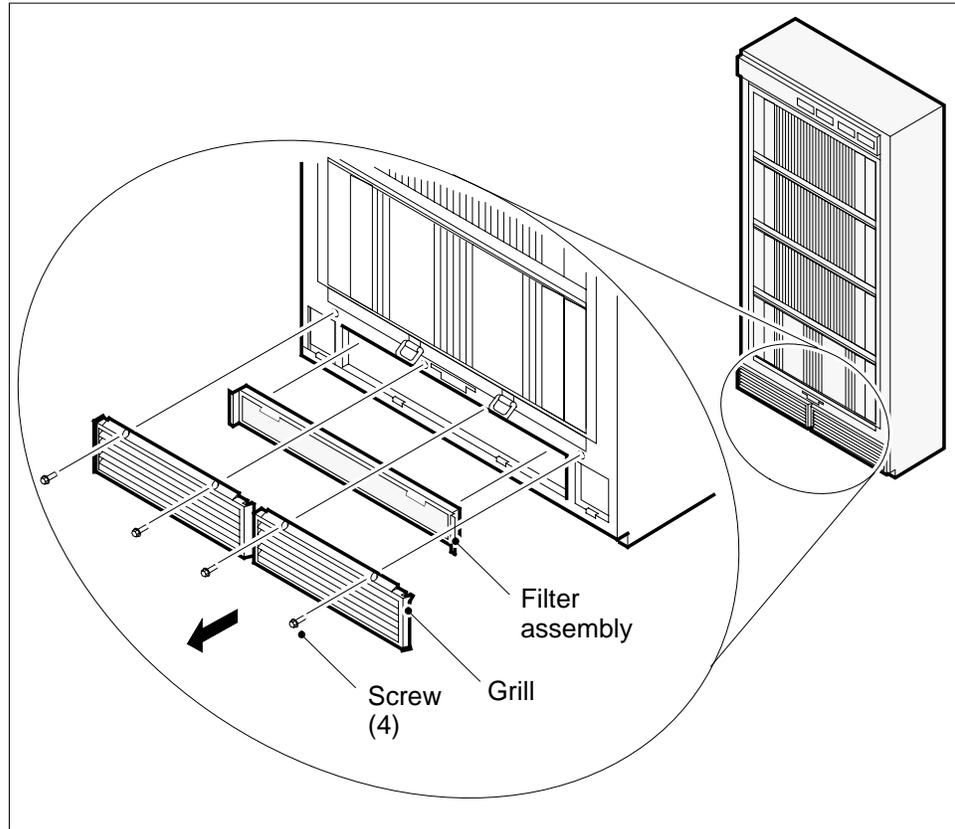


- 13 Remove the filter from the assembly.
- 14 Insert the replacement filter into the assembly.
- 15 Close the filter assembly.
- 16 Insert the filter assembly again.
Go to step 34.

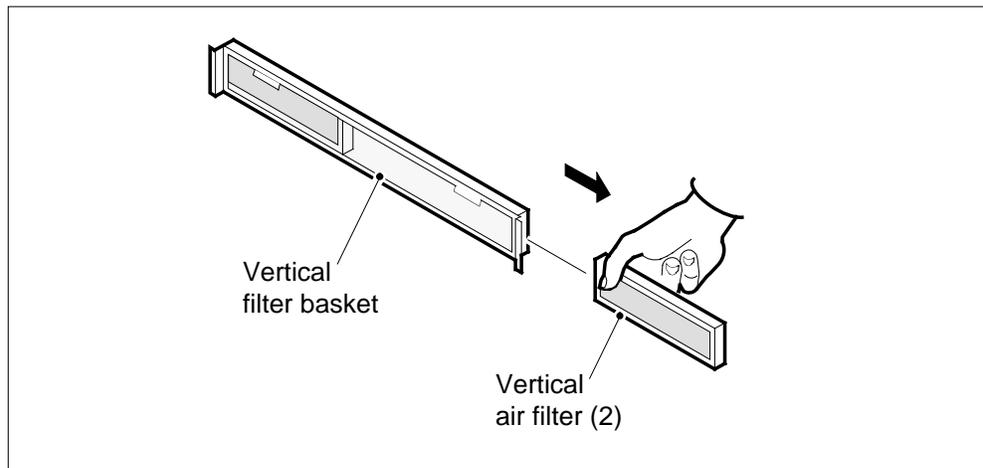
At the front of the cabinet

- 17 Remove the two cooling unit grills.
To remove the two cooling unit grills, remove the screws that hold the grills in place.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)



- 18 Remove the filter assembly.
To remove the filter assembly, pull on the handles.
- 19 Slide the filters out of the filter assembly.



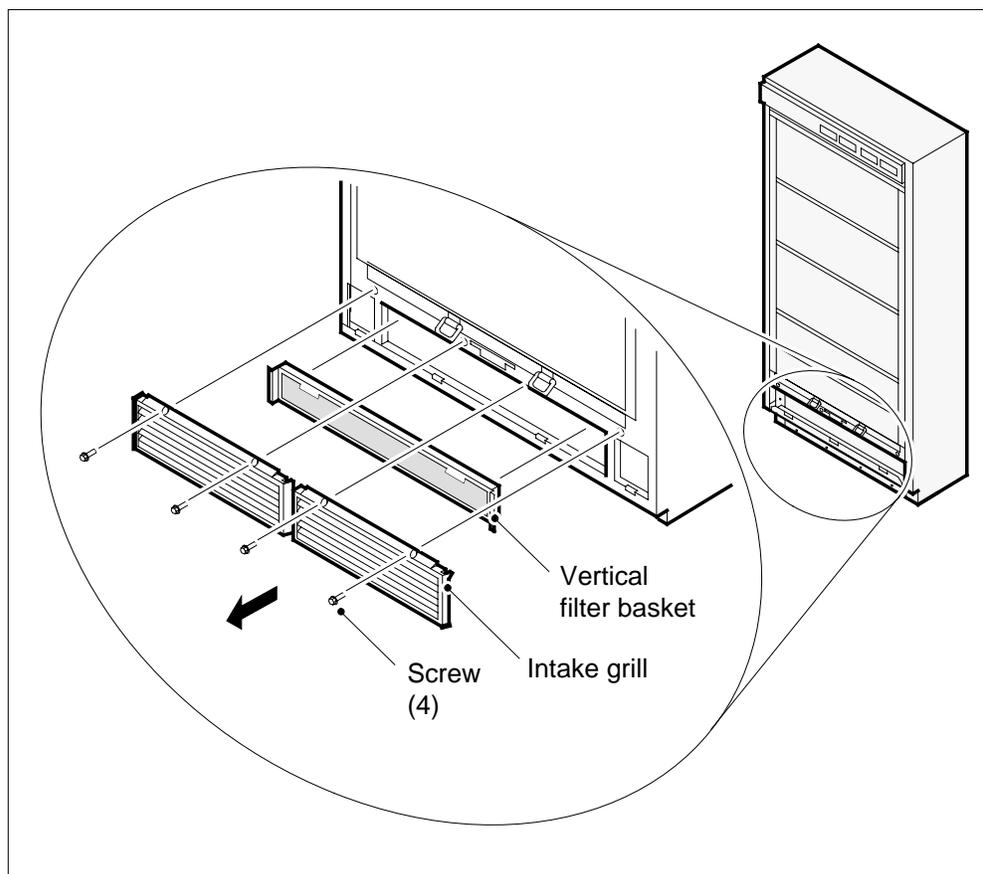
- 20 Slide the replacement filters into the filter assembly.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

- 21 Install the filter assembly again.
- 22 Install the cooling unit grills again.
Go to step 34.

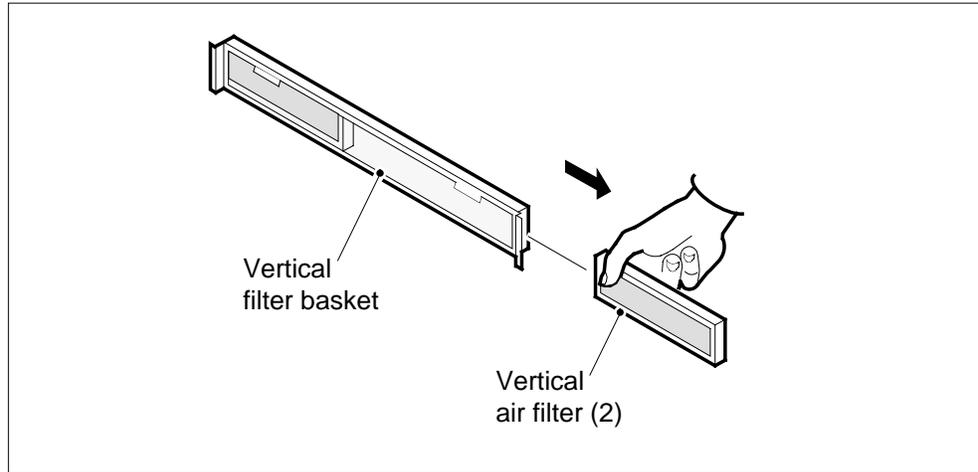
At the back of the cabinet

- 23 Open the cabinet doors.
- 24 Remove the two cooling unit grills.
To remove the two cooling unit grills, remove the screws that hold the grills in place.



- 25 Remove the filter assembly.
To remove the filter assembly, pull on the handles.
- 26 Slide the filters out of the filter assembly.

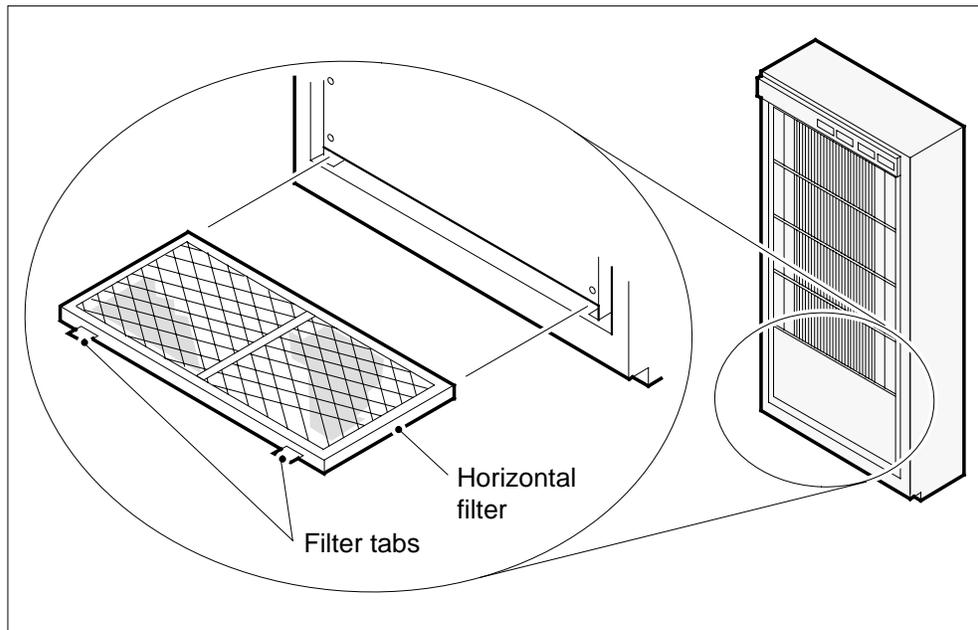
Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)



- 27 Slide the replacement filters into the filter assembly.
- 28 Install the filter assembly again.
- 29 Install the cooling unit grills again.
Go to step 34.

At the front of the cabinet

- 30 Remove the filter.
To remove the filter, pull on the two filter tabs.

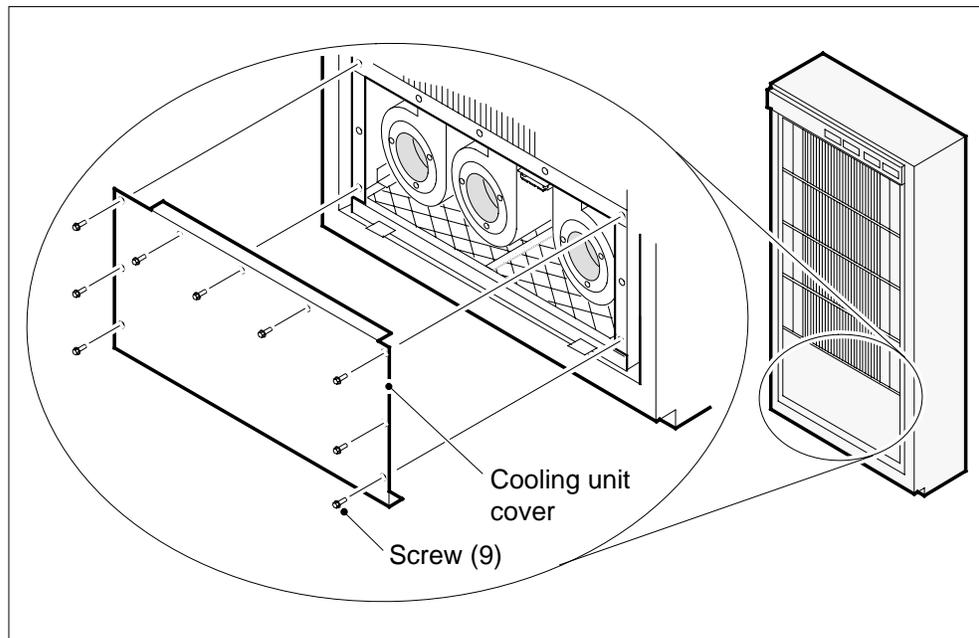


- 31 Remove the cooling unit cover.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (continued)

To remove the cooling unit cover, remove the nine mounting screws in the cover. You can locate the testing unit cover at the bottom of the cabinet.

Note: Do not remove the four bolts that fasten the cooling unit to the cabinet. The procedure *Replacing a cooling unit assembly in Trouble Locating and Clearing Procedures*, shows the location of these screws.



- 32 Remove any dust or particles from the space between the cooling unit and the floor.
- 33 Slide in the replacement filter.
Note: Insert the filter so the arrows on the front point up.
- 34 Determine if power to the cooling unit connects through a PDC or a CPDC.

If power to the cooling unit	Do
connects through a PDC	step 35
connects through a CPDC	step 36

At the front of the PDC

- 35 Insert the cooling unit fuses again.
To insert the cooling unit fuses again, push the fuse cartridges into the front panel of the PDC.
Go to step 37.

Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet (end)

At the front of the CPDC

36



DANGER

Risk of injury

When you close a breaker, you can cause an electrical discharge. Wear eye protection when you close a cooling unit breaker.

Close the cooling unit circuit breakers.

At the front of the cabinet

37 Determine if all the cooling unit fans operate.

Note: If a minimum of one of the cooling unit fans does not operate, the fan failure light is lit.

If	Do
all fans operate	step 38
any fans do not operate	step 40

38 Close the cabinet doors (front and back).

39 Discard any filters that you replaced.

Go to step 41.

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

41 The procedure is complete.

Replacing cooling unit filters

Application

Use this procedure to replace cooling unit filters in frames that use the cooling unit NTRX90AA, NTRX91AA and NTRX92AA. The filter part numbers for replacement are:

- A0346832 for the NTRX90AA (see NTP 297-8991-805)
- A0361371 for the NTRX91AA and NTRX92AA (see NTP 297-8991-805)

Confirm the cooling unit type by reading the label on the back of the unit.

Also use this procedure to replace cooling unit filters in the cooling units of the following types of frames:

- NTMX89FA Cabinetized Remote Switching Center/Line Card Module (CRSC/LCM)
- NTMX89FB Cabinetized Remote Switching Center/Integrated Services Digital Network (CRSC/ISDN)
- NTRX30CA Cabinetized Line Concentrating Equipment (CLCE)
- NTRX30DA Cabinetized Line Module ISDN (CLMI)
- NTRX31AA Cabinetized Power Distribution Cabinet (CPDC)
- NTRX34BA Cabinetized Miscellaneous Equipment (CMIS)
- NTRX89FC Cabinetized Extension Module (CEXT)
- NTMX90AB Global Peripheral Platform (GPP) cabinet

Some of these frames can contain cooling units described in other procedures, found in this document. Refer to:

- Replacing a cooling unit filter in a 0.71-m (28-in.) cabinet
- Replacing a cooling unit filter in a 1.07-m (42-in.) cabinet

Interval

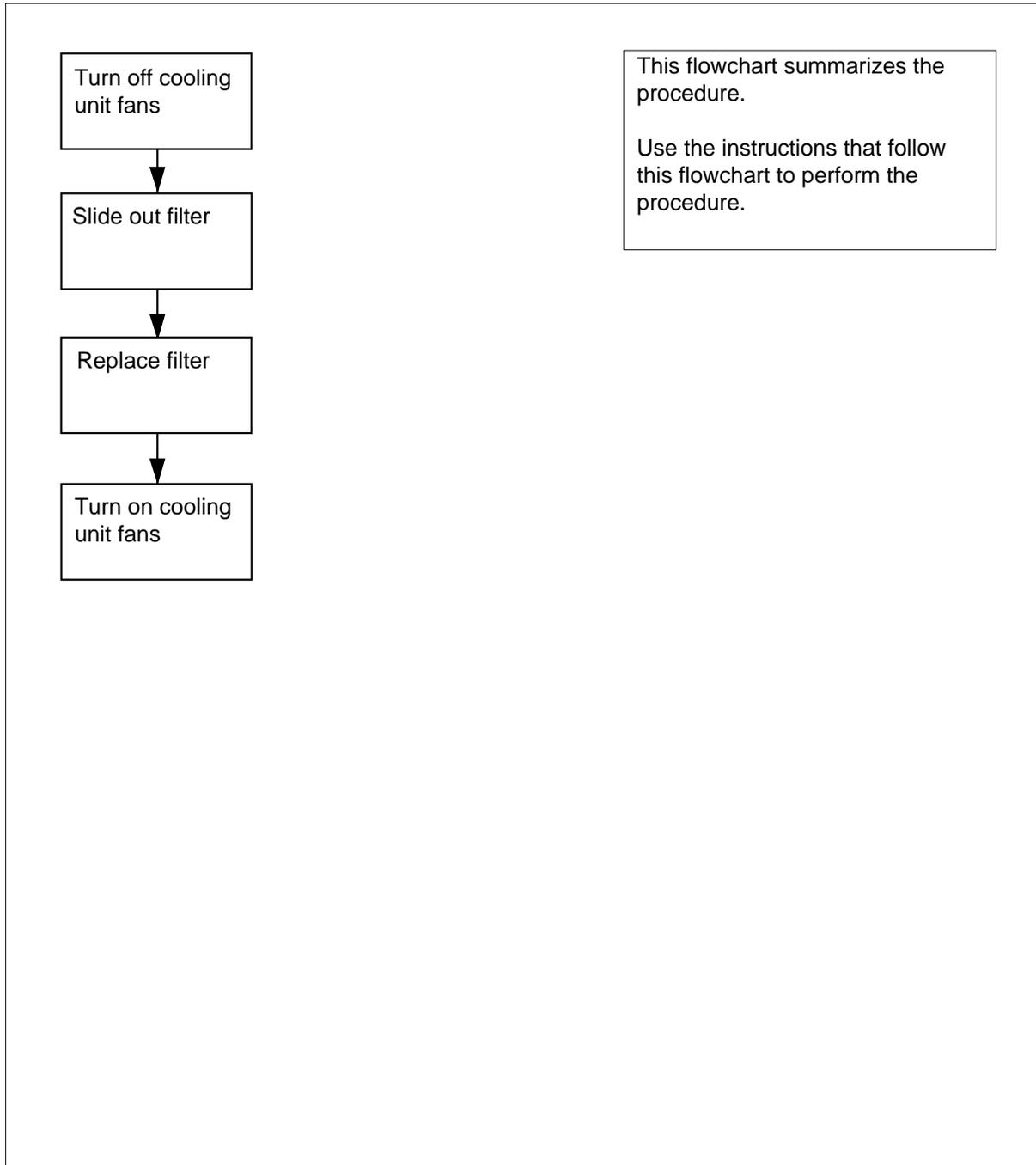
Perform this procedure at three month intervals.

Action

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

Replacing cooling unit filters (continued)

Summary of Replacing a cooling unit filter



Replacing cooling unit filters (continued)

Replacing a cooling unit filter

At the cooling unit

1



WARNING

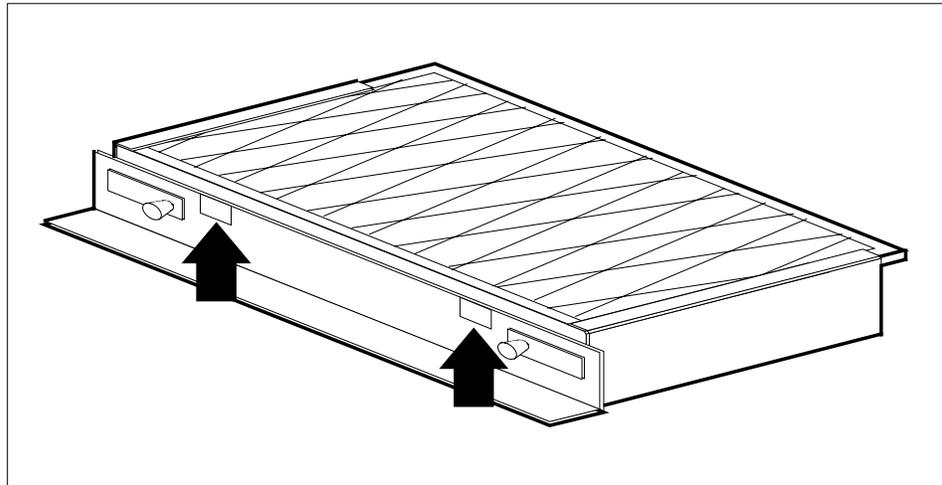
To prevent overheating

Do not leave the cooling unit fans off for longer than 30 min.

To make sure the cooling fans are off, remove the two fuses on the face plate of the modular supervisory panel (MSP). Or, if provided, turn off the fan power switch on the front of the unit (move the switch from 1 to O).

2

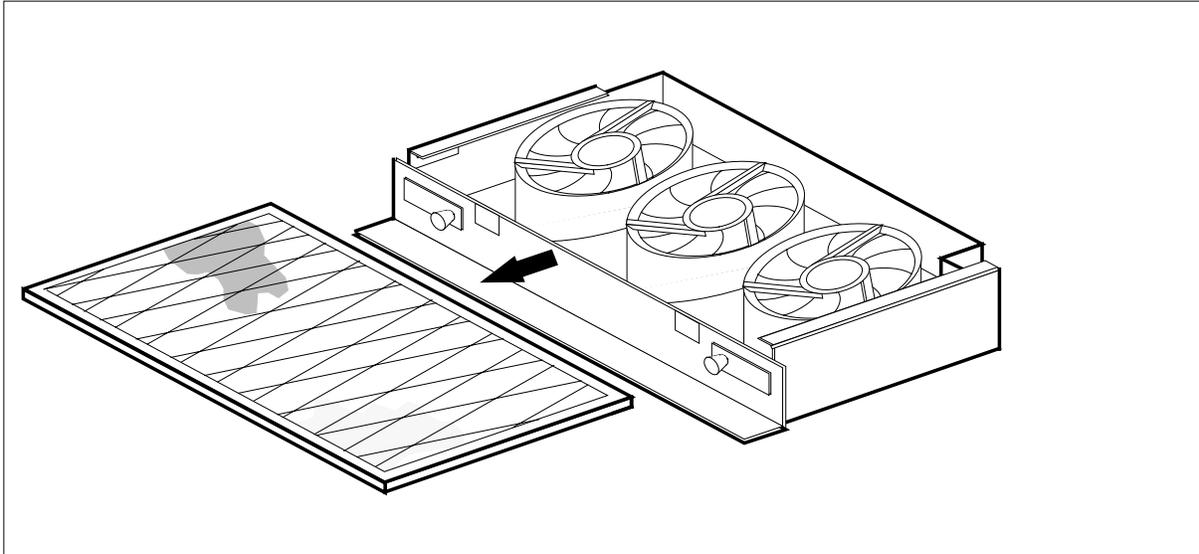
Use the two filter access tabs to hold the filter, pressing on the tab and holding the filter from below.



3

Slide the filter out of the cabinet.

Replacing cooling unit filters (end)



- 4 Replace the filter with the same part number as the filter removed.
- 5 To restart the fans, replace the fuses that you removed in step 1, or return the fan power switch to the ON position.
- 6 The procedure is complete.

Replacing a fan in a 1.07-m (42-in.) cabinet

Application

Use this procedure to replace a fan (AO381714 or AO382103) in a 1.07-m (42-in.) cabinet.

Interval

Perform this procedure if a fan fails. A fan can perform for 8 to 10 years.

Common Procedures

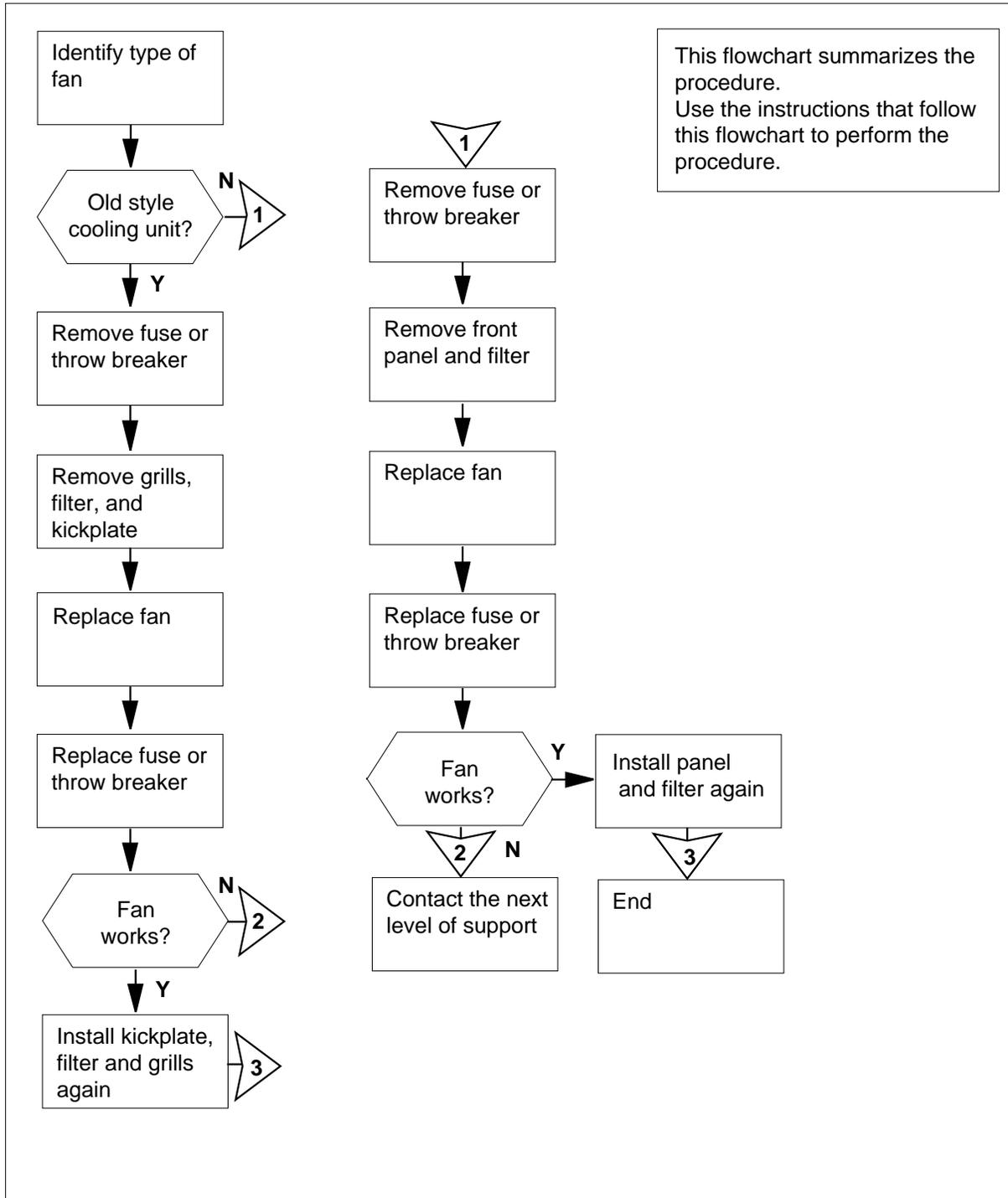
There are no common procedures.

Action

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

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

Summary of Replacing a fan in a 1.07-m (42-in.) cabinet



Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

Replacing a fan in a 1.07-m (42-in.) cabinet

At your current location

1



DANGER
Loss of cabinet cooling
 If you leave the fans disconnected for an extended period of time, the equipment in the cabinet can overheat.

Examine the diagrams of the two 1.07-m. (42-in) DMS cabinet cooling units in steps 8 and 29.

If the cabinet	Do
you are replacing the fan in is like the cabinet illustrated in step 8	step 2
you are replacing the fan in is like the cabinet illustrated in step 29	step 23

2 Identify the type of power distribution center the 1.07-m (42-in.) cabinet connects to.

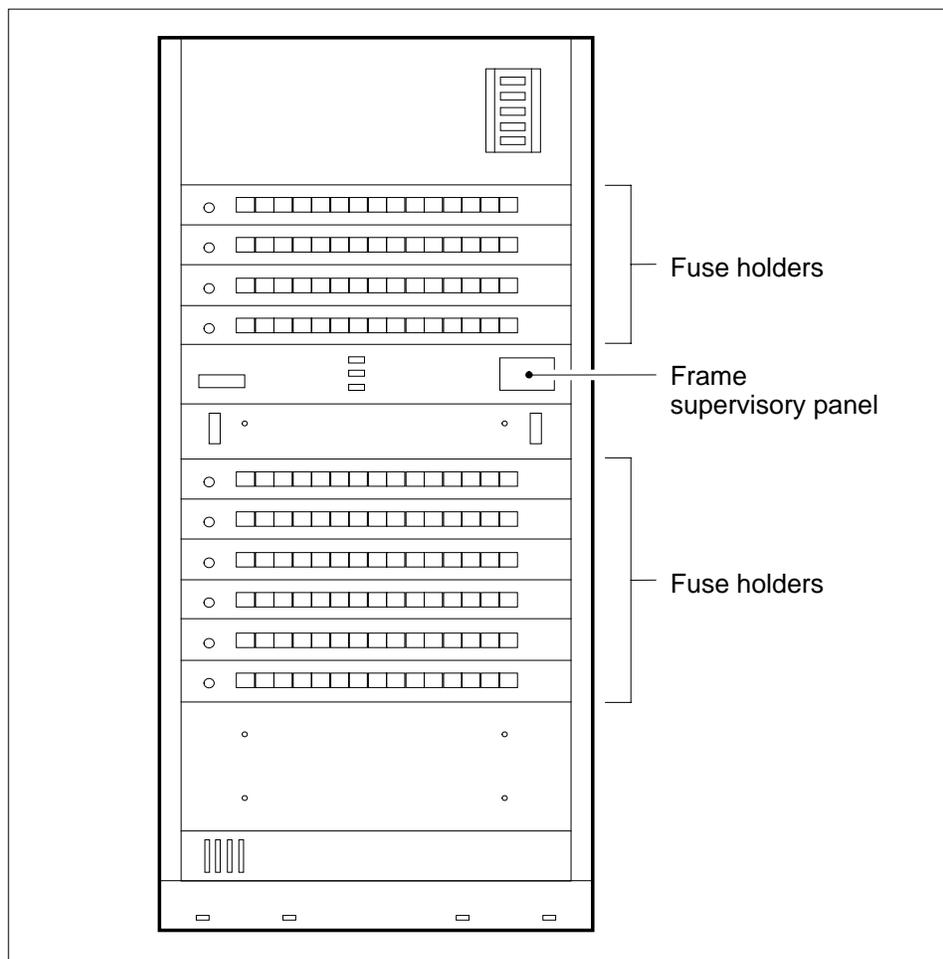
If the cabinet	Do
connects to PDC	step 3
connects to CPDC	step 6

At the front of the PDC

3 Find the cooling unit fuse.

Note: You can find the cooling unit fuse holder on the front panel of the PDC. The cooling unit fuse holder indicates the cabinet number (that you recorded in step 2) above the fuse holder. The cooling unit fuse holder also indicates the cooling unit number below the fuse holder.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



4



DANGER

Risk of injury

Fuse holder removal can cause an electrical discharge. Wear eye protection when you remove cooling unit fuse holders.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

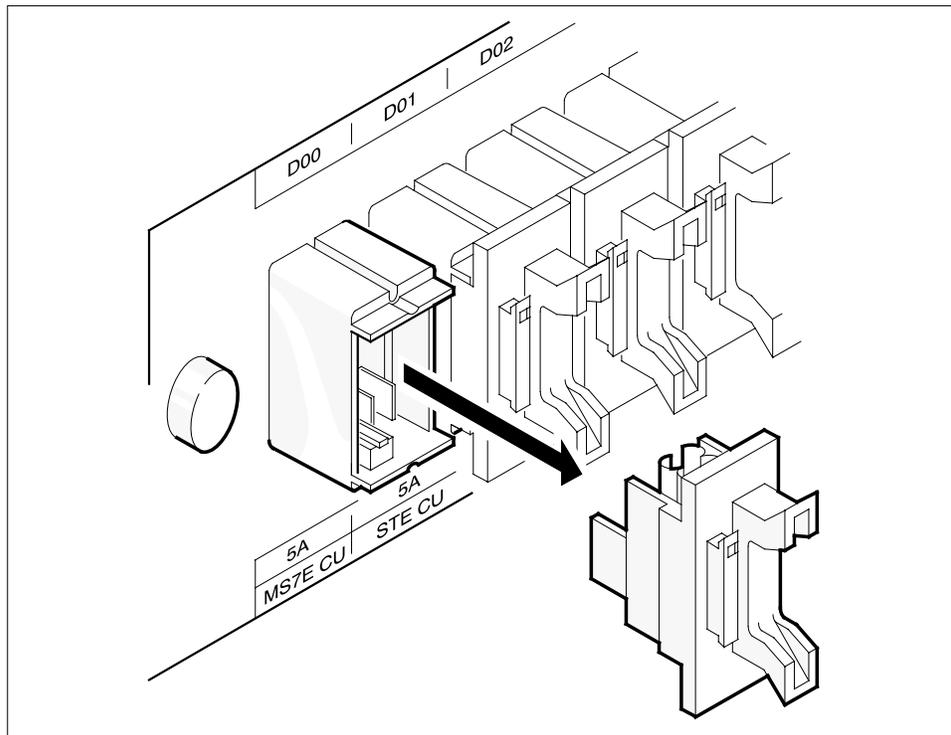
**WARNING****Possible loss of service**

Before you remove a fuse, make sure that the fuse you remove is the cooling unit fuse. If you remove the wrong fuse, you can disconnect power to a critical hardware component and cause loss of service.

Remove the cooling unit fuse.

To remove the cooling unit fuse, pull the fuse holder straight out of the front panel of the PDC.

Note: When you disconnect the power to the cooling unit, the fan failure light is lit. You can locate the fan failure light at the top of the cabinet between the doors.



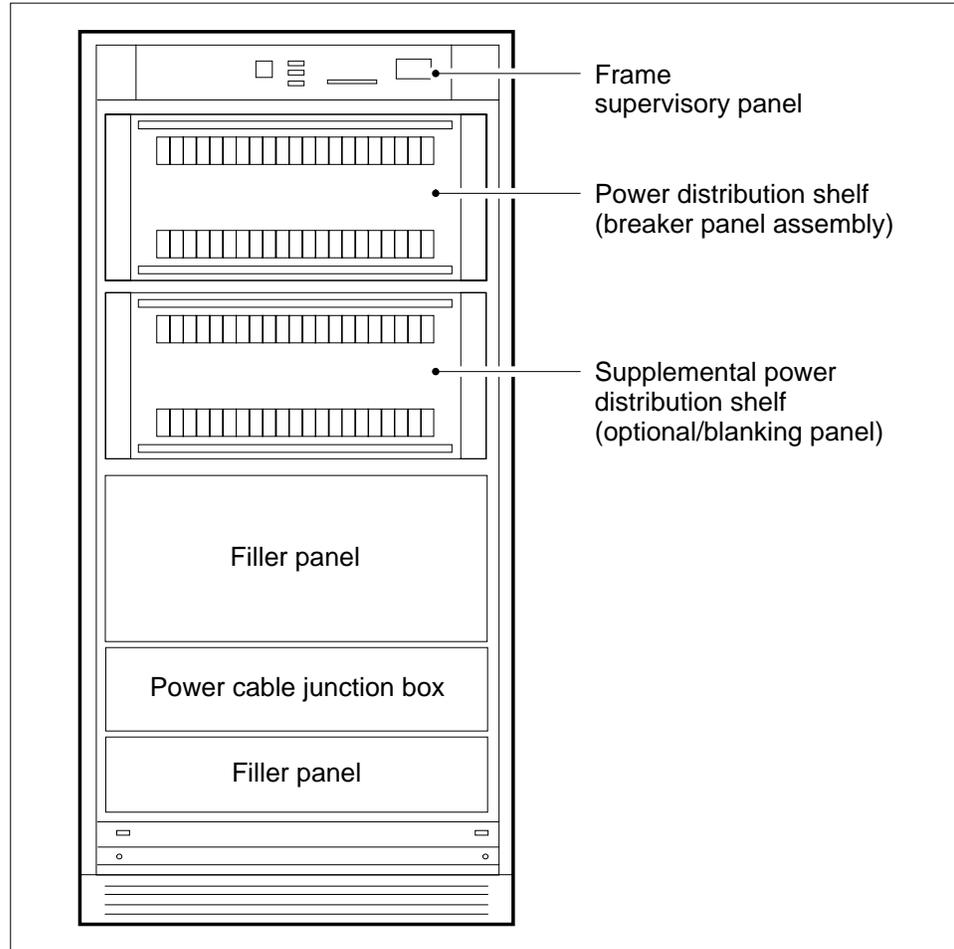
- 5 Go to step 8.

At the front of the CPDC

- 6 Find the cooling unit circuit breaker.

Note: You can find the cooling unit circuit breaker on the front panel of the CPDC. The cooling circuit breaker has the cabinet number (recorded in step 2) above the breaker. The cooling circuit breaker also has the cooling unit number below the breaker.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



7



DANGER

Risk of injury

If you throw the breaker, you can cause an electrical discharge. Wear eye protection when you throw the cooling unit breaker.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



CAUTION

Possible loss of service

Before you throw the cooling unit breaker, make sure that you disconnect power from the cooling unit. If you throw the wrong breaker you can disconnect power to a critical hardware component and cause loss of service.

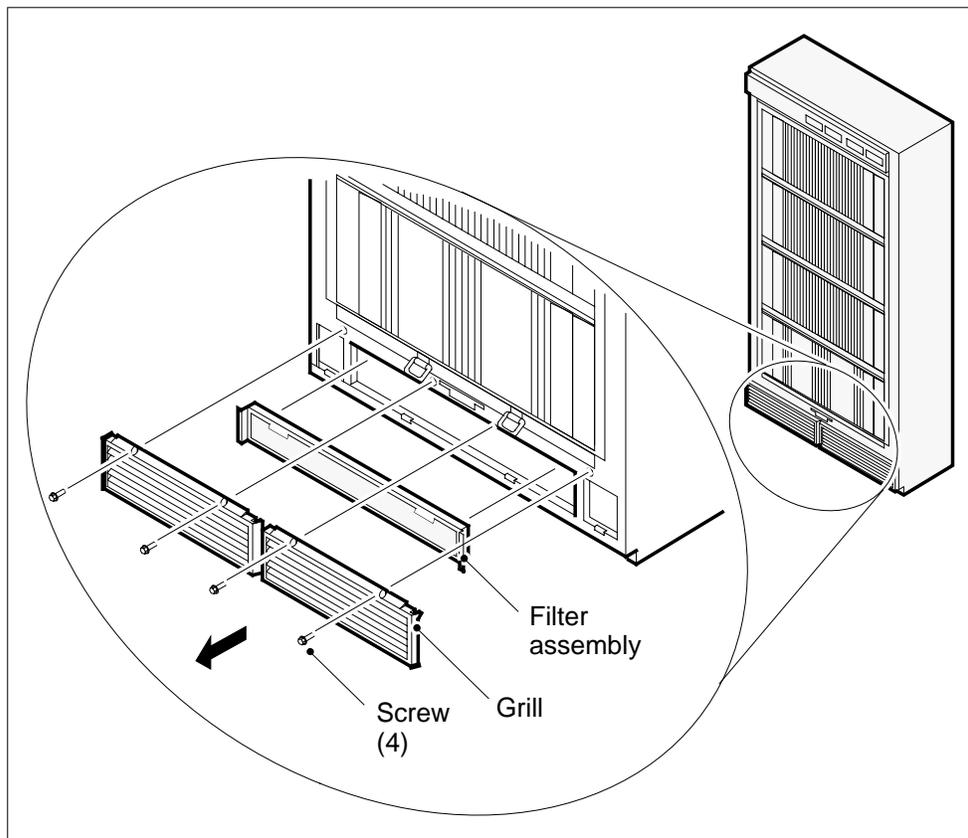
Throw the cooling unit circuit breaker.

Note: When you disconnect the power to the cooling unit, the fan failure light is lit. You can locate the fan failure light at the top of the cabinet between the doors.

At the front of the cabinet

- 8 Remove the two cooling unit grills.

To remove the two cooling unit grills, remove the screws that hold the grills in place. The two grills are at the bottom of the cabinet front



Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

9



DANGER

Electrocution

Do not touch the cabinet wiring. Contact with cabinet wiring that is not shielded can result in electric shock.

Remove the filter assembly.

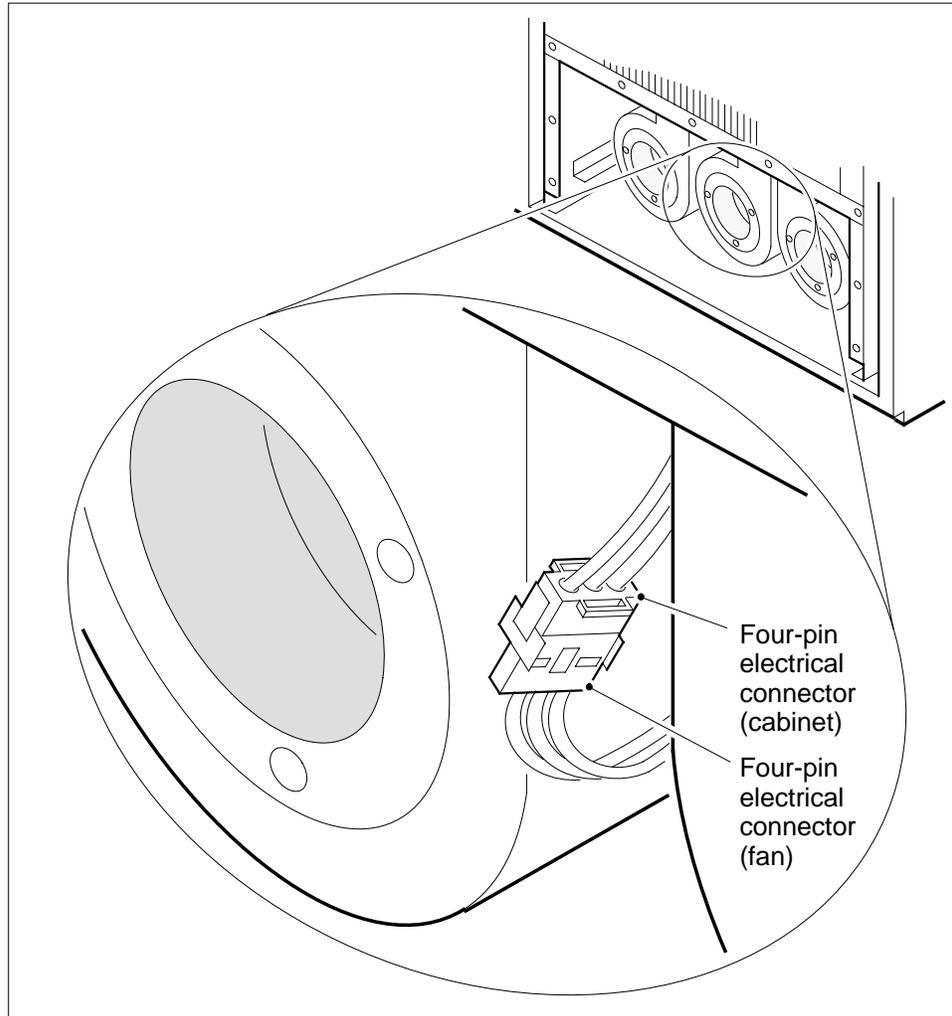
To remove the filter assembly, pull on the handles.

10 Remove the kickplate assembly.

To remove the kickplate assembly, remove the bolts that hold the kickplate assembly in place.

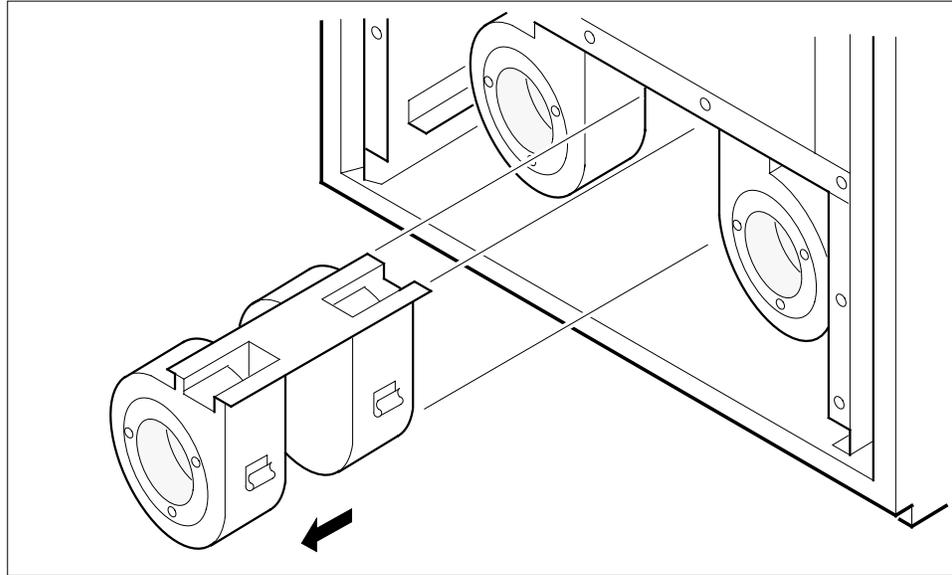
11 Disconnect the four-pin electrical connector of the fan that has faults from the corresponding four-pin connector of the cabinet.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



- 12** Slide the fan that has faults out of the cabinet.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



- 13** Slide the replacement fan into the cabinet.
- 14** Connect the four-pin electrical connector of the fan with the corresponding four-pin electrical connector of the cabinet.
- 15** Identify the type of power distribution center that connects to the 1.07-m (42-in.) cabinet connects.

If the cabinet	Do
connects to a PDC	step 16
connects to a CPDC	step 17

At the PDC

- 16** Replace the fuses for the cooling unit at the PDC.
Go to step 18.

At the CPDC

- 17** Set the circuit breaker at the CPDC of the cooling unit to ON.
- 18** Check if the fan works.

If the replacement fan	Do
works	step 19
does not work	step 44

- 19** Install the kickplate assembly again.
- 20** Install the filter assembly again.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

21



DANGER
Loss of cabinet cooling
 If you leave the fans disconnected for an extended period of time the equipment in the cabinet can overheat.

Install the cooling unit grills again.

22 Go to step 41.

23 Identify the type of power distribution center that connects to the 42-in. (1.07-m) cabinet.

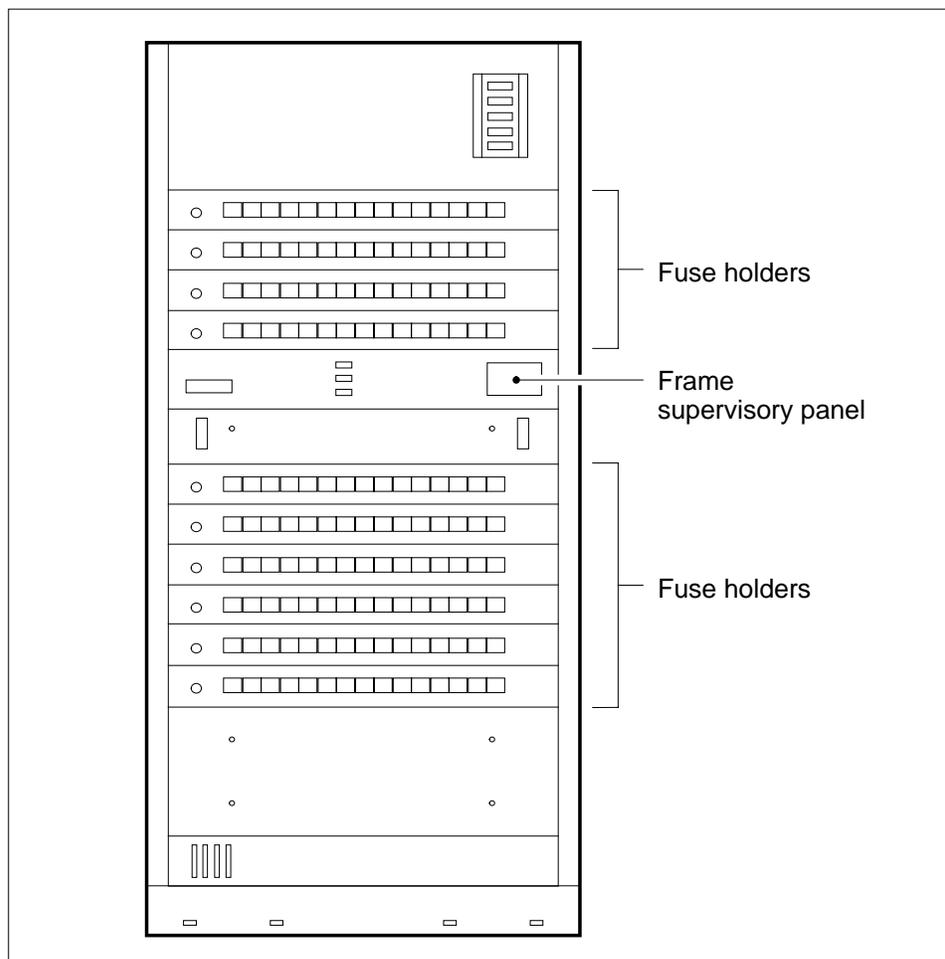
If the cabinet	Do
connects to a PDC	step 24
connects to a CPDC	step 27

At the front of the PDC

24 Find the cooling unit fuse.

Note: You can find the cooling unit fuse holder on the front panel of the PDC. The cooling unit fuse holder indicates the cabinet number (that you recorded in step 2) above the fuse holder. The cooling unit fuse holder also indicates the cooling unit number below the fuse holder.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



25



DANGER

Risk of injury

Fuse holder removal can cause an electrical discharge. Wear eye protection when you remove cooling unit fuse holders.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



CAUTION

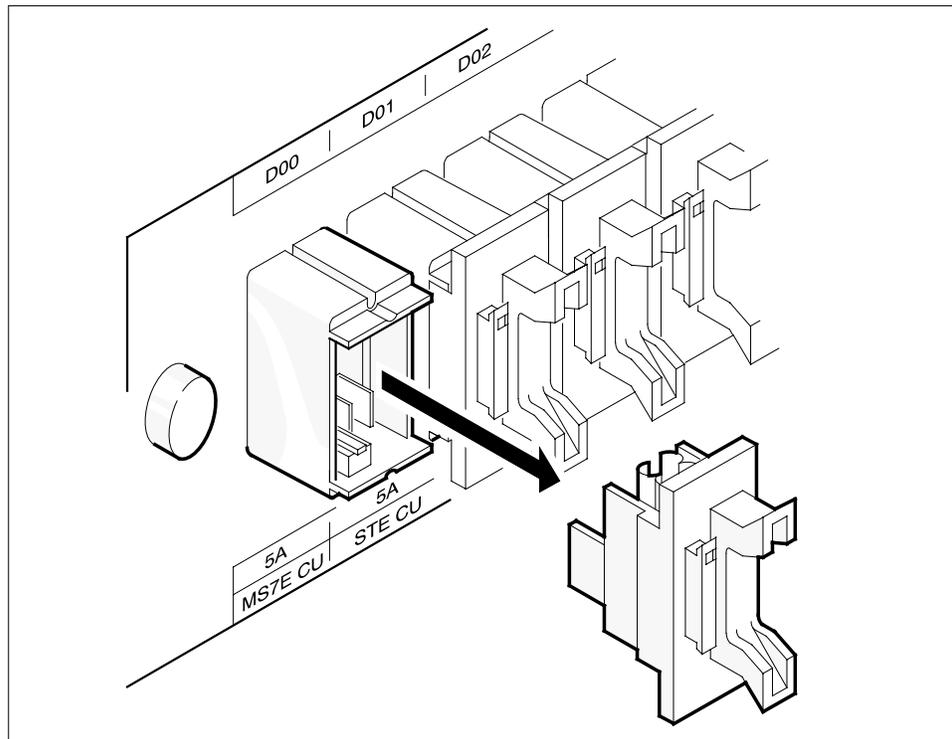
Possible loss of service

Before you remove a fuse, make sure that the fuse you remove is the cooling unit fuse. If you remove the wrong fuse, you can disconnect power to a critical hardware component and cause loss of service.

Remove the cooling unit fuse.

To remove the cooling unit fuse, pull the fuse holder out of the front panel of the PDC.

Note: When you disconnect power to the cooling unit, the fan failure light is lit. You can find the fan failure light at the top of the cabinet between the doors.



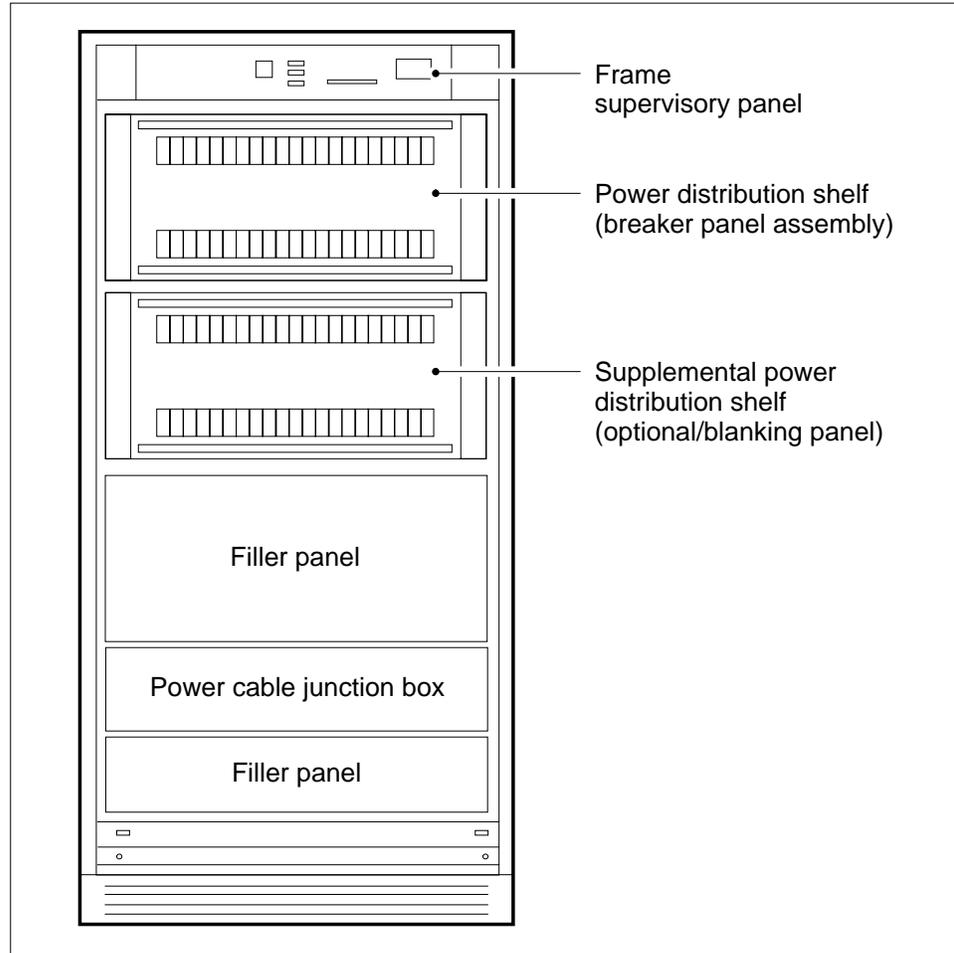
26 Go to step 29.

At the front of the CPDC

27 Find the cooling unit circuit breaker.

Note: You can find the cooling unit circuit breaker on the front panel of the CPDC. The cooling unit circuit breaker has the cabinet number (that you recorded in step 2) above the breaker. The cooling unit circuit breaker also has the cooling unit number below the fuse holder.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



28



DANGER

Risk of injury

If you throw the breaker, you can cause an electrical discharge. Wear eye protection when you throw the cooling unit breaker.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



CAUTION

Possible loss of service

Before you throw the cooling unit breaker, make sure that you disconnect power from the cooling unit. If you throw the wrong breaker, you can disconnect power to a critical hardware component and cause loss of service.

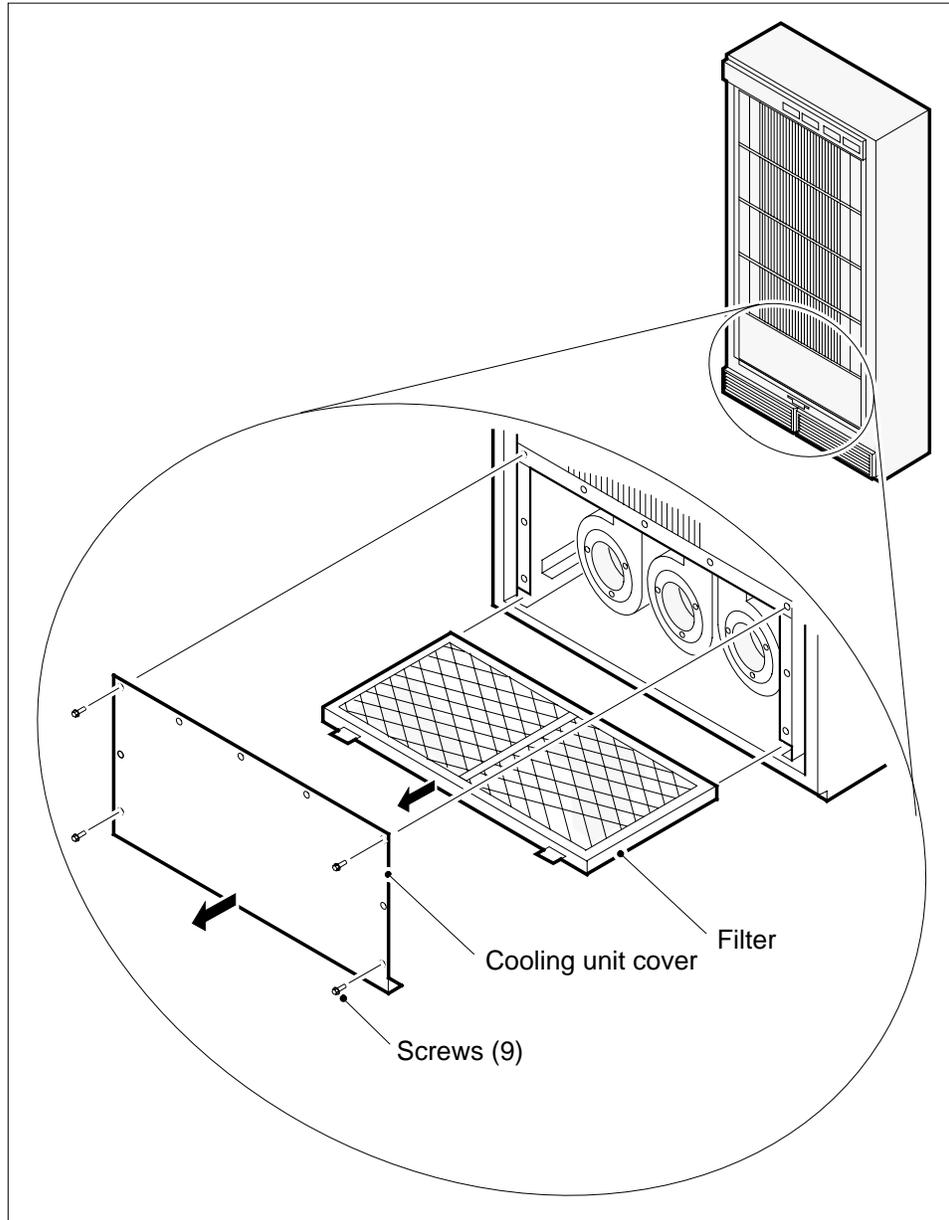
Throw the cooling unit circuit breaker.

Note: When you disconnect power to the cooling unit, the fan failure light is lit. You can find the fan failure light at the top of the cabinet between the doors.

At the front of the cabinet

29 Open the cabinet doors.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



30



DANGER

Electrocution

Do not touch the cabinet wiring. Contact with cabinet wiring that is not shielded can result in electric shock.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)

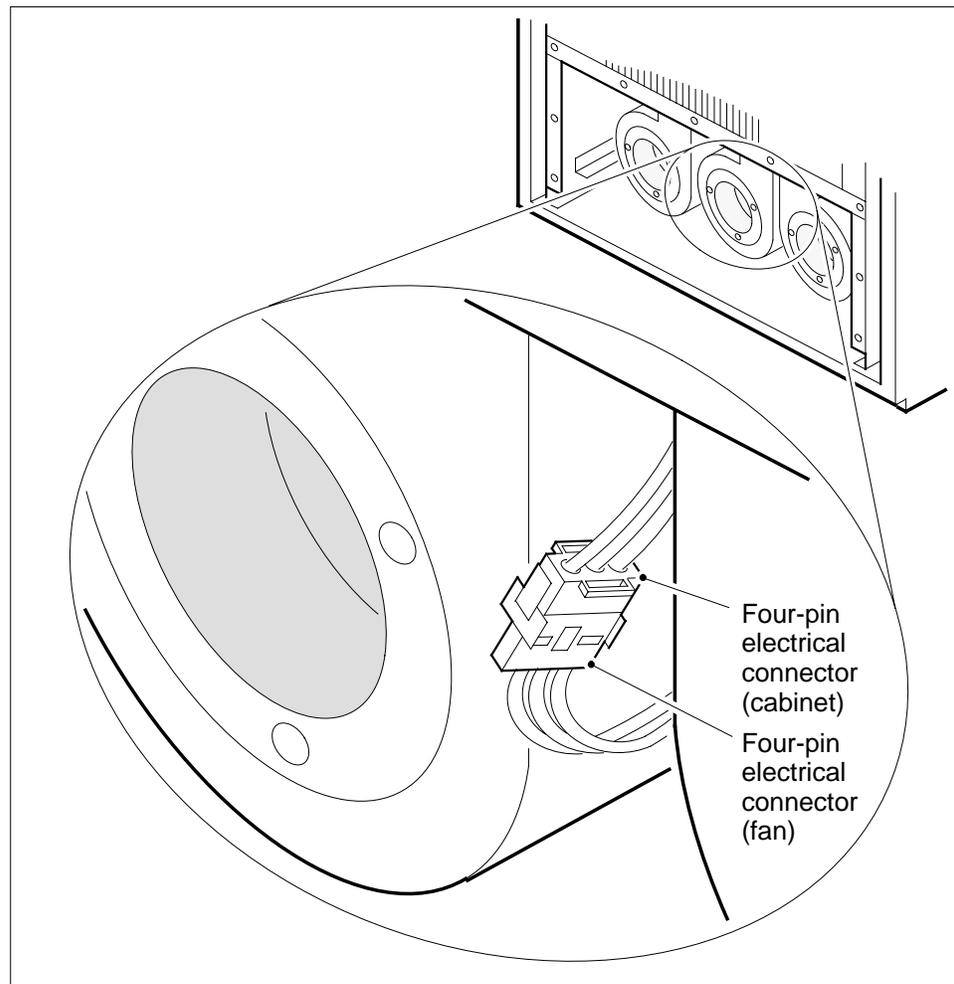
Remove the cooling unit cover.

To remove the cooling unit cover, located above the two unit grills, remove the nine inner screws of the cover.

Note: Do not remove the four bolts located on the outer edge of the cooling unit cover.

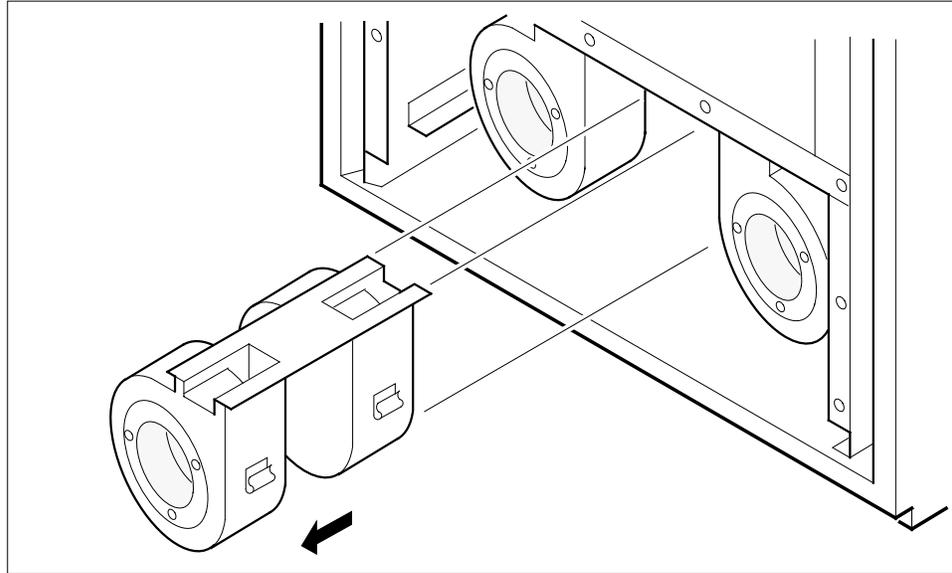
At the front of the cabinet

- 31** Slide the fan that has faults far enough out of the cabinet to disconnect the four-pin electrical connector of the fan. Locate the cooling fan on the far left.



- 32** Disconnect the four-pin connector of the defective fan from the corresponding four-pin connector of the cabinet.
- 33** Slide the fan the that has faults rest of the way out of the cabinet.

Replacing a fan in a 1.07-m (42-in.) cabinet (continued)



- 34 Slide the replacement fan (AO381714 or AO382103) part way into the cabinet.
- 35 Connect the four-pin electrical connector of the replacement fan with the corresponding four-pin electrical connector of the cabinet.
- 36 Slide the replacement fan the rest of the way into the cabinet.
- 37 Identify the type of power distribution center that connects to the 42-in. (1.07-m) cabinet.

If the cabinet	Do
connects to a PDC	step 38
connects to a CPDC	step 39

At the PDC

- 38 Insert the cooling unit fuse again.
To insert the cooling unit fuse again, push the fuse holder into the front panel of the PDC.
Go to step 40.

Replacing a fan in a 1.07-m (42-in.) cabinet (end)

At the CPDC

39



DANGER
Risk of injury
 If you throw the breaker, you can cause an electrical discharge. Wear eye protection when you throw the cooling unit breaker.

Throw the cooling unit circuit breaker.

At the 42-in. (1.07-m) cabinet

40 Determine if the replacement fan operates.

If the replacement fan	Do
operates	step 41
does not operate	step 44

At the rear of the cabinet

41 Close the cabinet doors.

At the front of the cabinet

42 Install the cooling unit cover again.

43 Close the cabinet doors.

Go to step 45.

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

45 The procedure is complete.

Replacing an NTNY18 cooling unit PM UEN

Application

Use this procedure to replace an NTNY18 cooling unit in a Universal Edge 9000 (UEN) frame.

Interval

Perform this procedure when there is a cooling unit failure.

Common procedures

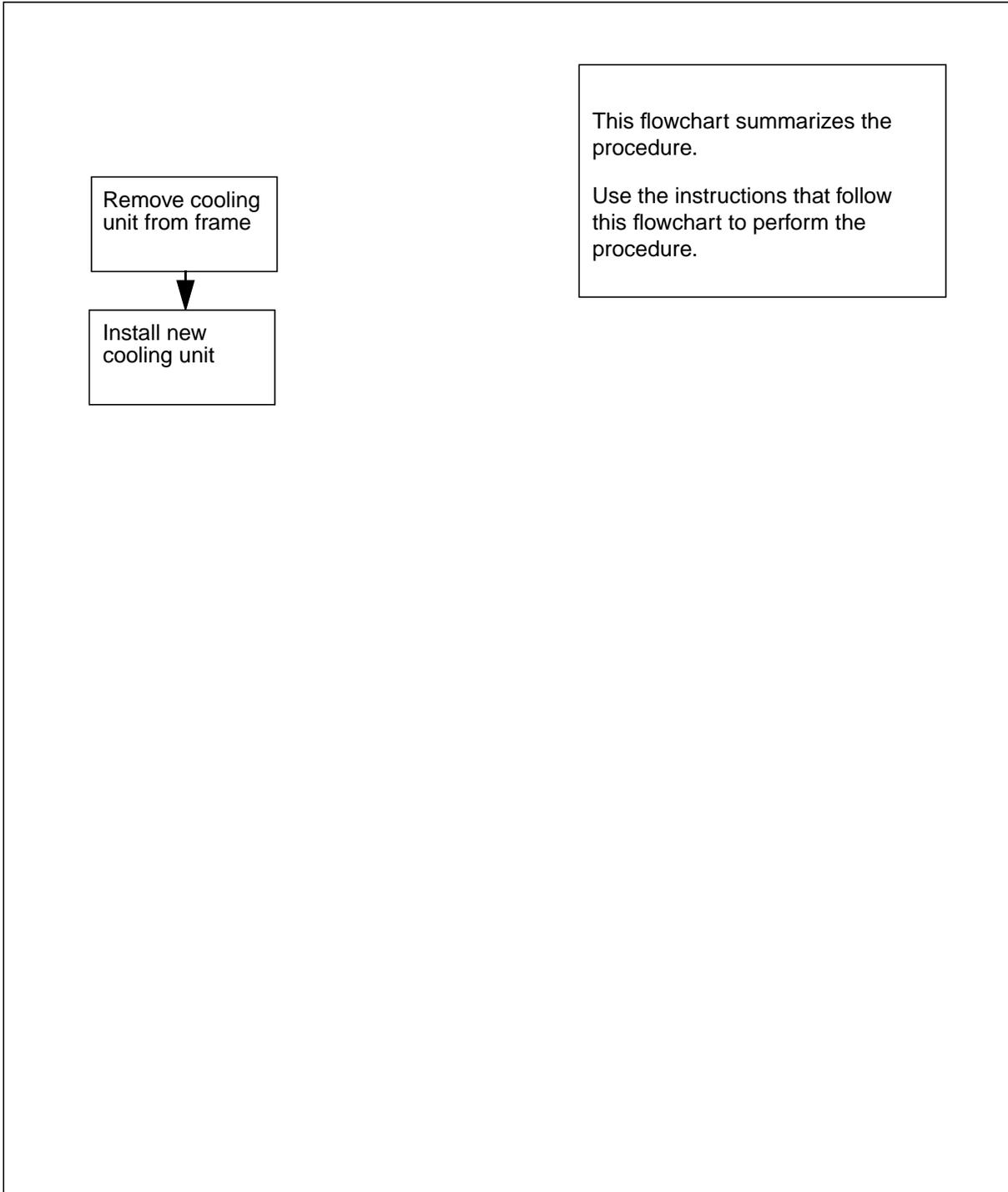
This procedure does not refer to any common procedures.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to perform the routine maintenance procedure.

Replacing an NTNY18 cooling unit PM UEN (continued)

Summary of Replacing an NTNY18AA cooling unit



Replacing an NTNY18 cooling unit PM UEN (continued)

Replacing an NTNY18AA cooling unit

At the UEN equipment frame

1



CAUTION

Risk of overheating

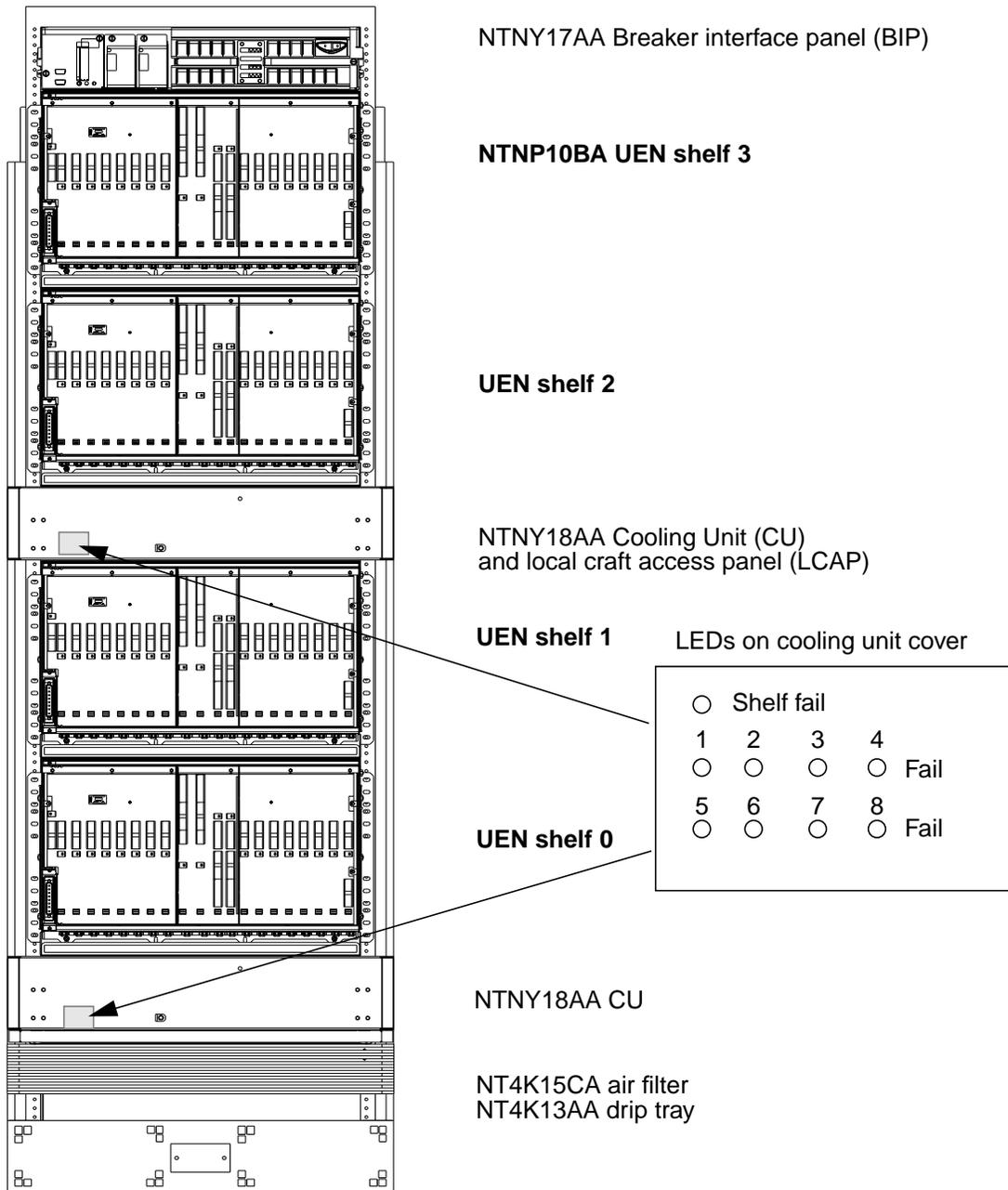
Prolonged use of the system while replacing the NTNY18 8-fan cooling unit may cause the equipment in the frame to overheat.

Perform replacement of cooling unit in a timely manner. Review the steps of this procedure to insure all tools and parts necessary to complete the task are available before the beginning of the procedure.

- Obtain a replacement cooling unit. Make sure the replacement cooling unit and the unit you replace have the same PEC and PEC suffix.
- 2 Remove the cooling unit front cover by pulling it free of the four posts that hold it to the four holding clips.
 - 3 Set the circuit breakers CU-A and CU-B on the breaker interface panel (BIP) to the Off position.
 - 4 Using a flat blade screw driver, loosen the two screws that hold the cooling unit in place.
 - 5 Pull the cooling unit out until it is free of the frame.
 - 6 Install the replacement cooling unit into the frame. Using a flat blade screwdriver, tighten the two screws to secure the cooling unit to the frame.
 - 7 Set circuit breakers CU-A and CU-B on the BIP to the On position.
 - 8 A red LED will light briefly on the face of the cooling unit and then go out, indicating proper connection.
 - 9 Check that the LED does not remain lit and that the fans are operating properly by the absence of any lit fan LEDs on the face of the cooling unit. Refer to the following figure to locate the LEDs on the cooling unit.

Replacing an NTNY18 cooling unit PM UEN (continued)

UEN frame and cooling unit LEDs



- 10 Replace the cooling unit front cover. Align the four posts on the cooling unit to the holding clips on the back of the front cover. Lightly strike each end of the front cover with one hand until the cover snaps into place.

Replacing an NTNY18 cooling unit

PM UEN (end)

- 11 Perform the "Returning a card for repair or replacement" procedure in this document and return to this step.
- 12 This procedure is complete.

Returning a card or assembly in Canada

Application

Use this procedure to return a circuit card or assembly, like a power converter, to Nortel (Northern Telecom) for repair or replacement. Use this procedure in Canada.

Interval

Perform this procedure as required.

Common procedures

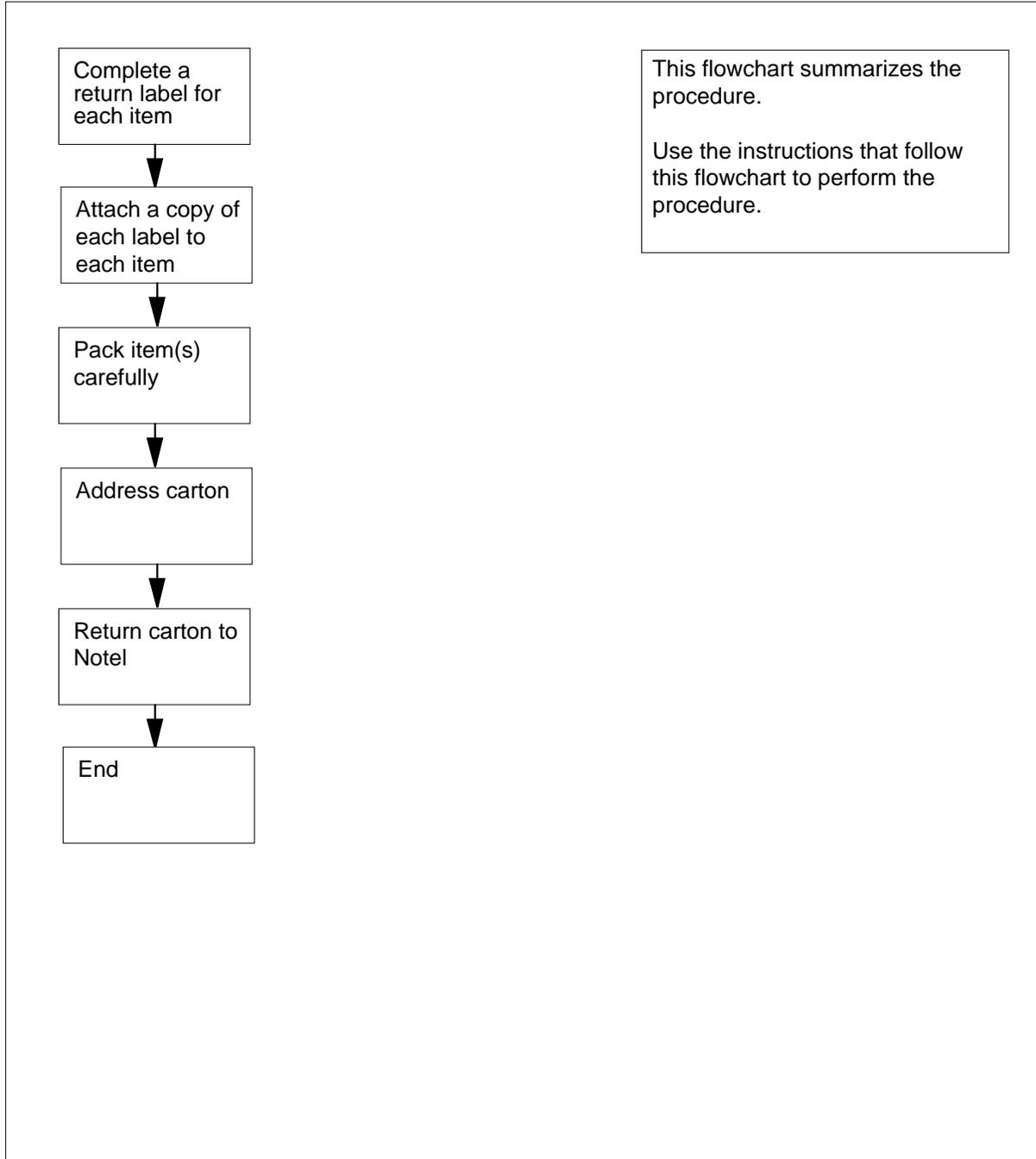
There are no common procedures.

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.

Returning a card or assembly in Canada (continued)

Summary of Returning a card or assembly in Canada



Returning a card or assembly in Canada (continued)

Returning a card or assembly in Canada

At your Current Location

- 1 Put the card or assembly to return in an electrostatic discharge (ESD) protective bag.
- 2 Complete one return label (form 24-115) for each card or assembly that you must return.

make sure that you include the following information:

- return authorization number from customer service
- Nortel product engineering code (PEC)
- serial number
- release number
- BCS software release in use at the time of replacement
- peripheral module (PM) software load name, if available
- description of the failure and action taken to repair the failure
- fault code that describes the fault best
- name of your company
- office identifier code
- your name
- site name

If you	Do
need help to complete the return label	step 3
do not need help to complete the return label	step 4

- 3 Call the number that follows to help you complete the return label:
 - days: 416-454-2808 or 1-800-668-5511
 - evenings: 416-457-9555
- 4 For each item that you must return, attach one copy of the return label.
- 5 Keep the other copies of the label for your records.
- 6 Pack the card or assembly in a Nortel shipping carton and seal the carton.

If a Nortel carton	Do
is available	step 8
is not available	step 7

Returning a card or assembly in Canada (end)

- 7** Use any suitable carton. Make sure that you
 - enclose each card assembly in packing paper
 - surround each card assembly in bubble pack or foam
 - secure each card assembly in the carton to prevent the contents from moving around during shipping
- 8** Address the carton to:
Nortel Canada Limited, Customer Service Operations, c/o Wes Bell
Transport, Unit 3, Door 4, 1630 Trinity Road, Mississauga, Ontario, L5T 1L6
- 9** Return the carton to Nortel.
- 10** The procedure is complete.

Returning a card or assembly in Germany

Application

Use this procedure to return a circuit card or assembly, like a power converter, to Nortel (Northern Telecom) for repair or replacement. Use this procedure in Germany.

Interval

Perform this procedure as required.

Common procedures

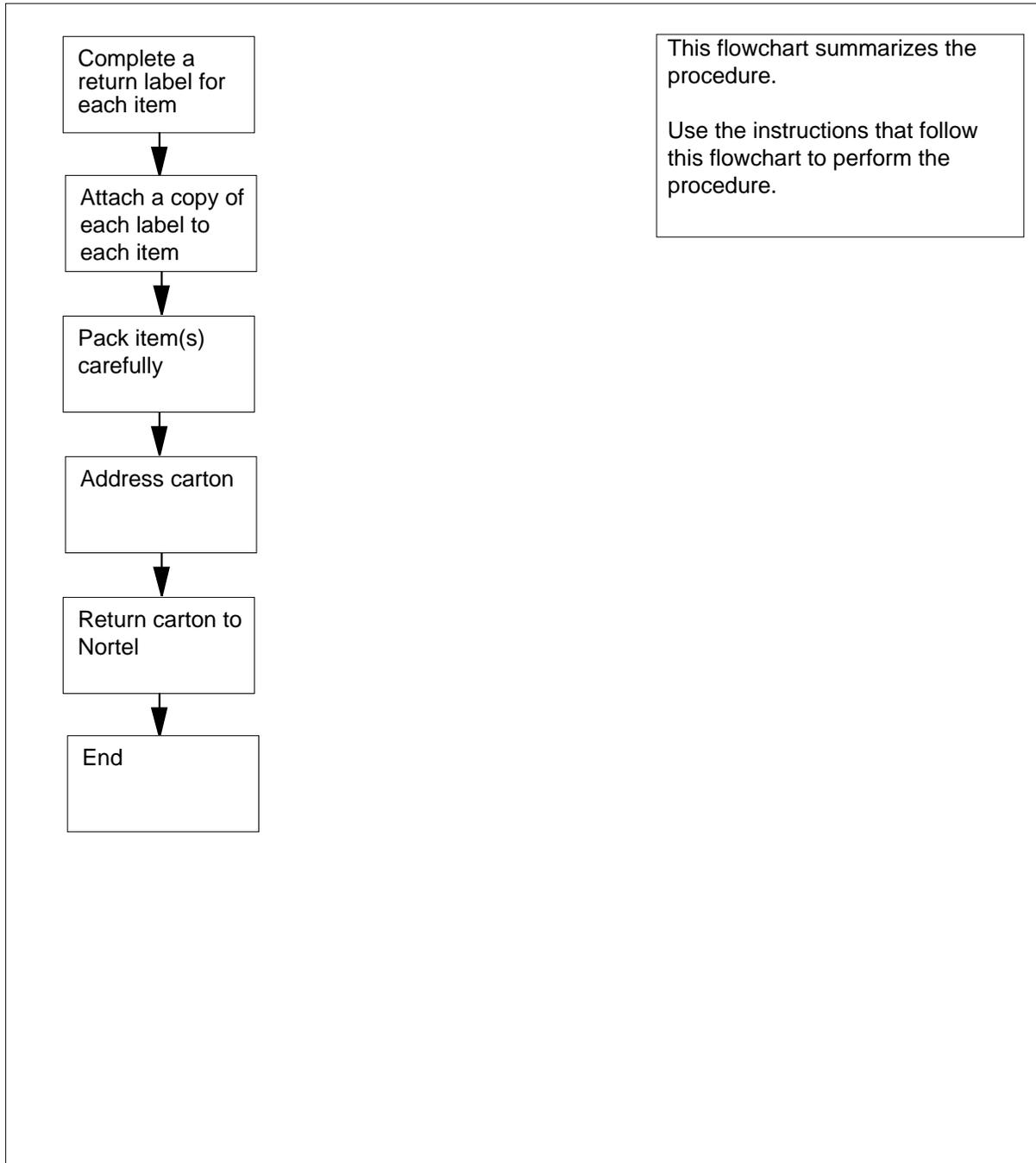
There are no common procedures.

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.

Returning a card or assembly in Germany (continued)

Summary of Returning a card or assembly in Germany



Returning a card or assembly in Germany (end)

Returning a card or assembly in Germany

At your Current Location

- 1 Put the card or assembly you must return into an electrostatic discharge (ESD) protective bag.
- 2 Complete one return label (form 24-115) for each card or assembly that you want to return.

Make sure that you include the following information:

- return authorization number from customer service
 - Nortel product engineering code (PEC)
 - serial number
 - release number
 - BCS software release in use at the time of replacement
 - peripheral module (PM) software load name, if available
 - description of the failure and action taken to repair the failure
 - fault code that describes the fault best
 - name of your company
 - office identifier code
 - your name
 - site name
- 3 For each item that you must return, attach one copy of the return label.
 - 4 Keep the other copies of the label for your records.
 - 5 Pack the card or assembly in a Nortel shipping carton and seal the carton.

If a Nortel carton	Do
is available	step 7
is not available	step 6

- 6 Use any suitable carton. Make sure that you
 - enclose each card assembly in packing paper
 - surround each card assembly in bubble pack or foam
 - secure each card assembly in the carton to prevent the contents from moving around during shipping
- 7 Address the carton to:

Nortel GmbH, Logistik-Zentrum, Neiderhofheimer Str. 56, D-6238 Hofheim/Taunus
- 8 Return the carton to Nortel.
- 9 The procedure is complete.

Reviewing REx test results on an LCM

Application

Use the following procedure to review the results of routine exercise (REx) tests on a line concentrating module (LCM) and the LCM variants. LCM variants include international LCM (ILCM), integrated services digital network LCM (LCMI), and enhanced LCM (LCME). You can use the procedure to review the results of REx tests on a line module and the line module variants like an enhanced line module (ELM).

Interval

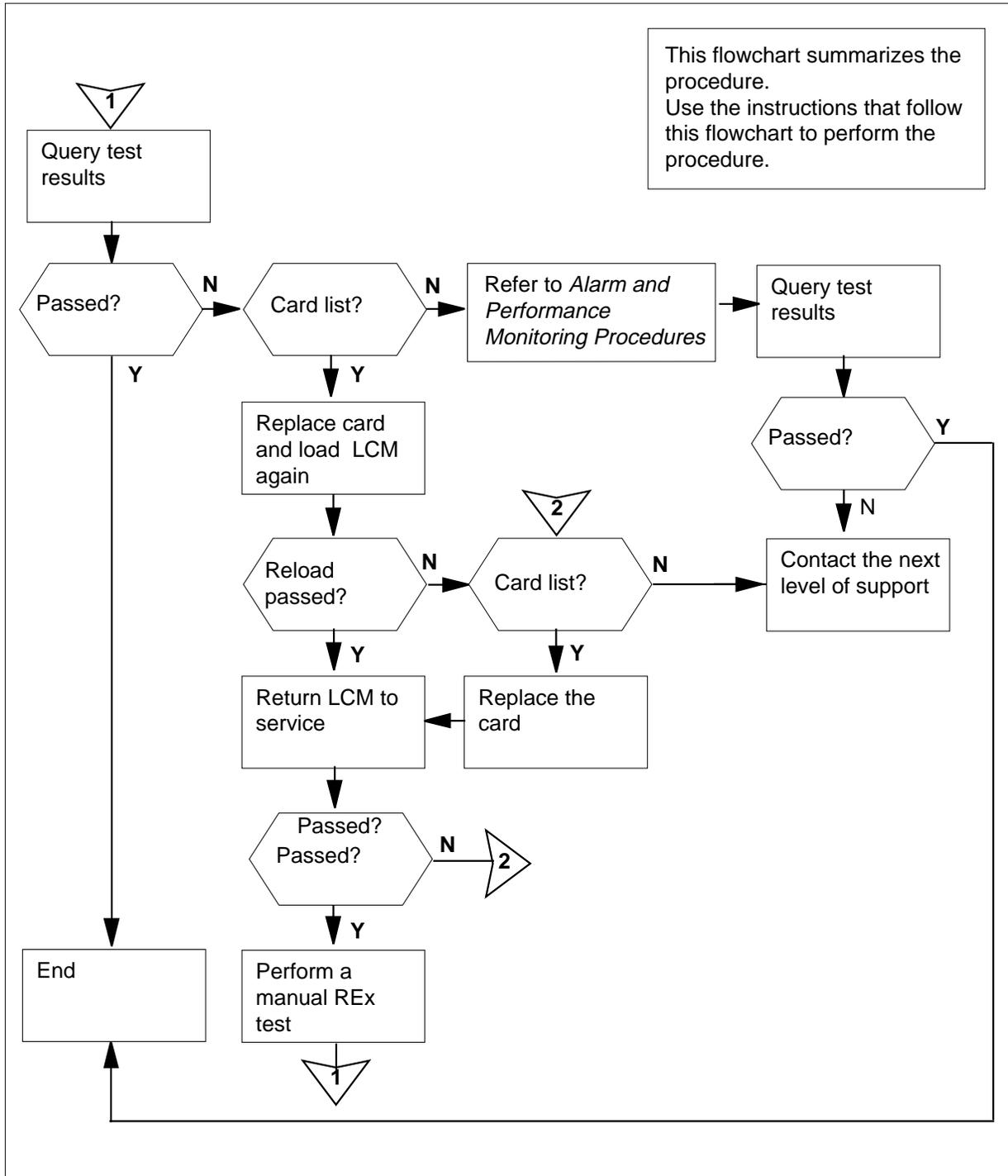
Perform this procedure after the completion of a REx testing schedule for an LCM.

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.

Reviewing REx test results on an LCM (continued)

Summary of Reviewing REx test results on an LCM



Reviewing REx test results on an LCM (continued)

Reviewing REx test results on an LCM

At the CI level of 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 LCM for which you require a report, type
`>POST LCM site frame_no pair_no`
and press the Enter key.
where
site
is the four-character string that indicates the location of the LCM
frame_no
is the number of the frame that contains the LCM (0 to 511)
pair_no
is the number of the LCM in the frame (0 or 1)
- 3 To test the REx test results, type
`>TST REX QUERY`
and press the Enter key.

Example of a MAP response:

LCM Host 00 0 is included in the list of LCM types
scheduled for a REX test.

Recent REX Results:

Last REX date was THU. 1991/11/29 at 09:53:57;
FAILED.

UNIT 0:

REX failure due to Memory Fail.
Cards Reported: NT6X51 0

UNIT 1:

No failure exists

No prior REX failure.

- 4 If a failure is present on both units, choose one unit to work on. If you completed the procedure on one unit, return to step 3 and perform the procedure on the other unit.
- 5 From the MAP response, determine the results of the REx test.

If the REx test	Do
passed	step 25
failed, and the system generated a card list	step 8

Reviewing REx test results on an LCM (continued)

	If the REx test	Do
	failed, and the system did not generate a card list	step 6
6	Perform the procedure <i>Clearing a PM, LCM, LCME, LCMI critical, major, or minor alarm</i> in <i>Alarm and Performance Monitoring Procedures</i> . Complete the procedure and return to this point.	
7	From the MAP response, determine the results of the REx test.	
	If the REx test	Do
	passed	step 25
	failed	step 24
8	Record the locations and PECs (product engineering codes) and PEC suffixes of the cards on the card list.	
9	Perform the correct procedure in <i>Card Replacement Procedures</i> to change the first card on the list. Complete the procedure and return to this point.	
10	Cross the replaced card off the list.	
11	To busy the affected unit, type <code>>BSY UNIT unit_no</code> and press the Enter key. <i>where</i> unit_no is the number of the affected unit (0 or 1), as seen in the MAP display in step 3.	
12	To load the software again to the LCM that has potential defective cards listed against the LCM, type <code>>LOADPM UNIT unit_no</code> and press the Enter key. <i>where</i> unit_no is the number of the affected unit (0 or 1), as seen in the MAP display in step 3	
	If the LOADPM command	Do
	passed	step 16
	failed, and the system generated a card list	step 13
	failed, and you replaced all cards on the list	step 24

Reviewing REx test results on an LCM (continued)

- 13 Record the locations and PECs and PEC suffixes of any cards that do not appear on the card list that you recorded in step 8.
- 14 Perform the correct procedure in *Card Replacement Procedures*, to change the first card on the list. Complete the procedure and return to this point.
- 15 Cross the replaced card off the list. Go to step 12.
- 16 To return the unit to service, type

```
>RTS UNIT unit_no
```

 and press the Enter key.
where
 unit_no
 is the number of the affected unit (0 or 1), as seen in the MAP display in step 3

If the RTS command	Do
passed	step 17
failed and more cards remain on the list	step 14
failed and more cards do not remain on the list	step 24

- 17 Perform a manual REx test on the LCM that has potential defective cards listed in the display. Perform the procedure *Performing a manual REx test on an LCM* in this document. Complete the procedure and return to this point.

- 18 To test the REx test results, type

```
>TST REX QUERY
```

and press the Enter key.

Example of a MAP response:

```
LCM HOST 00 0 is included in the list of LCM types
scheduled for a REX test.
```

```
Recent REX Results:
```

```
Last REX test was THU. 1991/11/29 at 09:53:57;
```

```
PASSED.
```

```
No Prior REX failure.
```

- 19 From the MAP response, determine the results of the REx test.

If the REx test	Do
passed	step 23
failed, and the system generated a card list	step 20

Reviewing REx test results on an LCM (end)

	If the REx test	Do
	failed, and the system did not generate a card list	step 6
20	Note the number of the XPM that has potential defective cards listed against the XPM in the MAP display in step 18.	
21	Compare the card list to earlier card lists.	
	If the card list	Do
	contains new cards that you did not replace on the same unit that you identified in step 4	step 22
	does not contain new cards, all cards are on the same unit as that you identified in step 4 and are replaced	step 24
	contains cards on a different unit than the unit you identified in step 4	step 11
22	Note any cards that you did not replace in this procedure. Add any additional cards that the system did not generate to the list that you recorded in step 13. Go to step 9.	
23	Check if a failure is present on the other unit that you noted in step 3 .	
	If a failure	Do
	is present	step 4
	is not present	step 25
24	For additional help, contact the next level of support.	
25	The procedure is complete.	

Reviewing REx test results on an XPM

Application

Use the following procedure to review the results of routine exercise (REx) tests performed on XMS-based peripheral modules (XPM). You can review the results to help you determine the actions to take as a result of the tests.

The line group controller (LGC), message and switching buffer (MSB), and remote cluster controller (RCC) node types support REx tests.

LGC nodes include the following variants:

- integrated services digital network (ISDN) LGC (LGCI)
- international LGC (ILGC)
- offshore LGC (LGCO)
- PCM-30 LGC (PLGC)
- Global Peripheral Platform (GPP)
- Turkish LGC (TLGC)
- Australian LGC (ALGC)
- line trunk controller (LTC)
- international LTC (ILTC)
- Turkish LTC (TLTC)
- digital trunk controller (DTC)
- ISDN DTC (DTCI)
- PCM-30 DTC (PDTC)
- Turkish DTC (TDTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMSR)
- subscriber module access (SMA)
- integrated cellular peripheral (ICP)
- traffic operator position system (TOPS) message switch (TMS)

MSB nodes include MSB6 and MSB7.

Reviewing REx test results on an XPM (continued)

RCC nodes include the variants that follow: Turkey RCC (TRCC), ISDN RCC (RCCI), Australian RCC (ARCC), PCM30 RCC (PRCC), RCC2, SRCC, and RCO2.

Interval

Perform this procedure after the completion of a REx testing schedule for an XPM.

Common procedures

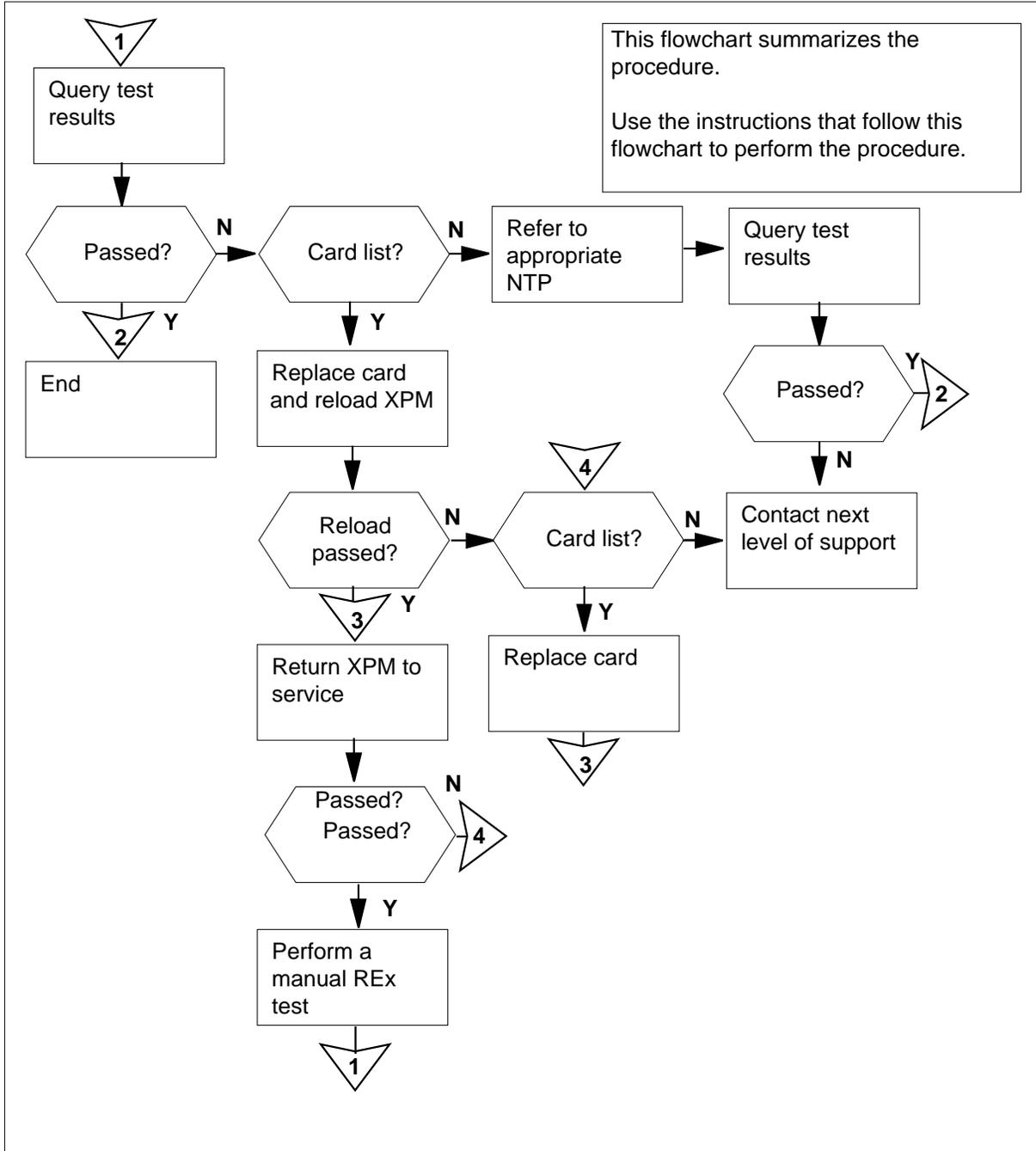
There are no common procedures.

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.

Reviewing REx test results on an XPM (continued)

Summary of Reviewing REx test results on an XPM



Reviewing REx test results on an XPM (continued)

Reviewing REx test results on an XPM

At the MAP terminal

- 1 To access the PM level, type
`>MAPCI ;MTC ;PM`
 and press the Enter key.
- 2 To post the XPM for which you require a report, type
`>POST xpm_type number`
 and press the Enter key.

where

xpm_type
 is the type of XPM to test (for example, LGC)

number
 is the number of the XPM (0 to 2047)

- 3 To test the REx test results, type
`>TST REX QUERY`
 and press the Enter key.

Example of a MAP response

```
DTC 0 is included in the REX schedule.
Last REX date was Thu.1991/11/29 at 09:53:57:FAILED.
REX test Failed - Inactive OOS tests after SWACT
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 01 NO2 LTE 00 18 DTC : 000 17 6X62
Prior REX failure was TUE. 1991/11/27 at 10:02:47.
First pass after prior failure was WED. 1991/11/28 at
02:15:24.
```

- 4 From the MAP response, determine the results of the REx test.

If the REx test	Do
passed	step 25
failed, and the system generated a card list	step 8
failed, and the system did not generate a card list	step 5

- 5 Perform the appropriate procedure in *Alarm and Performance Monitoring Procedures*. Complete the procedure and return to this point.
- 6 To test the REx test results, type
`>TST REX QUERY`
 and press the Enter key.

Reviewing REX test results on an XPM (continued)

Example of a MAP response

```
DTC 0 is included in the REX schedule.
Last REX date was Thu.1991/11/29 at 09:53:57:FAILED.
REX test Failed - Inactive OOS tests after SWACT
Site Flr RPos Bay_id Shf Description Slot EqPec
HOST 01 NO2 LTE 00 18 DTC : 000 17 6X62
Prior REX failure was TUE. 1991/11/27 at 10:02:47.
First pass after prior failure was WED. 1991/11/28 at
02:15:24.
```

- 7 From the MAP response, determine the results of the REX test.

If the REX test	Do
passed	step 25
failed	step 24

- 8 Note the number of the XPM that has potential defective cards listed against the XPM in the MAP display in step 3.

- 9 Record the locations and PECs (product engineering codes) and PEC suffixes of the cards on the card list.

- 10 Perform the correct procedure in *Card Replacement Procedures* to change the first card on the list. Complete the procedure and return to this point.

- 11 Cross the replaced card off the list.

- 12 To manually busy the affected unit, type

```
>BSY inactive
```

and press the Enter key.

- 13 To reload the software to the XPM that has potential defective cards listed against the XPM, type

```
>LOADPM inactive
```

and press the Enter key.

If the LOADPM command	Do
passed	step 17
failed, and the system generated a card list	step 14
failed, and you replaced all cards on the list	step 24

- 14 Record the locations, PECs, and PEC suffixes of any cards not on the card list recorded in step 9.

- 15 Perform the correct procedure in *Card Replacement Procedures* to change the first card on the list. Complete the procedure and return to this point.

Reviewing REx test results on an XPM (continued)

16 Cross the replaced card off the list.
Go to step 13.

17 To return the unit to service, type
>RTS inactive
and press the Enter key.

If the RTS command	Do
passed	step 18
failed and more cards remain on the list	step 15
failed and more cards do not remain on the list	step 24

18 Perform a manual REx test on the XPM that has potential defective cards listed in the display. Perform the procedure in *Performing a manual REx test on an XPM* in this document. Complete the procedure and return to this point.

19 To test the REx test results, type
>TST REX QUERY
and press the Enter key.
Example of a MAP response

```
DTC 0 is included in the REX schedule.
Last REX date was THU. 1991/11/29 at 09:53:57; PASSED.
No prior REX failure.
```

20 From the MAP response, determine the results of the REx test.

If the REx test	Do
passed	step 25
failed, and the system generated a card list	step 21
failed, and the system did not generate a card list	step 5

21 Note the number of the XPM that has potential defective cards listed against it in the MAP display in step 19.

Reviewing REx test results on an XPM (end)

- 22** Compare the card list to earlier card lists.

If the card list

Do

includes new cards that you did not replace on the same unit that you identified in step 8 step 23

does not include any new cards. All cards are on the same unit that you identified in step 8 and are replaced step 24

includes cards on a different unit than the one that you identified in step 8 step 12

- 23** Note any cards that you did not replace in this procedure. Add any additional cards the system did not generate earlier to the list that you recorded in step 14.

Go to step 10.

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

- 25** The procedure is complete.

Scheduling an automatic BIC relay test

Application

Use the following procedure to schedule automatic tests for the tip/ring reversal relay. Schedule the tests for the tip/ring reversal relay on each bus interface card (BIC), NT6X54, and on an extended line concentrating module (XLCM).

For additional information on office parameters BICRELAY_XLCM_TEST_SCHEDULE, and BICRELAY_NUM_SIMUL_TESTS, refer to *Office Parameters Reference Manual*.

Interval

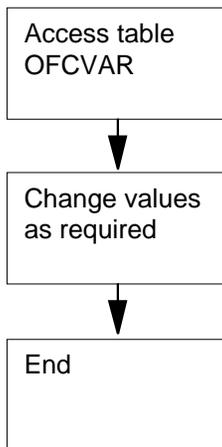
Perform this procedure when you must create or change an automatic BIC relay testing schedule.

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.

Scheduling an automatic BIC relay test (continued)

Summary of Scheduling an automatic BIC relay test



This flowchart summarizes the procedure.

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

Scheduling an automatic BIC relay test (continued)

Scheduling an automatic BIC relay test

At the CI level of the MAP terminal

- 1 To determine if a scheduled BIC relay test (BRT) is in progress, type
>BICRELAY QUERY
 and press the Enter key.

Example of a MAP response

```
SYSTEM LEVEL BIC RELAY TEST: ON
PM181 DRAWER STATE CHANGE LOGS: ALLOWED
CURRENT NUMBER OF BRT TESTS IN PROGRESS: 0
NEXT SCHEDULE LCM: LCM HOST 03 0
```

If a scheduled BRT	Do
is in progress	step 2
is not in progress	step 3

- 2 To turn the BRT off, type
>BICRELAY OFF
 and press the Enter key.

Example of a MAP response

The BIC RELAY test has been turned off.

- 3 To access table OFCVAR, type
>TABLE OFCVAR
 and press the Enter key.
- 4 To position on the BICRELAY_XLCM_TEST_SCHEDULE office parameter, type
>POS BICRELAY_XLCM_TEST_SCHEDULE
 and press the Enter key.

Example of a MAP response

```
BICRELAY_XLCM_TEST_SCHEDULE 3 0 5 0 (SU) $
```

- 5 To prepare to change the parameter, type
>CHA
 and press the Enter key.

Example of a MAP display response

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

Scheduling an automatic BIC relay test (continued)

- 6 To confirm the change, type
>Y

and press the Enter key.

Example of a MAP display response

```
PARMVAL: 3 0 5 0
```

- 7 To schedule the BRT, type
>start_hh start_mm end_hh end_mm (days)
and press the Enter key.

where

start_hh

is the hour the BRT must start (0 to 23 on the 24-h clock)

start_mm

is the minute after the hour the BRT must start (0 to 59)

end_hh

is the hour the BRT must end (0 to 23 on the 24-h clock)

end_mm

is the minute after the hour the BRT must stop (0 to 59)

days

is the day of the week, in brackets, the BRT must run, (MO), (TU), (WE), (TH), (FR), (SA), or (SU). The BRT runs once a week

Note: The start and stop times must indicate a window of a minimum of 10 min.

Example of a MAP response

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

- 8 To confirm the change, type
>Y
and press the Enter key.
- 9 To position on the BICRELAY_NUM_SIMUL_TESTS office parameter, type
>POS BICRELAY_NUM_SIMUL_TESTS
and press the Enter key.
- 10 To determine the number of XLCMs that will test at the same time, type
>CHA
and press the Enter key.

Example of a MAP response

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

Scheduling an automatic BIC relay test (continued)

11 To confirm the change, type

>Y

and press the Enter key.

Example of a MAP response

PARMVAL: 3

Note: The default value of BICRELAY_NUM_SIMUL_TESTS is 3.

12 To add the number of XLCMs you must test at the same time, type

>xlcm_num

and press the Enter key.

where

xlcm_num
is 1 to 3

Example of a MAP response

TUPLE TO BE CHANGED:

BICRELAY_NUM_SIMUL_TESTS

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

13 To confirm the numbers, type

>Y

and press the Enter key.

14 To quit from the table editor and return to the CI level, type

>QUIT ALL

and press the Enter key.

15 Obtain a list of all XLCMs to test from office records.

16 To obtain a printed copy of all XLCMs in the office, type

>RECORD START ONTO dev_name

and press the Enter key.

where

dev_name
is the name of the printer

17 To access table LCMINV, type

>TABLE LCMINV

and press the Enter key.

18 To obtain a list of all LCMs, type

>LIS ALL

and press the Enter key.

Example of a MAP response

Scheduling an automatic BIC relay test (continued)

```

TOP LCMNM FRTYPE SHPOS FLOOR ROW FRPOS  EQPEC LOAD CSPMNO
BICTST MEMSIZE LCMTYPE
-----
HOST 00 0 PCLM   4   0   B   5   6X04AA  LCM34A LTC   0
      N           64K  LCM Y   C   HLCM ( 0) ( 2) ( 1)$
HOST 02 0 PCLM   4   0   B   6   6X04AA  XLCM34S LTC   1
      Y   256K           LCM Y   C   HLCM (17) (18) (19)$
    
```

- 19** To stop the printer, type
>RECORD STOP ONTO dev_name
 and press the Enter key.
where
 dev_name
 is the name of the printer
- 20** On the paper copy from the printer, note all XLCMs where n is the load name. The XLCMn in the LOAD field indicates these XLCMs. For example, in the MAP display in step 18, XLCM34S is the LOAD name.
- 21** Compare the list from step 20 with the list from office records in step 15. Determine if the test does not include any XLCMs. An N in the BICTST field in table LCMINV indicates that the test does not include an XLCM. For example, in the MAP display in step 18, a Y in the BICTST field indicates the XLCM is included in the test.

If	Do
the test does not, but must include an XLCM	step 22
the test includes all XLCMs	step 30

- 22** To prepare to turn the test on for each XLCM that is missing, type
>CHA
 and press the Enter key.
Example of a MAP response

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

- 23** To confirm the change, type
>Y
 and press the Enter key.
Example of a MAP response

```
PARMVAL: 3 0 5 0
```

- 24** Press the Enter key for each field until you reach the BICTST field.

Scheduling an automatic BIC relay test (end)

- 25** To change the BICTST parameter to Y, type
>Y
 and press the Enter key.
- 26** Verify that the MEMSIZE for the parameter is 256 kbytes.

If MEMSIZE	Do
is 256 kbytes	step 28
is not 256 kbytes	step 27

- 27** To change the MEMSIZE parameter, type
>256
 and press the Enter key.
- 28** Press the Enter key for each field that remains until you reach the first blank LKINFO prompt field. To end the change, type
>\$
 and press the Enter key.

Example of a MAP response

```
TUPLE TO BE CHANGED:
REM3 03 0 PCLM 4 0 B 4 6X04AA XLCM34S RCC 1
  Y 256K
          LCM Y      C HLCM      (4)(5)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

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

Example of a MAP response

```
TUPLE CHANGED
```

- 30** To quit from the table editor and return to the CI level, type
>QUIT ALL
 and press the Enter key.

- 31** To turn on the BRT, type
>BICRELAY ON
 and press the Enter key.

Example of a MAP response

The BIC RELAY test will begin at the scheduled start time.

- 32** The procedure is complete.

Scheduling an automatic line test

Application

Use the following procedure to schedule automatic line testing (ALT). This procedure includes automatic line testing from the ALT level of the MAP terminal.

The main ALT menu accesses each of the following tests:

- extended diagnostic tests (DIAG)
- short diagnostic tests (SDIAG)
- on-hook balance network tests (BAL)
- line insulation tests (LIT)
- keyset line circuit tests (CKTTST)

Extended diagnostic tests (DIAG) include:

- transhybrid loss
- channel loss for remote concentrator SLC-96 (RCS) lines
- attenuation pad
- talk battery
- noise
- loop signal at line card
- self test
- loop signal at keyset
- add-on and extension
- flux cancellation
- echo return loss for RCS
- loop detector
- loop detector for remote concentrator terminal (RCT)
- loop detector for RCS
- metering test
- two-party automatic number identification (ANI) for RCT
- equalization current detector
- buffer full flag
- battery feed resistor

Scheduling an automatic line test (continued)

- reversal relay
- +48V reversal relay
- ground start detector
- cutoff relay
- ring and supervision
- ringing test for RCS
- test access relay
- isolation relay test

A short diagnostic test (SDIAG) is a part of the following DIAG tests:

- transhybrid loss
- attenuation pad
- noise
- loop signal at line card
- self
- loop signal at keyset
- loop detector for RCT
- ring
- supervision

On-hook balance network tests (BAL) determine if a subscriber loop is loaded or unloaded. Line insulation tests (LIT) detect foreign potential and not enough conductor leakage resistance on the loop facility. Keyset line circuit tests (CKTTST) test keyset lines.

You can create and modify from the ALT level of the MAP terminal. For additional information on ALT, refer to *Lines Maintenance Guide*. For additional information on table ALTSCHEM, refer to the *Translations Guide*.

Interval

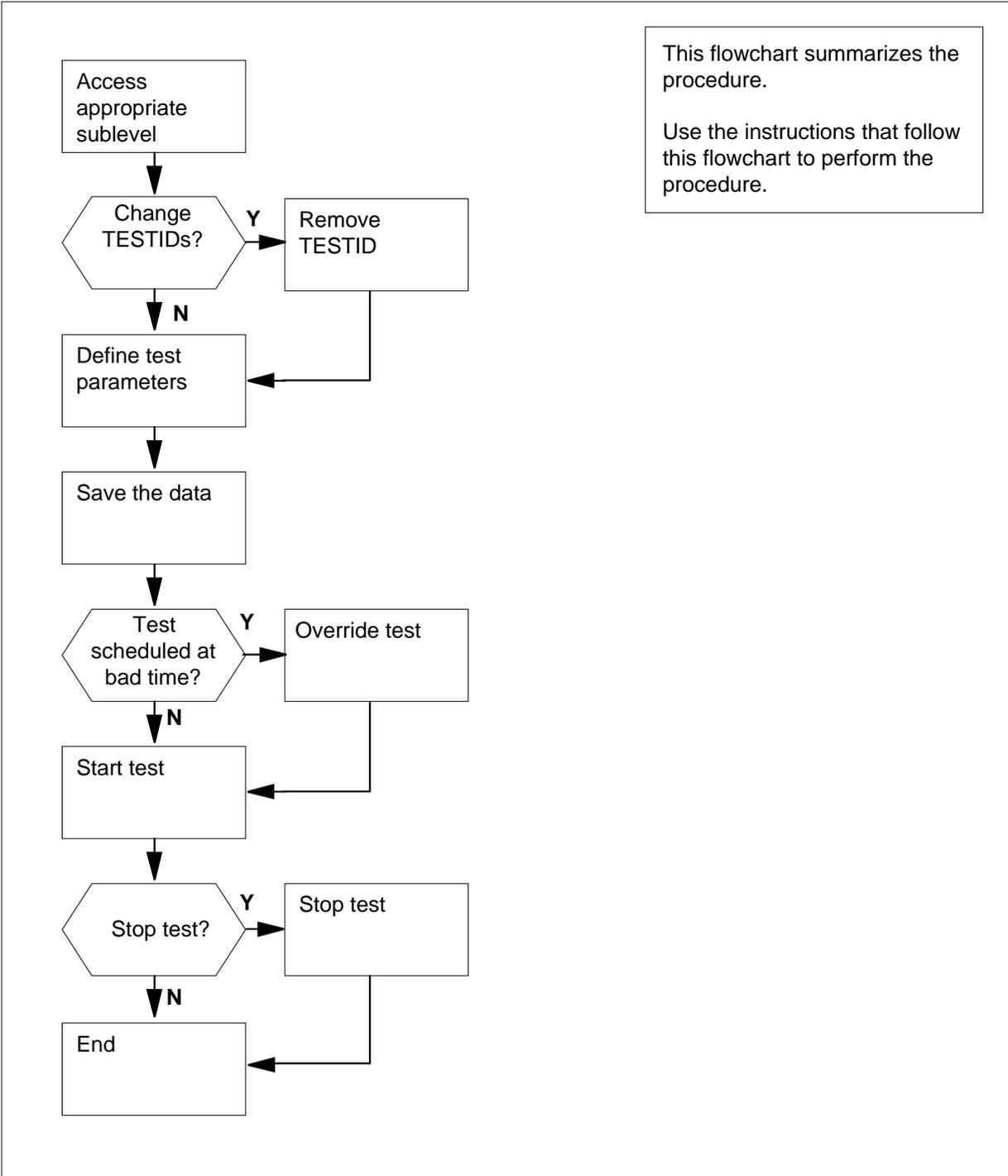
Perform this procedure to create or change an ALT schedule.

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.

Scheduling an automatic line test (continued)

Scheduling an automatic line test



Scheduling an automatic line test (continued)

Scheduling an automatic line test

At your current location:

- 1 From office records, determine which type of test you need to run.

If you	Do
must run an extended diagnostic test	the DIAG sublevel
must run a short diagnostic test	the SDIAG sublevel
must run an on-hook balance network test	the BAL sublevel
must run a line insulation test	the LIT sublevel
must run a keyset line circuit test	the CKTTST sublevel

- 2 Determine if any different identifiers (TESTID) for each ALT are defined. Determine the identifiers from office records or from table ALTSCHED.

If you	Do
must determine TESTIDs from office records	step 3
must determine TESTIDs from table ALTSCHED	step 4

- 3 Consult office records and record all TESTIDs. Go to step 9.

At the CI level of the MAP display

- 4 To obtain a printed copy of the contents of table ALTSCHED, type
>RECORD START ONTO dev_name
 and press the Enter key.

where

dev_name
 is the name of the printer

- 5 To access table ALTSCHED, type
>TABLE ALTSCHED
 and press the Enter key.

- 6 To determine if TALTSCHED defines TESTIDs for each ALT, type
>LIS ALL
 and press the Enter key.

Example of a MAP display response

Scheduling an automatic line test (continued)

```

ALTTSTID                                TESTDEF
                                SCHDTIME
                                USERID   STARTED   LOGFORM
-----
TEST01   N  DIAG                   ALL  HOST 00 0 00 00  HOST 00 0 00 01
        DIALUPO                       N    SUMMARY   (TUE 10 15 TUE 11 15)$
    
```

Note: The left corner of each entry in the table defines the TESTIDs. In this example, the TESTID is TEST01.

- 7 To leave table ALTSCHED, type:
>QUIT
 and press the Enter key.
- 8 To stop recording the information on the printer, type:
>RECORD STOP ONTO dev_name
 and press the Enter key.
where
 dev_name
 is the name of the printer
- 9 To access the ALT level of the MAP, type
>MAPCI ;MTC ;LNS ;ALT
 and press the Enter key.
- 10 To access the appropriate sublevel of the MAP that you determined in step 1, type
>sublevel1
 and press the Enter key.
where
 sublevel
 is one of SDIAG, DIAG, LIT, BAL, or CKTTST
- 11 To post the first TESTID on the list, type
>POST testid
 and press the Enter key.
where
 testid
 is a 6 to 12-character alphanumeric identifier, starting with a letter (do not use the word MANUAL as an identifier).
- 12 Determine if the information is correct or if you must change the information.

If the TESTID	Do
is correct	step 15
needs changing	step 13

Scheduling an automatic line test (continued)

- 13** To change a current TESTID, remove the TESTID from table ALTSCHED and enter the TESTID as a new TESTID. To remove the TESTID and the data that corresponds to the TESTID from memory, type

>REMOVE

and press the Enter key.

- 14** Determine if you must post more TESTIDs.

If	Do
you need to post more TESTIDs	step 11
you do not need to post more TESTIDs	step 15

- 15** Determine if you need to define a new TESTID.

If you	Do
need to define a new TESTID	step 16
do not need to define a new TESTID	step 40

- 16** To define a TESTID, type

>DEFSCHD testid

and press the Enter key.

where

testid

is a 6 to 12-character alphanumeric identifier that starts with a letter (you cannot use the word MANUAL as an identifier).

Example of a MAP response

Table ALTSCHED is empty.

The TESTID is not in table ALTSCHED.

- 17** Use the following information to help you determine where to proceed.

If you	Do
must use data from a current TESTID for a new TESTID	step 21
do not need to use data from a current TESTID for a new TESTID	step 18

- 18** To define the line type, type

>DEFINE LINETYPE type

Scheduling an automatic line test (continued)

and press the Enter key.

where

type

is the line type you must test, STANDARD, ISDN or ALL

- 19** To define the lines that you must test, type

```
>DEFINE STARTLEN frame unit drawer circuit ENDLEN frame  
unit drawer circuit
```

and press the Enter key.

where

frame

is the frame number (00 to 99)

unit

is the unit number (0 to 9)

drawer

is the drawer number (00 to 31)

circuit

is the circuit number (00 to 31)

Note: The frame, unit, drawer, and circuit after STARTLEN define where the test must begin. The frame, unit, drawer, and circuit after ENDLEN define where the test must end.

Example of a MAP response

```
TESTID: test01          Status: Stopped  
                        Linetype: Standard  
STARTLEN              ENDLEN  
HOST 00 0 00 00      HOST 00 0 00 02
```

- 20** Go to step 22.

- 21** To define the extension to the test, type

```
>DEFINE EXTENSION testid
```

and press the Enter key.

where

testid

is a current TESTID in table ALTSCHED

Note: You must schedule the current TESTID at the same sublevel of the MAP display as the new TESTID. For example, you cannot use a current TESTID at the SDIAG sublevel to create a new TESTID at the CKTTST sublevel. The new TESTID must be at the SDIAG sublevel.

- 22** To define the times of the test schedule, type

```
>DEFINE TIME startday starthh startmm endday endhh endmm
```

and press the Enter key.

where

Scheduling an automatic line test (continued)

startday

is the day of the week the test must start (MON, TUE, WED, THU, FRI, SAT, or SUN)

starthh

is the hour of the day the test must start (00 to 23 on the 24-h clock)

startmm

is the minute of the hour the test must start (00 to 59)

endday

is the day of the week the test must end (MON, TUE, WED, THU, FRI, SAT, or SUN)

endhh

is the hour of the day the test must end (00 to 23 on the 24-h clock)

endmm

is the minute of the hour the test must end (00 to 59 on the 24-h clock)

Example of a MAP display response

```

cont      MON TUE WED      THU FRI SAT SUN
start    :   : 23:00    :   :   :
stop     :   : 23:59    :   :   :
    
```

Note: There must be a minimum of ten minutes between the start time and the stop time.

- 23** Determine if the test is an extension (that you defined in step 21).

If the test	Do
is an extension	step 29
is not an extension	step 24

- 24** The next action depends on the type of test that you need to define.

If test	Do
is LIT	step 25
is CKTTST	step 28
is other than listed here	step 29

- 25** To define the test schedule for a LIT test, type

>DEFINE EMF

and press the Enter key.

Note: EMF specifies that you must perform the electromotive force test at the default values of EMFDCV and EMFACV (2V).

Example of a MAP display response

Scheduling an automatic line test (continued)

```
TESTID: test01          Status: Defined
                        Linetype: ISDN
STARTLEN              ENDLEN      Test
HOST 00 0 00 02 HOST 00 0 00 03 EMFDC Dft AC Dft
```

26 To define any additional parameters for the LIT test, type

```
>DEFINE [EMFDCV volts] [EMFACV volts] [TG] [RG] [TR]
[RESVALUE <TG mct lct> <RG mct lct> <TR mct lct>] [CAP
<thresh>]
```

and press the Enter key.

where

EMF

specifies that you must perform the electromotive force test at the default values of EMFDCV and EMFACV (2V)

EMFDCV

changes the default value for EMFDC voltage

EMFACV

changes the default value for EMFAC voltage

volts

specifies the voltage limit (1V to 300V)

TG

specifies that you must perform a tip to ground resistance test at the default values (mct = 40k Ω , lct = 200k Ω)

mct

specifies the most critical threshold, up to 40 Ω

lct

specifies the least critical threshold, up to 200 Ω

RG

specifies that you must perform a ring to ground resistance test at the default values (mct = 40k Ω , lct = 200k Ω)

TR

specifies that you must perform a tip to ring resistance test at the default values (mct = 40k Ω , lct = 200k Ω)

RESVALUE

changes the most and least critical resistance value for the TG, RG or TR test, 100 Ω units over the range 1 to 9990

mct

specifies the most critical resistance threshold in increments of 100 Ω from 1 to 7500 increments

lct

specifies the least critical resistance threshold in increments of 100 Ω from 1 to 7500 increments

CAP

specifies that you must perform the capacitance test (default threshold = 0.1 μ F)

Scheduling an automatic line test (continued)

thresh

specifies the capacitance threshold in increments of 0.001 μ F from 1 to 5000

27 Go to step 29.

28 To define the test schedule for a CKTTST test, type

>DEFINE NUMMSG number SERVICE service LOCATION location

and press the Enter key.

where

number

specifies the number of messages, 1 to 50, to send during the CKTTST (default is the value in office parameter CIRCUIT_TEST_NUMBER_MESSAGES)

service

specifies the type of keyset lines to run the test on, VOICE, DATA or ALL

location

specifies where the test is to run, TERMINAL or LINECARD

Example of a MAP display response

```

TESTID: test02                Status: Stopped
                               Linetype: ISDN
STARTLEN                     ENDLEN      Test
HOST 00 0 00 02 HOST 00 0 00 03 NUMMSG  44
                               SERVICE All
                               LOCATION Linecard
    
```

Note: For additional information on office parameters, refer to *Office Parameters Reference Manual*.

29 To store the test data, type

>SUBMIT

and press the Enter key.

Example of a MAP display response

The data has been added into table ALTSCHED.

30 Determine if you scheduled the test for the wrong time, like a high traffic period.

If the test	Do
is scheduled for an correct time	step 31
is scheduled for the wrong time	step 32

31 To postpone the test, type

>OVERRIDE UNTILAFTER day hh mm

and press the Enter key.

Scheduling an automatic line test (continued)

where

day

is the day of the week when the test must resume (MON, TUE, WED, THU, FRI, SAT, or SUN)

hh

is the hour of the day (00 to 23 on the 24-h clock)

mm

is the minute of the hour (00 to 59)

- 32** To start the automatic line test, type

>START len log_type

and press the Enter key.

where

len

specifies where to start the test, BEGINLEN or LASTLEN

log_type

specifies the type of log that is output when the test finishes, FULL or SUMMARY

Note: The test starts at the first LEN in the block of defined LENs and outputs a detailed ALT109 log. The tests occurs in this way if you do not specify parameters.

Example of a MAP response

```
Start LEN is set to start from "BEGINLEN".  
Please confirm ("YES" or "NO"):
```

- 33** To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response

```
ALT tester process has acknowledged the start request.
```

- 34** To verify that the test runs, type

>STATUS format

and press the Enter key.

where

format

is STREAM for information displayed in the test stream format, or LCDTESTSET for information in the LCD test set format.

Example of a MAP response

```
TESTID : test01      Test type: CKTTST  
Start LEN  End LEN Stream  Vert   Testing status  
HOST 00 0 00 02 HOST 00 0 00 03    0    --- WAITING
```

Scheduling an automatic line test (end)

35 You can stop a test at any time.

If you**Do**

intend to stop the test

step 36

do not intend to stop the test

step 40

36 To stop the test, type

>STOP

and press the Enter key.

37 Determine if the test was active or inactive.

If the test**Do**

was active

step 38

was inactive

step 40

38 Wait until the test status changes from Active to Inactive.

39 To enter a second STOP command, type

>STOP

and press the Enter key.

40 The procedure is complete.

Scheduling an automatic REx test on an FP

Application

Use the following procedure to schedule a routine exercise (REx) test on an file processor (FP).

Interval

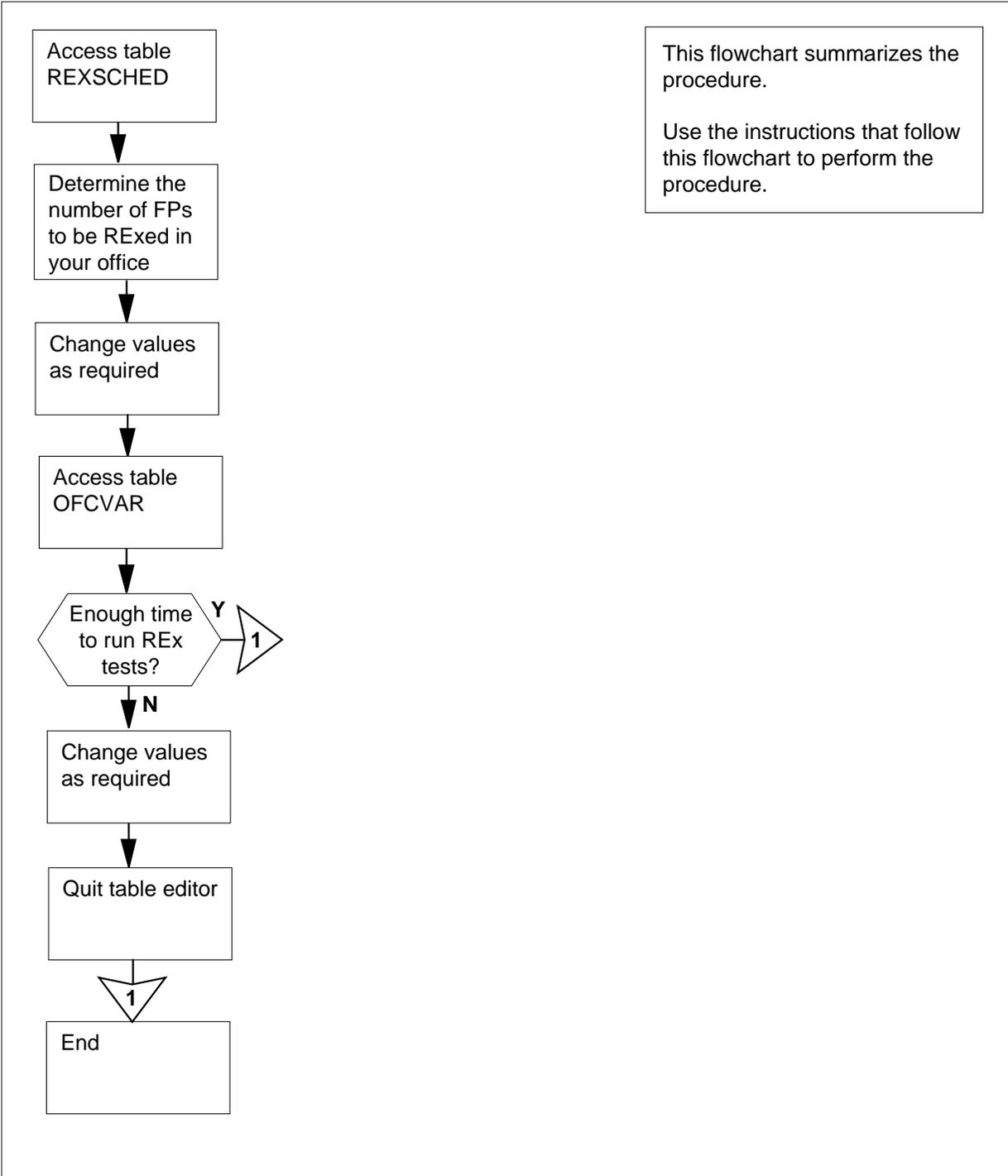
Perform this procedure when you want to add an FP to a current automatic REx schedule.

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.

Scheduling an automatic REx test on an FP (continued)

Summary of Scheduling an automatic REx test on an FP



Scheduling an automatic REx test on an FP (continued)

Scheduling an automatic REx test on an FP

At the MAP terminal

1



DANGER

Service degradation

A REx test on an FP node will slow the performance of applications on that node. Schedule REx tests for periods of low traffic.

To access table REXSCHED, type

```
>TABLE REXSCHED
```

and press the Enter key.

2

To position on the FPREXTEST tuple, type

```
>POSITION FP_REX_TEST
```

and press the Enter key.

Example of a MAP response:

```
FP_REX_TEST Y199NONE
```

Note: In the example, 99 corresponds to the number of REx tests set to run in parallel.

3

Determine the number of REx tests you want to run at the same time. Base the number of tests on the number of FPs in your office.

If your office	Do
has 1 to 3 FPs	step 4
has 4 to 8 FPs	step 5
has 9 to 11 FPs	step 6

4

Determine if the value in field Parallel is 1.

If the value	Do
is 1	step 11
is not 1	step 7

5

Determine if the value in field Parallel is 2.

If the value	Do
is 2	step 11

Scheduling an automatic REx test on an FP (continued)

	If the value	Do
	is not 2	step 7
6	Determine if the value in field Parallel is 3.	
	If the value	Do
	is 3	step 11
	is not 3	step 7
7	To change the number in the parallel field, type >CHANGE PARALLEL and press the Enter key. <i>Example of a MAP response:</i>	
	<pre>ENTER Y TO CONTINUE PROCESSING OR N TO QUIT</pre>	
8	To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response:</i> Parallel: 99	
9	To enter the new value in the field, type >parallel _no and press the Enter key. <i>where</i> parallel_no is the number of REx tests you want to run at the same time, determined in step 3 <i>Example of a MAP response:</i>	
	<pre>TUPLE TO BE CHANGED: FP_REX_TEST Y 1 1 NONE Enter Y to Confirm, N to Reject or E to Edit</pre>	
10	To confirm the change, type >Y and press the Enter key. <i>Example of a MAP response:</i> Tuple changed	
11	To quit from table REXSCHED, type >QUIT	

Scheduling an automatic REx test on an FP (continued)

- and press the Enter key.
- 12** To access table OFCVAR, type
>TABLE OFCVAR
 and press the Enter key.
Example of a MAP response:
 TABLE: OFCVAR
- 13** To position on the office parameter NODEREXCONTROL, type
>POSITION NODEREXCONTROL
 and press the Enter key.
Example of a MAP response:
 NODEREXCONTROL Y 1 30 3 30
- In the example:**
 Y indicates that you activated the REx test
- 1 30**
 is the start time of the REx test on the 24-h clock
- 3 30**
 is the end time of the REx test on the 24-h clock
- 14** Determine if you have enough time to run REx tests on all FPs in your office.
Note: You must add 30 min to the total value of the office parameter NODEREXCONTROL for each parallel REx test on the FPs.
- | If the time frame | Do |
|--------------------------|-----------|
| is enough | step 19 |
| is not enough | step 15 |
- 15** You can change the schedule of an automatic REx test. To change the schedule, add 30 min to the total value of the office parameter NODEREXCONTROL for each set of FPs. (For example, if your office has four FPs and you run two at a time, the REx tests require 60 min to run) To change the schedule, type
>CHANGE
 and press the Enter key.
Example of a MAP response:
- ENTER Y TO
 CONTINUE PROCESSING
 OR N TO QUIT
- 16** To confirm the command, type
>Y
 and press the Enter key.
Example of a MAP response:
 PARMVAL: Y 2 30 4 30

Scheduling an automatic REx test on an FP (end)

- 17** To change the start and stop times, type
`>Y start_hh start_mm end_hh end_mm`
and press the Enter key.
where
start_hh start_mm
is the start time of the REx test
end_hh end_mm
is the end time of the REx test
Example input
`>Y 02 30 04 30`
Example of a MAP display:
- ```
TUPLE TO BE CHANGED:
NODEREXCONTROL Y 02 30 04 30
ENTER Y TO CONFIRM, N TO REJECT, OR E TO
EDIT.
```
- 18** To confirm the change to the office parameter NODEREXCONTROL, type  
`>Y`  
and press the Enter key.  
*Example of a MAP response:*  
TUPLE CHANGED
- 19** To quit from table OFCVAR, type  
`>QUIT`  
and press the Enter key.
- 20** The procedure is complete.

## Scheduling an automatic REx test on an LCM

---

### Application

Use the following procedure to schedule routine exercise (REx) tests on a line concentrating module (LCM). Use the procedure to schedule REx tests on the variants of an LCM.

The following are variants of an LCM:

- international LCM (ILCM)
- integrated services digital network LCM (LCMI)
- enhanced LCM (LCME)

Use the procedure to schedule REx tests on a line module. Use the procedure to schedule REx tests on the variants of a line module, like enhanced line module (ELM).

REx testing facilitates normal system-controlled testing. Use the tests as early indicators of faults that can affect service. The tests allow the operating company to take the appropriate actions to correct the faults. The REx schedule allows you to provide the system with a list of LCMs that you must test. The schedule allows you to specify the time of day when you must perform the tests. Schedule the tests for periods of low traffic and repeat the tests each day until you turn OFF the REx testing. The system REx scheduler runs REx on one LCM at a time. The log system records the results of the tests.

*Note:* The default time interval for the performance of a REx test is between 01:00 and 03:00.

### Interval

Perform this procedure when you want to create or change a REx testing schedule.

### Common procedures

There are no common procedures.

### Action

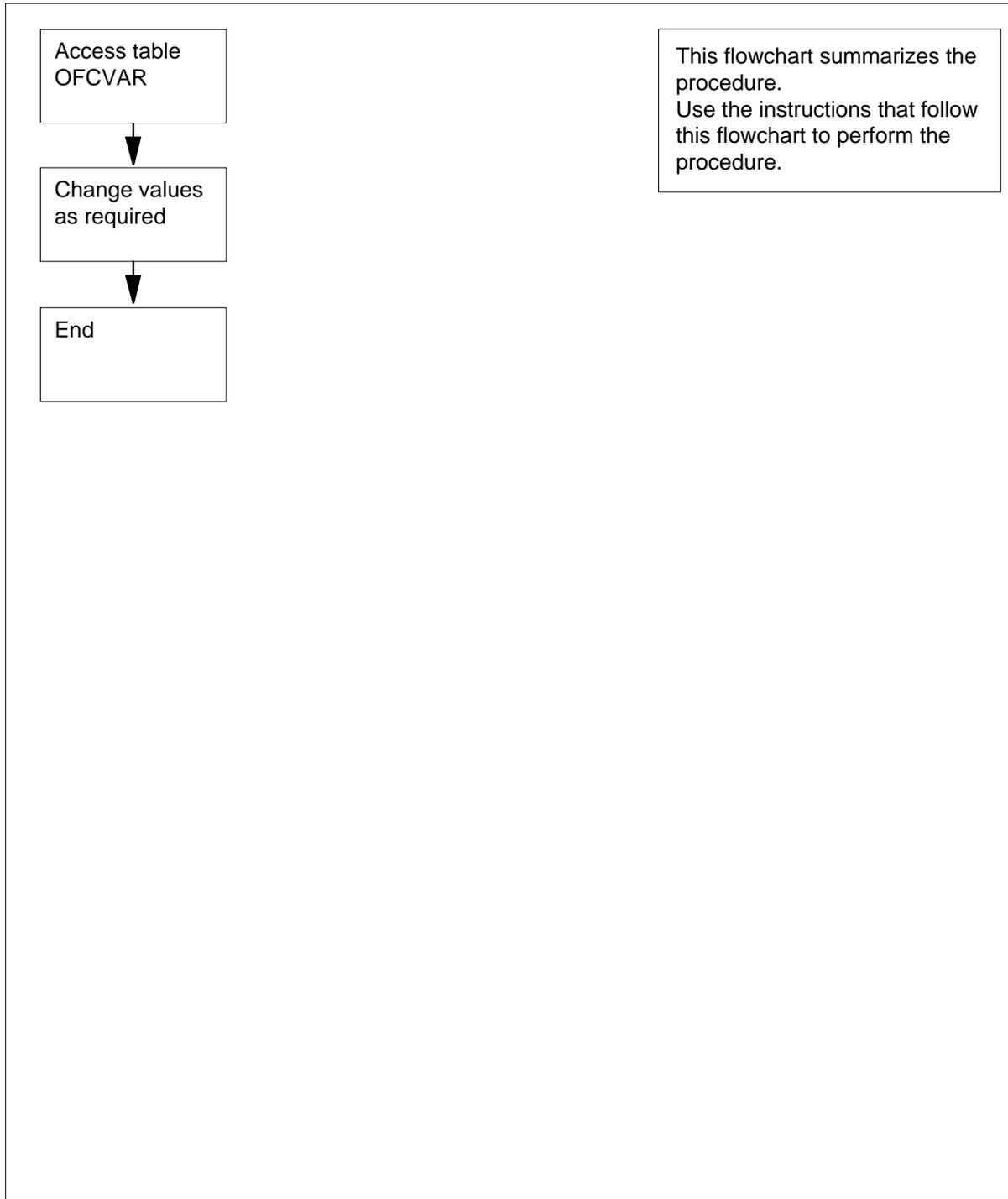
This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform this procedure.

---

## Scheduling an automatic REx test on an LCM (continued)

---

### Summary of Scheduling an automatic REx test on an LCM



## Scheduling an automatic REx test on an LCM (continued)

### Scheduling an automatic REx test on an LCM

#### *At your current location*

- 1 From office records, obtain a list of all LCMs that you must include in the REx test schedule.

**Note:** The system automatically includes all LCMs in the REx test schedule unless you exclude the LCMs with the TST REX OFF command.

#### *At the MAP terminal*

- 2 To access the PM level of the MAP display, type  
`>MAPCI;MTC;PM`  
 and press the Enter key.
- 3 To post the LCM that you want to include in the REx test, type  
`>POST LCM site frame_no pair_no`  
 and press the Enter key.

*where*

**site**

is the four-character string that indicates the location of the LCM

**frame\_no**

is the number of the frame that contains the LCM (0 to 511)

**pair\_no**

is the number of the LCM in the frame (0 or 1)

- 4 To note if you activated the REx test, type  
`>QUERYPM`  
 and press the Enter key.

*Example of a MAP response:*

```
PM Type: LCM Int. NO.:2 Status index: 2 Node_no: 23
Memory Size: 256K
ESA equipped: Yes, Intraswitching is On
Loadnames:LCMINV-XLCMY,Unit0:XLCM31E,Unit1:XLCM31E
LCM HOST 00 0 is included in the list of LCM types
scheduled for a REX test.
REX on LCM HOST 00 0 has not been performed.
Node Status: OK
Unit 0 Status: OK
Unit 1 Status: OK
Site Flr RPos Bay_id Shf Description Slot EqPEC
HOST 05 D05 OPE 00 05 LCM 00 0 6X04AA
```

- 5 Determine if you must include other LCMs in the schedule.

---

**If you**

**Do**

---

must include other LCMs

step 4

---

**Scheduling an automatic REx test on an LCM** (continued)

|           | <b>If you</b>                                                                                                                                                     | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | must not include other LCMs                                                                                                                                       | step 6    |
| <b>6</b>  | Compare the list that you recorded in step 1 with the list that you recorded in step 4.                                                                           |           |
|           | <b>If the list in step 4</b>                                                                                                                                      | <b>Do</b> |
|           | includes only the same LCMs as the list in step 1                                                                                                                 | step 12   |
|           | includes additional LCMs that you do not want to include                                                                                                          | step 7    |
|           | does not include all the LCMs on the list in step 1                                                                                                               | step 10   |
|           | includes additional LCMs that you do not want to include and does not include all LCMs that you want to include in the schedule                                   | step 7    |
| <b>7</b>  | To exclude the LCM, refer to the procedure in <i>Excluding an LCM from a REx test schedule</i> in this document. Complete the procedure and return to this point. |           |
| <b>8</b>  | Determine if all the LCMs that you do not need to test are removed from the schedule.                                                                             |           |
|           | <b>If all LCMs</b>                                                                                                                                                | <b>Do</b> |
|           | that you do not need to test are removed                                                                                                                          | step 9    |
|           | that you do not need to test are not removed                                                                                                                      | step 7    |
| <b>9</b>  | Determine if the schedule is missing LCMs that you need to add to the REx schedule.                                                                               |           |
|           | <b>If you</b>                                                                                                                                                     | <b>Do</b> |
|           | must add LCMs                                                                                                                                                     | step 10   |
|           | must not add any LCMs                                                                                                                                             | step 12   |
| <b>10</b> | To add the LCMs, refer to the procedure <i>Adding an LCM to a REx test schedule</i> in this document. Complete the procedure and return to this point.            |           |

---

## Scheduling an automatic REx test on an LCM (continued)

---

- 11 Determine if the schedule includes all the LCMs that you want to test.

| If the schedule                             | Do      |
|---------------------------------------------|---------|
| includes all the LCMs you must test         | step 12 |
| does not include all the LCMs you must test | step 10 |

- 12 To return to the CI level, type

```
>QUIT ALL
```

and press the Enter key.

- 13 To access table OFCVAR, type

```
>TABLE OFCVAR
```

and press the Enter key.

*Example of a MAP response:*

```
TABLE: OFCVAR
```

- 14 To position on the LCDREXCONTROL office parameter, type

```
>POSITION LCDREX_CONTROL
```

and press the Enter key.

*Example of a MAP response:*

```
LCDREXCONTROL Y 1 30 4 30
```

**Note:** In the MAP response, Y indicates that you activated the REx test. On the 24-h clock, 1 is the hour the REx test must start and 30 is the minute the test must start. On the 24-h clock, 4 is the hour the REx test must end and 30 is the minute the test must end.

- 15 To schedule an automatic REx test for an LCM, type

```
>CHANGE
```

and press the Enter key.

*MAP response:*

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

- 16 To confirm the addition, type

```
>Y
```

and press the Enter key.

*MAP response:*

```
PARMVAL: Y 1 30 4 30
```

---

## Scheduling an automatic REx test on an LCM (end)

---

- 17** To schedule the automatic REx test, type  
**>Y start\_hh start\_mm end\_hh end\_mm**  
 and press the Enter key.  
*where*
- start\_hh**  
 is the hour the REx test must start, for example, 01, on the 24-h clock
- start\_mm**  
 is the minutes after the hour the REx test must start, for example, 30
- end\_hh**  
 is the hour the REx test must end, for example, 04, on the 24-h clock
- end\_mm**  
 is the minutes after the hour the REx test must end, for example, 30
- Note:** Enter values that give the LCDREXCONTROL office parameter enough time to test all the LCMs that you want to test.
- Example of a MAP response:*
- ```
TUPLE TO BE CHANGED:
LCDREXCONTROL      Y 01 30 04 30
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT.
```
- 18** To confirm the addition, type
>Y
 and press the Enter key.
Example of a MAP response:
- ```
PARMVAL: Y 1 30 4 30
```
- 19** To confirm the change to the value of the PARMVAL field in the LCDREXCONTROL office parameter, type  
**>Y**  
 and press the Enter key.  
*Example of a MAP response:*
- ```
TUPLE CHANGED
```
- 20** To quit from the table editor and return to the CI level, type
>QUIT ALL
 and press the Enter key.
- 21** The procedure is complete.

Scheduling an automatic REx test on an XPM

Application

Use the following procedure to schedule a routine exercise (REx) test on an XMS-based peripheral module (XPM). The REx test scheduler manages normal system-controlled (automatic) REx testing. The REx test schedule determines which nodes are REx tested, the dates of the tests, and the frequency of the tests. Automatic REx tests are normally scheduled during periods of low traffic. REx test results are recorded by the log system.

Datafill in tables OFCVAR, REXINTEN, and REXSCHED control REx testing.

The line group controller (LGC), message and switching buffer (MSB), and remote cluster controller (RCC) node types support REx tests..

REx tests run in parallel on a number of host XPMs. Use the CI command AUTOCONFIG to control the number of host XPMs. Use this command to either enable, disable, or query the autoconfiguration of the parallel value that the system REx controller uses. The automatic REx test configuration process computes the minimum parallel value that allows all host XPMs in a large office to be automatically REx tested weekly. For additional information, refer to the description of table REXSCHED in the data schema section of *Translations Guide*.

LGC nodes include the following variants:

- integrated services digital network (ISDN) LGC (LGCI)
- international LGC (ILGC)
- offshore LGC (LGCO)
- PCM-30 LGC (PLGC)
- Global Peripheral Platform (GPP)
- Turkish LGC (TLGC)
- Australian LGC (ALGC)
- line trunk controller (LTC)
- international LTC (ILTC)
- Turkish LTC (TLTC)
- digital trunk controller (DTC)
- ISDN DTC (DTCI)
- PCM-30 DTC (PDTC)

Scheduling an automatic REx test on an XPM (continued)

- Turkish DTC (TDTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- subscriber carrier module-100S remote (SMSR)
- subscriber module access (SMA)
- traffic operator position system (TOPS) message switch (TMS)

MSB nodes include MSB6 and MSB7.

The RCC nodes include the following variants:

- Turkey RCC (TRCC)
- ISDN RCC (RCCI)
- Australian RCC (ARCC)
- PCM30 RCC (PRCC)
- RCC2
- SRCC
- RCO2

Note: If a warm switch of activity (SwAct) is not possible, terminate the REx test.

An optional feature allows public safety answering points (PSAP) E911 calls with the following to withstand a controlled warm SwAct:

- three way calling
- conference calls
- call parking
- other flash-activated features

A controlled warm SwAct occurs during a REx test.

Interval

Perform this procedure when you want to create or change a REx testing schedule.

Scheduling an automatic REx test on an XPM (continued)

Common procedures

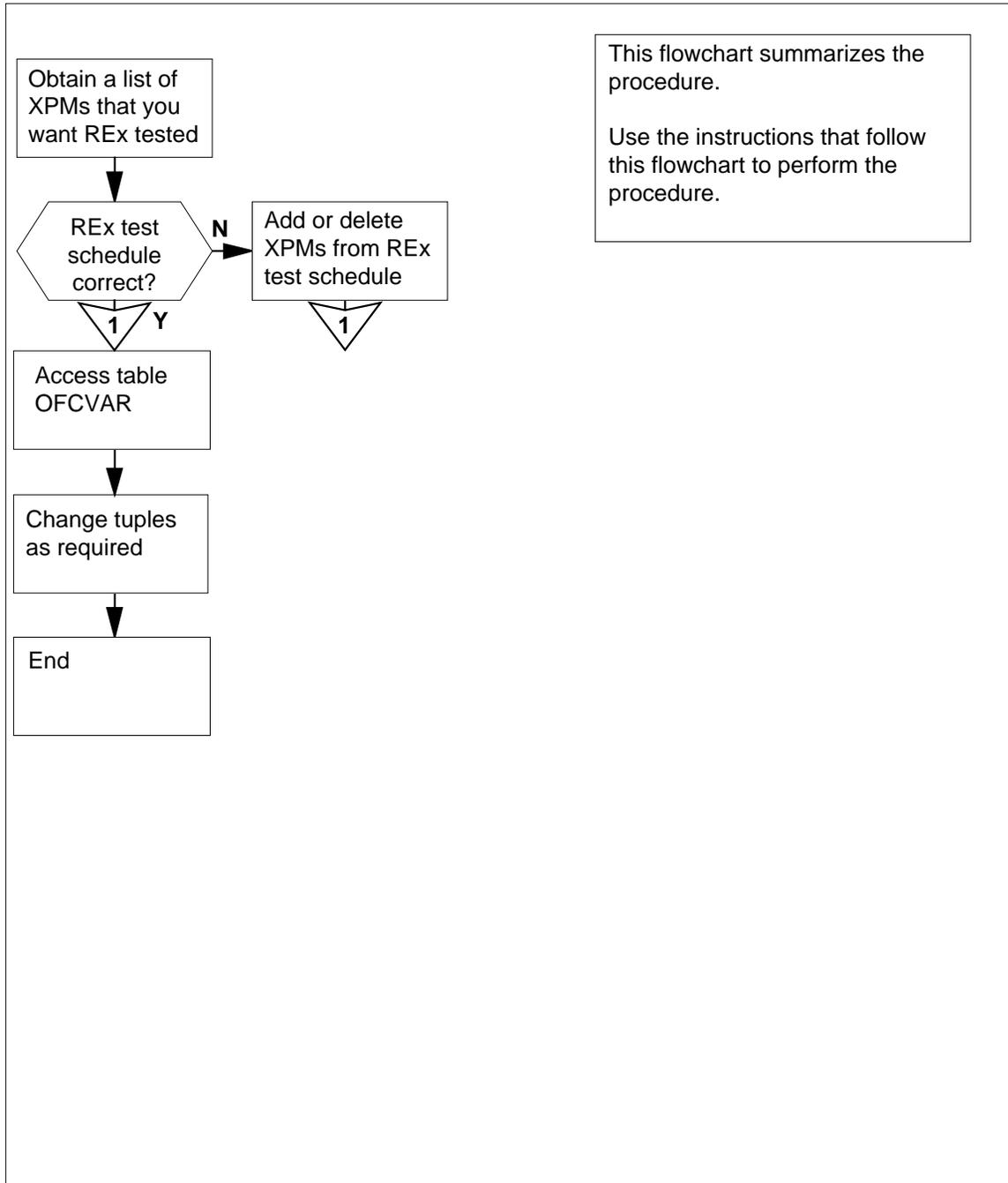
There are no common procedures.

Action

This procedure contains a summary flowchart. Use the flowchart to review the procedure. Follow the steps to perform this procedure.

Scheduling an automatic REx test on an XPM (continued)

Summary of Scheduling an automatic REx test on an XPM



Scheduling an automatic REx test on an XPM (continued)

Scheduling an automatic REx test on an XPM

At your current location

- 1 Obtain a list of all XPMs in the office. Obtain a list of XPMs that you must include in the REx test schedule.

If you	Do
must activate automatic REx test configuration	step 2
must not activate automatic REx test configuration	step 4

At the MAP terminal

- 2 To access the CI level of the MAP display, type
`>QUIT ALL`
and press the Enter key.
- 3 To activate automatic REx test configuration, type
`>AUTOCONFIG ON LGC_REX_TEST`
and press the Enter key.
Note: You can activate automatic REx test configuration for XPMs datafilled in table LTCINV.
- 4 To access the PM level of the MAP display, type
`>MAPCI ;MTC ;PM`
and press the Enter key.
- 5 To post an XPM, type
`>POST xpm_type xpm_no`
and press the Enter key.
where
xpm_type
is the type of XPM, for example, LGC)
xpm_no
is the number of the XPM (0 to 2047)
- 6 To determine if you activated automatic REx testing for the XPM, type
`>QUERYPM`
and press the Enter key.
Example of a MAP response:

Scheduling an automatic REx test on an XPM (continued)

LGC 0 is included in the REX schedule.

If you	Do
must include the XPM in automatic REx testing and the schedule includes the XPM	step 9
must include the XPM in automatic REx testing and the schedule does not include the XPM	step 8
must not include the XPM in automatic REx testing and the schedule includes the XPM	step 7
must not include the XPM in automatic REx testing and the schedule does not include the XPM	step 9

-
- 7 Exclude the XPM from the schedule for automatic REx testing. Perform the procedure *Excluding an XPM from a REx test schedule* in this document. Complete the procedure and go to step 9.
 - 8 Add the XPM to the schedule for automatic REx testing. Perform the procedure *Adding an XPM to a REx test schedule* in this document. Complete the procedure and go to step 9.
 - 9 Repeat steps 5 and 6 for each of the remaining XPMs in the office.
 - 10 To access the CI level of the MAP display, type
>QUIT ALL
 and press the Enter key.
 - 11 To access table OFCVAR, type
>TABLE OFCVAR
 and press the Enter key.
Example of a MAP response:
 TABLE: OFCVAR
 - 12 To position on office parameter NODEREXCONTROL, type
>POSITION NODEREXCONTROL
 and press the Enter key.
Example of a MAP response:
 NODEREXCONTROL Y 1 30 3 30

Note: In the MAP response example, the Y indicates that you activated automatic REx testing. The 1 is the start hour of the REx test on the 24-h clock. The 30 is the start minute of the REx test. The 3 is the end hour of the REx test on the 24-h clock. The 30 is the end minute of the REx test.

Scheduling an automatic REx test on an XPM (continued)

- 13 To prepare to change office parameter NODEREXCONTROL, type
>**CHANGE**
and press the Enter key.
Example of a MAP response:
- ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
- 14 To confirm the command, type
>**Y**
and press the Enter key.
Example of a MAP response:
PARMVAL: Y 1 30 4 30
- 15 To schedule automatic REx testing, type
>**Y start_hr start_min end_hr end_min**
and press the Enter key.
where
- start_hr**
is the hour the REx test must start, for example, 01 on the 24-h clock
 - start_min**
is the minutes after the hour the REx test must start, for example, 30
 - end_hr**
is the hour the REx test must end, for example, 04 on the 24-h clock
 - end_min**
is the minutes after the hour the REx test must end, for example, 30
- Note:** Enter values that give office parameter NODEREXCONTROL enough time to test all the XPMs that you must test. Allow 30 min for LGC and MSB node types. Allow 45 min for RCC node types.
- 16 To confirm the addition, type
>**Y**
and press the Enter key.
Example of a MAP response:
- PARMVAL: Y 1 30 4 30
- 17 To confirm the change to the value of the PARMVAL field in the NODEREXCONTROL office parameter, type
>**Y**
and press the Enter key.
Example of a MAP response:
- TUPLE CHANGED

Scheduling an automatic REx test on an XPM (end)

- 18 To quit from table OFCVAR and return to the CI level of the MAP display, type
`>QUIT ALL`
and press the Enter key.
- 19 The procedure is complete.

Scheduling a magnetic tape drive maintenance

Application

Use the following procedure to schedule magnetic tape drive maintenance.

Interval

Perform this procedure about every 180 days (6 months).

Perform the 1000-h maintenance routine described in the manual every 3 months. The maintenance routine is for Hewlett Packard tape drives used for recording automatic message accounting (AMA) or call detail recording (CDR).

Common procedures

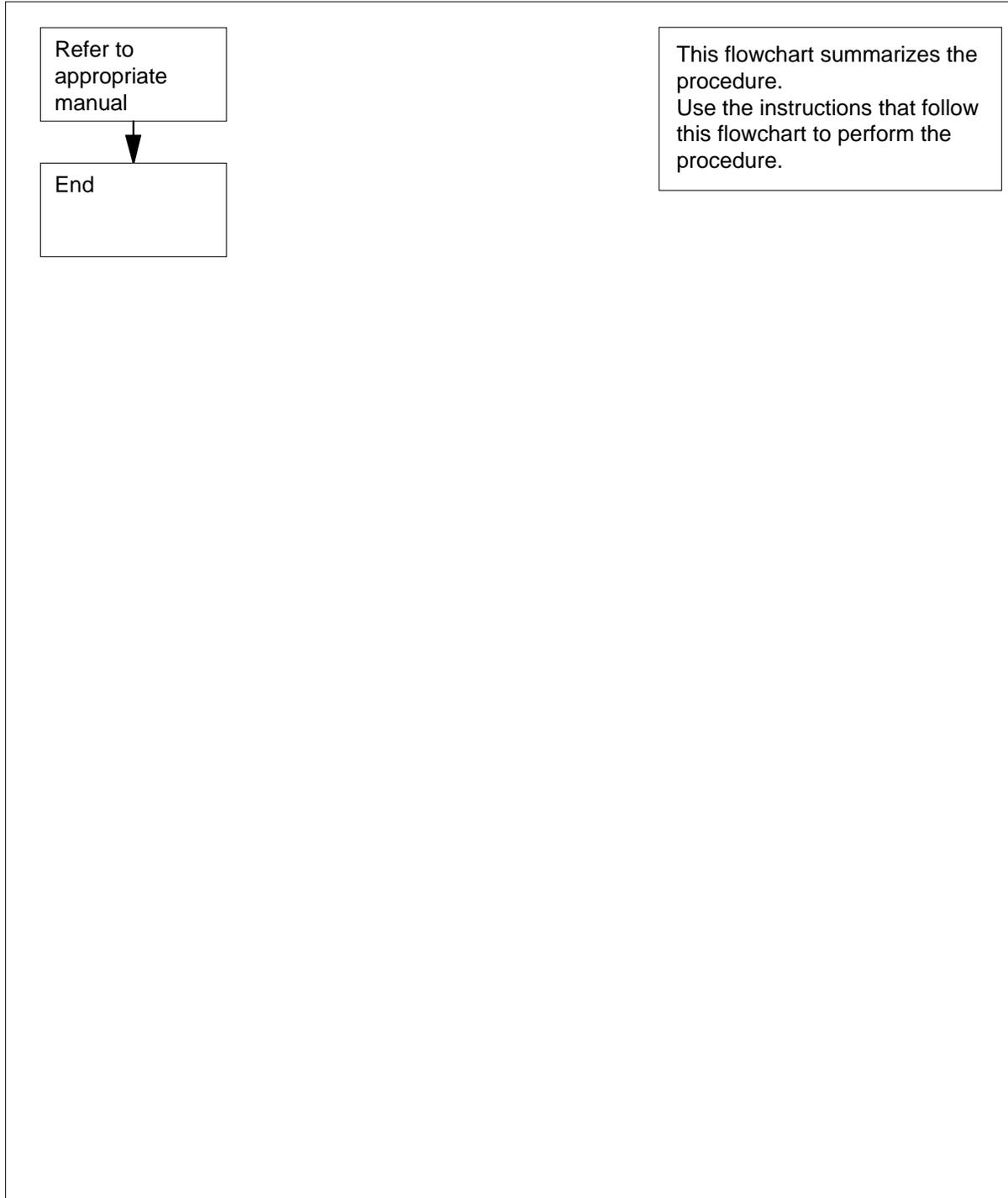
There are no common procedures.

Action

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

Scheduling a magnetic tape drive maintenance (continued)

Summary of Scheduling a magnetic tape drive maintenance



Scheduling a magnetic tape drive maintenance (end)

Scheduling a magnetic tape drive maintenance

At your current location

- 1** Set up a routine maintenance schedule. Base the schedule on the information in the manuals supplied with the Hewlett Packard or Cooke magnetic tape drive.
- 2** The procedure is complete.

Scheduling and storing daily office image backups

Application

Use this procedure to create system load module (SLM) disk volumes for storing daily office images. Use this procedure to set up a rotation design for daily office image dumps.

Interval

This procedure is an administrative task. The office supervisor will decide when this procedure will be performed.

Common procedures

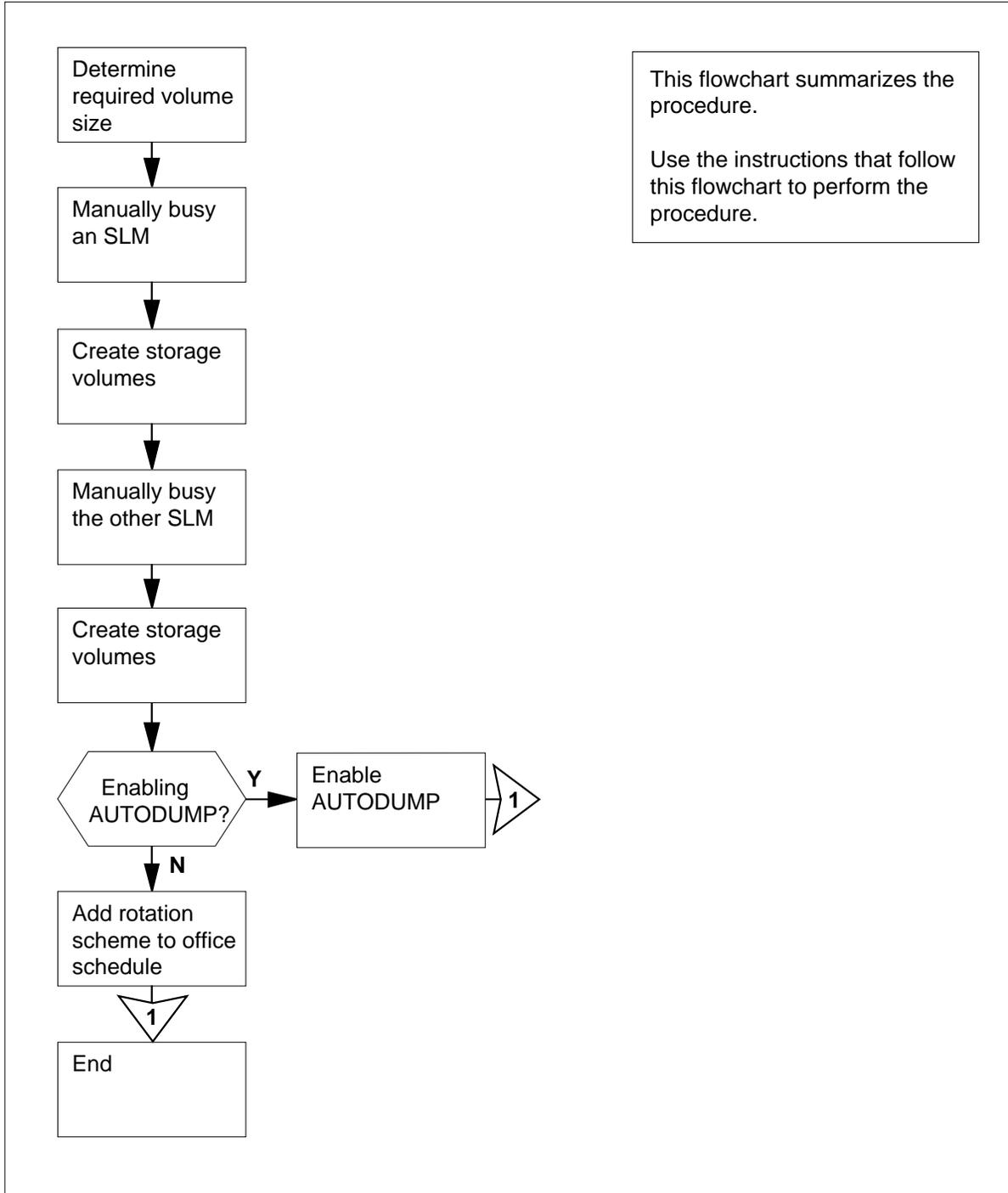
There are no common procedures.

Action

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

Scheduling and storing daily office image backups (continued)

Scheduling and storing daily office image backups



Scheduling and storing daily office image backups (continued)

Scheduling and storing daily office image backups

At your current location

- 1 Determine the volume sizes and names for your office from the following table.

Note: The volume sizes and names are guidelines. You can modify the volume sizes and names to suit your office requirements.

SLM type	Volume size	Volume name
SLM 1	60 Mbyte	S00DIMG0, S00DIMG1, S01DIMG0, S01DIMG1
SLM 1A	100 Mbyte	S00DIMG0, S00DIMG1, S01DIMG0, S01DIMG1
SLM 2	130 Mbyte	S00DIMG0, S00DIMG1, S01DIMG0, S01DIMG1
SLM 3	160 Mbyte	S00DIMG0, S00DIMG1, S01DIMG0, S01DIMG1

Use volumes that you assign for the storage of office images only for that purpose. This restriction helps to make sure office records are accurate. Other files that are present on these volumes can affect the AUTODUMP facility. For a description of the AUTODUMP facility, refer to *Enabling and scheduling automatic image taking* in this document.

- 2 Use the formula $[(CM+MS) + 20\%(CM+MS)]$ to calculate the volume size after the One Night Process (ONP).

Note: Calculate the volume size after each software upgrade. Make sure that the volume size is large enough to store the image.

- 3 The recommended volume size for daily image storage is the higher of the values determined in steps 1 and 2.

Scheduling and storing daily office image backups (continued)

4



CAUTION

Loss of data recording services

Before you attempt this procedure, make sure another device will assume the data recording services. The SLM that you will busy provides the data recording services. Make sure that the other device has space to assume the recording.

Choose an SLM in which to create volumes for storing daily office images.

At the MAP terminal

5 To access the CMMNT level of the MAP display, type

```
>MAPCI ;MTC ;CM ;CMMNT
```

and press the Enter key.

Example of a MAP response:

```
CM  Sync Act  CPU0  CPU1  Jam  Memory  CMMnt  MC  PMC
0   .  cpu 0   .   .           .   .   .

Traps:           Per minute =      0      Total =      0

AutoLdev:       Primary = SLM 0 DISK Secondary = SLM 1 DISK

Image Restartable = No image test since last restart

Next image test restart type= RELOAD

System memory in kbytes as of 14:39:07
Memory (kbytes): Used = 105984 Avail = 12800 Total=118784
```

6 Determine which device is the primary autoloader device.

Note: The primary autoloader device is on the right of the AutoLdev header on the MAP display. In step 5, the primary autoloader device is the disk of SLM 0.

If the SLM in use	Do
is the primary autoloader device	step 7
is the secondary autoloader device	step 8

7 To change the autoloader route to a device on the secondary SLM, type

```
>AUTOLD SLM slm_number device_type
```

and press the Enter key.

where

Scheduling and storing daily office image backups (continued)

slm_number

is the number of the SLM (0 or 1) that does not contain the primary autoload device

device_type

is the SLM device type (DISK or TAPE)

MAP response:

New autold route has been set.

- 8** To access the SLM plane of the SLM where you must create the image storage volumes, type

>IOD;SLM slm_number

and press the Enter key.

where

slm_number

is the number of the SLM (0 or 1) chosen in step 4

- 9** To manually busy the SLM, type

>BSY

and press the Enter key.

If the response
Do

is SLM 0 busy passed or SLM 1 busy passed

step 10

is other than listed here

step 20

- 10** To access the disk administration utility for the device you busied, type

>DISKADM disk_name

and press the Enter key.

where

disk_name

is the name of the disk (S00D or S01D) in the SLM you busied

Example of a MAP response:

Start up command sequence is in progress.

This may take a few minutes.

Administration of device S00D on CM is now active.

DISKADM; CM

- 11** To create the first image storage volume on the device, type

>CREATEVOL volume_name volume_size STD

and press the Enter key.

where

volume_name

is the name of the new volume

Scheduling and storing daily office image backups (continued)

volume_size

is the required size of the volume in megabytes. Review steps 1, 2, and 3 for the recommended volume size.

Example of a MAP response:

```
STD volume IMAGE1 will be created on S01D.
```

```
Volume size:      100 megabytes
File Directory size:  511 files
Volume Free Space Map Size: 2048 segments
```

```
Do you want to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 12** To confirm the command, type

```
>YES
```

and press the Enter key.

- 13** To create the second image storage volume on the device, type

```
>CREATEVOL volume_name volume_size STD
```

and press the Enter key.

where

volume_name

is the name of the new volume

volume_size

is the required size of the volume in megabytes. Review steps 1, 2, and 3 for the recommended volume size.

Example of a MAP response:

```
STD volume IMAGE2 will be created on S01D.
```

```
Volume size:      100 megabytes
File Directory size:  511 files
Volume Free Space Map Size: 2048 segments
```

```
Do you want to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 14** To confirm the command, type

```
>YES
```

and press the Enter key.

- 15** To quit from the disk administration utility, type

```
>QUIT
```

and press the Enter key.

- 16** To create image storage volumes in the other SLM, repeat steps 5 to 15. Create image storage volumes on both SLMs and complete this procedure.

Scheduling and storing daily office image backups (end)

- 17 Determine if you must enable automatic image-taking in the office.
- | If you | Do |
|--|---------|
| must enable automatic image-taking | step 18 |
| must not enable automatic image-taking | step 19 |
-
- 18 Perform the procedure *Enabling and scheduling automatic image taking* in this document. Complete the procedure and return to this point.
Go to step 21.
- 19 Update the office routine maintenance schedule to include the SLM disk volumes that you created for the storage of manual image dumps.
The following is the recommended rotation design:
Day 1—dump to the first image volume of SLM 0
Day 2—dump to the first image volume of SLM 1
Day 3—dump to the second image volume of SLM 0
Day 4—dump to the second image volume of SLM 1
Day 5—erase files in the first image volume of SLM 0, and dump a new image to this volume
Day 6—erase files in the first image volume of SLM 1, and dump a new image to this volume
Day 7—erase files in the second image volume of SLM 0, and dump a new image to this volume
Day 8—erase files in the second image volume of SLM 1, and dump a new image to this volume
Day 9—repeat the procedure for day 5
Day 10—repeat the procedure for day 6
Day 11—repeat the procedure for day 7
Day 12—repeat the procedure for day 8
Day 13—continue the four-day rotation design
Go to step 21.
- 20 For additional help, contact the next level of support.
- 21 The procedure is complete.

Scheduling and storing monthly office image backups

Application

Use this procedure to designate tapes for monthly backups of office image dumps. Use this procedure to establish a rotation design for these tapes in the routine maintenance schedule for the office.

These tapes serve as emergency backups and are stored offsite, in the event a fire or other disaster destroys the on-site backups.

Interval

This procedure is an administrative task. The office supervisor will decide when this procedure will be performed.

Common procedures

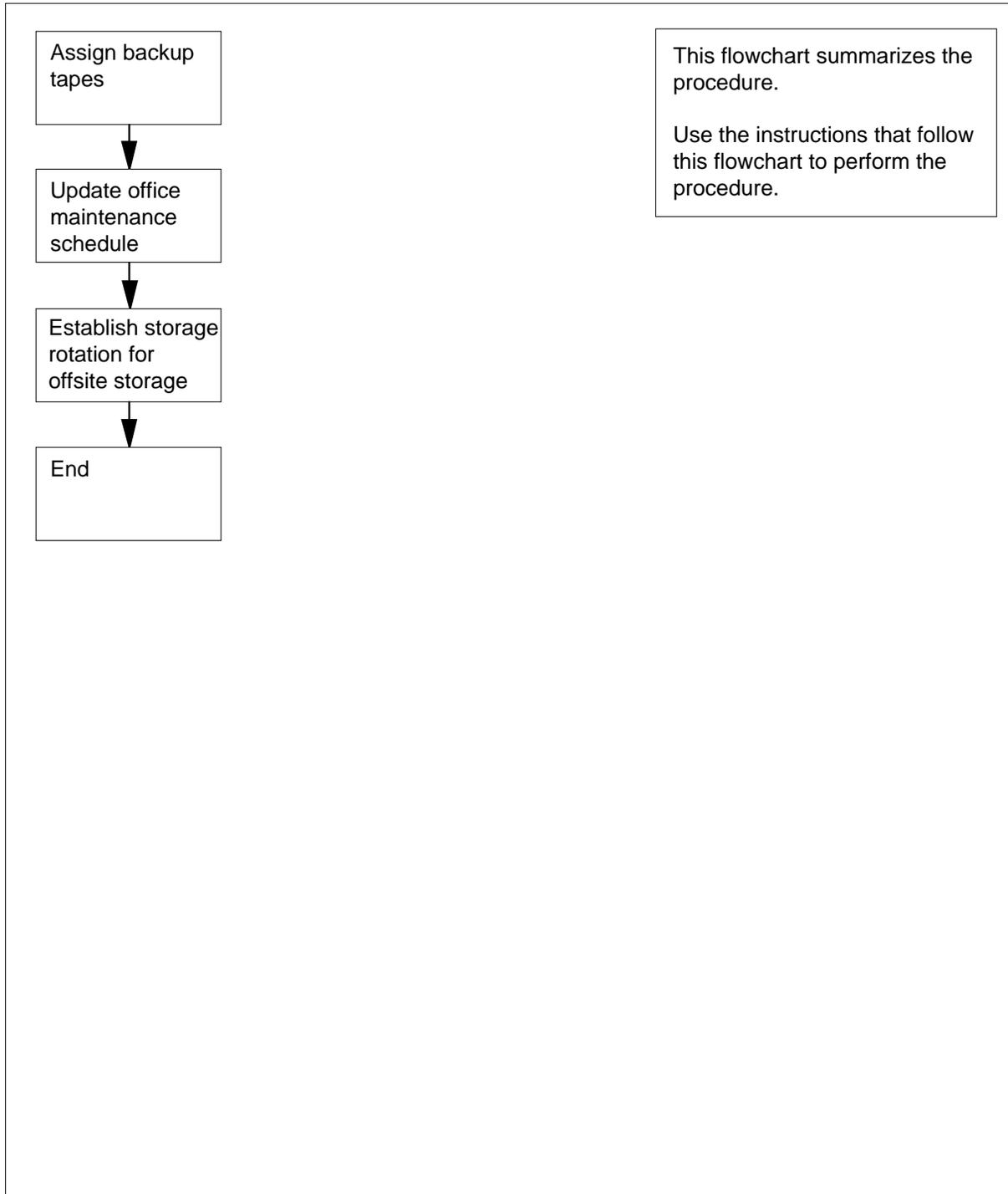
There are no common procedures.

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.

Scheduling and storing monthly office image backups (continued)

Summary of Scheduling and storing monthly office image backups



Scheduling and storing monthly office image backups (end)

Scheduling and storing monthly office image backups

At your current location

- 1 Designate four SLM tape cartridges that you can use only to store monthly office image backups. These cartridges can be blank or used.
- 2 Label the tapes MTHLY1, MTHLY2, MTHLY3, and MTHLY4. You can use a similar naming standard acceptable to your office procedure.
- 3 Designate a day of the month, normally every fourth Friday, for monthly image backups.
- 4 Make sure the office routine maintenance schedule includes the procedure *Copying an office image from SLM disk to SLM tape*. You can find this procedure in this document. Perform the procedure on this day.
- 5 The following is the recommended rotation design for monthly office image backups:
 - Week 1—backup to tape MTHLY1. Send MTHLY1 offsite.
 - Week 5—backup to tape MTHLY2 Send MTHLY2 offsite.
 - Week 9—backup to tape MTHLY3, Send MTHLY3 offsite.
 - Week 13—backup to tape MTHLY4, Send MTHLY4 offsite. Retrieve tape MTHLY1 from offsite storage.
 - Week 17—backup to tape MTHLY1, Send MTHLY1 offsite. Retrieve tape MTHLY2 from offsite storage.
 - Week 21—backup to tape MTHLY2, Send MTHLY2 offsite. Retrieve tape MTHLY3 from offsite storage.
 - Week 25—backup to tape MTHLY3, Send MTHLY3 offsite. Retrieve tape MTHLY4 from offsite storage.
 - Week 29—backup to tape MTHLY4, Send MTHLY4 offsite. Retrieve tape MTHLY1 from offsite storage.
 - Week 33—continue the backup and rotation design
- 6 Store the monthly image tape cartridges offsite in a storage area. Use these monthly images as emergency backups.
- 7 The procedure is complete.

Scheduling and storing office image backups

Application

This procedure contains guidelines and references for the following:

- how to create disk storage volumes for the daily office images
- how to designate tapes for storing office image backups
- how to enable automatic, scheduled dumping of office images
- how to schedule daily, weekly, and monthly office image backups

Interval

This procedure is an administrative task. The office supervisor will decide when this procedure will be performed.

Common procedures

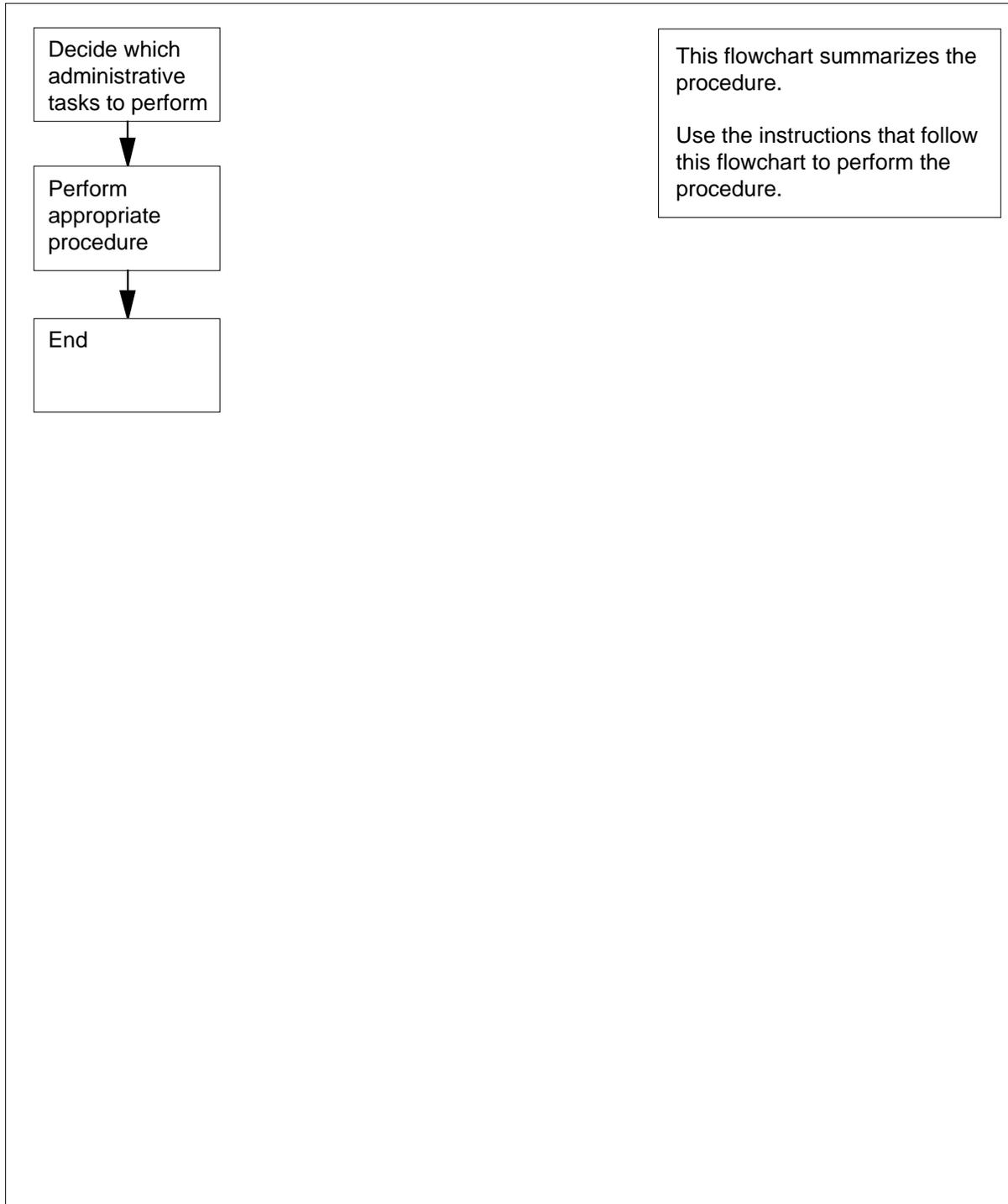
There are no common procedures.

Action

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

Scheduling and storing office image backups (continued)

Summary of Scheduling and storing office image backups



Scheduling and storing office image backups (continued)

Scheduling and storing office image backups

At your current location

- 1 Determine if system load module (SLM) volumes for the storage of daily office images are present.

Note: Use two image volumes per SLM disk to store images. Use the two image volumes only for image storage.

The following are examples of image volumes:

- SLM0: S00DIMG0, S00DIMG1
- SLM1: S01DIMG0, S01DIMG1

If volumes for image storage	Do
are present	step 3
are not present	step 2

- 2 Perform the procedure *Scheduling and storing daily office image backups* in this document. Complete the procedure and return to this point.

- 3 Determine if you must enable automatic office image-taking.

If you	Do
must enable automatic image-taking	step 4
must not enable automatic image-taking	step 5

- 4 Perform the procedure *Enabling and scheduling automatic image taking* in this document. Complete the procedure and return to this point.

- 5 Determine if SLM tape cartridges as backup tapes for office images are present. Determine if a storage and rotation plan is present.

If backup tapes and a rotation plan	Do
are present	step 7
are not present	step 6

- 6 Perform the procedure *Scheduling and storing weekly office image backups* in this document. Complete the procedure and return to this point.

- 7 Determine if a plan for monthly offsite office image storage is present.

If a storage plan	Do
is present	step 9

Scheduling and storing office image backups (end)

	If a storage plan	Do
	is present	step 8
8	Perform the procedure <i>Scheduling and storing monthly office image backups</i> in this document. Complete the procedure and return to this point.	
9	The procedure is complete.	

Scheduling and storing weekly office image backups

Application

Use this procedure to designate tapes for weekly backups of office image dumps. Use this procedure to establish a rotation design for these tapes in the office routine maintenance schedule.

Interval

This procedure is an administrative task. The office supervisor will decide when this procedure will be performed.

Common procedures

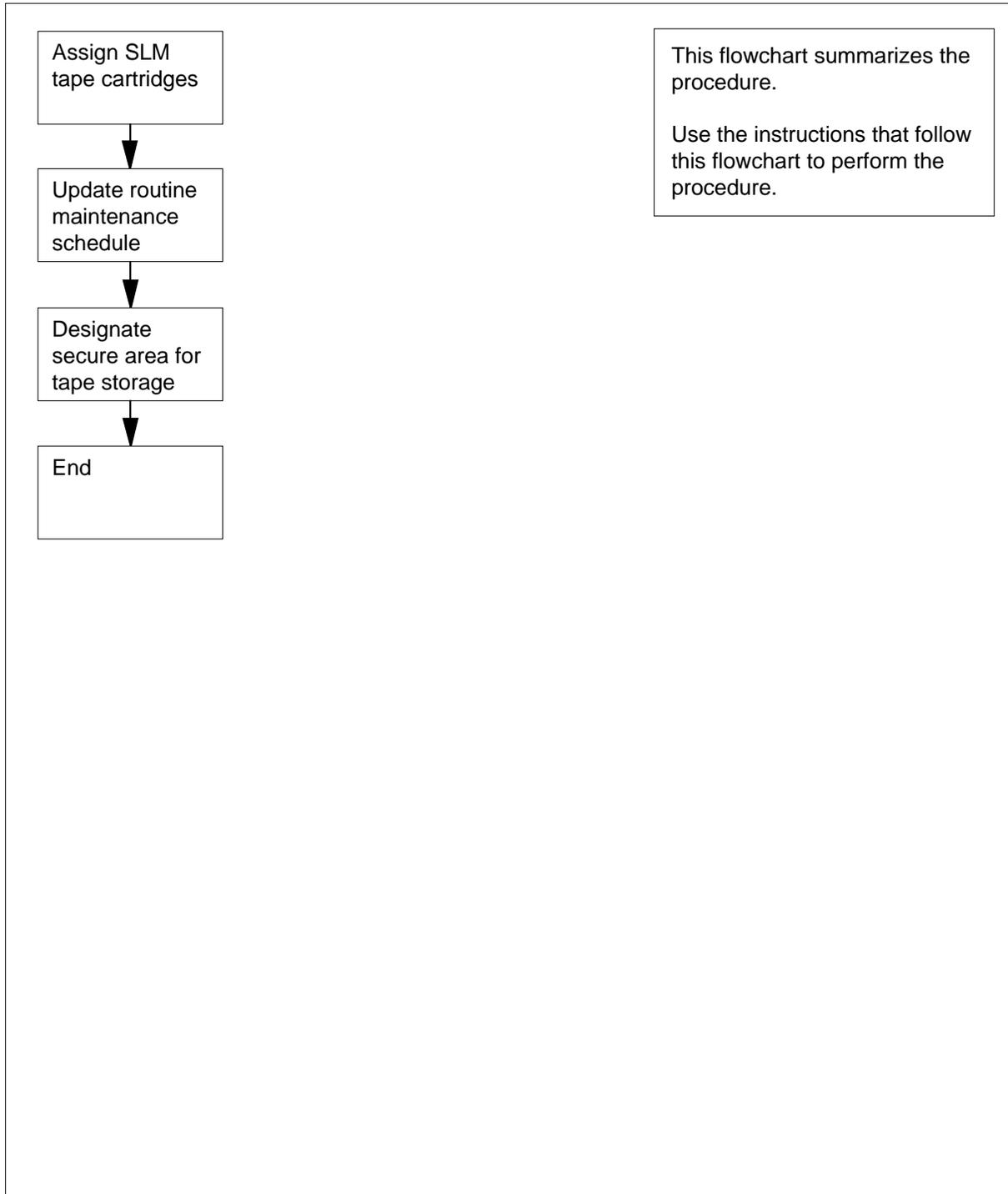
There are no common procedures.

Action

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

Scheduling and storing weekly office image backups (continued)

Summary of Scheduling and storing weekly office image backups



Scheduling and storing weekly office image backups (end)

Scheduling and storing weekly office image backups

At your current location

- 1 Designate five SLM tape cartridges to use only for storing weekly office image backups. These cartridges can be blank or used.
- 2 Label the tape cartridges BCKUP1, BCKUP2, BCKUP3, BCKUP4, and BCKUP5. You can use a similar naming standard acceptable to your office procedures.
- 3 Designate a day of the week, normally Friday, to implement image backups. Make sure that the office maintenance schedule includes a weekly image backup.
- 4 Use the procedure *Copying an office image from SLM disk to SLM tape* in this document, to perform weekly office image backups.
The following is the recommended rotation plan:
Week 1—back up to tape BCKUP1
Week 2—back up to tape BCKUP2
Week 3—back up to tape BCKUP3
Week 4—back up to tape BCKUP4
Week 5—back up to tape BCKUP5
Week 6—back up to tape BCKUP1
Week 7—continue backup and rotation plan
- 5 Store the weekly image tape cartridges on-site in the designated storage area of the office.
- 6 The procedure is complete.

Setting up a loop for a carrier remote loopback test

Application

Use this procedure to place the frame relay interface unit (FRIU) and the carrier that associates with the unit in loopback mode. The customer runs a loopback test between the customer premises equipment and the FRIU. The FRIU receives the test frames. The FRIU sends the frames directly back (looped back) to the customer. The customer can terminate the test. After the customer terminates the test, the customer removes the FRIU from loopback mode. If the test fails, check the quality of the T1 carrier. To check the quality of the T1 carrier, perform a loopback test from the office.

The test includes all channels on the T1 carrier, to permit the customer to perform bit pattern tests or framed data tests.

Interval

Perform this procedure at the request of the customer.

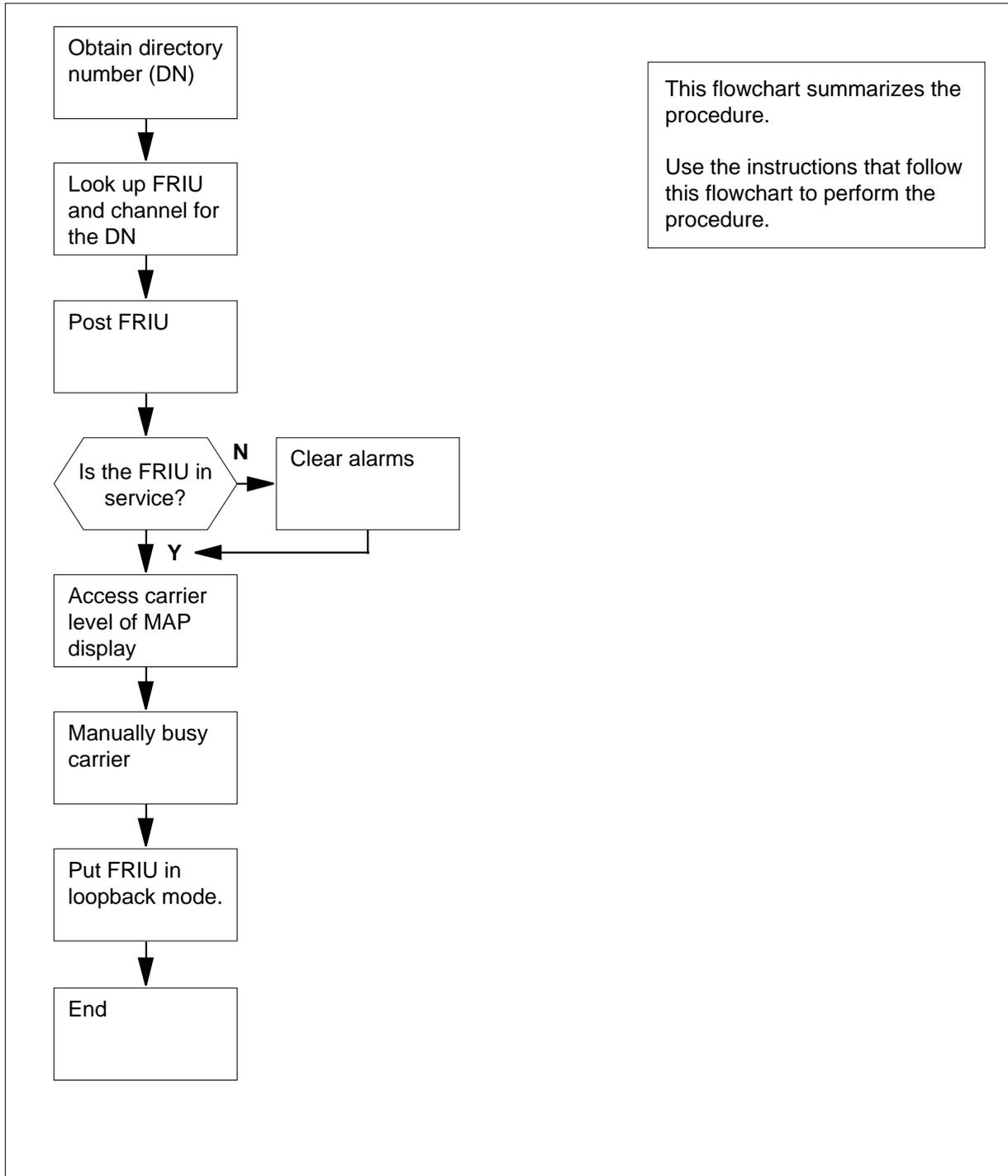
Action

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 does not apply to Datapath connections. In step Section 4, "To determine the FRIU number and the channel that associates with the agent ID, type" on page -616, the carrier is made busy. Datapath receives an on-hook message. The connection clears.

Setting up a loop for a carrier remote loopback test (continued)

Summary of Setting up a loop for a carrier remote loopback test



Setting up a loop for a carrier remote loopback test (continued)

Setting up a loop for a carrier remote loopback test

At your current location

- 1 Obtain the directory number (DN) from the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display, type
>PVDNCI
and press the Enter key.
Response:

PVDNCI :

- 3 To identify the agent ID that associates with the DN the customer supplies, type
>FRSDISP DN NO dir_no
and press the Enter key.
where
dir_no
is the DN that the customer supplies

Response:

PVDNCI :

DN 6132263770 belongs to FRS Agent 1

Note: The agent ID is at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type
>FRSDISP AGENT ID agent_no
and press the Enter key.
where
agent_no
is the agent ID you obtained in step 3

Response:

```
AGENT DN      NP   SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel given to this agent are under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

- 5 To return to the CI level of the MAP display, type
>QUIT
and press the Enter key.

Setting up a loop for a carrier remote loopback test (continued)

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

>MAPCI;MTC;PM

and press the Enter key.

Response:

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	2	0	0	0	0	70

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key.

where

friu_no

is the number of the FRIU you obtained at step 4

Response:

FRIU	121	InSv	Rsvd
------	-----	------	------

If the state of the FRIU

Do

is InSv or ISTb

step 9

is other than listed here

step 8

8 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

9 To access the carrier level of the MAP display, type

>CARR

and press the Enter key.

10 Inform the customer that you are ready to set a loop on the selected carrier. Proceed when the customer is ready to complete the loop.

11 To manually busy the carrier, type

>BSY FORCE

and press the Enter key.

12 To put the FRIU in loopback mode, type

>LOOP REMOTE

and press the Enter key.

Note: In response, the system sets the carrier state to ManB-R.

13 Inform the customer that testing can begin.

Note: After the customer tells you that the test is complete, remove the FRIU and the carrier from loopback mode. To remove the FRIU and the carrier from loopback mode, perform the procedure *Removing a loop after a carrier remote loopback test*.

Setting up a loop for a carrier remote loopback test (end)

14 The procedure is complete.

Setting up a loop for a channel remote loopback test

Application

Use this procedure to place the frame relay interface unit (FRIU) and specified channels that associate with the carrier in loopback mode. The customer runs a loopback test between the customer premises equipment and the FRIU. The FRIU receives the test frames. The FRIU sends the frames directly back (looped back) to the customer. The customer can terminate the test. After the customer terminates the test, the customer removes the FRIU from loopback mode. If the test fails, check the quality of the T1 carrier. To check the quality of the T1 carrier, perform a loopback test from the office.

This test involves a minimum of one channel on the T1 carrier. The test permits the customer to perform framed data tests on these channels.

Interval

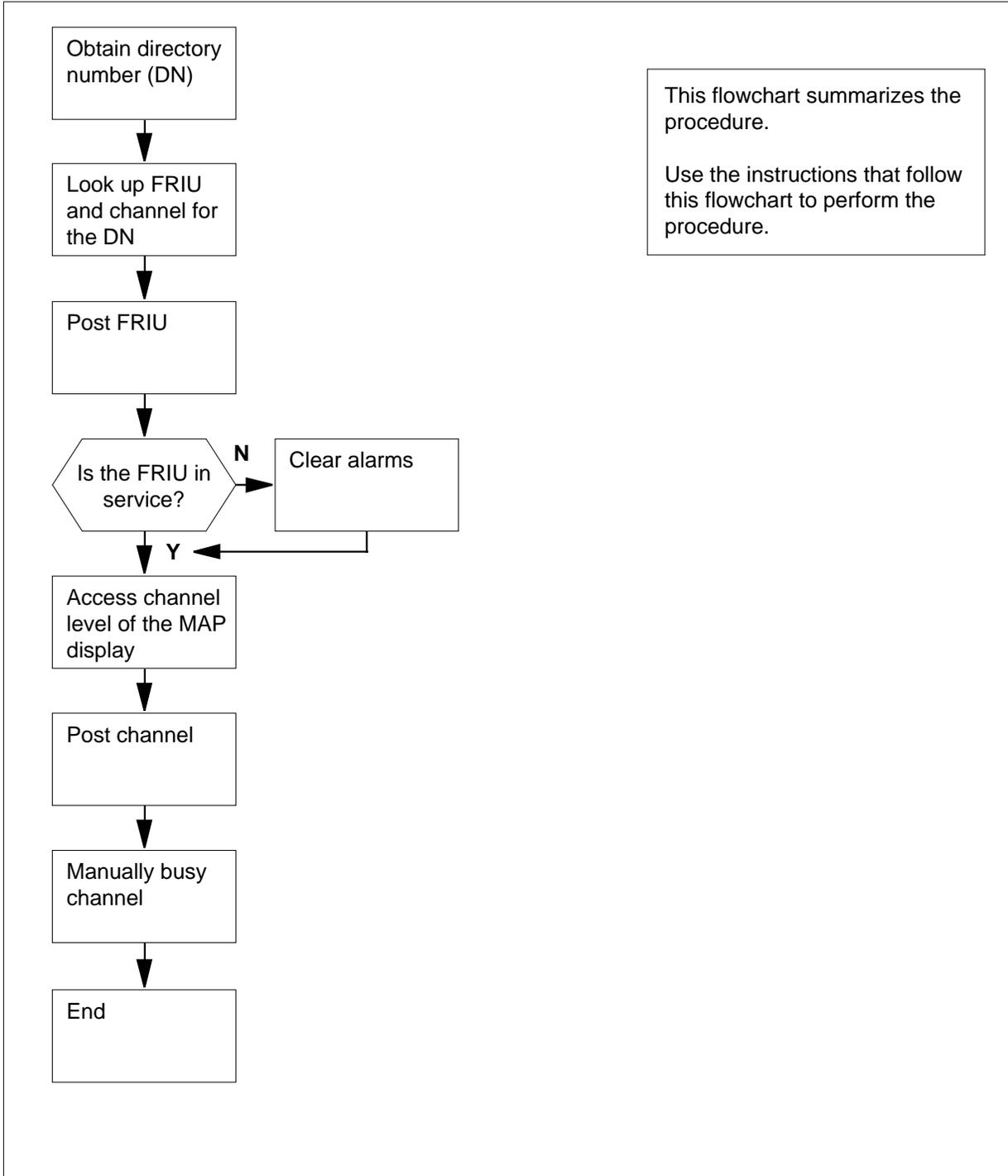
Perform this procedure at the request of the customer.

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.

Setting up a loop for a channel remote loopback test (continued)

Summary of Setting up a loop for a channel remote loopback test



Setting up a loop for a channel remote loopback test (continued)

Setting up a loop for a channel remote loopback test

At your current location

- 1 Obtain the directory number (DN) from the customer.

At the MAP terminal

- 2 To access the PVDNCI level of the MAP display, type

```
>PVDNCI
```

and press the Enter key.

Response:

```
PVDNCI :
```

- 3 To identify the agent ID that associates with the DN that you receive from the customer, type

```
>FRSDISP DN NO dir_no
```

and press the Enter key.

where

dir_no

is the DN the customer supplies

Response:

```
PVDNCI :
```

```
DN 6132263770 belongs to FRS Agent 1
```

Note: The agent ID is at the end of the response. In the example, the agent ID is 1.

- 4 To determine the FRIU number and the channel that associates with the agent ID, type

```
>FRSDISP AGENT ID agent_no
```

and press the Enter key.

where

agent_no

is the agent ID obtained in step 3

Response:

```
AGENT DN      NP  SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1          FRIU 121 7
```

Note: The FRIU number and channel given to this agent are under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

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

```
>QUIT
```

and press the Enter key.

Setting up a loop for a channel remote loopback test (continued)

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

>MAPCI;MTC;PM

and press the Enter key.

Response:

	SysB	ManB	OffL	CBsy	ISTb	InSv
PM	2	0	0	0	0	70

7 To post the FRIU, type

>POST FRIU friu_no

and press the Enter key.

where

friu_no

is the number of the FRIU you obtained in step 4

Response:

FRIU	121	InSv	Rsvd
------	-----	------	------

If the state of the FRIU

Do

is InSv or ISTb

step 9

is other than listed here

step 8

8 Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

9 To access the Carrier level of the MAP display, type

>CARR

and press the Enter key.

10 To access the Channel level of the MAP display, type

>CHAN

and press the Enter key.

11 To post the channel that you want to test, type

>POST chan_no

and press the Enter key.

where

chan_no

is the number of the channel for which the customer requests the loopback

12 Inform the customer that you are ready to set a loop on the selected channel. Proceed when the customer is ready.

13 To manually busy the channel, type

>BSY

Setting up a loop for a channel remote loopback test (end)

- and press the Enter key.
- 14** To put the FRIU in loopback mode, type
>LOOP REMOTE
and press the Enter key.
Note: In response, the system sets the carrier state to manual busy remote.
- 15** Inform the customer that testing can begin.
Note: After the customer tells you that the test is complete, remove the FRIU and the carrier from loopback mode. To remove the carrier from loopback mode, perform the procedure *Removing a loop after a channel remote loopback test*.
- 16** The procedure is complete.

Setting up parallel recording on disk in the DIRP utility

Application

Use this procedure to set up parallel files for backup recording of files of a contributing subsystem. Format disk volumes for parallel recording before you mount the disk volumes in a parallel pool. Use the standard DIRPPFMT command to format disk volumes.

To allocate parallel volumes to a subsystem, you can change the entries in the DIRPOOL table. Use this procedure in place of the MNT command. If you use the MNT command, make sure that you allocate a parallel pool to the subsystem. To allocate the parallel pool, enter a parallel pool in the DIRPOOL table and the PARLPOOL field in the DIRPSSYS table. To allocate volumes to a subsystem, enter data into every other volume. Operating company personnel can add or delete parallel volumes. Operating company personnel can replace a parallel volume without the interruption of the ordering of the complete pool of volumes.

Make sure the device type for parallel recording is not the same as the device type for active and standby volumes. For additional information, refer to field PARDTYPE in table DIRPSSYS in *Translations Guide*.

Example of a MAP display:

```

58  PARLPOOL  PARALLEL  DISK    AMA1    $    AMA2    $
      AMA3          $      $      $      $    $    $    $
      $            $      $      $      $    $    $    $
      $            $      $      $      $

```

For more information on tables DIRPPPOOL and DIRPSSYS, refer to *Translations Guide*.

Interval

Perform this procedure when you require a backup recording of the files of a contributing subsystem.

Common procedures

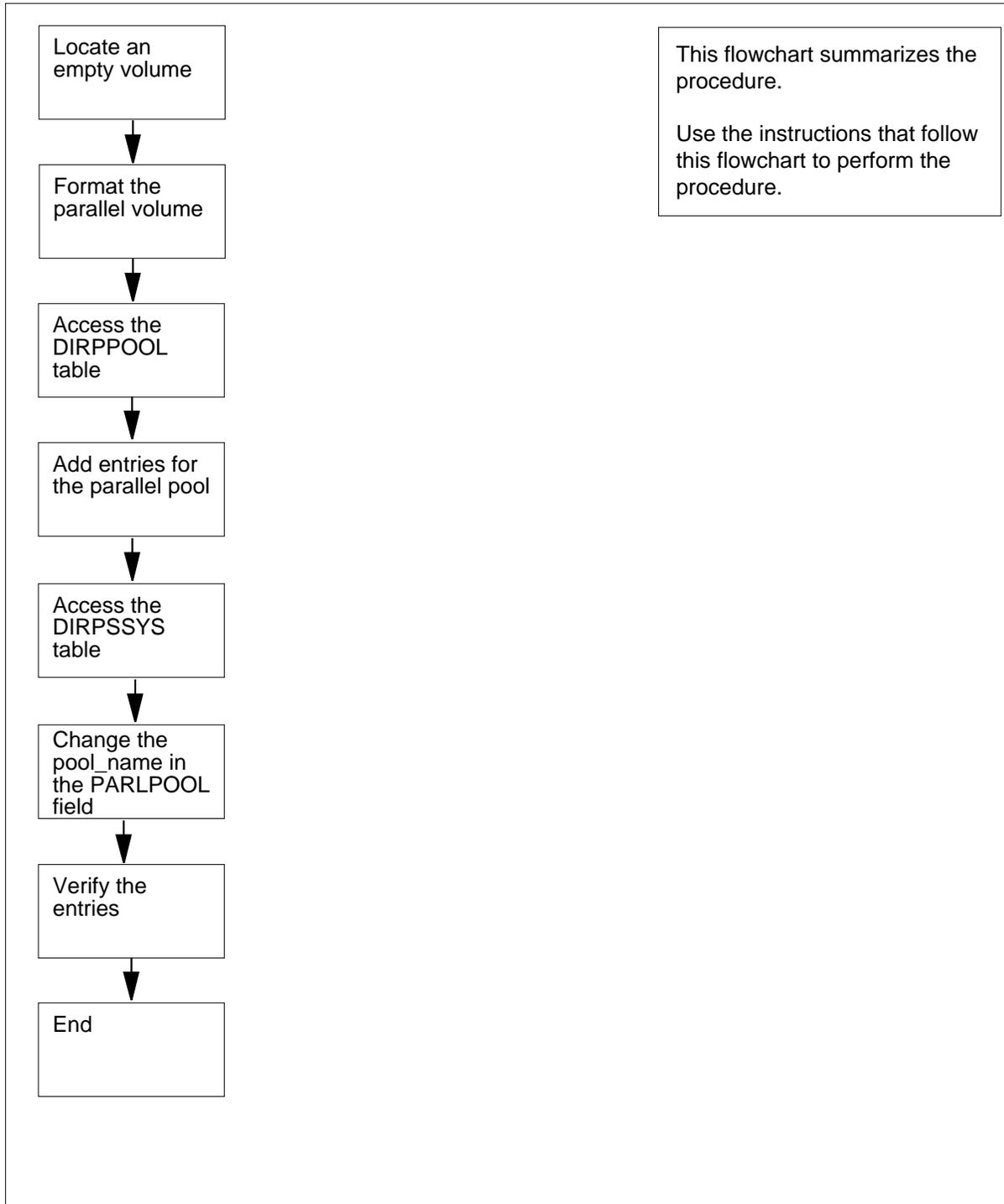
There are no common procedures.

Action

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

Setting up parallel recording on disk in the DIRP utility (continued)

Summary of Setting up parallel recording on disk in the DIRP utility



Setting up parallel recording on disk in the DIRP utility (continued)

Setting up parallel recording on disk in the DIRP utility

At your current location

1



CAUTION

Format operation is CPU intensive

Parallel volume formatting consumes a large amount of CPU time and slows the response of the CPU. Perform the format operation during periods of low traffic.



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. Loss or damage of AMA data results in revenue loss for the operating company.

Determine the type of switch in use.

If the switch	Do
is a DMS SuperNode switch and normal vols on IOC	step 9
is not a DMS SuperNode switch or normal vols on IOC	step 2

At the MAP terminal

2 To access the IOC level of the MAP display, type

```
>MAPCI;MTC;IOD;IOC ioc_no
```

and press the Enter key.

where

ioc_no

is the IOC number (0 or 1)

Example of a MAP response:

```
IOC CARD  0  1  2  3  4  5  6  7  8
0 PORT 0123 0123 0123 0123 0123 0123 0123 0123 0123
STAT .--- .--- .--P P--- -.--- ----- .--- P---
TYPE DDU MTD CONS CONS CONS MPC MPC
```

Setting up parallel recording on disk in the DIRP utility (continued)

- 3** To access the card level of the MAP display, type
>CARD n
 and press the Enter key.
where
n
 is the card that associates with the disk drive unit (DDU)

- 4** To list the volumes given to the IOC and the DDU, type
>ALLOC
 and press the Enter key.

Example of a MAP response:

VOLID	VOL_NAME	SERIAL_NO	BLOCKS	ADDR	TYPE	R/O	FILES_OPEN
0	RTMLOADS	2800	40000	D000	0	NO	0
1	XPMLOADS	2801	25534	D000	0	NO	0
2	PMLOADS	2802	10000	D000	0	NO	0
3	PERM	2803	5000	D000	0	NO	0
4	TEMP	2804	5000	D000	0	NO	0
5	AMA	2805	5000	D000	0	NO	0
6	OM	2806	3000	D000	0	NO	0
7	CAPNET	2807	5000	D000	0	NO	0
8	VOL	2808	20000	D000	0	NO	0
9	AMA1	2809	5000	D000	0	NO	0
10	AMATEMP	280A	5000	D000	0	NO	0

- 5** To access the disk utility, type
>DSKUT
 and press the Enter key.
- 6** To list the files on a volume, type
>LISTVOL vol_name ALL
 and press the Enter key.

where

vol_name
 is a volume name listed in step 4

- 7** Determine if an empty volume is available for parallel recording.

If an empty volume	Do
is available	step 13
is not available	step 8
is not available and you verified both disks	step 48

- 8** Return to step 3. Check the alternate IOC for available volumes.

Setting up parallel recording on disk in the DIRP utility (continued)

9 To access the disk utility, type

>DISKUT

and press the Enter key.

10 To list the files on a volume, type

>LISTVOLS **dev_name**

and press the Enter key.

where

dev_name

is the device name (S00D or S01D)

11 Determine if an empty volume is available for parallel recording.

If an empty volume	Do
is available	step 13
is not available	step 12
is not available, and you verified both disks	step 48

12 Return to step 9. Check the alternate disk for available volumes.

13 To access the DIRP level of the MAP display, type

>MAPCI;MTC;IOD;DIRP

and press the Enter key.

14 To format the parallel volume, type

>DIRPPFMT **vol_name**

and press the Enter key.

where

vol_name

is the parallel volume that you must format.

Example of a MAP response:

```
WARNING - THIS COMMAND COULD TAKE ABOUT nn MINUTES TO EXECUTE
```

```
*** WARNING - PARALLEL VOLUME PREFORMATTING WILL CONSUME A CONSIDERABLE AMOUNT OF CPU TIME AND WILL SLOW DISK RESPONSE
```

```
PLEASE CONFIRM ("YES" OR "NO"):
```

15 To confirm the formatting operation, type

>YES

and press the Enter key.

MAP response:

Setting up parallel recording on disk in the DIRP utility (continued)

FILE CREATED WITH FILENAME: Byymddhrmnsq.
THE LENGTH OF THE FILE IS nn DIRP RECORDS.

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

>QUIT ALL

and press the Enter key.

- 17** To enter the DIRPPPOOL table, type

>TABLE DIRPPPOOL

and press the Enter key.

MAP response:

TABLE: DIRPPPOOL

- 18** To list the table range, type

>LIST ALL

and press the Enter key.

- 19** Identify the free pool number.

- 20** To add the datafill for the parallel pool, type

>ADD

and press the Enter key.

- 21** To confirm the addition, type

>Y

and press the Enter key.

- 22** To add the datafill for the parallel pool number, type

>pool_no

and press the Enter key.

where

pool_no

is the number of the parallel pool

- 23** To add the datafill for the parallel pool name, type

>pool_name

and press the Enter key.

where

pool_name

is the name of the parallel pool

- 24** To add the datafill for the parallel pool type, type

>PARALLEL

and press the Enter key.

Setting up parallel recording on disk in the DIRP utility (continued)

- 25 To add the datafill for the device type, type
>**DISK**
and press the Enter key.
- 26 To add the datafill for each parallel pool, type
>**\$**
and press the Enter key.
Repeat for each of the 24 parallel pool volumes.

Example of a MAP response:

```
TUPLE TO BE ADDED:
  58  PARLPOOL  PARALLEL  DISK    $    $    $    $
      $          $        $    $    $    $    $
      $          $        $    $    $    $    $
      $          $        $    $
```

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

- 27 Check the MAP response to make sure the information is correct.

If the information	Do
is correct	step 28
is not correct. You must edit the entry.	step 29
is not correct after several attempts	step 48

- 28 To confirm the addition, type
>**YES**
and press the Enter key.
Go to step 33.
- 29 To edit the information, type
>**E**
and press the Enter key.
- 30 To confirm the information, press the Enter key at each prompt.
- 31 To change the information, type
>**data**
and press the Enter key.
where
data
is the correct datafill for that field

Setting up parallel recording on disk in the DIRP utility (continued)

- 32** When datafill is present in all fields, return to step 27.
- 33** To exit the DIRPPOOL table, type
>QUIT
 and press the Enter key.
- 34** To access the DIRPSSYS table, type
>TABLE DIRPSSYS
 and press the Enter key.
- 35** To verify the subsystem information in the table, type
>POSITION pool_name
 and press the Enter key.
where
pool_name
 is the pool where you must set up parallel recording
- 36** To change the pool name in the PARLPOOL field, type
>CHANGE PARLPOOL pool_name
 and press the Enter key.
where
pool_name
 is the name of the POOLNAME field in table DIRPPOOL
- 37** Make sure that the datafill is correct.
- | If the datafill | Do |
|--|-----------|
| is correct | step 38 |
| is not correct. You must edit the entry. | step 39 |
| is not correct after several attempts | step 48 |
-
- 38** To confirm the addition, type
>YES
 and press the Enter key.
 Go to step 43.
- 39** To edit the information, type
>E
 and press the Enter key.
- 40** To confirm the information, press the Enter key at each prompt.
- 41** To change the information, type
>data

Setting up parallel recording on disk in the DIRP utility (continued)

and press the Enter key.

where

data

is the correct datafill for that field

42 When datafill is present in all fields, return to step 37.

43 To exit the DIRPSSYS table, type

>QUIT

and press the Enter key.

44 To access the DIRP level of the MAP display, type

>MAPCI ;MTC ;IOD ;DIRP

and press the Enter key.

45 To mount the parallel volume, type

>MNT ssys vol PARALEL

and press the Enter key.

where

ssys

is the subsystem name or number

vol

is the name of the parallel volume

Repeat for the number of parallel volumes.

46 To make sure this procedure is complete, type

>QUERY ssys VOLUMES

and press the Enter key.

where

ssys

is the subsystem

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	D000AMAP	READY	0	0	0	N/A	1	2966	YES
1	D010AMAP	READY	1	1	0	N/A	1	3020	NO

Setting up parallel recording on disk in the DIRP utility (end)

47 Make sure all the information is correct.

If the information	Do
is correct	step 49
is not correct	step 17
is not correct after several at-tempts	step 48

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

49 The procedure is complete.

Setting up parallel recording on an MTD in the DIRP utility

Application

Use this procedure to set up parallel recording of the normal files to a magnetic tape device (MTD).

Make sure the device type for parallel recording is not the same as the device type for active and standby volumes. For additional information, refer to field PARDDTYPE in table DIRPSSYS in *Translations Guide*.

For more information on tables DIRPPOOL and DIRPSSYS, refer to *Translations Guide*.

Interval

Follow this procedure when you need to perform parallel recording.

Common procedures

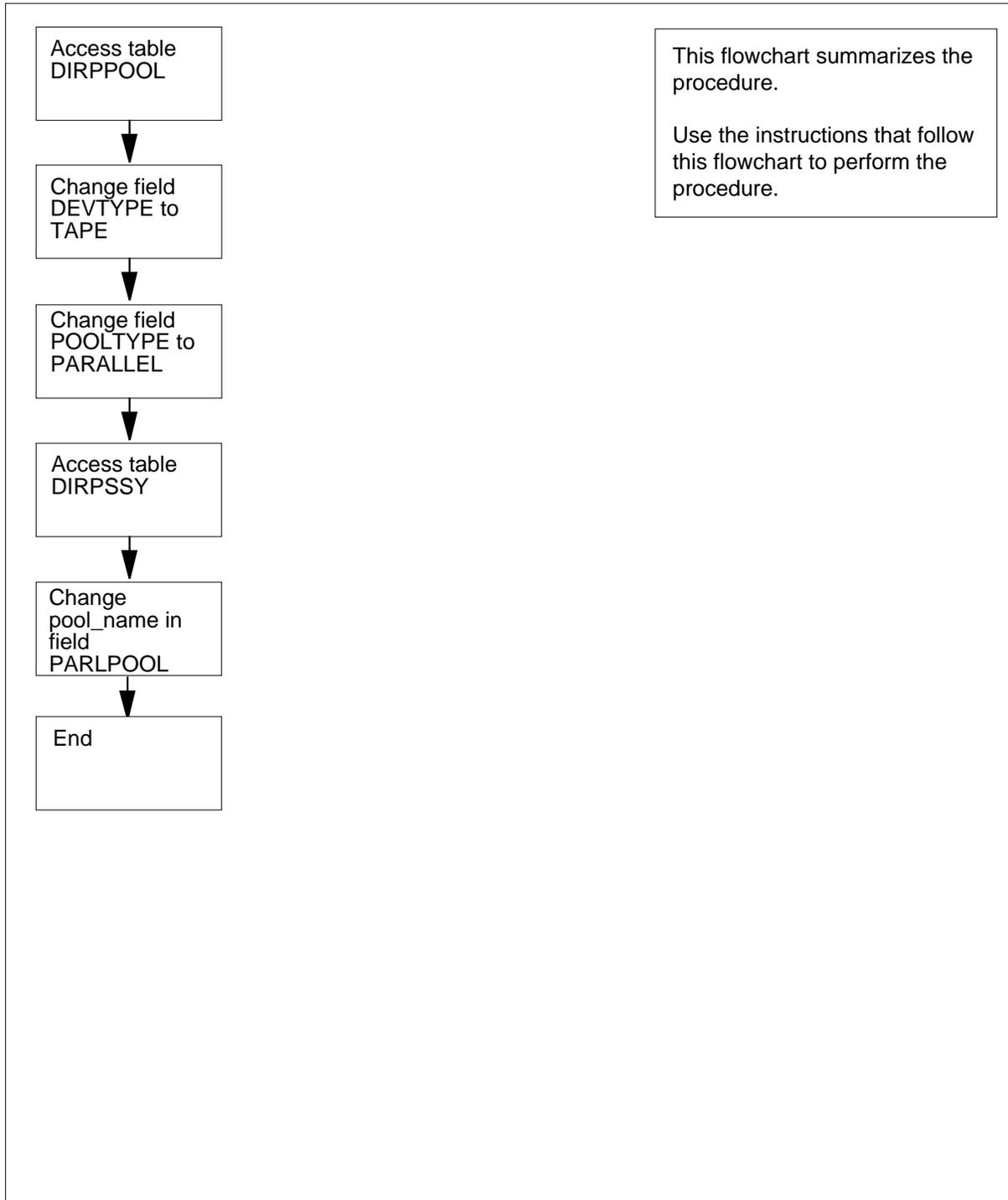
There are no common procedures.

Action

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

Setting up parallel recording on an MTD in the DIRP utility (continued)

Summary of Setting up parallel recording on an MTD in the DIRP utility



Setting up parallel recording on an MTD in the DIRP utility (continued)

Setting up parallel recording on an MTD in the DIRP utility

At the MAP

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. Loss or damage of AMA data results in revenue loss for the operating company.

To access the DIRP level of the MAP, type

```
>MAPCI;MTC;IOD;DIRP
```

and press the Enter key.

2

To query the subsystem to verify if a parallel pool is in field PARLPOOL, type

```
>QUERY ssys
```

and press the Enter key.

where

ssys

is the subsystem

3

Note if a parallel pool is present. If a parallel pool is not present, the datafill is NA. If a parallel pool is present, the datafill is the name of the parallel pool.

4

To access the DIRPPOOL table, type

```
>TABLE DIRPPOOL
```

and press the Enter key.

5

Determine if a parallel pool is present.

If a parallel pool	Do
--------------------	----

is present	step 9
------------	--------

is not present	step 6
----------------	--------

6

To add the datafill for the parallel pool, type

```
>ADD
```

and press the Enter key.

MAP response:

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

7

To confirm the addition, type

```
>Y
```

Setting up parallel recording on an MTD in the DIRP utility (continued)

- and press the Enter key.
- 8** To add the datafill for the parallel pool, type
>pool_name
 and press the Enter key.
where
pool_name
 is the pool that you must set up with parallel recording
- 9** To verify the subsystem information in the table, type
>POSITION pool_name
 and press the Enter key.
where
pool_name
 is the pool that you must set up with parallel recording
- 10** To change the DEVTYPE field to magnetic tape, type
>CHANGE DEVTYPE
 and press the Enter key.
MAP response:
- ```

ENTER Y TO CONTINUE PROCESSING OR N TO QUIT

```
- 11** To confirm the change, type  
**>Y**  
 and press the Enter key.  
*Example of a MAP response:*
- ```

DEVTYPE:DISK

```
- 12** To change the device type to tape, type
>TAPE
 and press the Enter key.
Example of a MAP response:
- ```

TUPLE TO BE CHANGED:
 1 AMAPARL PARALLEL TAPE $ $ $ $
 $ $ $ $ $ $ $ $
 $ $ $ $ $ $ $ $
 $ $ $ $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

```

---

## Setting up parallel recording on an MTD in the DIRP utility (continued)

---

13 Make sure that the datafill is correct.

| If the datafill                        | Do      |
|----------------------------------------|---------|
| is correct                             | step 17 |
| is not correct, and needs editing      | step 14 |
| is not correct after several at-tempts | step 41 |

14 To edit the information, type  
>E  
and press the Enter key.

15 To confirm the information, press the Enter key at each prompt.

16 To change the information, type  
>data  
and press the Enter key.  
where

**data**  
is the correct datafill for that field

17 To confirm the change, type  
>Y  
and press the Enter key.  
MAP response:

TUPLE CHANGED

18 To change the POOLTYPE field to parallel, type  
>CHANGE POOLTYPE  
and press the Enter key.

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

20 To change the pool type to parallel, type  
>PARALLEL  
and press the Enter key.

21 Make sure that the datafill is correct.

| If the datafill | Do      |
|-----------------|---------|
| is correct      | step 26 |

**Setting up parallel recording on an MTD in the DIRP utility** (continued)

|           | <b>If the datafill</b>                                                                                                                                | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is not correct. You must edit the entry.                                                                                                              | step 22   |
|           | is not correct after several attempts                                                                                                                 | step 41   |
| <b>22</b> | To edit the information, type<br>> <b>E</b><br>and press the Enter key.                                                                               |           |
| <b>23</b> | To confirm the information, press the Enter key at each prompt.                                                                                       |           |
| <b>24</b> | To change the information, type<br>> <b>data</b><br>and press the Enter key.<br><i>where</i><br><b>data</b><br>is the correct datafill for that field |           |
| <b>25</b> | Datafill each field. Return to step 21.                                                                                                               |           |
| <b>26</b> | To confirm the change, type<br>> <b>Y</b><br>and press the Enter key.                                                                                 |           |
| <b>27</b> | To verify that the table datafill is correct, type<br>> <b>LIST</b><br>and press the Enter key.                                                       |           |
|           | <b>If the information</b>                                                                                                                             | <b>Do</b> |
|           | is correct                                                                                                                                            | step 28   |
|           | is not correct                                                                                                                                        | step 41   |
| <b>28</b> | To exit table DIRPPOOL, type<br>> <b>QUIT</b><br>and press the Enter key.                                                                             |           |
| <b>29</b> | To access the DIRPSSYS table, type<br>> <b>TABLE DIRPSSYS</b><br>and press the Enter key.                                                             |           |
| <b>30</b> | To verify the subsystem information in the table, type<br>> <b>POS pool_name</b><br>and press the Enter key.                                          |           |

---

## Setting up parallel recording on an MTD in the DIRP utility (continued)

---

*where*

**pool\_name**

is the pool that you must set up with parallel recording

- 31** To change the pool name in the PARLPOOL field, type

>**CHANGE PARLPOOL**

and press the Enter key.

- 32** To confirm the change, type

>**Y**

and press the Enter key.

- 33** To change the pool name, type

>**pool\_name**

and press the Enter key.

*where*

**pool\_name**

is the name of the POOLNAME field in table DIRPPool

- 34** Make sure that the datafill is correct.

---

**If the datafill**

**Do**

is correct

step 36

is not correct. You must edit the entry.

step 35

is not correct after several attempts

step 41

---

- 35** To edit the information, type

>**E**

and press the Enter key.

Return to step 33.

- 36** To confirm the addition, type

>**Y**

and press the Enter key.

- 37** To exit the DIRPSSYS table, type

>**QUIT**

and press the Enter key.

- 38** To access the DIRP level of the MAP, type

>**MAPCI ;MTC ;IOD ;DIRP**

and press the Enter key.

---

**Setting up parallel recording on an MTD in the DIRP utility (end)**

---

39 To verify that the preceding procedure occurred correctly, type

>QUERY **ssys ALL**

and press the Enter key.

*where*

**ssys**

is the name of the subsystem

40 Make sure that the information is correct.

---

| <b>If the information</b> | <b>Do</b> |
|---------------------------|-----------|
|---------------------------|-----------|

---

|            |         |
|------------|---------|
| is correct | step 42 |
|------------|---------|

|                |         |
|----------------|---------|
| is not correct | step 41 |
|----------------|---------|

---

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

42 The procedure is complete.

---

## Shelf-door assembly removal and replacement procedure

---

### Application

Use this procedure to remove and replace a faulty DMS-Spectrum Peripheral Module (SPM) shelf-door assembly NTLX5102.

### Definition

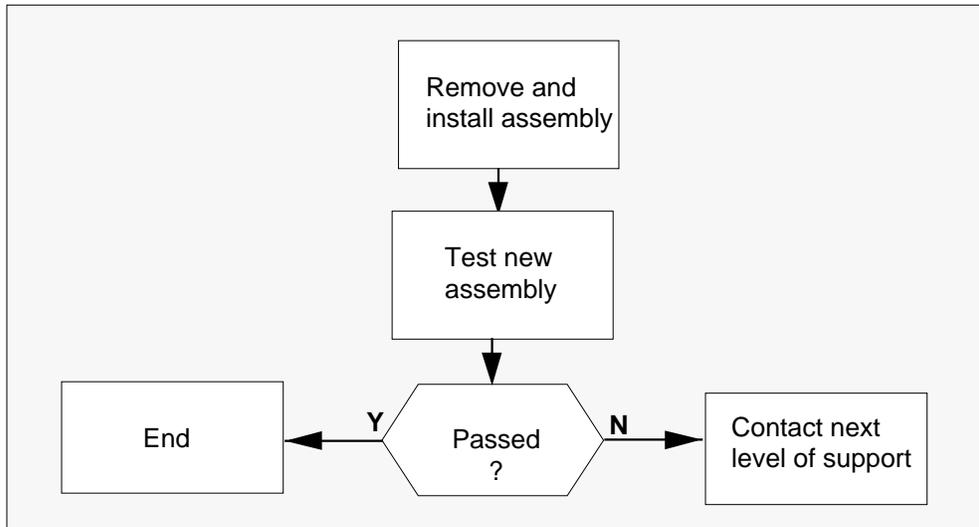
Perform the specific steps located in the action section to remove and replace the faulty SPM shelf-door assembly.

### 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.



### Shelf-door assembly removal and replacement procedure



#### **CAUTION**

##### **Static electricity damage**

While handling circuit cards or cables, wear a wrist strap connected to the wrist-strap grounding point on the frame. This protects the cards against damage caused by static electricity.

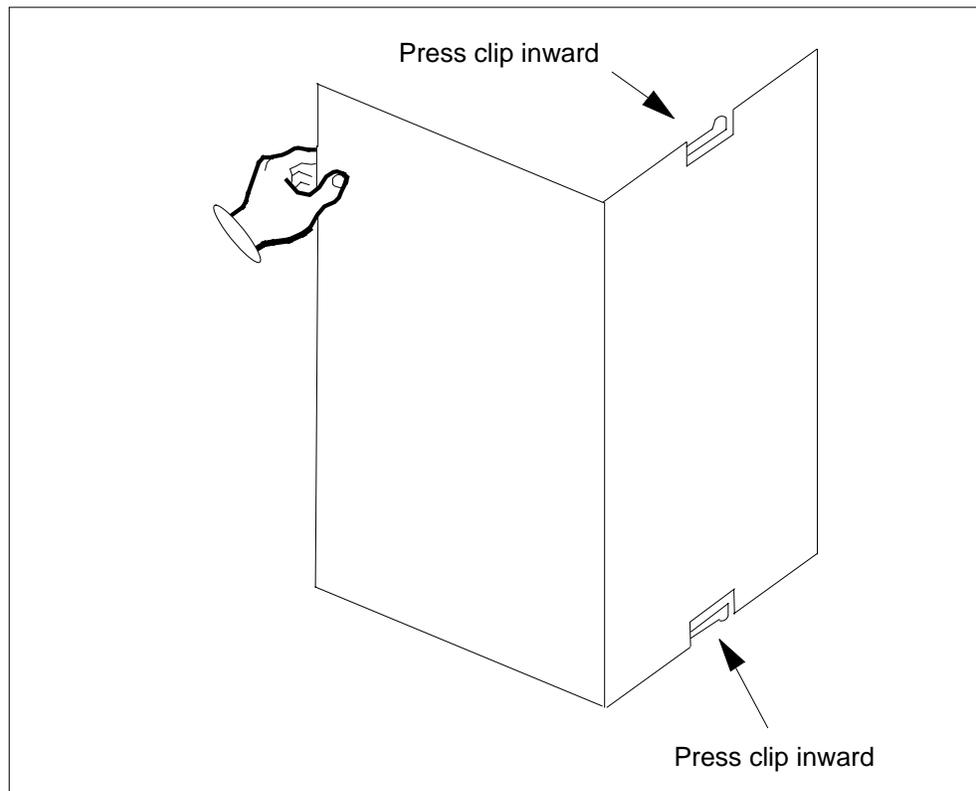
---

**Shelf-door assembly removal and replacement procedure** (end)

---

**At the SPM frame**

- 1 Open and access the faulty SPM shelf-door assembly.
- 2 As shown in the following figure, while holding the assembly, remove the door by pressing the clips located at the top and bottom of the assembly.



- 3 Remove the faulty shelf-door assembly from the frame.
- 4 Hold the new shelf-door assembly and slide it into the grooves located in the NTLX51AA dual-shelf assembly until the clips are in a locked position.
- 5 Test the new shelf-door assembly by opening and closing it several times to ensure it works correctly.
- 6 If the new assembly does not work correctly, contact the personnel responsible for the next level of support.
- 7 You have completed this procedure.

## Testing an APU

---

### Application

Use this procedure to run out-of-service diagnostic tests on an application processor unit (APU).

### Interval

Perform this procedure as required.

### Common procedures

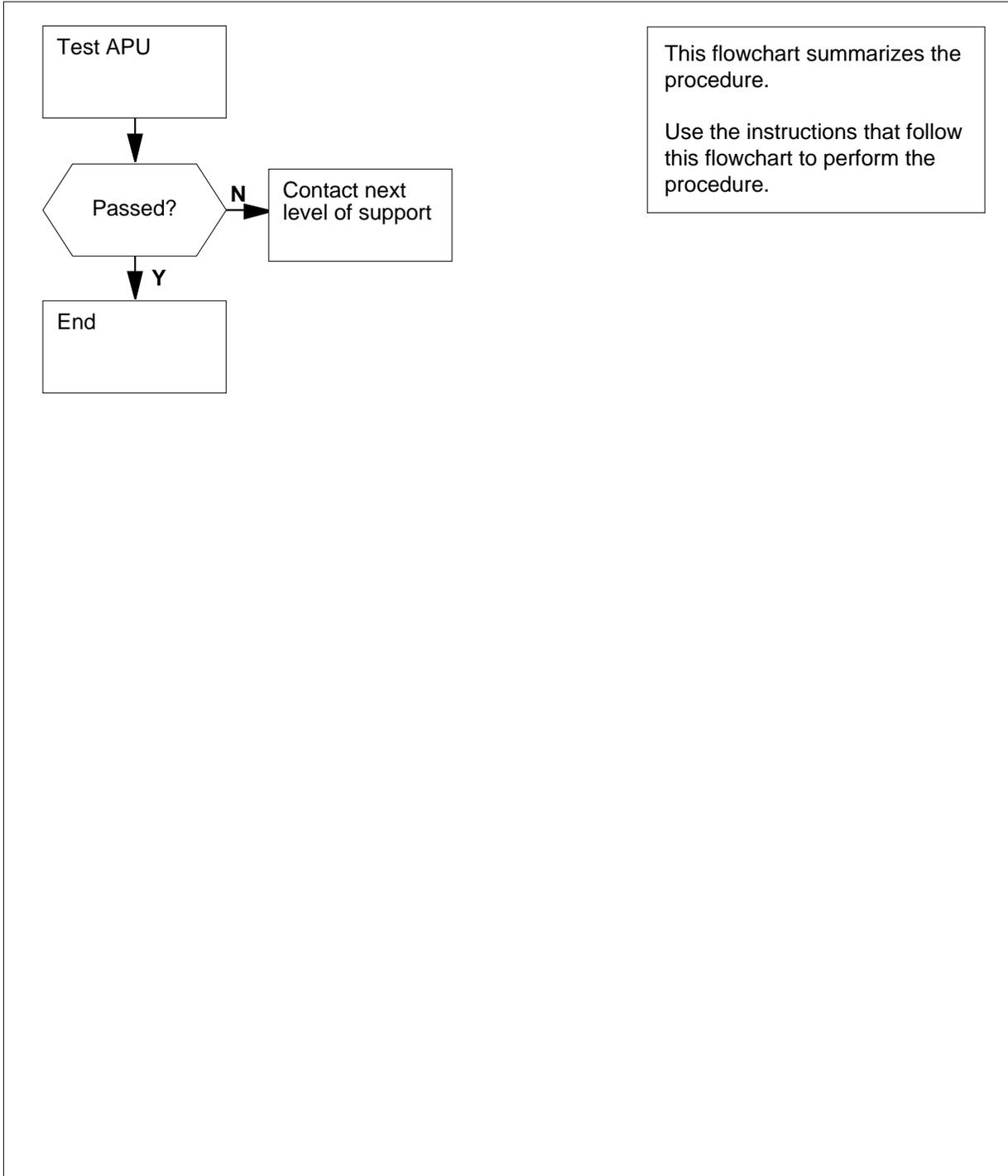
There are no common procedures.

### 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.

## Testing an APU (continued)

### Summary of Testing an APU



## Testing an APU (continued)

### Testing an APU

#### At the MAP terminal

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

```

 SysB ManB OffL CBsy ISTb InSv
PM 1 10 12 0 6 49

```

- 2 To post the APU that you must test, type  
**>POST APU apu\_no**  
 and press the Enter key.

where

**apu\_no**  
 is the number of the APU (0 to 511)

```
APU 5 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 in this document to clear the alarm.

5



**CAUTION**  
**Loss of service**  
 You reduce service capacity when you remove an APU from service.

To manually busy the APU, type

**>BSY**

and press the Enter key.

| If the BSY command   | Do     |
|----------------------|--------|
| passed               | step 8 |
| conditionally passed | step 9 |

**Testing an APU** (continued)

|          | <b>If the BSY command</b>                                                                   | <b>Do</b> |
|----------|---------------------------------------------------------------------------------------------|-----------|
|          | failed                                                                                      | step 6    |
|          | resulted in the system prompting for confirmation                                           | step 7    |
| <b>6</b> | To force the APU to busy, type<br>> <b>BSY FORCE</b><br>and press the Enter key.            |           |
|          | <b>If the BSY FORCE command</b>                                                             | <b>Do</b> |
|          | passed                                                                                      | step 8    |
|          | resulted in the system prompting for confirmation                                           | step 7    |
| <b>7</b> | To confirm the action, type<br>> <b>YES</b><br>and press the Enter key.                     |           |
| <b>8</b> | To run diagnostic tests on the posted APU, type<br>> <b>TST</b><br>and press the Enter key. |           |
|          | <b>If the system response</b>                                                               | <b>Do</b> |
|          | is APU apu_no TST Passed.                                                                   | step 11   |
|          | is APU apu_no TST Conditionally Passed.                                                     | step 9    |
|          | is APU apu_no TST Failed.                                                                   | step 12   |
|          | is APU apu_no TST Rejected.                                                                 | step 12   |
| <b>9</b> | To reset the APU, type<br>> <b>PMRESET</b><br>and press the Enter key.                      |           |
|          | <b>If the PMRESET command</b>                                                               | <b>Do</b> |
|          | passed                                                                                      | step 10   |

## Testing an APU (end)

---

|           |                                                                        |           |
|-----------|------------------------------------------------------------------------|-----------|
|           | <b>If the PMRESET command</b>                                          | <b>Do</b> |
|           | failed                                                                 | step 12   |
| <b>10</b> | To load the APU, type<br>>LOADPDM<br>and press the Enter key.          |           |
|           | <b>If the LOADPDM command</b>                                          | <b>Do</b> |
|           | passed                                                                 | step 11   |
|           | failed                                                                 | step12    |
| <b>11</b> | To return the APU to service, type<br>>RTS<br>and press the Enter key. |           |
|           | <b>If the RTS command</b>                                              | <b>Do</b> |
|           | passed                                                                 | step 13   |
|           | failed                                                                 | step 12   |
| <b>12</b> | For additional help, contact the next level of support.                |           |
| <b>13</b> | The procedure is complete.                                             |           |

## Testing a dead system alarm

---

### Application

Use this procedure to verify that the dead system alarm operates correctly.

This procedure depends on the datafill in tables SCGRP and SDGRP to identify a card that has faults. The datafill in tables SCGRP and SDGRP that relate to a given office are described in *Translations Guide*.

This procedure will not function properly unless tuples ABMTMFL and ABOAUFL are correctly datafilled in table ALMSC.

### Interval

Perform this procedure every 30 days (1 month).

### Common procedures

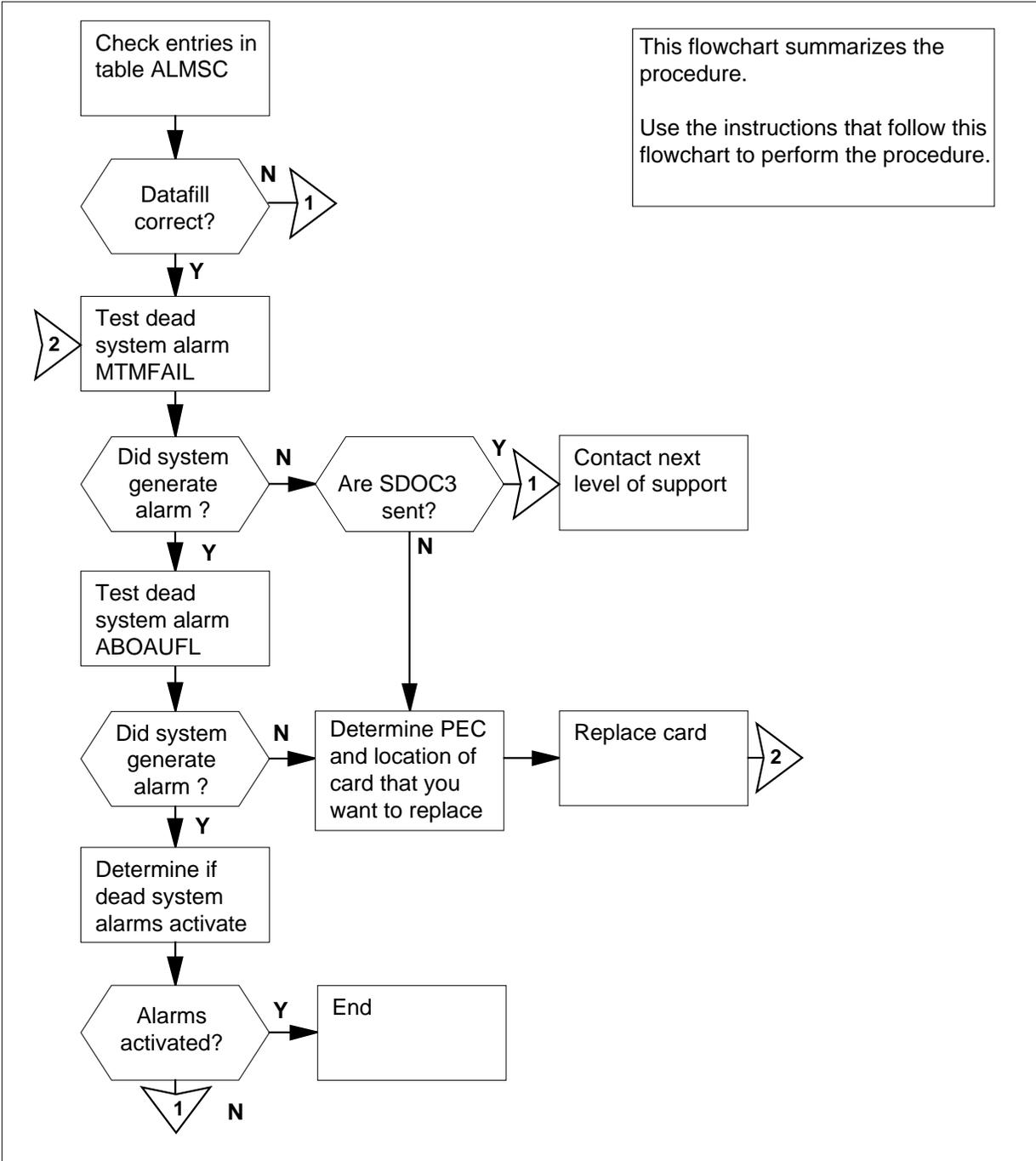
There are no common procedures.

### 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.

## Testing a dead system alarm (continued)

### Summary of Testing a dead system alarm



---

## Testing a dead system alarm (continued)

---

### Testing a dead system alarm

#### At the MAP terminal

- 1 To access system table ALMSC, type

```
>TABLE ALMSC
```

and press the Enter key.

- 2 To position on tuple ABMTMFL, type

```
>POSITION ABMTMFL
```

and press the Enter key.

**Note:** If you enter tuple ABMTMFL in table ALMSC, the system generates a MAP display. The following is an example of a MAP display.

*Example of a MAP display:*

```
ABMTMFL 0 0 0 Y MJ N (ABAUD N N) (ABOAU N N)
 (COMAUD1 N N)
 (EXPILDMS N N)
 (OAUVISLOOP N N)$
```

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

| If you                   | Do      |
|--------------------------|---------|
| datafill tuple ABMTMFL   | step 4  |
| did not datafill ABMTMFL | step 29 |

- 4 Determine if the datafill for tuple ABMTMFL is correct.

**Note:** The entries for fields REPORT, ALM and LOGIC (subfields FIX\_LOGIC, SDFUNCT, ALMGRP, and ALMXFR) must match the following entries:

```
(ABAUD N N)
(ABOAU N N)
(EXPILDMS N N)
(OAUVISLOOP N N)
```

You can datafill other fields and subfields. The datafill does not affect the method in which the dead system alarms function.

| If ABMTMFL datafill | Do      |
|---------------------|---------|
| is correct          | step 5  |
| is not correct      | step 29 |

- 5 To position on tuple ABOAUFL, type

```
>POSITION ABOAUFL
```

## Testing a dead system alarm (continued)

and press the Enter key.

**Note:** If you datafill tuple ABOAUFL in table ALMSC the system generates, a MAP display. The following is an example of a MAP display.

*Example of a MAP display:*

```
ABOAUFL 0 0 0 Y MJ Y
```

| <b>If you</b>           | <b>Do</b> |
|-------------------------|-----------|
| datafill tuple ABOAUFL  | step 6    |
| do not datafill ABOAUFL | step 29   |

- 6** Determine if the datafill for tuple ABOAUFL is correct.

**Note:** The datafill for fields REPORT, ALM and LOGIC must be as follows:

```
Y MJ Y
```

You can datafill other fields. The datafill does not affect the method in which the dead system alarms function.

| <b>If ABOAUFL datafill</b> | <b>Do</b> |
|----------------------------|-----------|
| is correct                 | step 7    |
| is not correct             | step 29   |

- 7** To exit from table ALMSC, type  
**>QUIT**  
 and press the Enter key.
- 8** To access the EXT level of the MAP display, type  
**>MAPCI ;MTC ;EXT**  
 and press the Enter key.
- 9** To test the dead system alarm MTMFAIL, type  
**>TSTDSALM MTMFAIL 12**  
 and press the Enter key.  
*Example of a MAP display*
- ABMTMFL alarm should sound.  
 Dead system alarm only if both tested at same time.
- 10** Wait approximately 20 s. To display the alarms present, type  
**>LIST MAJ ;LIST MIN**  
 and press the Enter key.

**Testing a dead system alarm** (continued)

- 11 Look at the MAP responses. Listen for audible alarms. Examine the lights on the alarm and control display (ACD) panel. Determine if all of the following alarm indications occur:
- ABMTMFL alarm appears in the work area of the MAP display
  - audible battery alarm sounds
  - OAU light glows on the ACD panel

| If all the alarm indications occur                                               | Do      |
|----------------------------------------------------------------------------------|---------|
| occur                                                                            | step 12 |
| do not occur                                                                     | step 15 |
| do not occur and the message<br>WARNING--SDOC3 SENT<br>ON DEAD SYSTEM is present | step 29 |

- 12 To test the dead system alarm OAUFAIL, type  
>TSTDSALM OAUFAIL 12  
and press the Enter key.

*Example of a MAP display*

ABOAUFL alarm should sound.  
Dead system alarm only if both  
tested at same time.

- 13 Wait approximately 20 s. To display the alarms present, type  
>LIST MAJ;LIST MIN  
and press the Enter key.

- 14 Look at the MAP responses. Listen for audible alarms. Examine the lights on the ACD. Determine if all of the following alarm indications occur:

- ABOAUFL alarm appears in the work area of the MAP display
- audible battery alarm sounds
- OAU light glows on the ACD panel

| If all the alarm indications occur | Do      |
|------------------------------------|---------|
| occur                              | step 26 |
| do not occur                       | step 15 |

- 15 To access the system table ALMSD, type  
>TABLE ALMSD  
and press the Enter key.

- 16 To position on the tuple that has the name of the SD group, type  
>POSITION sdgroup

## Testing a dead system alarm (continued)

---

and press the Enter key.

where

**sdgroup**

is MTMFAIL if alarm ABMTMFL did not appear in step 11

is OAUFAIL if alarm ABOUFL did not appear in step 14

is CRALMAUD if the audible battery alarm did not sound in step 11 or step 14

is OAUVISLOOP if the OAU light did not glow in step 11 or step 14

17 To list the table contents, type

>LIST

and press the Enter key.

18 Record the entry under SDGROUP.

19 To exit from the table, type

>QUIT

and press the Enter key.

20 To access the system table ALMSDGRP, type

>TABLE ALMSDGRP

and press the Enter key.

21 To position on the tuple that you recorded in step 18, type

>POSITION **sdgroup**

and press the Enter key.

where

**sdgroup**

is the entry under SDGROUP that you recorded in step 18

*Example of a MAP display*

| <u>SDGROUP</u> | <u>TMTYPE</u> | <u>TMNO</u> | <u>TMCKTNO</u> | <u>CARDCODE</u> |
|----------------|---------------|-------------|----------------|-----------------|
| 1              | MTM           | 0           | 4              | 3X82AA          |

22 Record the entries under TMTYPE, TMNO, and CARDCODE. These entries indicate the product engineering code (PEC) and location of the card that you must replace.

23 To exit from the table, type

>QUIT

and press the Enter key.

24 To replace the card you identified in step 22, refer to the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

25 Go to step 9.

---

## Testing a dead system alarm (end)

---

- 26** To determine if the system activated the dead system alarms, type  
**>TSTDSALM MTMFAIL 12;TSTDSALM OAUFAIL 12**  
 and press the Enter key.
- 27** Wait 20 s for the system to activate the alarm indicators. The following alarm indications occur:
- the critical bell sounds
  - the critical alarm light glows on the ACD panel
  - the OAU alarm light glows on the ACD panel
- 
- | <b>If</b>                                 | <b>Do</b> |
|-------------------------------------------|-----------|
| all the alarm indications occur           | step 28   |
| any of the alarm indications do not occur | step 29   |
- 
- 28** Wait 1 min. Note the changes at the MAP and on the ACD panel. The following changes in the alarm occur:
- At the MAP, the alarm under the EXT header disappears.
  - On the ACD panel, the critical alarm light turns off.
- 
- | <b>If the above changes</b> | <b>Do</b> |
|-----------------------------|-----------|
| occur                       | step 30   |
| do not occur                | step 29   |
- 
- 29** For additional help, contact the next level of support.
- 30** The procedure is complete.

## Testing an EIU

---

### Application

Use this procedure to run diagnostic tests on an Ethernet interface unit (EIU).

### Interval

Perform this procedure as required.

### Common procedures

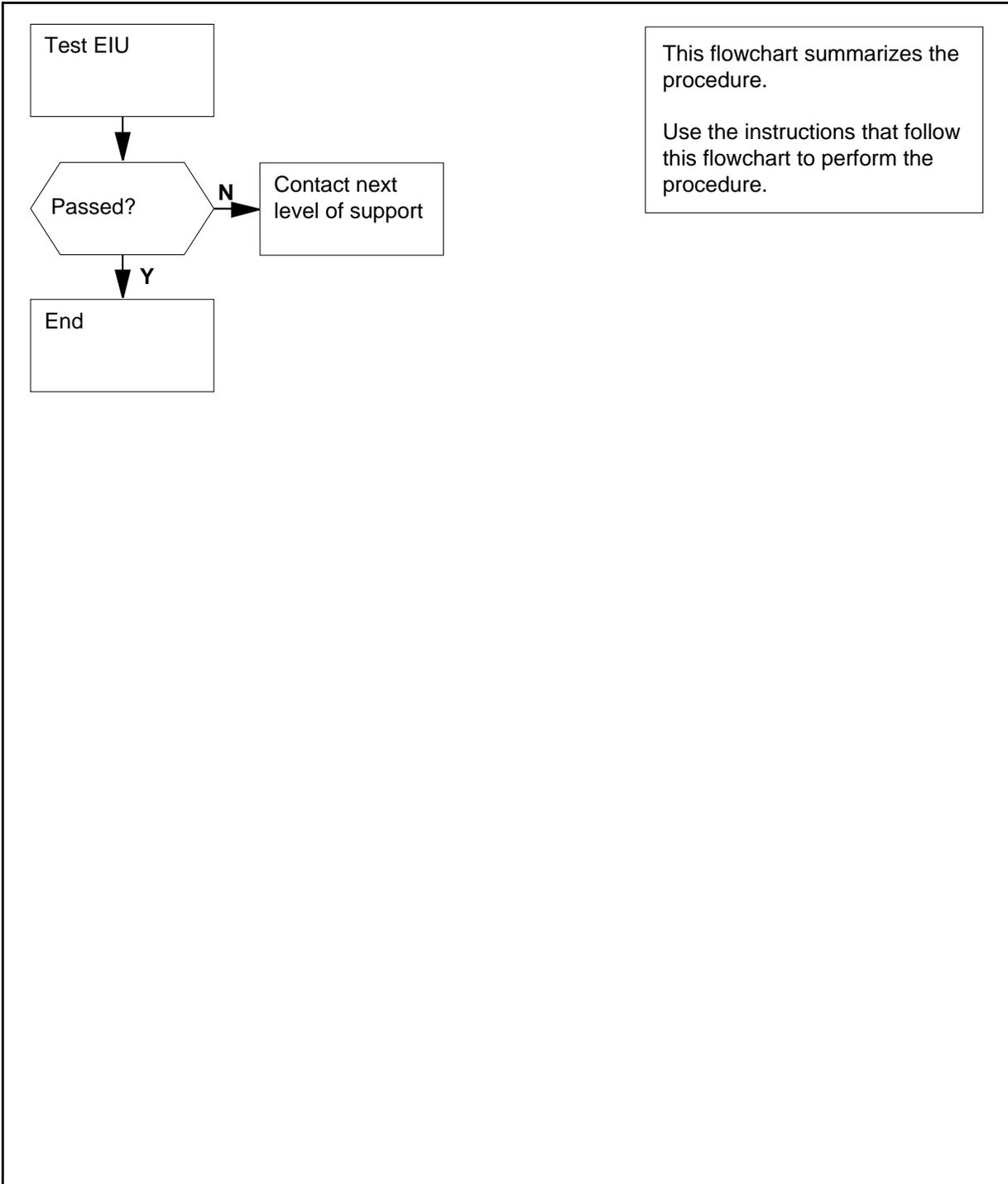
There are no common procedures.

### 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.

## Testing an EIU (continued)

### Summary of Testing an EIU



## Testing an EIU (continued)

---

### Testing 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 that you must test, type  
**>POST EIU eiu\_no**  
 and press the Enter key.

*where*

**eiu\_no**  
 is the number of the EIU (0 to 511)

*Example of a MAP response:*

EIU 205 OffL Rsvd

3 To manually busy the EIU, type  
**>BSY**  
 and press the Enter key.

---

#### **If the response is**

#### **Do**

Busying EIU 205 requires confirmation because the action may isolate the SuperNode from the nodes on the LEN. Please confirm ("YES","Y","NO", or "N"):

step 6

Warning: EIU 205 is currently being imaged. The BSY command will be aborted unless the FORCE option is used.

step 4

anything else including additional messages with above response

step 9

---

4 To manually force bsy the EIU, type  
**>BSY FORCE**  
 and press the Enter key.

*Example of a MAP response:*

**Testing an EIU (continued)**

WARNING: EIU 205 is currently being imaged.  
 Do you wish to abort imaging to proceed with the BSY request?  
 Please confirm ("YES", "Y", "NO", or "N"):

| If                              | 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 step 7  
*Example of a MAP response:*

Imaging will be aborted on EIU 205.

- 6 To confirm the action, type  
**>YES**  
 and press the Enter key.

| If the BSY command | Do     |
|--------------------|--------|
| passed             | step 7 |
| failed             | step 9 |

- 7 To run diagnostic tests on the posted EIU, type  
**>TST**  
 and press the Enter key.

| If the system response      | Do     |
|-----------------------------|--------|
| is EIU eiu_no TST PASSED.   | step 8 |
| is EIU eiu_no TST FAILED.   | step 9 |
| is EIU eiu_no TST REJECTED. | step 9 |

- 8 To return to service the EIU, type  
**>RTS**

## Testing an EIU (end)

---

and press the Enter key.

| <b>If the RTS command</b> | <b>Do</b> |
|---------------------------|-----------|
| 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.

BSY command aborted due to imaging in progress.

**11** The procedure is complete.

## Testing F-bus taps on an ELPP

---

### Application

Use this procedure to manually test in-service F-bus taps on one link interface module (LIM) of an enhanced link peripheral processor (ELPP). A manual test of in-service F-bus taps performs tests that routine exercise (REx) tests do not perform. Ensure that both LIM units and F-buses are in-service (InSv) before performing this procedure.

### Interval

Perform this procedure daily.

### Common procedures

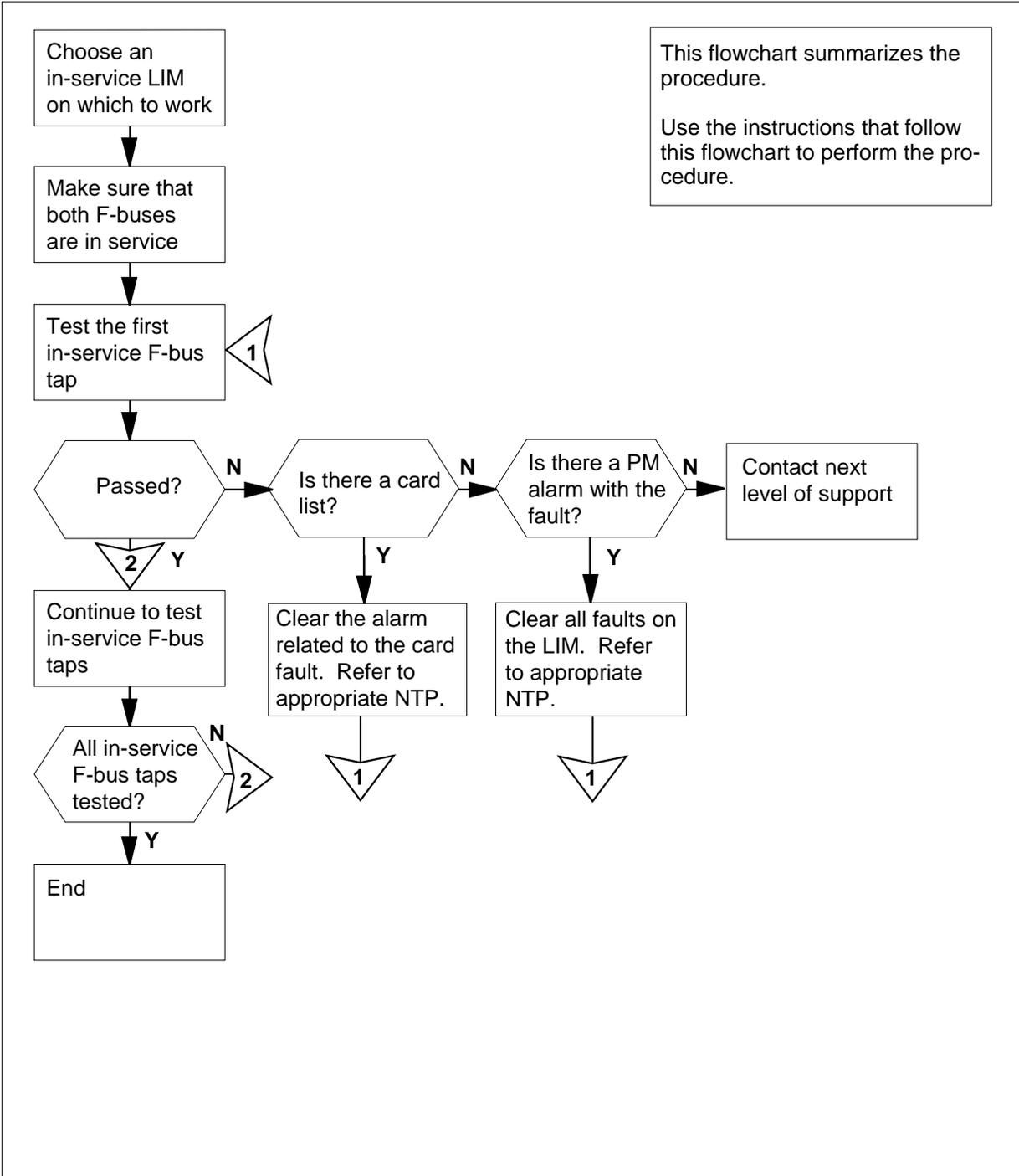
There are no common procedures.

### Action

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

## Testing F-bus taps on an ELPP (continued)

### Summary of Testing F-bus taps on an ELPP



---

## Testing F-bus taps on an ELPP (continued)

---

### Testing F-bus taps on an ELPP

#### *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 determine if any in-service LIMs are present, type  
`>DISP INSV LIM`  
 and press the Enter key.

*Example of a MAP response:*

```
InSv LIM: 1,2,3
```

| If in-service LIMs | Do      |
|--------------------|---------|
| are displayed      | step 3  |
| are not displayed  | step 23 |

- 3 Record the numbers of the in-service LIMs.
- 4 Choose an in-service LIM to work on.
- 5 To post the LIM, type  
`>POST LIM lim_no`  
 and press the Enter key.  
*where*  
     **lim\_no**  
     is the number of the LIM that you chose to work on in step 4 (0 to 16).

*Example of a MAP display:*

```
LIM 0 InSv
 OOS OOS_Taps
 Links LIS1 LIS2 LIS3
Unit0: InSv
Unit1: InSv
```

- 6 From the MAP display in step 5, determine if both LIM units are in service.  
 On the MAP display:
  - LIM 1 indicates that LIM 0 is currently posted
  - InSv indicates that LIM 0 is in service

## Testing F-bus taps on an ELPP (continued)

- Unit0: InSv indicates that unit 0 of the posted LIM is in service
- Unit1: InSv indicates that unit 1 of the posted LIM is in service

| If both LIM units          | Do      |
|----------------------------|---------|
| are Insv                   | step 7  |
| are other than listed here | step 23 |

7 To access the LIS level of the MAP display, type

```
>LIS lis_no
```

and press the Enter key.

where

**lis\_no**

is the number of the LIS (1, 2, or 3)

*Example of a MAP display:*

```
LIS 1 InSv Tap: 0 4 8
FBus0: InSv ..-- ---- ---
FBus1: InSv ..-- ---- ---
```

8 From the MAP display in step 7, determine if both F-buses of the posted LIM are in service.

| If both F-buses            | Do      |
|----------------------------|---------|
| are Insv                   | step 9  |
| are other than listed here | step 22 |

9 From either F-bus, choose an in-service F-bus tap to work on. A dot (.) under the tap number identifies in-service taps.

10



**CAUTION**  
**Possible service interruption**  
 Make sure the mate tap of the F-bus tap that you work on is in service. A dot (.) under the tap number identifies in-service taps. If the tap is not in service, do not busy the tap you work on. If you busy this tap, you will isolate a node (HLIU or HSLR) and you can interrupt service.

Record the number of the tap. Record the number of the F-bus associated with the tap.

**Note:** In the F-bus MAP display in step 7, the tap number follows the word Tap.

**Testing F-bus taps on an ELPP (continued)**

- 11 To manually busy the in-service F-bus tap that you recorded, type  
`>BSY FBUS fbus_no tap_no`  
 and press the Enter key.

where

**fbus\_no**  
 is the number of the F-bus associated with the tap (0 or 1)

**tap\_no**  
 is the number of the F-bus tap (0 to 23)

**tap\_no**  
 is the number of the F-bus tap (0 to 11)

| If the MAP response is                                                                                                                            | Do      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| LIM lim_no LIS lis_no FBus fbus_no Tap tap_no Busy passed.                                                                                        | step 13 |
| Busy requires confirmation because a SEVERE system outage may occur if the following node is isolated.HLIU hliu_noPlease confirm ("YES" or "NO"): | step 12 |

- 12 To cancel the command, type  
`>NO`  
 and press the Enter key.  
 Go to step 18.

- 13 To test the F-bus tap, type  
`>TST FBUS fbus_no tap_no`  
 and press the Enter key.

where

**fbus\_no**  
 is the number of the F-bus associated with the tap (0 or 1)

**tap\_no**  
 is the number of the F-bus tap (0 to 23)

**tap\_no**  
 is the number of the F-bus tap (0 to 11)

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 14 |

**Testing F-bus taps on an ELPP** (continued)

|           | <b>If the TST command</b>                                                                                                                                                                                                                                                                                                   | <b>Do</b> |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed, and the system generated a card list                                                                                                                                                                                                                                                                                | step 21   |
|           | failed, and the system did not generate a card list                                                                                                                                                                                                                                                                         | step 20   |
| <b>14</b> | To return the F-bus tap to service, type<br>>RTS FBUS fbus_no tap_no<br>and press the Enter key.<br><i>where</i><br><b>fbus_no</b><br>is the number of the F-bus associated with the tap (0 or 1)<br><b>tap_no</b><br>is the number of the F-bus tap (0 to 23)<br><b>tap_no</b><br>is the number of the F-bus tap (0 to 35) |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                                                                                                                                   | <b>Do</b> |
|           | passed                                                                                                                                                                                                                                                                                                                      | step 15   |
|           | failed, and the system generated a card list                                                                                                                                                                                                                                                                                | step 21   |
|           | failed, and the system did not generate a card list                                                                                                                                                                                                                                                                         | step 20   |
| <b>15</b> | Determine if you tested all in-service taps on both F-bus 0 and F-bus 1.<br><b>Note:</b> A dot (.) under the tap number identifies in-service taps.                                                                                                                                                                         |           |
|           | <b>If you</b>                                                                                                                                                                                                                                                                                                               | <b>Do</b> |
|           | tested all in-service F-bus taps on both F-bus 0 and 1                                                                                                                                                                                                                                                                      | step 16   |
|           | did not test all in-service taps on F-bus 0 and 1                                                                                                                                                                                                                                                                           | step 18   |
| <b>16</b> | Determine if you have tested taps on all LIS levels (1, 2, and 3).                                                                                                                                                                                                                                                          |           |
|           | <b>If</b>                                                                                                                                                                                                                                                                                                                   | <b>Do</b> |
|           | you have tested taps on all LIS levels (1, 2, and 3)                                                                                                                                                                                                                                                                        | step 25   |

**Testing F-bus taps on an ELPP (end)**

|           | <b>If</b>                                                                                                                                                                                                                                                                                                                                                                     | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | you have not tested taps on all LIS levels (1, 2, and 3)                                                                                                                                                                                                                                                                                                                      | step 17   |
| <b>17</b> | To access the next LIS level type<br>> <b>NEXT</b><br>and press the Enter key.<br>Go to step 8.                                                                                                                                                                                                                                                                               |           |
| <b>18</b> | Choose another in-service tap that has not been tested.                                                                                                                                                                                                                                                                                                                       |           |
| <b>19</b> | Record the tap number (0 to 11) and the F-bus number (0 or 1) associated with the tap.<br><br><b>Note:</b> A dot (.) under the tap number identifies in-service taps.<br>Go to step 11.                                                                                                                                                                                       |           |
| <b>20</b> | From the alarm banner of the MAP display, determine if a PM alarm is associated with the problem that you discovered.                                                                                                                                                                                                                                                         |           |
|           | <b>If an alarm</b>                                                                                                                                                                                                                                                                                                                                                            | <b>Do</b> |
|           | is present                                                                                                                                                                                                                                                                                                                                                                    | step 21   |
|           | is not present                                                                                                                                                                                                                                                                                                                                                                | step 24   |
| <b>21</b> | A PM alarm indicates the type of PM with the problem. Perform the correct procedure in <i>Alarm and Performance Monitoring Procedures</i> to clear the fault. Complete the procedure and return to this point.<br>Go to step 2.                                                                                                                                               |           |
| <b>22</b> | Both F-buses must be in service before you use this procedure. Clear any PM alarms that the system can generate if both F-buses are not in service. Check the PM alarm banner to determine which alarm the banner displays. Refer to <i>Alarm and Performance Monitoring Procedures</i> to clear the fault. Complete the procedure and return to this point.<br>Go to step 2. |           |
| <b>23</b> | Clear all LIM alarms. Make sure that both LIM units are in service.<br>Go to step 2.                                                                                                                                                                                                                                                                                          |           |
| <b>24</b> | For additional help, contact the next level of support.                                                                                                                                                                                                                                                                                                                       |           |
| <b>25</b> | The procedure is complete.                                                                                                                                                                                                                                                                                                                                                    |           |

## Testing F-bus taps on an LPP

---

### Application

Use this procedure to test in-service F-bus taps on one link interface module (LIM) of a link peripheral processor (LPP). A manual test of in-service F-bus taps performs tests that a routine exercise (REx) test does not perform. Make sure that both LIM units and both F-buses are in service (InSv) before you perform this procedure.

### Interval

Perform this procedure daily.

### Common procedures

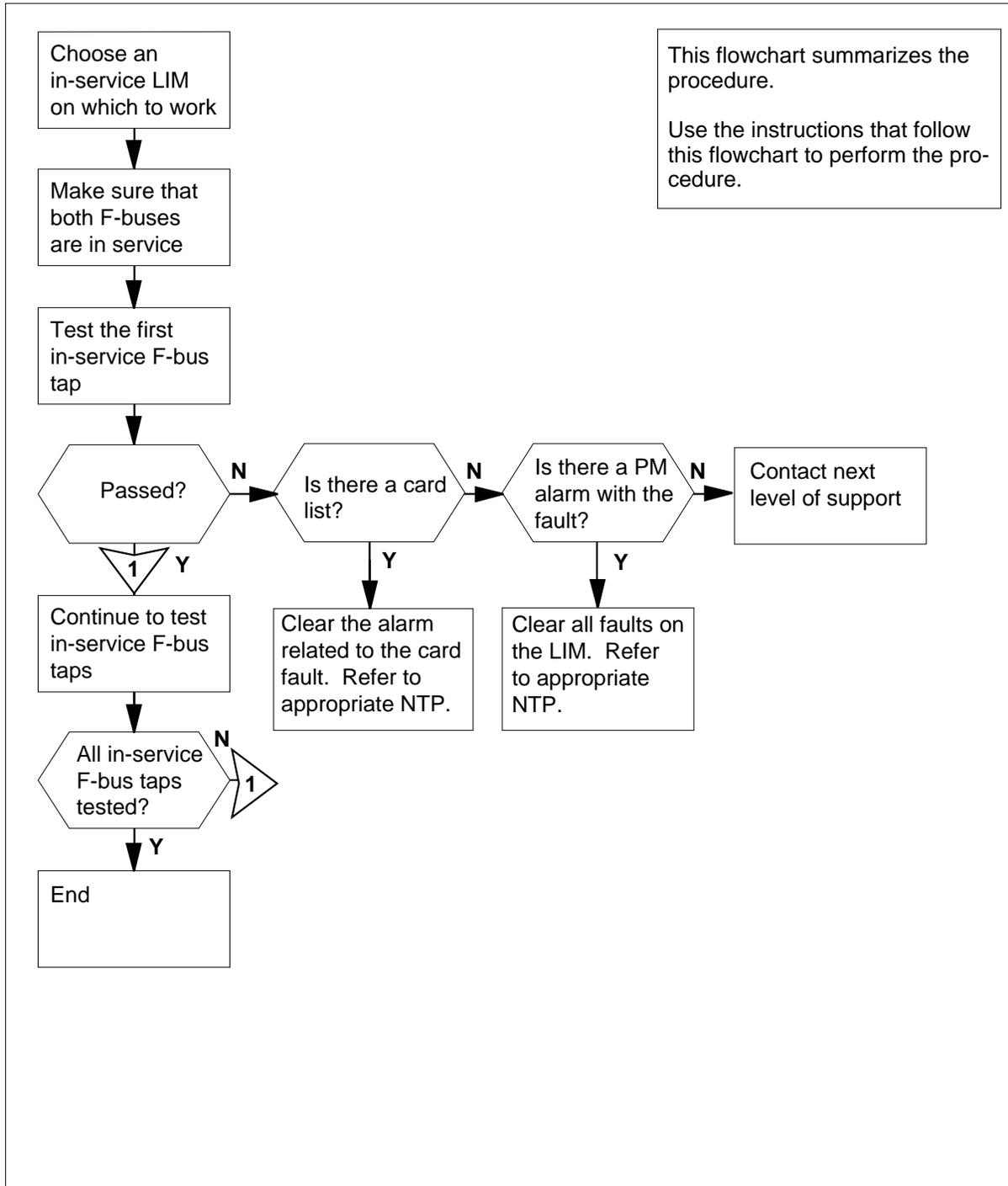
There are no common procedures.

### Action

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

## Testing F-bus taps on an LPP (continued)

### Summary of Testing F-bus taps on an LPP



## Testing F-bus taps on an LPP (continued)

---

### Testing F-bus taps on an LPP

#### 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 determine if any in-service LIMs are present, type  
`>DISP INSV LIM`  
and press the Enter key.

*Example of a MAP response:*

```
InSv LIM: 1,2,3
```

---

| If in-service LIMs | Do      |
|--------------------|---------|
| are displayed      | step 3  |
| are not displayed  | step 21 |

---

- 3 Record the numbers of the in-service LIMs.
- 4 Choose an in-service LIM to work on.
- 5 To post the LIM, type  
`>POST LIM lim_no`  
and press the Enter key.

*where*

**lim\_no**

is the number of the LIM that you must post as chosen in step 4 (0 to 16)

*Example of a MAP display:*

```
LIM 1 InSv
 Links_OOS Taps_OOS
Unit0: InSv . .
Unit1: InSv . .
```

- 6 From the MAP display in step 5, determine if both LIM units are in service. On the MAP display:
  - LIM 1 indicates that LIM 1 is currently posted
  - InSv indicates that LIM 1 is in service

## Testing F-bus taps on an LPP (continued)

- Unit0: InSv indicates that unit 0 of the posted LIM is in service
- Unit1: InSv indicates that unit 1 of the posted LIM is in service

| If both LIM units          | Do      |
|----------------------------|---------|
| are Insv                   | step 7  |
| are other than listed here | step 21 |

- 7** To access the F-bus level of the MAP display, type  
**>FBUS**  
 and press the Enter key.

*Example of a MAP display:*

```
LIM 1 InSv
 Links_OOS Taps_OOS
Unit0: InSv 1
Unit1: InSv 1
 Tap: 0 4 8 12 16 20 24 28 32
FBus0: InSv .-M- .-I- .-. .-. .-. .-. .-. .-.
FBus1: InSv .-. .-I- .-. .S- .-. .-. .-. .-
```

- 8** From the MAP display in step 7, determine if both F-buses of the posted LIM are in service.

| If both F-buses            | Do      |
|----------------------------|---------|
| are Insv                   | step 9  |
| are other than listed here | step 20 |

- 9** Choose an in-service F-bus tap to work on either F-bus 0 or 1. A dot (.) under the tap number identifies in-service taps.

**10**



**CAUTION**  
**Possible service interruption**  
 Make sure the mate tap of the F-bus tap that you work on is in service. A dot (.) under the tap number identifies in-service taps. If the tap is not in service, do not busy the tap you work on. If you busy this tap, you will isolate a node (LIU7 or EIU) and you can interrupt service.

Record the number of the tap. Record the number of the F-bus that associates with the tap.

**Note:** In the F-bus MAP display in step 7, the tap number follows the word Tap.

## Testing F-bus taps on an LPP (continued)

- 11 To manually busy the in-service F-bus tap that you chose, type  
**>BSY FBUS fbus\_no tap\_no**  
 and press the Enter key.

*where*

**fbus\_no**

is the number of the F-bus that associates with the tap (0 or 1)

**tap\_no**

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

**If the MAP response**

**Do**

is LIM lim\_no FBus step 13  
 fbus\_no Tap tap\_no  
 Busy passed.

is LIM lim\_no FBus step 12  
 fbus\_no Tap tap\_no re-  
 quires confirmation  
 because the following  
 LIU may be isolat-  
 ed.LIU7 liu\_noPlease  
 confirm  
 ("YES"or"NO"):

- 12 To cancel the command, type  
**>NO**  
 and press the Enter key.  
 Go to step 16.

- 13 To test the F-bus tap, type  
**>TST FBUS fbus\_no tap\_no**  
 and press the Enter key.

*where*

**fbus\_no**

is the number of the F-bus that associates with the tap (0 or 1)

**tap\_no**

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

**If the TST command**

**Do**

passed step 14  
 failed, and the system generated step 19  
 a card list

**Testing F-bus taps on an LPP (continued)**

|           | <b>If the TST command</b>                                                                                                                                                                                                                                           | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed, and the system did not generate a card list                                                                                                                                                                                                                 | step 18   |
| <b>14</b> | To return the F-bus tap to service, type<br>>RTS FBUS fbus_no tap_no<br>and press the Enter key.<br><i>where</i><br><b>fbus_no</b><br>is the number of the F-bus that associates with the tap (0 or 1)<br><b>tap_no</b><br>is the number of the F-bus tap (0 to 35) |           |
|           | <b>If the RTS command</b>                                                                                                                                                                                                                                           | <b>Do</b> |
|           | passed                                                                                                                                                                                                                                                              | step 15   |
|           | failed, and the system generated a card list                                                                                                                                                                                                                        | step 19   |
|           | failed, and the system did not generate a card list                                                                                                                                                                                                                 | step 18   |
| <b>15</b> | Determine if you tested all in-service taps on both F-bus 0 and F-bus 1.<br><b>Note:</b> A dot (.) under the tap number identifies in-service taps.                                                                                                                 |           |
|           | <b>If you</b>                                                                                                                                                                                                                                                       | <b>Do</b> |
|           | tested all in-service F-bus taps on both F-bus 0 and 1                                                                                                                                                                                                              | step 23   |
|           | did not test all in-service taps on F-bus 0 and 1                                                                                                                                                                                                                   | step 16   |
| <b>16</b> | Choose another in-service tap to work on.                                                                                                                                                                                                                           |           |
| <b>17</b> | Record the tap number (0 to 35) and the F-bus number (0 or 1) that associates with the tap.<br><b>Note:</b> A dot (.) under the tap number identifies in-service taps.<br>Go to step 11.                                                                            |           |
| <b>18</b> | From the alarm banner of the MAP display, determine if a PM alarm associates with the problem that you discovered.                                                                                                                                                  |           |
|           | <b>If an alarm</b>                                                                                                                                                                                                                                                  | <b>Do</b> |
|           | is present                                                                                                                                                                                                                                                          | step 19   |

## Testing F-bus taps on an LPP (end)

---

|           | <b>If an alarm</b>                                                                                                                                                                                                                                                                                                                                                            | <b>Do</b> |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is not present                                                                                                                                                                                                                                                                                                                                                                | step 22   |
| <b>19</b> | A PM alarm indicates the type of PM with the problem. Perform the correct procedure in <i>Alarm and Performance Monitoring Procedures</i> to clear the fault. Complete the procedure and return to this point.<br>Go to step 2.                                                                                                                                               |           |
| <b>20</b> | Both F-buses must be in service before you use this procedure. Clear any PM alarms that the system can generate if both F-buses are not in service. Check the PM alarm banner to determine which alarm the banner displays. Refer to <i>Alarm and Performance Monitoring Procedures</i> to clear the fault. Complete the procedure and return to this point.<br>Go to step 2. |           |
| <b>21</b> | Clear all LIM alarms. Make sure that both LIM units are in service.<br>Go to step 2.                                                                                                                                                                                                                                                                                          |           |
| <b>22</b> | For additional help, contact the next level of support.                                                                                                                                                                                                                                                                                                                       |           |
| <b>23</b> | The procedure is complete.                                                                                                                                                                                                                                                                                                                                                    |           |

## Testing F-bus taps on an MS

---

### Application

Use this procedure to test in-service F-bus taps on a message switch (MS). A manual test of in-service F-bus taps simulates the testing done by a routine exercise (REx) test procedure. Make sure that both F-buses are in service before you perform this procedure.

### Interval

Perform this procedure daily.

### Common procedures

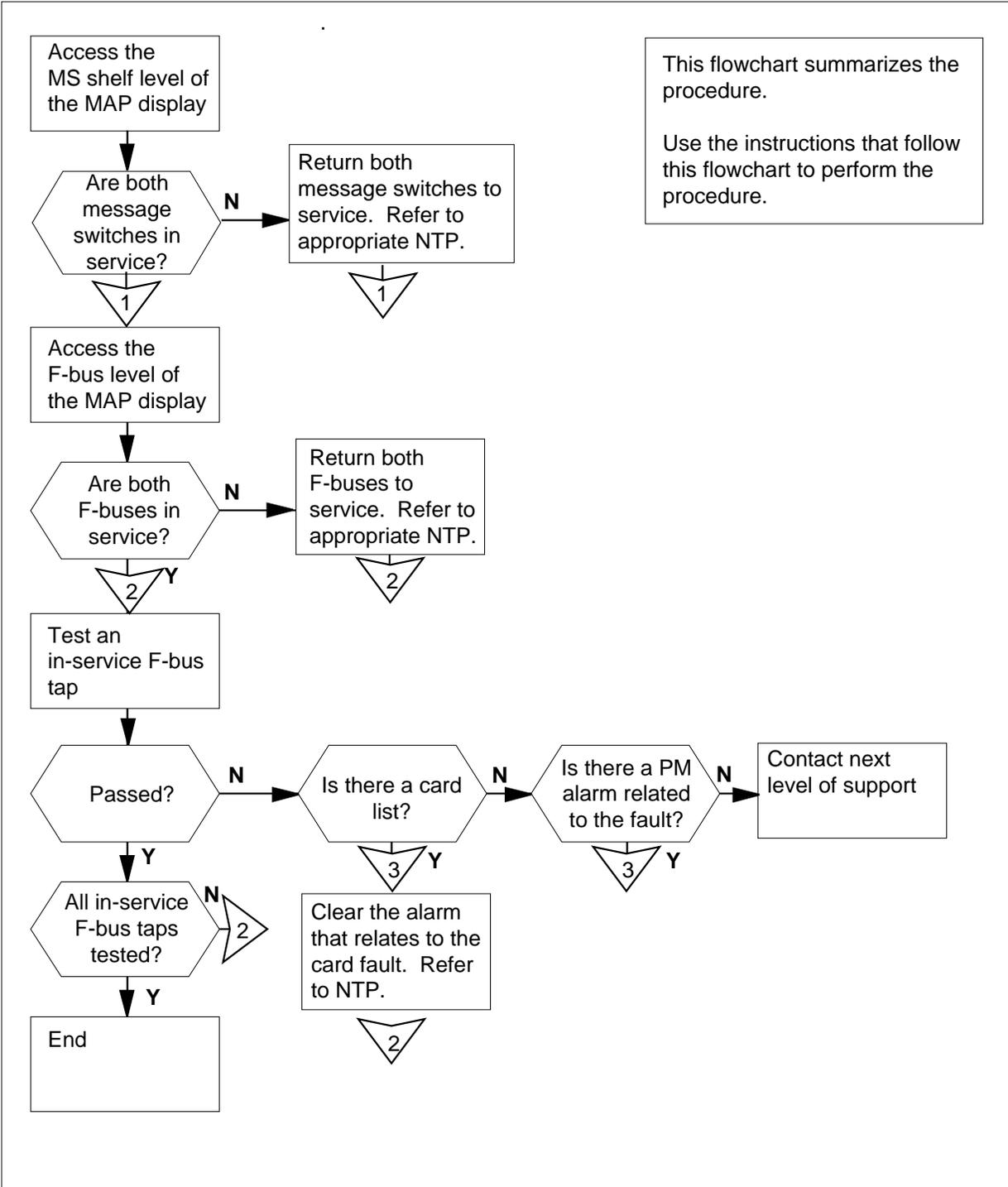
There are no common procedures.

### 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.

## Testing F-bus taps on an MS (continued)

### Summary of Testing F-bus taps on an MS



## Testing F-bus taps on an MS (continued)

### Testing F-bus taps on an MS

#### At the MAP terminal

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

| If both MS 0 and MS 1 | Do     |
|-----------------------|--------|
| are InSv              | step 3 |
| are not InSv          | step 2 |

- 2 Perform the correct procedure in *Alarm and Performance Monitoring Procedures* to return both message switches to service. Perform the correct alarm clearing procedure before you continue this procedure. Complete the procedure and return to this point.

- 3 To access the F-bus level of the MAP display, type  
**>FBUS**  
 and press the Enter key.

**Note:** Card 12 contains the NT9X73 T-bus to F-bus interface card in the SNSE SP/SSP MS shelf.

*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 4 8 12 16 20
MS 0 M
MS 1

```

**Note:** The following are F-bus states on the MAP display:

. indicates in service- indicates unequippedM indicates manual busyO  
 indicates offlineS indicates system busyI indicates in-service trouble

- 4 Determine if both F-buses are in service.

| If both F-buses            | Do     |
|----------------------------|--------|
| are (.) in service         | step 6 |
| are other than listed here | step 5 |

- 5 Make sure both F-buses are in service (.) before you perform this procedure. Clear all MS alarms that the system generated because both F-buses were not in service. Check the alarm banner to determine which alarm the banner displays. Perform the correct procedure in *Alarm and Performance Monitoring Procedures* to clear the fault. Complete the procedure and return to this point.

---

## Testing F-bus taps on an MS (continued)

---

- 6 Both MS 0 and MS 1 are in-service F-bus taps. Choose either an MS 0 or MS 1 to work on.  
**Note:** A dot (.) under the tap number identifies in-service taps.
- 7 Record the number of the tap. Record the number of the MS that associates with the tap.  
**Note:** The F-bus tap number is above the tap state, on the right of the F-bus header on the MAP display.
- 8



### CAUTION

#### Potential service interruption

The mate tap of the F-bus tap that you work on is not in service. A dot (.) under the tap number identifies in-service taps. Do not busy the tap you work on. If you busy this tap, you isolate a node (LIU7) and interrupt service.

To manually busy the in-service F-bus tap that you chose, type

```
>BSY ms_no TAP tap_no
```

and press the Enter key.

where

**ms\_no**

is the number of the MS that associates with the tap (0 or 1)

**tap\_no**

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

---

| If the response                                                                                                                                     | Do      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| is FBus fbus_no Tap tap_no Busy passed.                                                                                                             | step 10 |
| is FBus fbus_no Tap tap_no requires confirmation because the following LIU may be isolated. LIU7 liu_no. Please confirm ("YES", "Y", "NO", or "N"): | step 9  |

---

- 9 To cancel the command, type  
>NO  
and press the Enter key.  
Go to step 12.

---

## Testing F-bus taps on an MS (continued)

---

- 10** To test the F-bus tap, type  
**>TST ms\_no TAP tap\_no**  
 and press the Enter key.  
*where*  
     **ms\_no**  
         is the number of the MS that associates with the tap (0 or 1)  
     **tap\_no**  
         is the number of the F-bus tap (0 to 23)

---

| If the TST command                                  | Do      |
|-----------------------------------------------------|---------|
| passed                                              | step 11 |
| failed, and the system generated a card list        | step 16 |
| failed, and the system did not generate a card list | step 15 |

- 11** To return the F-bus tap to service, type  
**>RTS ms\_no TAP tap\_no**  
 and press the Enter key.  
*where*  
     **ms\_no**  
         is the number of the MS that associates with the tap (0 or 1)  
     **tap\_no**  
         is the number of the F-bus tap (0 to 23)

---

| If the RTS command                                  | Do      |
|-----------------------------------------------------|---------|
| passed                                              | step 12 |
| failed, and the system generated a card list        | step 16 |
| failed, and the system did not generate a card list | step 15 |

- 12** Determine if you tested all in-service taps on F-bus 0 and F-bus 1.  
     **Note:** A dot (.) under the tap number identifies in-service taps.

---

| If you                                              | Do      |
|-----------------------------------------------------|---------|
| tested all in-service F-bus taps on both MS 0 and 1 | step 19 |

---

## Testing F-bus taps on an MS (end)

---

|           | <b>If you</b>                                                                                                                                                                                                                                                                                  | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | did not test all in-service F-bus taps on both MS 0 and 1                                                                                                                                                                                                                                      | step 13   |
| <b>13</b> | Choose another in-service tap to work on. Make sure that the tap you choose is not tested.                                                                                                                                                                                                     |           |
| <b>14</b> | Record the tap number and the MS number that associate with the tap.<br><b>Note:</b> A dot (.) under the tap number identifies in-service taps.<br>Go to step 8.                                                                                                                               |           |
| <b>15</b> | Check under the PM alarm header to determine if an alarm associates with the fault that you discovered.                                                                                                                                                                                        |           |
|           | <b>If an alarm</b>                                                                                                                                                                                                                                                                             | <b>Do</b> |
|           | associates with the fault                                                                                                                                                                                                                                                                      | step 16   |
|           | does not associate with the fault                                                                                                                                                                                                                                                              | step 18   |
| <b>16</b> | A card that has faults can be the cause of the problem. A PM alarm under the PM alarm banner indicates the type of PM with the fault. Perform the correct procedure in <i>Alarm and Performance Monitoring Procedures</i> to clear the fault. Complete the procedure and return to this point. |           |
| <b>17</b> | Go to step 10.                                                                                                                                                                                                                                                                                 |           |
| <b>18</b> | For additional help, contact the next level of support.                                                                                                                                                                                                                                        |           |
| <b>19</b> | The procedure is complete.                                                                                                                                                                                                                                                                     |           |

## Testing an HLIU

---

### Application

Use the following procedure to run diagnostic tests on a high-speed link interface unit (HLIU).

### Interval

Perform this procedure as required.

### Common procedures

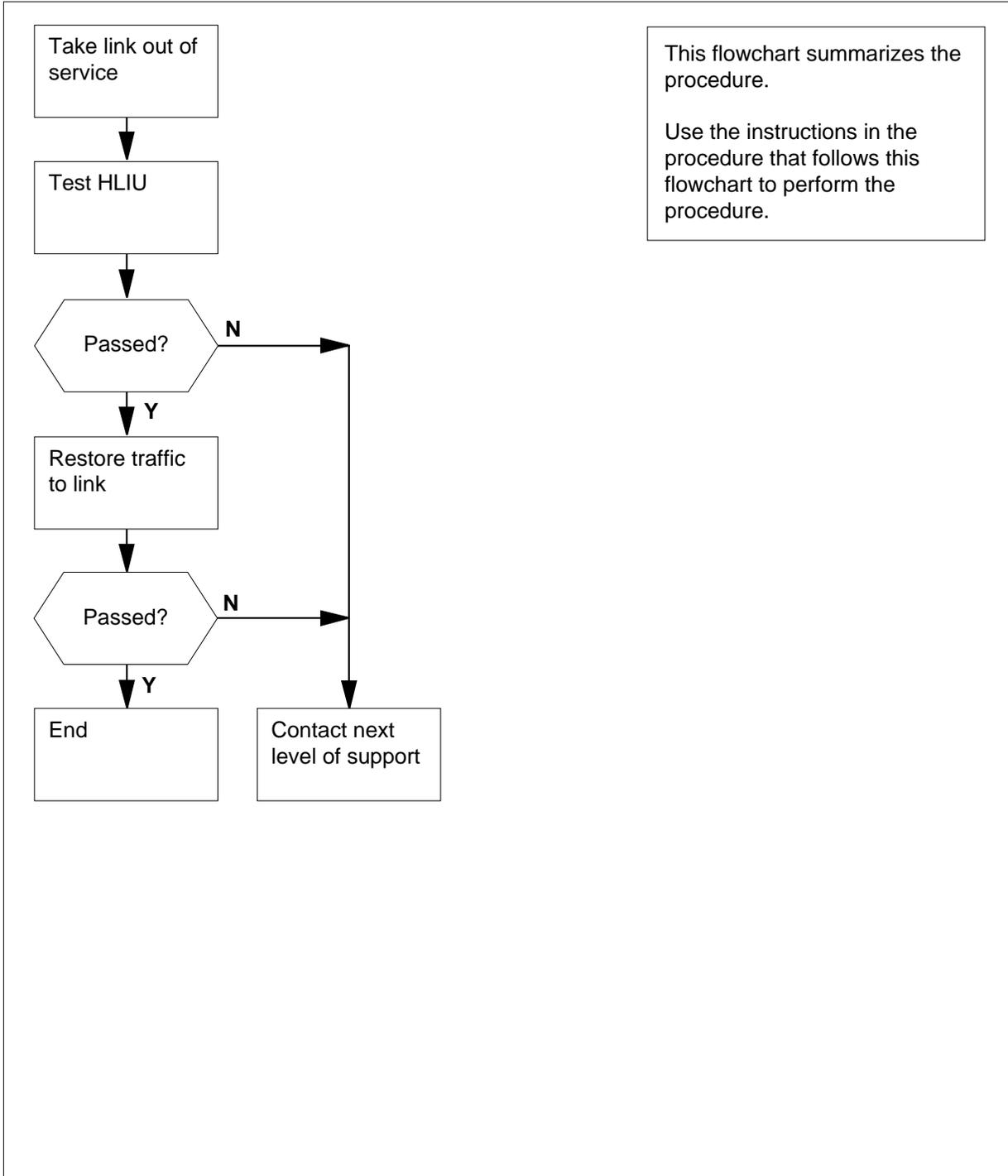
None

### Action

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

## Testing an HLIU (continued)

### Summary of Testing an HLIU



---

## Testing an HLIU (continued)

---

### Testing an HLIU



#### CAUTION

##### Possible loss of service

This procedure removes the HLIU from service. If possible, perform this procedure during periods of low traffic.

#### 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 HLIU that you want to test by typing  
`>POST HLIU liu_no`  
 and pressing the Enter key.  
*where*  
     **liu\_no**  
     is the number of the HLIU (0 to 511)
- 3 Determine the linkset name associated with the HLIU you are working on by typing  
`>QUERYPM`  
 and pressing the Enter key.

**Note:** The linkset name is located to the right of the word Linkset at the lower right of the MAP response. In the example, the linkset name is LSCAP1.

*Example of a MAP response:*

```
PM type:HLIU PM No.:110 Status:ISTb
LIM:1 Shelf:2 Slot:12 LIU FTA:4249 1000
Default Load: LCC36BX
Running Load: LCC36BX
ISTB conditions:
 Msg Channel #0 NA
 TAP #0 OOS/NA
LMS States: ISTb ISTb
Auditing?: No Yes
Msg Channels:NA Acc
TAPs: M .
Reserved HLIU forms part of CCS7 Linkset: LSCAP1
SLC: 5 LIU is allocated
```

- 4 Record the linkset name and SLC number shown in the MAP response in step 3.

## Testing an HLIU (continued)

---

- 5** Access the C7LKSET level of the MAP display by typing  
**>CCS ;CCS7 ;C7LKSET**  
 and pressing the Enter key.
- 6** Post the linkset of the link associated with the HLIU by typing  
**>POST C linkset\_name**  
 and pressing the Enter key.  
*where*  
**linkset\_name**  
 is the name of the linkset recorded in step 4
- 7** Inhibit the link associated with the HLIU by typing  
**>INH link\_no**  
*where*  
**link\_no**  
 is the SLC number of the link (0 to 15) recorded in step 4
- 8** Manually busy the link associated with the HLIU by typing  
**>BSY link\_no**  
 and pressing the Enter key.  
*where*  
**link\_no**  
 is the SLC number of the link (0 to 15) recorded in step 4

---

| If the response is                                                                      | Do      |
|-----------------------------------------------------------------------------------------|---------|
| Link link_no: Traffic is running on that linkPlease confirm ("YES", "Y", "NO", or "N"): | step 9  |
| anything else, including additional messages with above response                        | step 24 |

---

- 9** Confirm the command by typing  
**>YES**  
 and pressing the Enter key.

---

| If the BSY command | Do      |
|--------------------|---------|
| passes             | step 10 |
| fails              | step 24 |

---

- 10** Return to the PM level of the MAP display by typing  
**>PM**

**Testing an HLIU (continued)**

- and pressing the Enter key.
- 11** Post the HLIU again by typing  
**>POST HLIU liu\_no**  
 and pressing the Enter key.  
*where*  
     **liu\_no**  
         is the number of the HLIU (0 to 511)
- 12** Manually busy the HLIU by typing  
**>BSY**  
 and pressing the Enter key.
- | <b>If the BSY command</b> | <b>Do</b> |
|---------------------------|-----------|
| passes                    | step 13   |
| fails                     | step 24   |
- 13** Perform diagnostic tests on the posted HLIU by typing  
**>TST**  
 and pressing the Enter key.
- | <b>If the response is</b> | <b>Do</b> |
|---------------------------|-----------|
| HLIU liu_no TST PASSED.   | step 14   |
| HLIU liu_no TST FAILED.   | step 20   |
| HLIU liu_no TST REJECTED. | step 24   |
- 14** Return the HLIU to service by typing  
**>RTS**  
 and pressing the Enter key.
- | <b>If RTS command</b> | <b>Do</b> |
|-----------------------|-----------|
| passes                | step 15   |
| fails                 | step 24   |
- 15** Access the C7LKSET level of the MAP display by typing  
**>CCS ;CCS7 ;C7LKSET**  
 and pressing the Enter key.

## Testing an HLIU (continued)

---

- 16** Post the linkset of the link associated with the HLIU by typing  
**>POST C linkset\_name**  
 and pressing the Enter key.  
*where*

**linkset\_name**  
 is the name of the linkset recorded in step 4

- 17** Return the link associated with the HLIU to service by typing  
**>RTS link\_no**  
 and pressing the Enter key.  
*where*

**link\_no**  
 is the SLC number of the link (0 to 15) recorded in step 4

| If RTS command | Do      |
|----------------|---------|
| passes         | step 18 |
| fails          | step 24 |

- 18** Activate the link associated with the HLIU by typing  
**>ACT link\_no**  
 and pressing the Enter key.  
*where*

**link\_no**  
 is the SLC number of the link (0 to 15) recorded in step 4

| If the ACT command | Do      |
|--------------------|---------|
| passes             | step 19 |
| fails              | step 24 |

- 19** Restore traffic to the inhibited link associated with the HLIU by typing  
**>UINH link\_no**  
 and pressing the Enter key.  
*where*

**link\_no**  
 is the SLC number of the link (0 to 15) recorded in step 4

| If the UINH command | Do      |
|---------------------|---------|
| passes              | step 25 |
| fails               | step 24 |

---

**Testing an HLIU (end)**

---

- 20** Determine if a card list is generated.
- | <b>If a card list is</b> | <b>Do</b> |
|--------------------------|-----------|
| generated                | step 21   |
| not generated            | step 24   |
- 21** Record the location, description, slot number, and product engineering code (PEC), including suffix, of the cards on the list.
- 22** Perform the appropriate card replacement procedure in *Card Replacement Procedures*. When you have completed the procedure, return to this point.
- 23** Go to step 1.
- 24** For further assistance, contact the personnel responsible for the next level of support.
- 25** You have completed this procedure.

## Testing an HSLR

---

### Application

Use the following procedure to run diagnostic tests on a high-speed link router (HSLR).

### Interval

Perform this procedure as required.

### Common procedures

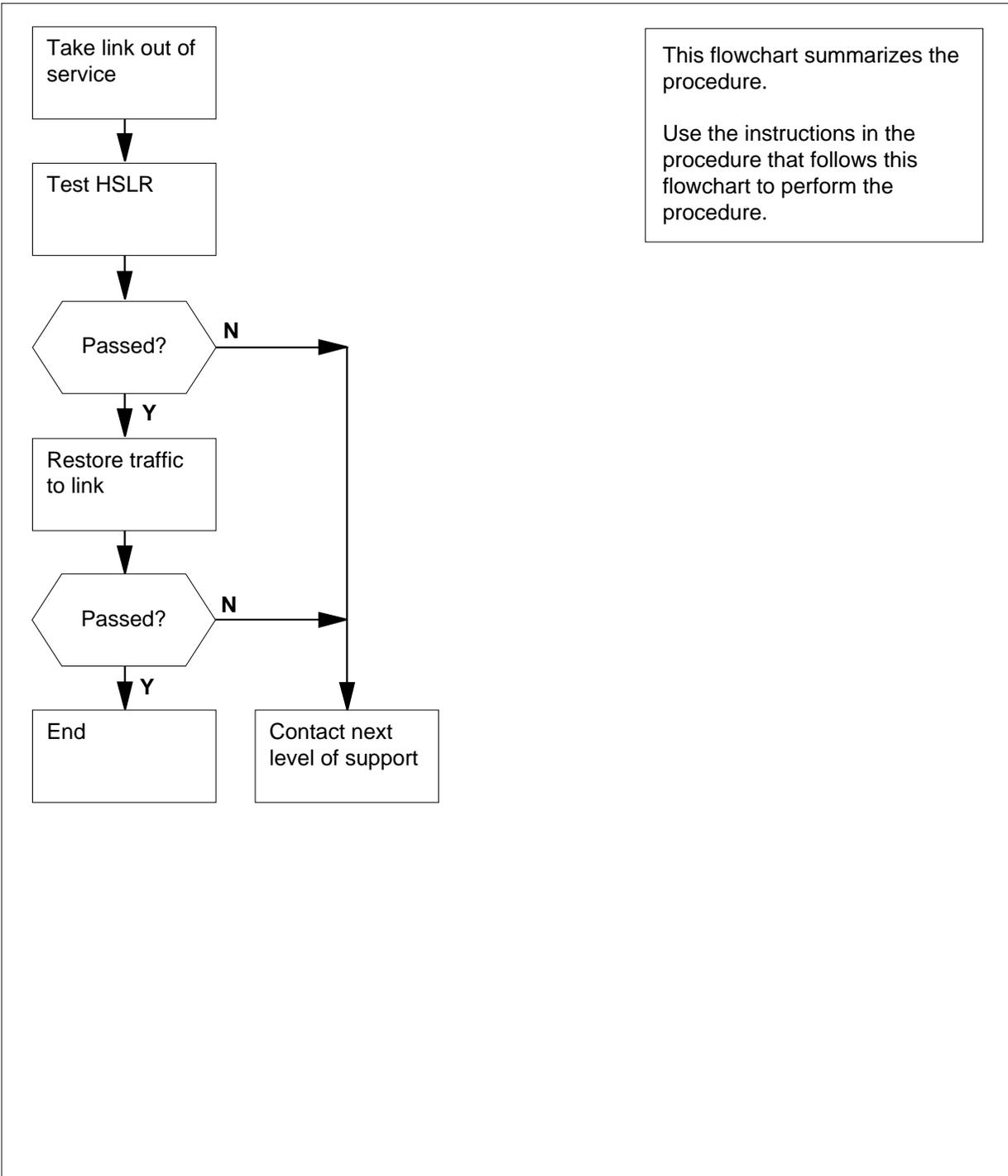
None

### Action

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

## Testing an HSLR (continued)

### Summary of Testing an HSLR



## Testing an HSLR (continued)

---

### Testing an HSLR



#### **CAUTION**

##### **Possible loss of service**

This procedure removes the HSLR from service. If possible, perform this procedure during periods of low traffic.

#### **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 HSLR that you want to test by typing  
`>POST HSLR liu_no`  
and pressing the Enter key.  
*where*  
`liu_no`  
is the number of the HSLR (0 to 511)
- 3 Determine the linkset name associated with the HSLR you are working on by typing  
`>QUERYPM`  
and pressing the Enter key.

**Note:** The linkset name is located to the right of the word Linkset at the lower right of the MAP response. In the example, the linkset name is LSCAP1.

*Example of a MAP response:*

```
PM type:HSLR PM No.:110 Status:ISTb
LIM:1 Shelf:2 Slot:12 LIU FTA:4249 1000
Default Load: LCC36BX
Running Load: LCC36BX
ISTB conditions:
 Msg Channel #0 NA
 TAP #0 OOS/NA
LMS States: ISTb ISTb
Auditing?: No Yes
Msg Channels:NA Acc
TAPs: M .
Reserved HSLR forms part of CCS7 Linkset: LSCAP1
SLC: 5 LIU is allocated
```

- 4 Record the linkset name and SLC number shown in the MAP response in step 3.

**Testing an HSLR (continued)**

5 Access the C7LKSET level of the MAP display by typing  
**>CCS ;CCS7 ;C7LKSET**  
 and pressing the Enter key.

6 Post the linkset of the link associated with the HSLR by typing  
**>POST C linkset\_name**  
 and pressing the Enter key.

*where*

**linkset\_name**

is the name of the linkset recorded in step 4

7 Inhibit the link associated with the HSLR by typing

**>INH link\_no**

*where*

**link\_no**

is the SLC number of the link (0 to 15) recorded in step 4

8 Manually busy the link associated with the HSLR by typing

**>BSY link\_no**

and pressing the Enter key.

*where*

**link\_no**

is the SLC number of the link (0 to 15) recorded in step 4

---

**If the response is**

**Do**

Link link\_no: Traffic is running on that linkPlease confirm ("YES", "Y", "NO", or "N"):

anything else, including additional messages with above response

9 Confirm the command by typing

**>YES**

and pressing the Enter key.

---

**If the BSY command**

**Do**

passes

step 10

fails

step 24

10 Return to the PM level of the MAP display by typing

**>PM**

## Testing an HSLR (continued)

---

- and pressing the Enter key.
- 11** Post the HSLR again by typing  
**>POST HSLR liu\_no**  
 and pressing the Enter key.  
*where*  
     **liu\_no**  
         is the number of the HSLR (0 to 511)
- 12** Manually busy the HSLR by typing  
**>BSY**  
 and pressing the Enter key.
- | If the BSY command | Do      |
|--------------------|---------|
| passes             | step 13 |
| fails              | step 24 |
- 13** Perform diagnostic tests on the posted HSLR by typing  
**>TST**  
 and pressing the Enter key.
- | If the response is               | Do      |
|----------------------------------|---------|
| HSLR    liu_no    TST<br>PASSED. | step 14 |
| HSLR    liu_no    TST<br>FAILED. | step 20 |
| HSLR liu_no TST RE-<br>JECTED.   | step 24 |
- 14** Return the HSLR to service by typing  
**>RTS**  
 and pressing the Enter key.
- | If RTS command | Do      |
|----------------|---------|
| passes         | step 15 |
| fails          | step 24 |
- 15** Access the C7LKSET level of the MAP display by typing  
**>CCS ;CCS7 ;C7LKSET**  
 and pressing the Enter key.

**Testing an HSLR (continued)**

16 Post the linkset of the link associated with the HSLR by typing

>POST C linkset\_name

and pressing the Enter key.

where

**linkset\_name**

is the name of the linkset recorded in step 4

17 Return the link associated with the HSLR to service by typing

>RTS link\_no

and pressing the Enter key.

where

**link\_no**

is the SLC number of the link (0 to 15) recorded in step 4

| If RTS command | Do      |
|----------------|---------|
| passes         | step 18 |
| fails          | step 24 |

18 Activate the link associated with the HSLR by typing

>ACT link\_no

and pressing the Enter key.

where

**link\_no**

is the SLC number of the link (0 to 15) recorded in step 4

| If the ACT command | Do      |
|--------------------|---------|
| passes             | step 19 |
| fails              | step 24 |

19 Restore traffic to the inhibited link associated with the HSLR by typing

>UINH link\_no

and pressing the Enter key.

where

**link\_no**

is the SLC number of the link (0 to 15) recorded in step 4

| If the UINH command | Do      |
|---------------------|---------|
| passes              | step 25 |
| fails               | step 24 |

## Testing an HSLR (end)

---

- 20 Determine if a card list is generated.
- | If a card list is | Do      |
|-------------------|---------|
| generated         | step 21 |
| not generated     | step 24 |
- 21 Record the location, description, slot number, and product engineering code (PEC), including suffix, of the cards on the list.
- 22 Perform the appropriate card replacement procedure in *Card Replacement Procedures*. When you have completed the procedure, return to this point.
- 23 Go to step 1.
- 24 For further assistance, contact the personnel responsible for the next level of support.
- 25 You have completed this procedure.

## Testing an LIM unit

---

### **Application**

Use this procedure to test a link interface module (LIM) unit.

### **Interval**

Perform this procedure as required.

### **Common procedures**

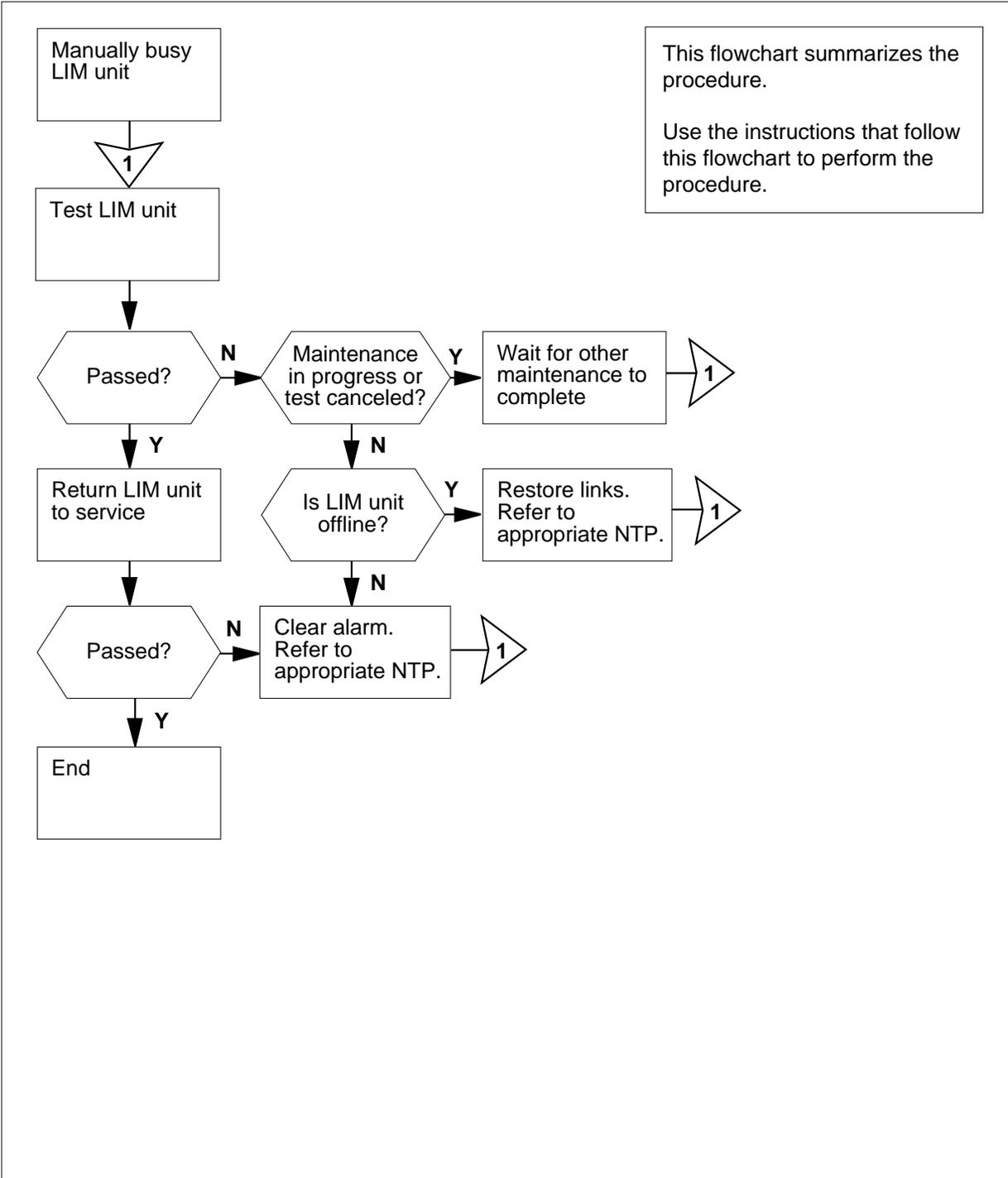
There are no common procedures.

### **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.

## Testing an LIM unit (continued)

### Summary of Testing an LIM unit



---

## Testing an LIM unit (continued)

---

### Testing an LIM unit

#### *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 on which you must run diagnostics, type  
`>POST LIM lim_no`  
 and press the Enter key.

*where*

**lim\_no**  
 is the number of the LIM (0 to 16)

- 3 Choose a LIM unit to work on.
- 4 To manually busy the LIM unit, 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 display:*  
 LIM 1 UNIT 0 BUSY INITIATED

---

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 5  |
| failed             | step 13 |

---

- 5 To test the LIM unit, type  
`>TST 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 display:*  
 LIM 1 UNIT 0 Test INITIATED

---

| If the TST command | Do      |
|--------------------|---------|
| passed             | step 12 |
| failed             | step 6  |

---

## Testing an LIM unit (continued)

- 6 Make sure that the diagnostic tests were successful.

| If the response                                                          | Do      |
|--------------------------------------------------------------------------|---------|
| is LIM x UNIT y TEST FAILED failure_reason                               | step 7  |
| is LIM x UNIT y TEST FAILED BECAUSE NO HOST LINKS EXIST.                 | step 9  |
| is LIM x UNIT y IS NOT ACCESSIBLE; TEST ACTION NOT TAKEN.                | step 9  |
| is LIM x UNIT y IS NOT RESPONDING; TEST FAILED.                          | step 9  |
| is LIM x UNIT y MAINTENANCE IS IN PROGRESS; TEST ACTION CANNOT BE TAKEN. | step 11 |
| is LIM x UNIT y TEST HAS BEEN ABORTED BY FORCE.                          | step 11 |

- 7 Perform the correct alarm clearing procedure in *Alarm and Performance Monitoring Procedures*. Complete the procedure and return to this point.
- 8 Go to step 1.
- 9 If a problem with the links of the LIM unit is present, refer to the procedure *Restoring LIM unit cross-links*. *Alarm and Performance Monitoring Procedures* describes this procedure. Complete the procedure and return to this point.
- 10 Go to step 1.
- 11 Do not perform the TST command. Other maintenance activities on the LIM unit are in process. Wait until maintenance activities are complete.  
Go to step 5.
- 12 To return to service the LIM unit, type  

```
>RTS 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 display:*

---

**Testing an LIM unit** (end)

---

LIM 1 UNIT 0 RETURN TO SERVICE INITIATED

---

| <b>If the RTS command</b> | <b>Do</b> |
|---------------------------|-----------|
| passed                    | step 14   |
| failed                    | step 13   |

---

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

## Testing an LIU7

---

### Application

Use the following procedure to run diagnostic tests on a link interface unit (LIU7).

### Interval

Perform this procedure as required.

### Common procedures

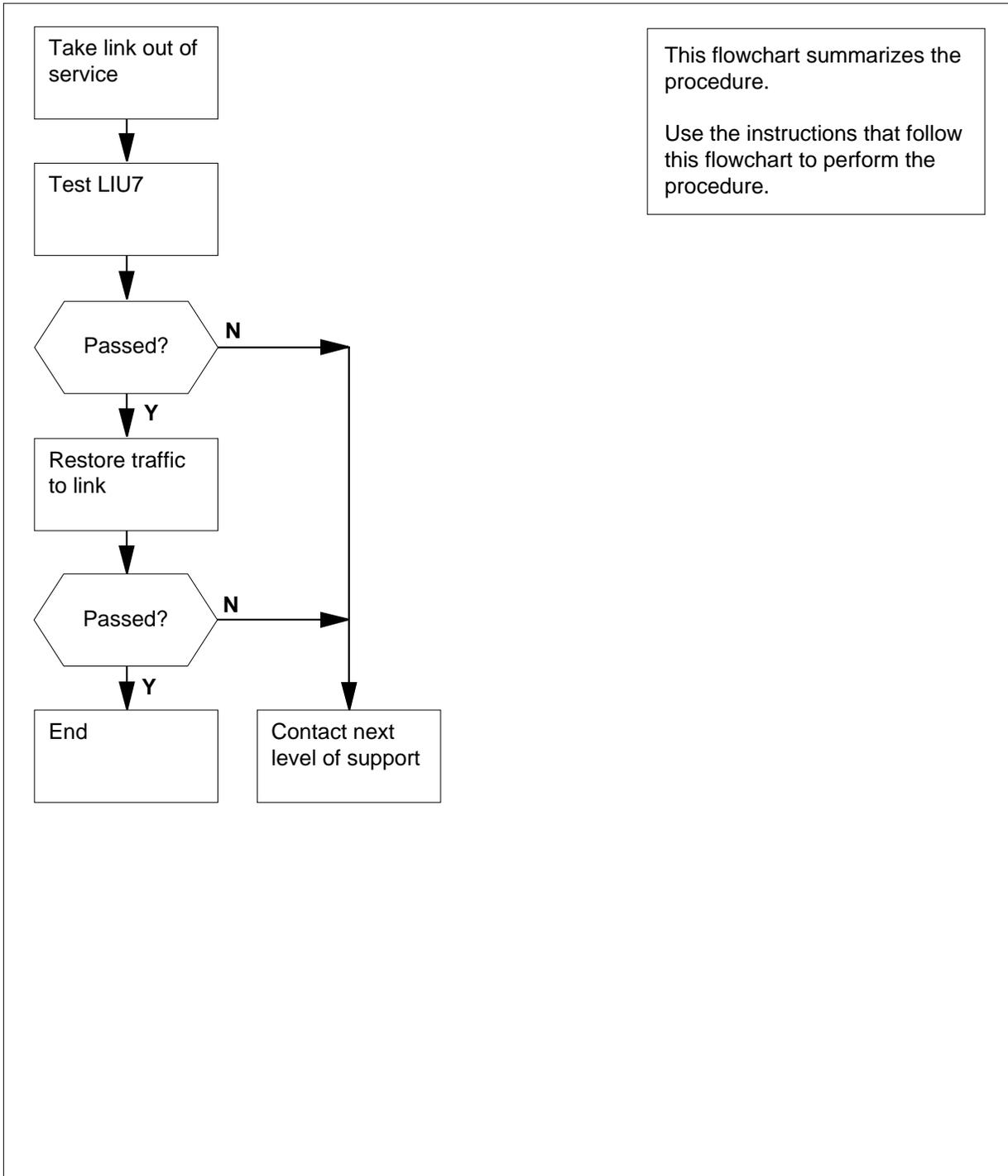
There are no common procedures.

### 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.

## Testing an LIU7 (continued)

### Summary of Testing an LIU7



## Testing an LIU7 (continued)

---

### Testing an LIU7



#### **CAUTION**

##### **Possible loss of service**

This procedure removes the LIU7 from service. If possible, perform this procedure during periods of low traffic.

#### **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 LIU7 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 511)

- 3 To determine the linkset name that associates with the LIU7, type

```
>QUERYPM
```

and press the Enter key.

**Note:** The linkset name is on the right of the word Linkset at the lower right of the MAP response. In the example, the linkset name is LSCAP1.

*Example of a MAP response:*

```
PM type:LIU7 PM No.:110 Status:ISTb
LIM:1 Shelf:2 Slot:12 LIU FTA:4249 1000
Default Load: LCC36BX
Running Load: LCC36BX
ISTB conditions:
 Msg Channel #0 NA
 TAP #0 OOS/NA
LMS States: ISTb ISTb
Auditing?: No Yes
Msg Channels:NA Acc
TAPs: M .
Reserved LIU7 forms part of CCS7 Linkset: LSCAP1
SLC: 5 LIU is allocated
```

- 4 Record the linkset name that is in the MAP response in step 3.

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

```
>CCS ;CCS7 ;C7LKSET
```

**Testing an LIU7** (continued)

and press the Enter key.

- 6 To post the linkset of the link that associates with the LIU7, type

>POST C linkset\_name

and press the Enter key.

where

**linkset\_name**

is the name of the linkset that you recorded in step 4

- 7 To inhibit the link that associates with the LIU7, type

>INH link\_no

where

**link\_no**

is the number of the link (0 to 15)

- 8 To manually busy the link that associates with the LIU7, type

>BSY link\_no

and press 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**

**Do**

is Link link\_no: Traffic is running on that linkPlease confirm ("YES", "Y", "NO", or "N"):

step 9

is other than listed here including additional messages with the preceding response

step 28

- 9 To confirm the command, type

>YES

and press the Enter key.

---

**If the BSY command**

**Do**

passed

step 10

failed

step 28

- 10 To confirm the command to deactivate the link that associates with the LIU7, type

>DEACT link\_no

## Testing an LIU7 (continued)

and press 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 11 |
| failed               | step 28 |

- 11 To return to the PM level of the MAP display, type

>PM

and press the Enter key.

- 12 To post the LIU7 again, type

>POST LIU7 liu\_no

and press the Enter key.

*where*

**liu\_no**  
is the number of the LIU7 (0 to 511)

- 13 To manually busy the LIU7, type

>BSY

and press the Enter key.

| If the response is                                                                                             | Do      |
|----------------------------------------------------------------------------------------------------------------|---------|
| Busying LIU7 liu_no will take a CCS7 resource out of service-<br>Please confirm<br>("YES", "Y", "NO", or "N"): | step 16 |
| Warning: The LIU7 is currently being imaged. The BSY command will be aborted unless the FORCE option is used.  | step 14 |
| anything else including additional messages with above response                                                | step 28 |

- 14 To manually force bsy the LIU7, type

>BSY FORCE

and press the Enter key.

**Testing an LIU7** (continued)

*Example of a MAP response:*

```
WARNING: The LIU7 is currently being imaged.
Do you wish to abort imaging to proceed with the BSY
request?
Please confirm ("YES", "Y", "NO", or "N"):
```

| If                              | Do      |
|---------------------------------|---------|
| proceed with BSY FORCE request. | step 15 |
| abort BSY FORCE request.        | step 29 |

- 15** To force bsy the LIU7, type  
**>YES**  
 and press the Enter key. Go to step17

*Example of a MAP response:*

```
Imaging will be aborted on LIU7 132.
```

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

| If the BSY command | Do      |
|--------------------|---------|
| passed             | step 17 |
| failed             | step 28 |

- 17** To perform diagnostic tests on the posted LIU7, type  
**>TST**  
 and press the Enter key.

| If the response              | Do      |
|------------------------------|---------|
| is LIU7 liu_no TST PASSED.   | step 18 |
| is LIU7 liu_no TST FAILED.   | step 24 |
| is LIU7 liu_no TST REJECTED. | step 28 |

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

## Testing an LIU7 (continued)

and press the Enter key.

| If RTS command | Do      |
|----------------|---------|
| passed         | step 19 |
| failed         | step 28 |

- 19** To access the C7LKSET level of the MAP display, type  
`>CCS ;CCS7 ;C7LKSET`  
 and press the Enter key.
- 20** To post the linkset of the link that associates with the LIU7, type  
`>POST C linkset_name`  
 and press the Enter key.  
*where*  
**linkset\_name**  
 is the name of the linkset that you recorded in step 4
- 21** To activate the link that associates with the LIU7, type  
`>ACT link_no`  
 and press 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 22 |
| failed             | step 28 |

- 22** To return the link that associates with the LIU7 to service, type  
`>RTS link_no`  
 and press 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 RTS command | Do      |
|----------------|---------|
| passed         | step 23 |

**Testing an LIU7 (end)**

|           | <b>If RTS command</b>                                                                                                                                                                      | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | failed                                                                                                                                                                                     | step 28   |
| <b>23</b> | To restore traffic to the inhibited link that associates with the LIU7, type<br>>UINH link_no<br>and press the Enter key.<br>where<br><b>link_no</b><br>is the number of the link (0 to15) |           |
|           | <b>If the UINH command</b>                                                                                                                                                                 | <b>Do</b> |
|           | passed                                                                                                                                                                                     | step 30   |
|           | failed                                                                                                                                                                                     | step 28   |
| <b>24</b> | Determine if the system generated a card list.                                                                                                                                             |           |
|           | <b>If the system</b>                                                                                                                                                                       | <b>Do</b> |
|           | generated a card list                                                                                                                                                                      | step 25   |
|           | did not generate a card list                                                                                                                                                               | step 28   |
| <b>25</b> | Record the location, description, slot number, product engineering code (PEC), and PEC suffix, of the cards on the list.                                                                   |           |
| <b>26</b> | Perform the correct procedure in <i>Card Replacement Procedures</i> to replace a card. Complete the procedure and return to this point.                                                    |           |
| <b>27</b> | Go to step 1.                                                                                                                                                                              |           |
| <b>28</b> | For additional help, contact the next level of support.                                                                                                                                    |           |
| <b>29</b> | To abort bsy request, type<br>>NO<br>and press the Enter key.<br><i>Example of a MAP response:</i><br><br>BSY command aborted due to imaging in progress.                                  |           |
| <b>30</b> | The procedure is complete.                                                                                                                                                                 |           |

## Testing an MP position (integrated)

---

### Application

Use this procedure to check components of Traffic Operator Position System (TOPS) message switch (TMS) Multipurpose (MP) positions. The TOPS message switch MP positions have one TOPS position controller (TPC). To test the MP positions, busy the positions from the MAP. Run tests that check the positions, and return the positions to service from the MAP.

### Interval

Perform this procedure at intervals of 6 months.

### Common procedures

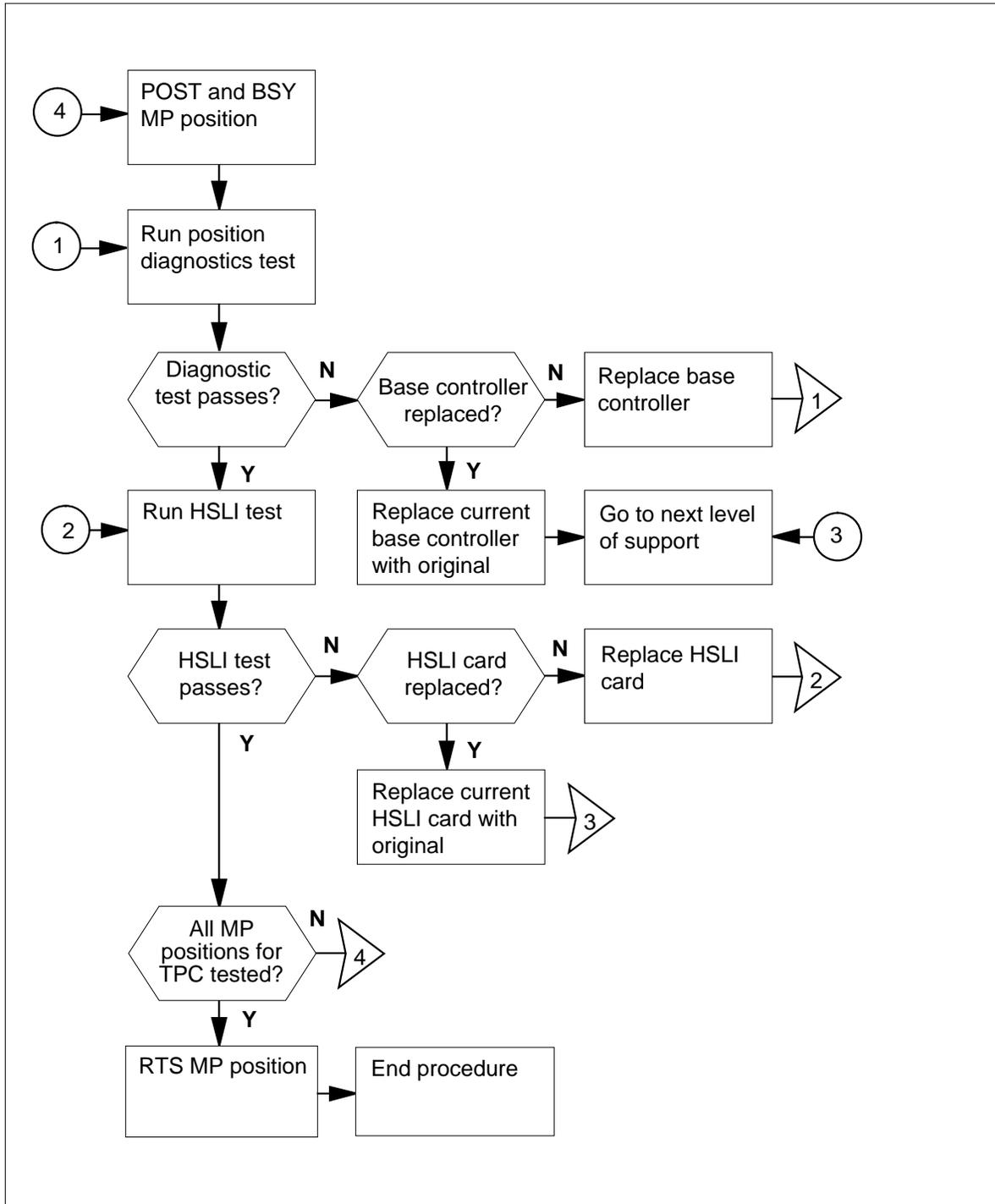
This procedure references the common procedure *Placing MP position in service (integrated)*.

### 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.

## Testing an MP position (integrated) (continued)

### Summary of Testing an MP position (integrated)



## Testing an MP position (integrated) (continued)

---

### How to test an MP position (integrated)



#### **CAUTION**

**MP positions must not be in service.**

When you prepare MP positions for a test, remove the positions from service. This action makes sure the positions cannot process calls.

#### **At the MAP display:**

**1** To post and busy the important MP position, do the following steps:

**a** Type

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

and press the Enter key.

**b** Type

```
>POST TPC x;MP
```

and press the Enter key.

*where*

**x**

is the TPC number.

**c** Type

```
>POST P n
```

and press the Enter key.

*where*

**n**

is the MP position number (0, 1, 2, or 3).

**d** Type

```
>BSY
```

and press the Enter key.

**Note:** Test only one MP for each TPC at a time.

**2** To run the position diagnostics test, type

```
>TST TERM
```

---

## Testing an MP position (integrated) (end)

---

and press the Enter key.

| Error code                                                | Test failed message                         |
|-----------------------------------------------------------|---------------------------------------------|
| 101, 201, 202, 205, 213, 214, 301-302, 305, 306, 401, 402 | Diagnostics software error in the TPC       |
| 204                                                       | Position not available for diagnostics      |
| 303, 304                                                  | Error in communication with the MP position |
| 403-411                                                   | MP position component diagnostic failed     |

| If the MAP displays                          | Do                                                                                                                                             |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Test passed                                  | step 5                                                                                                                                         |
| Test failed                                  | step 3 if one of the following error codes and messages appears                                                                                |
| Test failed and you replaced base controller | step 4 if one of the following error codes and messages appears                                                                                |
| <b>3</b>                                     | Replace the MP base controller. Refer to <i>TOPS MP Card Replacement Procedures</i> (NT0M90). Return to step 2.                                |
| <b>4</b>                                     | Replace the current MP base controller with the original base. Refer to <i>TOPS MP Card Replacement Procedures</i> (NT0M90). Proceed to step . |
| <b>5</b>                                     | To run the HSLI test, type<br>> <b>TST HSLI</b><br>and press the Enter key.                                                                    |

| If the MAP displays           | Do                                                              |
|-------------------------------|-----------------------------------------------------------------|
| Test passed                   | step 5                                                          |
| Test failed                   | step 3 if one of the following error codes and messages appears |
| Test failed and card replaced | step 4 if one of the following error codes and messages appears |

## Testing an MP position (standalone)

---

### Application

Use this procedure to check components of standalone Traffic Operator Position System (TOPS) Multipurpose (MP) positions. To test the standalone MP positions, perform the following procedures. Busy the positions from the MAP. Busy the positions from the TAMI. You must run tests that check the positions. Return the positions to service from the TAMI. Return the position to service from the MAP.

### Interval

Perform this procedure at intervals of 6 months.

### Common procedures

This procedure references the following common procedures:

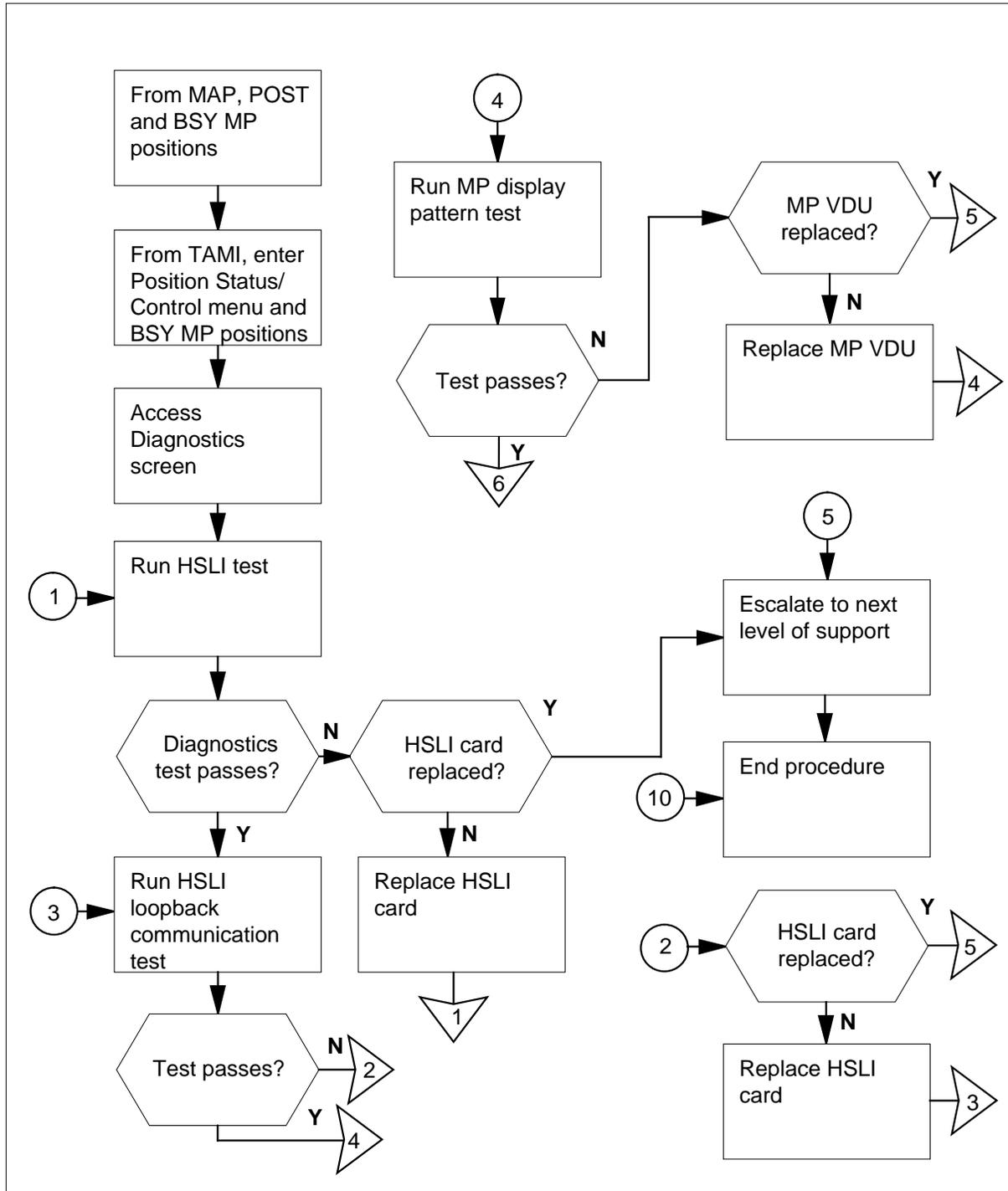
- How to place MP position in service (standalone)
- How to remove MP position from service (standalone)

### 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.

## Testing an MP position (standalone) (continued)

### Summary of testing an MP position (standalone)

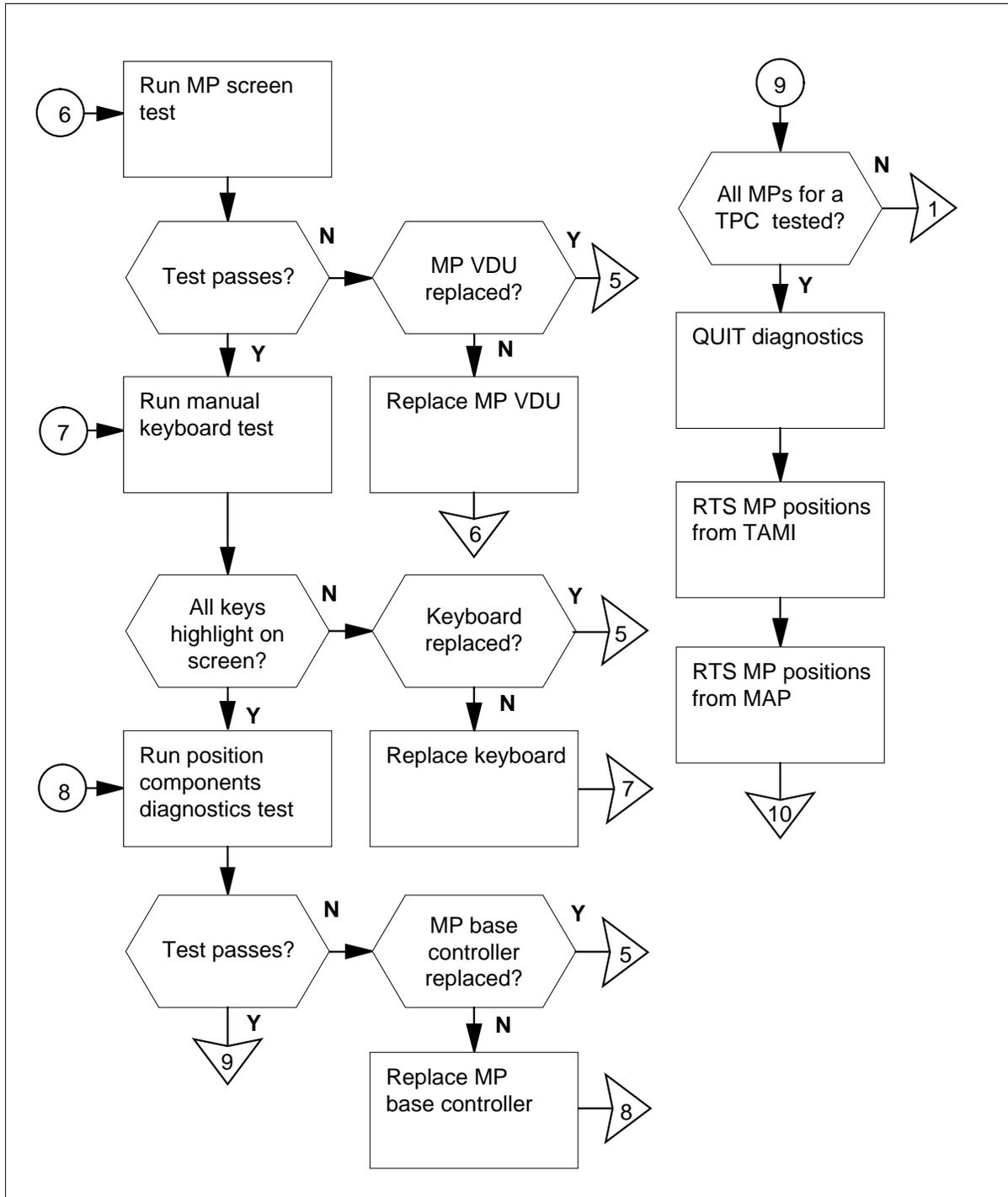


**Testing an MP position (standalone)** (continued)

---

**Testing an MP position (standalone) (continued)**

**Summary of testing an MP position (standalone) (continued)**



## Testing an MP position (standalone) (continued)

---

### How to test an MP position (standalone)

#### *At your current position*

1



#### **WARNING**

**MP positions must not be in service.**

To prepare MP positions for a test, remove the positions from service. This action makes sure the positions cannot process calls.



#### **CAUTION**

**Service interruption**

The removal of an MP position from service causes service interruption.

Perform the procedure *Removing MP position from service (standalone)*.

#### **At the TAMI:**

2 From the main menu, access the Diagnostics screen. To access this screen, type

>5

and press the Enter key.

*TAMI response:*

Enter TPC Diagnostics command:

3 To run the TOPS/HSLI card test, type

>POSDIAG n CARD

and press the Enter key.

where

n

is the MP position number (0, 1, 2, or 3).

**Note:** You can select only ManB positions.

*TAMI response:*

---

## Testing an MP position (standalone) (continued)

---

Performing CBT Port Register Test...  
 Performing CC Port Register Test...  
 Performing CBT Port Internal Loopback Test...  
 Performing CC Port Internal Loopback Test...  
 Performing HSLI Port Register Test...  
 Performing HSLI Port Ram Test...

| If diagnostics test                         | Do      |
|---------------------------------------------|---------|
| passes                                      | step 5  |
| fails and you did not replace the HSLI card | step 4  |
| fails and you replaced the HSLI card        | step 15 |

**4** Replace the HSLI card. Refer to *TOPS MP Card Replacement Procedures* (NTNX62). Return to step 3.

**5** To run the HSLI loopback communication test, type

**>POSDIAG n HSLI**

and press the Enter key.

where

**n**

is the MP position number (0, 1, 2, or 3).

**Note:** You can select only ManB positions.

*TAMI response:*

Downloading MP...

Performing HSLI Loopback Diagnostic...

| If loopback diagnostics test                | Do      |
|---------------------------------------------|---------|
| passes                                      | step 7  |
| fails and you did not replace the HSLI card | step 6  |
| fails and you replaced the HSLI card        | step 15 |

**6** Replace the HSLI card. Refer to *TOPS MP Card Replacement Procedures* (NTNX62), and return to step 5.

**7** To run the MP display pattern tests, type

**>POSDIAG n PATTERN**

---

## Testing an MP position (standalone) (continued)

---

and press the Enter key. Follow prompts to verify the patterns or exit the diagnostic.

where

**n**  
is the MP position number (0, 1, 2, or 3).

**Note:** You can select only ManB positions.

TAMI response:

```

Downloading MP...
Ready to display a pattern...
Enter "NEXT" or "EXIT" :

```

|           | <b>If diagnostics pattern test</b>                                                                                                                                                                              | <b>Do</b> |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | passes                                                                                                                                                                                                          | step 9    |
|           | fails and you did not replace the MP VDU                                                                                                                                                                        | step 8    |
|           | fails and you replaced the MP VDU replaced                                                                                                                                                                      | step 15   |
| <b>8</b>  | Refer to <i>TOPS MP Card Replacement Procedures</i> (NT0M92). Replace the MP VDU. Return to step 7.                                                                                                             |           |
| <b>9</b>  | To run the MP screen test, type<br>>POS DIAG <b>n</b> SCREEN<br>and press the Enter key.<br>where<br><b>n</b><br>is the MP position number (0, 1, 2, or 3).<br><b>Note:</b> You can select only ManB positions. |           |
|           | Lines of the letter h continue to appear on the screen. Follow prompts to exit the diagnostic.                                                                                                                  |           |
|           | <b>If diagnostics screen test</b>                                                                                                                                                                               | <b>Do</b> |
|           | passes                                                                                                                                                                                                          | step 11   |
|           | fails and you did not replace the MP VDU                                                                                                                                                                        | step 10   |
|           | fails and you replaced the MP VDU                                                                                                                                                                               | step 15   |
| <b>10</b> | Refer to <i>TOPS MP Card Replacement Procedures</i> (NT0M92). Replace the MP VDU. Return to step 9.                                                                                                             |           |

---

## Testing an MP position (standalone) (continued)

---

11 To run the MP manual keyboard test, type

>POSDIAG n MANKEY

and press the Enter key.

where

n

is the MP position number (0, 1, 2, or 3).

**Note:** You can select only ManB positions.

12 Press every key on the MP keyboard. Verify that the system highlights the keys on the MP VDU display. Follow prompts to exit the diagnostic.

| If keys                                                  | Do      |
|----------------------------------------------------------|---------|
| highlight                                                | step 14 |
| do not highlight and you did not replace the MP keyboard | step 13 |
| do not highlight and you re-placed the MP keyboard       | step 15 |

13 Refer to *TOPS MP Card Replacement Procedures* (NT0M36). Replace the MP keyboard. Return to step 11.

14 To run the terminal component diagnostics (TCD) test, type

>POSDIAG n TCD

and press the Enter key.

where

n

is the MP position number (0, 1, 2, or 3).

**Note:** You can select only ManB positions.

*TAMI response:*

```
Performing ROM position Component Diagnostic...
Performing CPU position Component Diagnostic...
Performing Exceptions position Component
Diagnostic...
Performing RAM position Component Diagnostic...
Performing HSLI Port position Component Diagnostic...
Performing UART position Component Diagnostic...
Performing Keyboard position Component Diagnostic...
Performing Telephony position Component Diagnostic...
```

| If TCD diagnostics test | Do      |
|-------------------------|---------|
| passes                  | step 17 |

## Testing an MP position (standalone) (end)

---

|           | <b>If TCD diagnostics test</b>                                                                                   | <b>Do</b> |
|-----------|------------------------------------------------------------------------------------------------------------------|-----------|
|           | fails and you did not replace the MP base controller                                                             | step 16   |
|           | fails and you replaced the MP base controller                                                                    | step 15   |
| <b>15</b> | For additional help, contact the next level of support.                                                          |           |
| <b>16</b> | Refer to <i>TOPS MP Card Replacement Procedures</i> (NT0M90). Replace the MP base controller. Return to step 14. |           |
| <b>17</b> | Make sure the system tests all positions associated with a TPC.                                                  |           |
|           | <b>If the system</b>                                                                                             | <b>Do</b> |
|           | tests all positions                                                                                              | step 18   |
|           | does not test all positions                                                                                      | step 3    |
| <b>18</b> | To exit diagnostics and return to the main menu, type<br>>QUIT<br>and press the Enter key.                       |           |
| <b>19</b> | Perform the procedure <i>Placing MP position in service (standalone)</i> .                                       |           |
| <b>20</b> | The procedure is complete.                                                                                       |           |

## Testing power converter voltages

---

### Application

Use this procedure to make sure the output voltages of the power converters on the frames and cabinets remain within specified ranges.

### Interval

Perform this procedure every 180 days (6 months).

### Common procedures

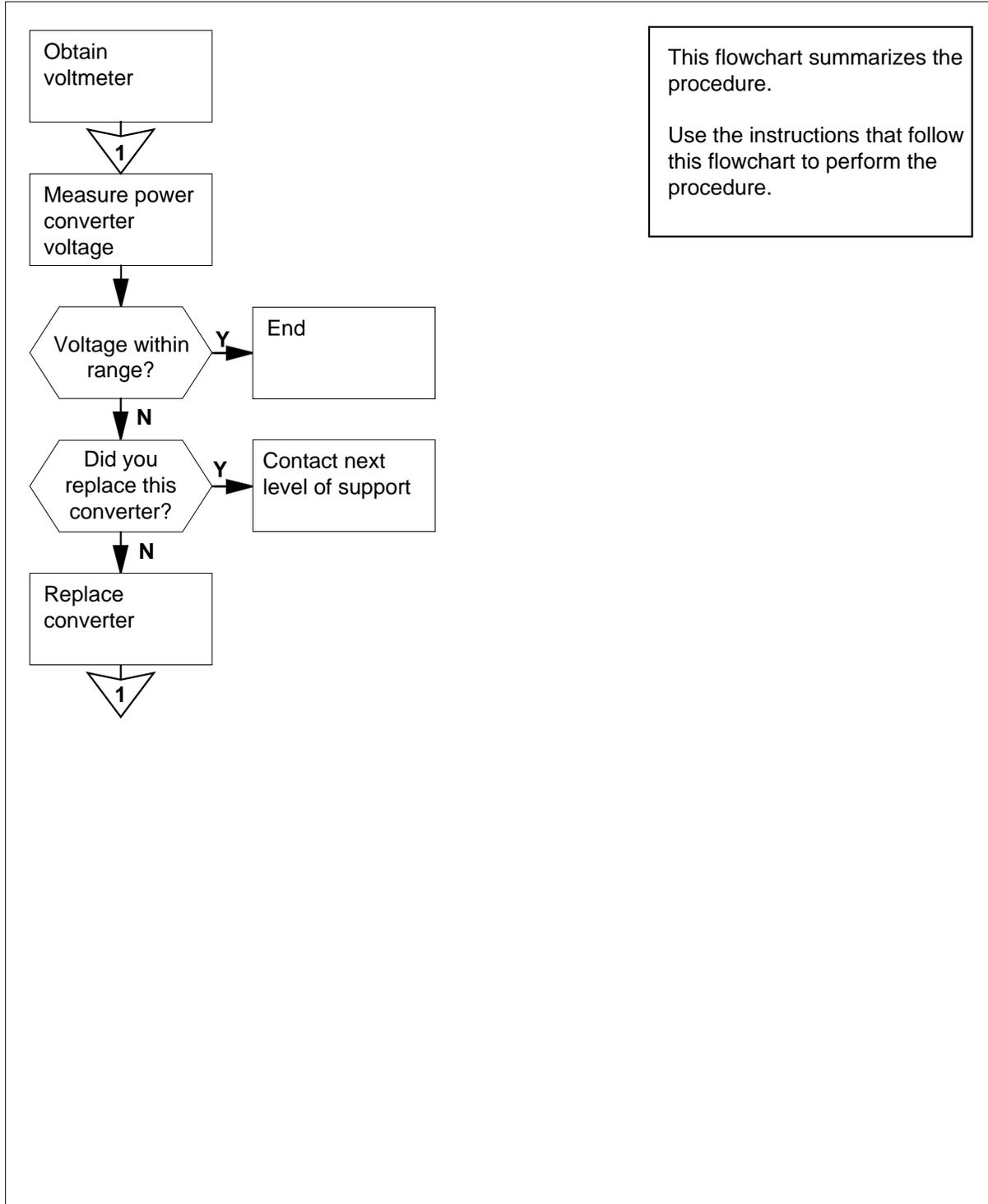
There are no common procedures.

### 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.

## Testing power converter voltages (continued)

### Summary of Testing power converter voltages



---

## Testing power converter voltages (continued)

---

### Testing power converter voltages

#### *At your current location*

1

**DANGER****Personal injury**

Physical injury or equipment damage can occur if you measure voltages on the backplane and the pins short out. Use extreme caution when you perform this procedure.

**WARNING****Static electricity damage**

Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle circuit cards. The wrist strap protects the cards against static electricity damage.

**CAUTION****Loss of service**

Perform this procedure during periods of low traffic.

Obtain a dc voltmeter that can indicate polarity.

2

For power converters on each frame or cabinet in your office, measure the voltage from the backplane or the test points.

**Note 1:** For an accurate voltage measurement, take voltage readings from the backplane of the power converter. You can also take measurements from the test points on the faceplate of the power converter. These points give an approximate reading of the current voltages. Keep a spare power converter available while you measure power converter voltages.

**Note 2:** Take readings between the test point labeled GND (or Common) and the appropriately labelled test point for the voltage in question. Follow this procedure when you measure voltages from the test points. This test point labeled GND (or Common) is on the converter faceplate.

## Testing power converter voltages (continued)

The following table lists the expected output voltage at the ground and voltage pins of different power converters.

### Testing power converter voltages (Sheet 1 of 2)

| Power converter type | Output voltage | Ground pins | Voltage pins |
|----------------------|----------------|-------------|--------------|
| NT1X78               | -5V            | 71AB-80AB   | 51AB-53AB    |
|                      | +5V            | 71AB-80AB   | 45AB-49AB    |
|                      | -12V           | 71AB-80AB   | 55AB         |
|                      | +24V           | 21AB-25AB   | 15AB-19AB    |
| NT2X06               | +5V            | 1AB-9AB     | 11AB-29AB    |
| NT2X07               | +5V            | 1AB-8AB     | 11AB-18AB    |
|                      | +12V           | 45AB-46AB   | 61AB-63AB    |
| NT2X09               | -5V            | 1AB-5AB     | 55AB-56AB    |
|                      | +5V            | 75AB-80AB   | 70AB-74AB    |
|                      | +12V           | 41AB-46AB   | 63AB-67AB    |
|                      | -15V           | 1AB-5AB     | 59AB-60AB    |
|                      | +24V           | 1AB-5AB     | 25AB-28AB    |
| NT2X70               | -5V            | 31AB-40AB   | 41AB-44AB    |
|                      | +5V            | 1AB-9AB     | 10AB-30AB    |
|                      | +12V           | 45AB-54AB   | 65AB-67AB    |
|                      | -12V           | 1AB-5AB     | 61AB-63AB    |
| NT6X53 AA, BA,<br>CA |                |             |              |

---

**Testing power converter voltages** (continued)
 

---

**Testing power converter voltages (Sheet 2 of 2)**

| Power converter type | Output voltage | Ground pins | Voltage pins      |
|----------------------|----------------|-------------|-------------------|
| NT6X53 EA            | +5V            | Test point  | Test point (+5V)  |
|                      | +15V           | Test point  | Test point (+15V) |
| NT4G50               | +5V            | Test point  | Test point (+5V)  |
|                      | +15V           | Test point  | Test point (-15V) |
| NT9X30               | +32V           | Return lug  | Lug (+32V)        |
| NT9X31               | +5V            | Test point  | Test point (+5V)  |
| NT9X47               | -5V            | Test point  | Test point (-5V)  |
| NT9X91               | +12V           | Test point  | Test point (+12V) |
| NTDX15               | +12V           | Test point  | Test point (+12V) |
|                      | +5V            | Test point  | Test point (+5V)  |
| NTDX15               | +5V            | Test point  | Test point (+5V)  |
|                      | -5V            | Test point  | Test point (-5V)  |

- 3** For each frame or cabinet, note the ID, each of its power converter types, and the measured voltages of the converter.

## Testing power converter voltages (continued)

- 4 Use the following table to note the maximum and minimum voltages acceptable for each power converter you test.

### Maximum and minimum acceptable voltages (Sheet 1 of 2)

| Power converter type | Output voltage | Maximum voltage | Minimum voltage |
|----------------------|----------------|-----------------|-----------------|
| NT1X78               | -5V            | -5.3V           | -4.7V           |
|                      | +5V            | +5.2V           | +4.8V           |
|                      | -12V           | -12.6V          | -11.4V          |
|                      | +24V           | +24.6V          | +22.6V          |
| NT2X06               | +5V            | +5.2V           | +4.9V           |
| NT2X07               | +5V            | +5.2V           | +4.9V           |
|                      | +12V           | +12.3V          | +11.7V          |
| NT2X09               | -5V            | -5.2V           | -4.8V           |
|                      | +5V            | +5.2V           | +4.9V           |
|                      | +12V           | +12.5V          | +11.5V          |
|                      | -15V           | -15.5V          | -14.5V          |
|                      | +24V           | +28V            | +22.5V          |
| NT2X70               | -5V            | -5.2V           | -4.8V           |
|                      | +5V            | +5.25V          | +5.05V          |
|                      | -12V           | -12.5V          | -11.7V          |
|                      | +12V           | +12.5V          | +11.7V          |
| NT6X53 AA, BA, CA    |                |                 |                 |

**Testing power converter voltages** (continued)

**Maximum and minimum acceptable voltages (Sheet 2 of 2)**

| Power converter type | Output voltage | Maximum voltage | Minimum voltage |
|----------------------|----------------|-----------------|-----------------|
| NT6X53 EA            | +5V            | +6V             | +4.9V           |
|                      | +15V           | +16V            | +14.8V          |
| NT4G50               | +5V            | +6V             | +4.9V           |
|                      | -15V           | -16V            | -14.8V          |
| NT9X30               | +32V           | +34V            | +30V            |
|                      | +5V            | +5.30V          | +5.05V          |
| NT9X31               | -5V            | -5.25V          | -5V             |
|                      | +12V           | +12.4V          | +11.7V          |
| NT9X91               | +12V           | +12.3V          | +11.7V          |
|                      | +5V            | +5.25V          | +5.1V           |
| NTDX15               | +5V            | +5.25V          | +5.05V          |
|                      | -5V            | -5.2V           | -5.0V           |

**5** Compare the voltages that you noted in step 3 to the acceptable maximum and minimum voltages noted in the previous step.

**If**

voltages are out of range, and you did not replace the related converter card

**Do**

step 6

## Testing power converter voltages (end)

---

|          | <b>If</b>                                                                                                                                                                                                  | <b>Do</b> |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|          | voltages are out of range, and you replaced the related converter card                                                                                                                                     | step 8    |
|          | voltages are within range                                                                                                                                                                                  | step 9    |
| <b>6</b> | For each converter with an out-of-range voltage, perform the correct procedure in <i>Card Replacement Procedures</i> to replace the power converter card. Complete the procedure and return to this point. |           |
| <b>7</b> | Measure the voltage on the replaced converters. Measure the voltage at the testpoints on the faceplates of the converters.<br>Go to step 3.                                                                |           |
| <b>8</b> | For additional help, contact the next level of support.                                                                                                                                                    |           |
| <b>9</b> | The procedure is complete.                                                                                                                                                                                 |           |

## Testing a VPU

---

### Application

Use this procedure to run out-of-service diagnostic tests on a voice processor unit (VPU).

### Interval

Perform this procedure as required.

### Common procedures

There are no common procedures.

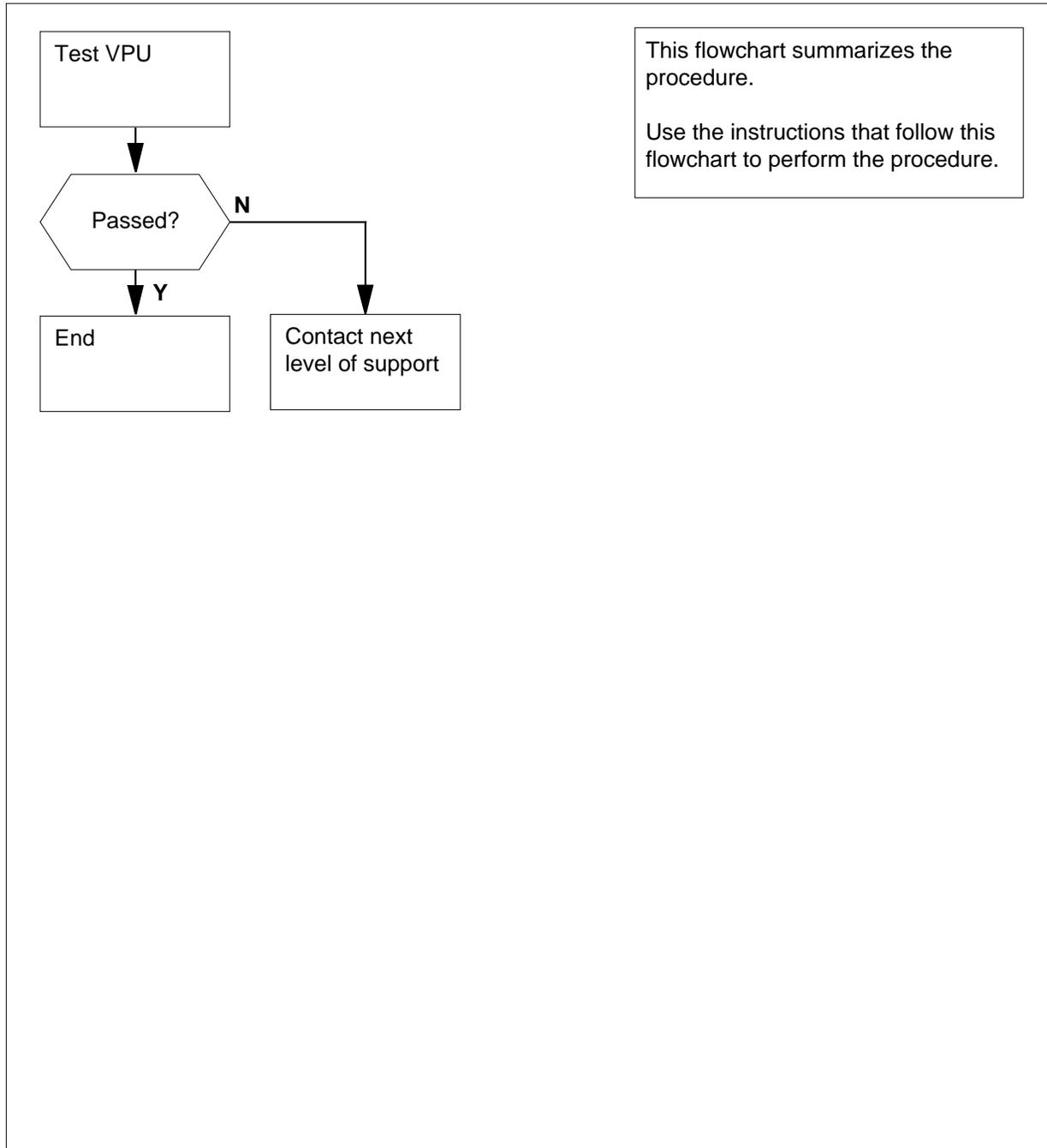
### Action

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.

## Testing a VPU (continued)

---

### Summary of Testing an VPU



**Testing a VPU (continued)**

**Testing 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 display:*

|    | SysB | ManB | OffL | CBsy | ISTb | InSv |
|----|------|------|------|------|------|------|
| PM | 1    | 10   | 12   | 0    | 6    | 49   |

- 2 To post the VPU that you must test, 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 response:*

VPU 5 InSv

- 3 Determine the state of the posted VPU.

| <b>If the VPU</b> | <b>Do</b> |
|-------------------|-----------|
| is Insv           | step 5    |
| is ISTb           | step 4    |

- 4 Perform the correct procedure in *Alarm and Performance Monitoring Procedures* to clear the alarm. Complete the procedure and return to this point.

- 5



**CAUTION**  
**Loss of service**  
 You reduce service capacity when you remove a VPU from service.

To manually busy the VPU, type  
**>BSY**

**Testing a VPU** (continued)

and press the Enter key.

| <b>If the BSY command</b>                         | <b>Do</b> |
|---------------------------------------------------|-----------|
| passed                                            | step 8    |
| conditionally passed                              | step 9    |
| failed                                            | step 6    |
| resulted in the system prompting for confirmation | step 7    |

- 6** To force the VPU to busy, type  
**>BSY FORCE**  
 and press the Enter key.

| <b>If the BSY FORCE command</b>                   | <b>Do</b> |
|---------------------------------------------------|-----------|
| passed                                            | step 8    |
| resulted in the system prompting for confirmation | step 7    |

- 7** To confirm the action, type  
**>YES**  
 and press the Enter key.

- 8** To run diagnostic tests on the posted VPU, type  
**>TST**  
 and press the Enter key.

| <b>If the system response</b>                | <b>Do</b> |
|----------------------------------------------|-----------|
| is VPU vpu_no TST Passed.                    | step 11   |
| is VPU vpu_no TST Con-<br>ditionally Passed. | step 9    |
| is VPU vpu_no TST Failed.                    | step 12   |
| is VPU vpu_no TST Re-<br>jected.             | step 12   |

- 9** To reset the VPU, type  
**>PMRESET**

**Testing a VPU (end)**

and press the Enter key.

|           | <b>If the PMRESET command</b>                                                  | <b>Do</b> |
|-----------|--------------------------------------------------------------------------------|-----------|
|           | passed                                                                         | step 10   |
|           | failed                                                                         | step 12   |
| <b>10</b> | To load the VPU, type<br>> <b>PMLOAD</b><br>and press the Enter key.           |           |
|           | <b>If the PMLOAD command</b>                                                   | <b>Do</b> |
|           | passed                                                                         | step 11   |
|           | failed                                                                         | step 12   |
| <b>11</b> | To return the VPU to service, type<br>> <b>RTS</b><br>and press the Enter key. |           |
|           | <b>If the RTS command</b>                                                      | <b>Do</b> |
|           | passed                                                                         | step 13   |
|           | failed                                                                         | step 12   |
| <b>12</b> | For additional help, contact the next level of support.                        |           |
| <b>13</b> | The procedure is complete.                                                     |           |

## Testing wrist-strap grounding cords

---

### Application

Use this procedure to test the resistance of wrist-strap grounding cords. The resistance must be low enough to allow static electricity to discharge from the person. The resistance must be high enough to prevent electrocution. If the resistance is not high enough, electrocution can occur if the equipment develops a short circuit.

### Interval

Perform this procedure every 30 days.

### Common procedures

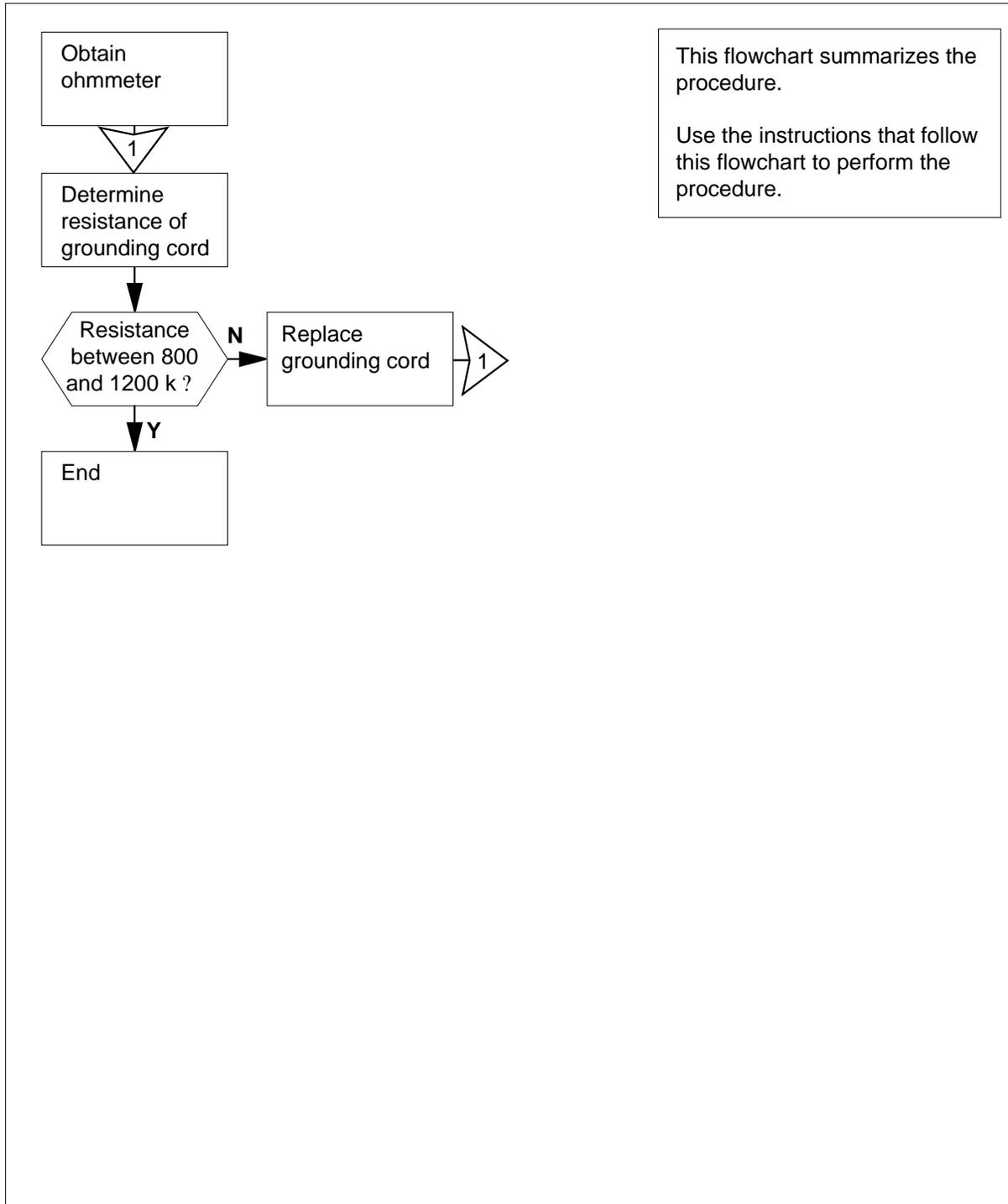
There are no common procedures.

### 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.

## Testing wrist-strap grounding cords (continued)

### Summary of Testing wrist-strap grounding cords



---

## Testing wrist-strap grounding cords (end)

---

### Testing wrist-strap grounding cords

#### *At your current location*

- 1 Obtain an ohmmeter.
- 2 Detach the grounding cord from the wrist strap.
- 3

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

Do not use a grounding cord with a resistance less than 800 k $\Omega$ . A resistance lower than 800 k $\Omega$  exposes you to the risk of electrocution, if the equipment short-circuits.

**WARNING****Risk of static damage to electronic equipment**

Do not use a grounding cord with a resistance greater than 1200 k $\Omega$ . A resistance greater than 1200 k $\Omega$  cannot conduct static charges to ground. A resistance greater than 1200 k $\Omega$  cannot protect sensitive electronic equipment against electrostatic discharges that can damage.

Use the ohmmeter to measure the resistance between opposite ends of the grounding cord.

---

**If the resistance****Do**

---

is between 800 k $\Omega$  and 1200 k $\Omega$  step 6

is less than 800 k $\Omega$  or more than 1200 k $\Omega$  step 4

---

- 4 Discard the grounding cord that has faults.
- 5 Obtain a new grounding cord. Go to step 3.
- 6 Connect the wrist strap to the grounding cord again.
- 7 The procedure is complete.

## Testing an XLIU

---

### Application

Use this procedure to run diagnostic tests on an X.25/X.75 link interface unit (XLIU). Use this procedure for working and spare XLIUs.

### Interval

Perform this procedure as required. Test spare XLIUs at normal intervals to make sure that the XLIUs have no defects.

### Common procedures

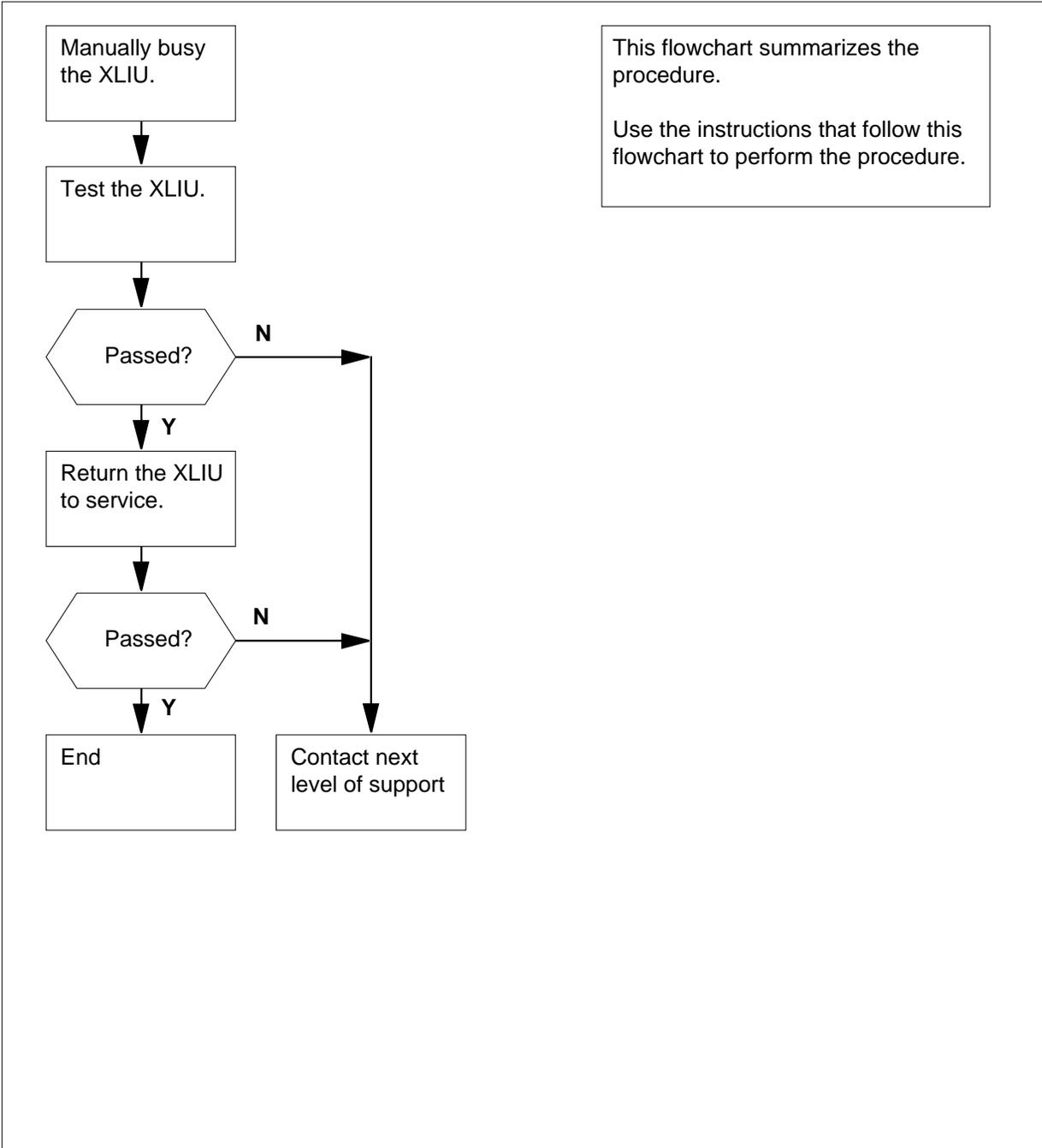
There are no common procedures.

### 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.

## Testing an XLIU (continued)

### Summary of Testing an XLIU



---

## Testing an XLIU (continued)

---

### Testing an XLIU

#### 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   | 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 that you must test

*Example of a MAP response:*

XLIU 132 InSv Spre

- 3 To query the XLIU, type

**>QUERYPM**

and press the Enter key.

*Example of a MAP response:*

## Testing an XLIU (continued)

---

```

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

```

| 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*. Complete the procedure and return to this point.

**5** Go to step 9.

**6** To manually busy the XLIU, type

**>BSY**

and press the Enter key.

*Example of a MAP response:*

```

WARNING: XLIU 132 is currently being imaged.
BSY command will be aborted unless FORCE option is used.

```

| If                          | Do      |
|-----------------------------|---------|
| FORCE option is to be used. | step 7  |
| no MAP message.             | step 9  |
| abort BSY request.          | step 11 |

**7** To manually force busy the XLIU, type

**>BSY FORCE**

and press the Enter key.

*Example of a MAP response:*

**Testing an XLIU (continued)**

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"):

| If                 | Do      |
|--------------------|---------|
| Proceed with BSY.  | step 8  |
| abort BSY request. | step 11 |

- 8** To set force busy, type  
**>YES**  
*Example of a MAP response:*

Imaging will be aborted on XLIU 132.

- 9** To run diagnostic tests on the posted XLIU, type  
**>TST**  
 and press the Enter key.

| If the response                                            | Do      |
|------------------------------------------------------------|---------|
| is XLIU xliu_no TST PASSED.                                | step 10 |
| is XLIU xliu_no TST FAILED and a failure reason is present | step 12 |
| is XLIU xliu_no TST REJECTED.                              | step 12 |

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

| If the RTS command | Do      |
|--------------------|---------|
| passed             | step 13 |
| failed             | step 12 |

- 11** Abort BSY request by typing  
**>N**  
 and pressing the Enter key.  
*Example of a MAP response:*

## Testing an XLIU (end)

---

BSY command aborted due to image in progress.

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

## **Updating TPC software (integrated and standalone)**

---

### **Application**

Use this procedure to update or reboot TOPS Position Controller (TPC) software.

### **Interval**

Perform this procedure when you need to update current software.

### **Common procedures**

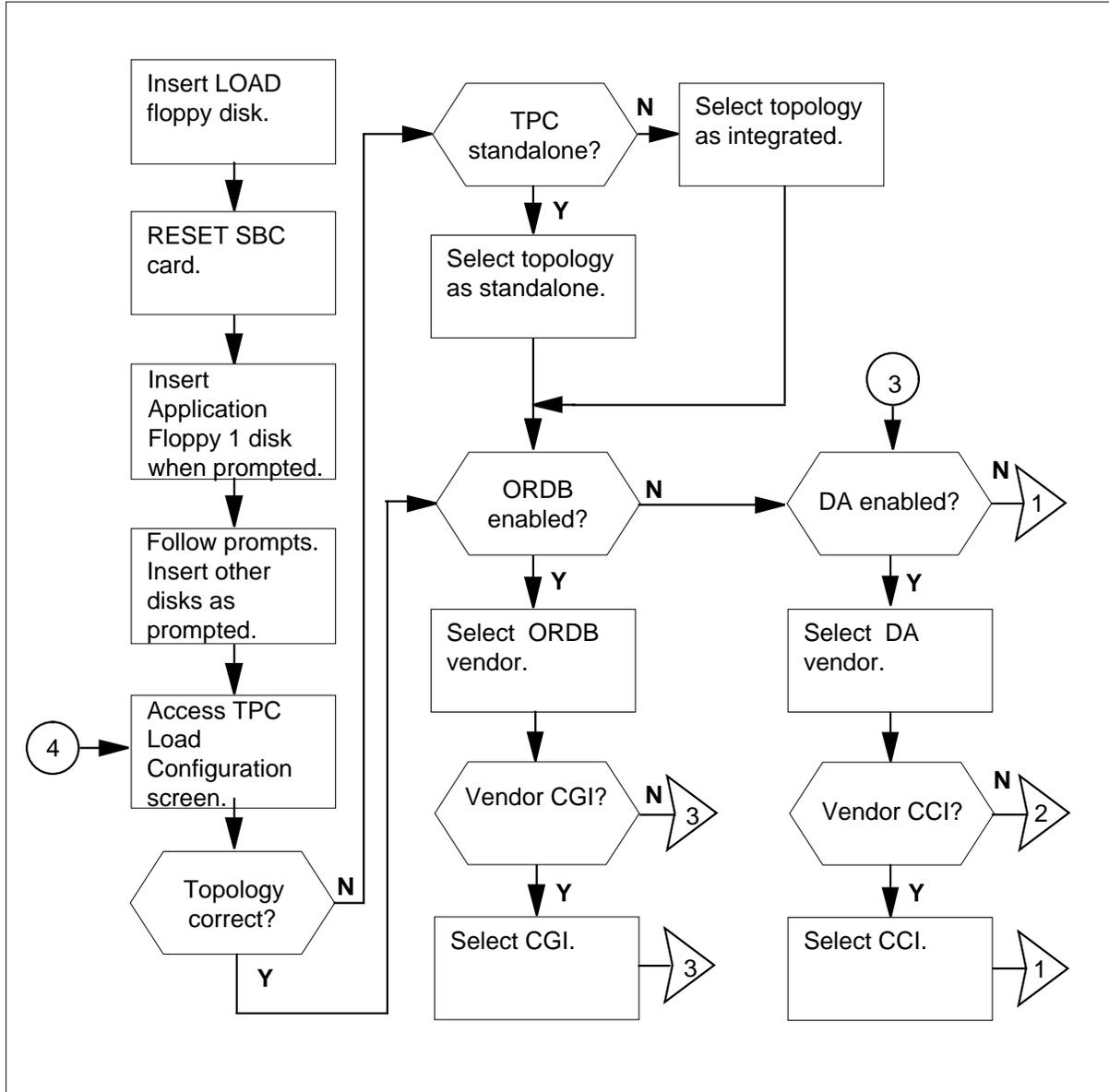
There are no common procedures

### **Action**

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

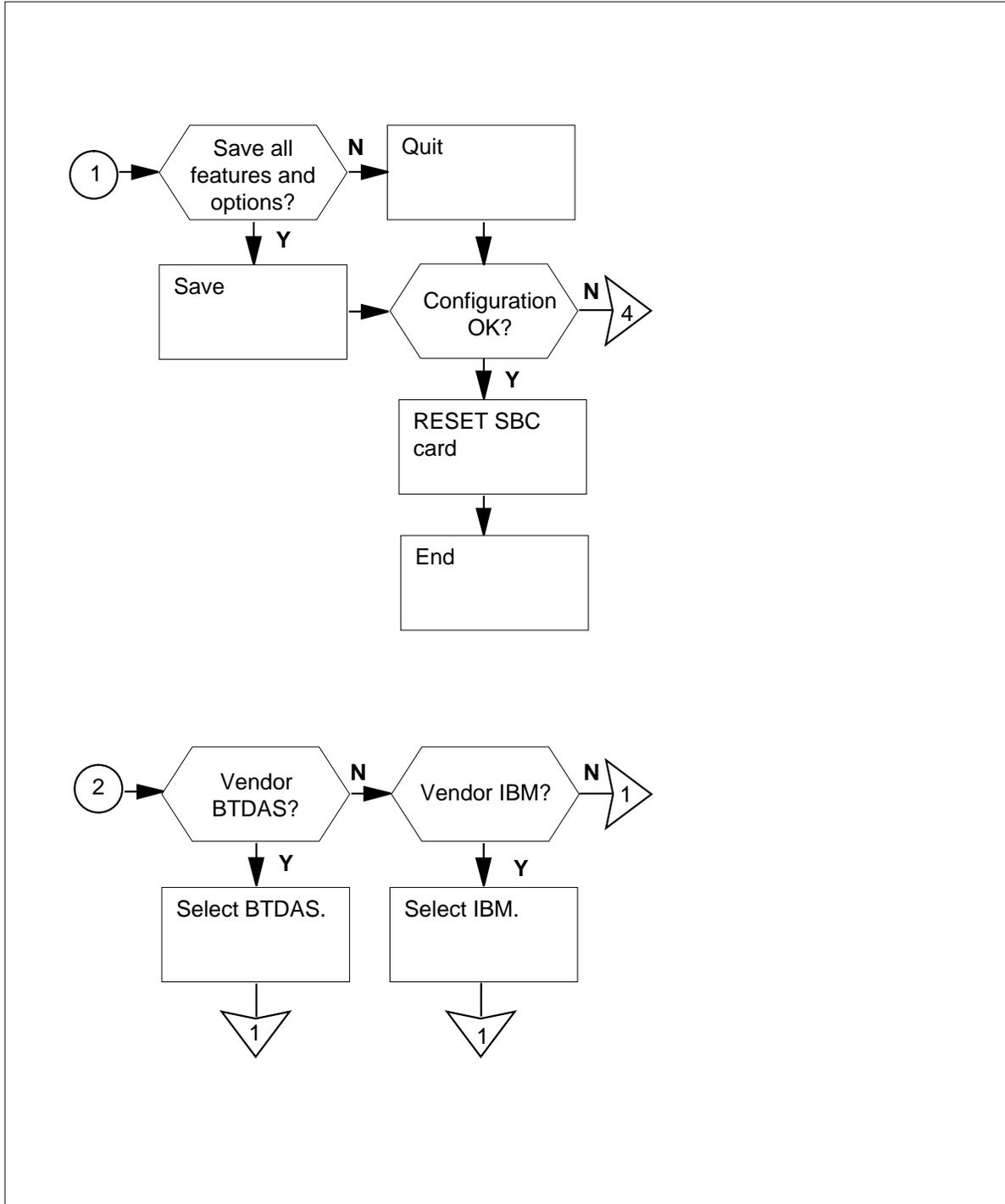
## Updating TPC software (integrated and standalone) (continued)

### Summary of how to update TPC software (integrated and standalone)



## Updating TPC software (integrated and standalone) (continued)

### Summary of how to update TPC software (integrated and standalone) (continued)



## Updating TPC software (integrated and standalone) (continued)

### How to update TPC software (integrated and standalone)

#### At your Current Location

1



#### WARNING

##### Possible damage to floppy disks

Take precautions when you remove floppy disks from jackets. Store floppy disks in a temperate, clean environment. Keep the disks away from liquids.



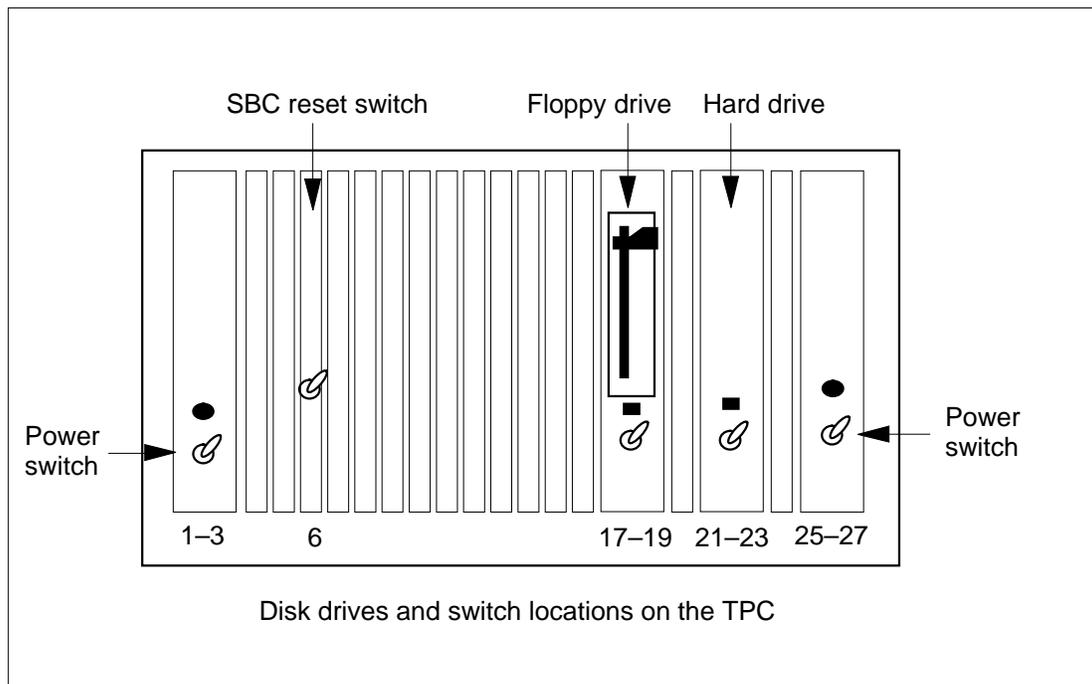
#### CAUTION

##### Service interruption

When you update TPC software, make sure each MP position is busy or offline.

Insert the LOAD floppy disk in the floppy drive of the TPC to update. Push the lever to lock the floppy disk in place. See the following figure.

**Note:** Make sure the edge of the floppy disk with notches is at the top and the label faces the hard drive.



---

## Updating TPC software (integrated and standalone) (continued)

---

- 2 To reset the SBC card lower and lift the RESET switch. See the figure in step 1.

*Example of a TAMI response:*

```

DOODLEBUG 4.2 - TPC (68010, 128 segment MMU, 7.0Mb memory)
Autobooting ...

Loading SYSTEM. KERNEL MF37
STANDARD Dnet Kernel
Loading SYSTEM. MONITOR MF29
Loading SYSTEM. PD.TEXT
Loading OSPCR_TPC.AREA AB06
Loading HXCR_TPC.AREA AG17
Loading TPCUART.CODE AB01
Loading ECH.CODE AE04
Loading TPC_VT100.CODE AD01
Loading HFLPY_TPC.AREA AC03
Loading HWNCH_TPC.AREA AE01

Command Interpreter Version MD09

 TPC FLOPPY LOADER
OPERATION STATUS

Transferring Application Files Pending
Transferring System Files Pending

Please insert the disk labeled:
Application Floppy - 1
Type C)ontinue

```

- 3 To follow the prompts on the TAMI remove the LOAD floppy disk. Insert the Application Floppy - 1 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

## Updating TPC software (integrated and standalone) (continued)

---

```

 TPC FLOPPY LOADER

 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

COPYING

 TPC FLOPPY LOADER
 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

Please insert the disk labeled:
Application Floppy - 2
Type C)ontinue
```

- 4 To follow the prompts on the TAMI, remove the Application Floppy - 1 disk. Insert the Application Floppy - 2 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

---

**Updating TPC software (integrated and standalone)** (continued)

---

```

 TPC FLOPPY LOADER

 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

COPYING

 TPC FLOPPY LOADER
 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

Please insert the disk labeled:
Application Floppy - 3
Type C)ontinue
```

- 5** To follow the prompts on the TAMI, remove the Application Floppy - 2 disk. Insert the Application Floppy - 3 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

## Updating TPC software (integrated and standalone) (continued)

---

```
TPC FLOPPY LOADER

Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

COPYING

TPC FLOPPY LOADER
Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

Please insert the disk labeled:
Application Floppy - 4
Type C)ontinue
```

- 6** To follow the prompts on the TAMI, remove the Application Floppy - 3 disk. Insert the Application Floppy - 4 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

---

**Updating TPC software (integrated and standalone)** (continued)

---

```

 TPC FLOPPY LOADER

 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Started
Transferring System Files Pending

COPYING

 TPC FLOPPY LOADER
 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Done
Transferring System Files Pending

Please insert the disk labeled:
System Floppy - 1
Type C)ontinue
```

- 7** To follow the prompts on the TAMI, remove the Application Floppy - 4 disk. Insert the System Floppy - 1 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

## Updating TPC software (integrated and standalone) (continued)

---

```

 TPC FLOPPY LOADER

 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Done
Transferring System Files Started

COPYING

 TPC FLOPPY LOADER
 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Done
Transferring System Files Started

Please insert the disk labeled:
System Floppy - 2
Type C)ontinue
```

- 8** To follow the prompts on the TAMI, remove the System Floppy - 1 disk. Insert the System Floppy - 2 disk. To continue to load the TPC, type:

>C

*Example of a TAMI response:*

---

## Updating TPC software (integrated and standalone) (continued)

---

```

 TPC FLOPPY LOADER

 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Done
Transferring System Files Started

COPYING

 TPC FLOPPY LOADER
 Load Name: TPC34BM

OPERATION STATUS
Transferring Application Files Done
Transferring System Files Done

Floppy loading complete. Remove floppy.
Type C)ontinue

```

- 9 To remove the floppy disk and access the TPC Load Configuration screen, type:

>C

*Example of a TAMI response:*

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB Disabled
T)opology Standalone

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving

```

**Note:** Do not reset the TPC immediately after you perform this step as you did in BCS32 and earlier versions.

## Updating TPC software (integrated and standalone) (continued)

- 10** See the TAMI response in step 9 to determine if topology feature current setting is correct.

| If topology feature current setting | Do      |
|-------------------------------------|---------|
| is correct                          | step 15 |
| is not correct                      | step 11 |

- 11** To access the topology feature, type:

>T

*Example of a TAMI response:*

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB Disabled
T)opology Integrated

Available options are:
 S)tandalone
 I)ntegrated NTXA83

Enter first letter of option to change setting for feature

```

- 12** Determine if the TPC is standalone or integrated.

| If TPC load   | Do      |
|---------------|---------|
| is standalone | step 13 |
| is integrated | step 14 |

- 13** To select the TPC load as being standalone, type:

>S

*Example of a TAMI response:*

---

## Updating TPC software (integrated and standalone) (continued)

---

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB Disabled
T)opology Standalone

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving

```

Go to step 15.

- 14** To select the TPC load as being integrated, type:

>1

*Example of a TAMI response:*

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB Disabled
T)opology Integrated

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving

```

- 15** Determine if Operator Reference Database (ORDB) must be enabled.

| If ORDB must   | Do      |
|----------------|---------|
| be enabled     | step 16 |
| not be enabled | step 18 |

- 16** To access ORDB type:

>0

*Example of a TAMI response:*

## Updating TPC software (integrated and standalone) (continued)

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB Disabled
T)opology Integrated

 Available options are:
 D)isabled
 C)GI NTXA20

Enter first letter of feature to change feature setting

```

- 17** To select the vendor, Computer Generations, Incorporated, that supports ORDB, type:

>C

*Example of a TAMI response:*

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB CGI
T)opology Integrated

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving

```

- 18** Determine if Directory Assistance (DA) must be enabled.

**If DA must**

**Do**

be enabled

step 19

not be enabled

step 24

- 19** To access directory assistance (DA), type:

>D

*Example of a TAMI response:*

**Updating TPC software (integrated and standalone) (continued)**

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A Disabled
O)RDB CGI
T)opology Integrated

 Available options are:

 D)isabled
 C)CI NTX708/709
 B)TDAS
 I)BM NTXD39/D40

Enter first letter of option to change setting for feature

```

**20** Select the vendor that supports DA.

| If vendor | Do      |
|-----------|---------|
| is CCI    | step 21 |
| is BTDAS  | step 22 |
| is IBM    | step 23 |

**21** To select Computer Consoles, Incorporated (CCI) type:

>C

*Example of a TAMI response:*

```

 TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A CCI
O)RDB CGI
T)opology Integrated

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving

```

Go to step 24.

---

## Updating TPC software (integrated and standalone) (continued)

---

- 22** To select British Telecom Directory Assistance (BTDA), type:  
>B

*Example of a TAMI response:*

```
TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A BTDA
O)RDB CGI
T)opology Integrated

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving
```

Go to step 24.

- 23** To select International Business Machines Corporation (IBM), type:  
>I

*Example of a TAMI response:*

```
TPC LOAD CONFIGURATION

FEATURE CURRENT SETTING

D)A IBM
O)RDB CGI
T)opology Integrated

Enter first letter of feature to change feature setting
S)ave current settings and quit Q)uit without saving
```

- 24** Determine if you must save each feature and option.

---

| <b>If you must</b>               | <b>Do</b> |
|----------------------------------|-----------|
| save each feature and option     | step a    |
| not save each feature and option | step 25   |

---

- 25** To quit without saving features and options, type:  
>Q  
Go to step 26.

---

## Updating TPC software (integrated and standalone) (continued)

---

- a To save each feature and option, type:

>S

*Example of a TAMI response:*

```

TPC LOAD CONFIGURATION

New settings saved in TPC configuration file.

Reset TPC to keep current configuration or...
Type C)ontinue

```

- 26** Make sure the TPC load configuration is correct.

| <b>If the TPC load</b>      | <b>Do</b> |
|-----------------------------|-----------|
| is correct                  | step 27   |
| must be reviewed or changed | step 9    |

- 27** To reset the SBC card lower and lift, the RESET switch.

*Example of a TAMI response:*

---

## Updating TPC software (integrated and standalone) (continued)

---

```
DOODLEBUG 4.2 - TPC (68010, 128 SEGMENT MMU, 7.0Mb memory)

Autobooting...

Loading SYSTEM.KERNEL MF37
STANDARD Dnet Kernel
Loading SYSTEM.MONITOR MF29
Loading SYSTEM.PD.TEXT
Loading OSPCR_TPC.AREA AB06
Loading HXCR_TPC.AREA AG17
Loading TPCUART.CODE AB01
Loading ECH.CODE AE04
Loading TPC_VT100.CODE AD01
Loading HFLPY_TPC.AREA AC03
Loading HWNCH_TPC.AREA AE01
Loading ATMSG.AREA AB01
Loading TPCDRS.AREA 91/04/09 11:32
Loading TPCDEBUG.AREA AB01
Loading TPCHSDA.AREA 91.04.09 11:47
Loading OSP.CODE AE01

Command Interpreter Version MD09

-----TOPS MP-----

Starting Supervisor initialization.
Supervisor initialization complete.

Starting log system initialization.
Log system initialization complete.
```

**28** When you complete loading, the TAMI main menu appears.

*Example of a TAMI response (integrated):*

---

**Updating TPC software (integrated and standalone) (end)**

---

```

 TPC ADMINISTRATION AND MAINTENANCE
 Version mTPC34BM IBM-DA/CGI-ORDB

1. TPC LOGS 5. RESET TPC
2. TPC DATAFILL 6. SONALERT
3. HSDA STATUS/CONTROL 7. TPC PATCHER
4. DATE AND TIME

 MAKE CHOICE:

```

*Example of a TAMI response (standalone):*

```

 TPC ADMINISTRATION AND MAINTENANCE
 Version sTPC34BM2 DA/ORDB/FRENCH

1. TPC LOGS 6. DATE AND TIME
2. TPC DATAFILL 7. RESET TPC
3. POSITION STATUS/CONTROL 8. SONALERT
4. HSDA STATUS/CONTROL 9. TPC PATCHER
5. DIAGNOSTICS

 MAKE CHOICE:

```

**29** This procedure is complete.

## Using the frame relay capture tool

---

### Application

This procedure captures frames received at or transmitted from an FRIU on the T1 carrier. The frames are copied into an ASCII file on the computing module (CM) for analysis. Note that the frame capture process puts the FRIU in the in-service trouble state. The FRIU returns in-service when you issue the CAPSTOP command. Use caution when you specify parameters for Frame Capture. This tool can affect the speed and quality of frame switching.

### Interval

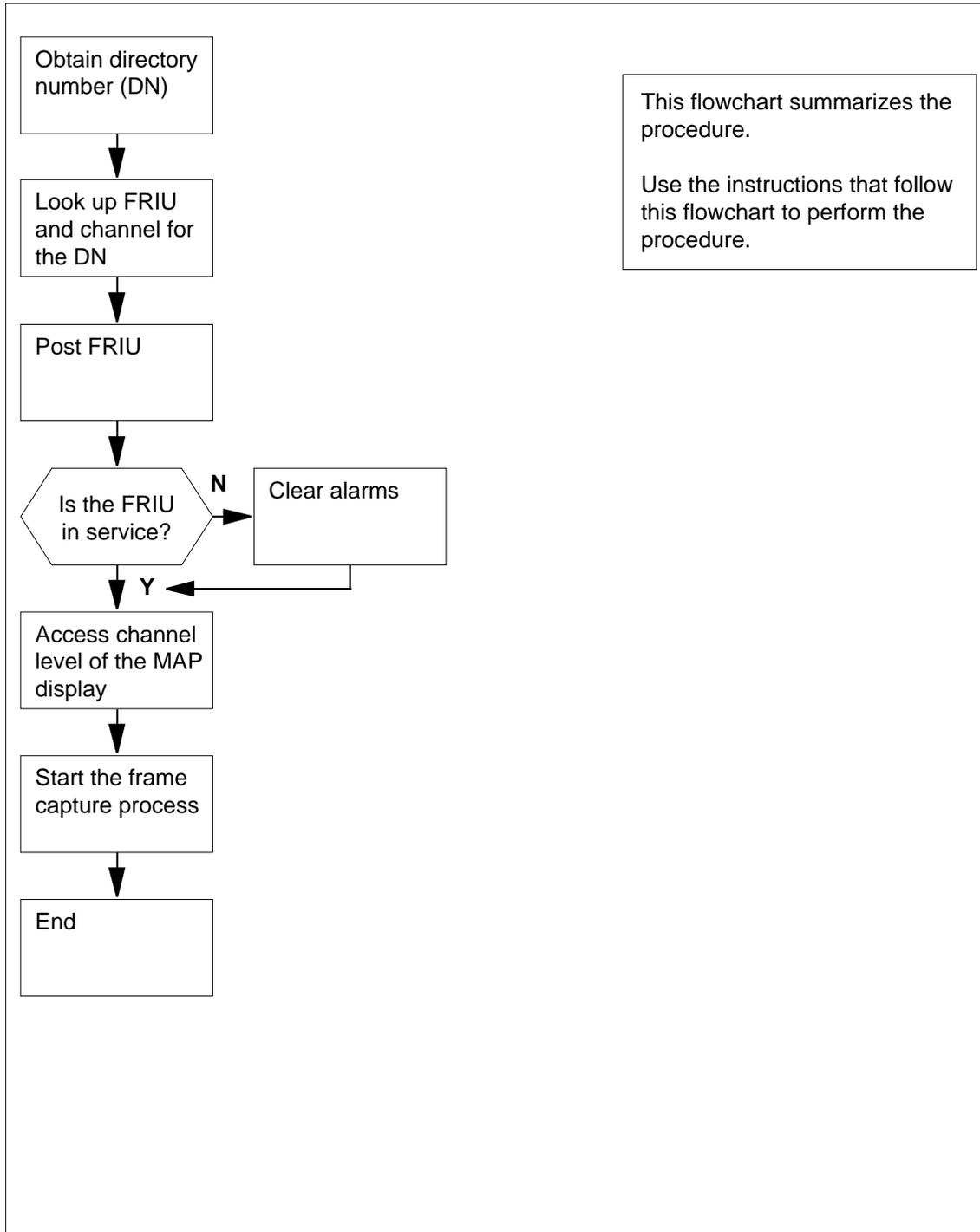
Perform this procedure as part of problem solving or monitoring the FRIU and the T1 carrier that associates with the FRIU.

### 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.

## Using the frame relay capture tool (continued)

### Summary of Using the frame relay capture tool



## Using the frame relay capture tool (continued)

---

### Using the frame relay capture tool

#### *At your current location*

1



**DANGER**

**Potential service interruption.**

The FRIU in the in-service trouble state affects customer service through the customer access channel.

Obtain the directory number (DN) from the customer.

#### *At the MAP terminal*

2 To access the PVDNCI level of the MAP display, type

```
>PVDNCI
```

and press the Enter key.

Example of a MAP response:

```
PVDNCI :
```

3 To identify the agent ID that associates with the DN obtained from the customer, type

```
>FRSDISP DN NO dir_no
```

and press the Enter key.

*where*

**dir\_no**

is the DN that the customer supplies

Response:

```
PVDNCI :
```

```
DN 6132263770 belongs to FRS Agent 1
```

**Note:** The agent ID is at the end of the response. In the example, the agent ID is 1.

4 To determine the FRIU number and the channel that associates with the agent ID, type

```
>FRSDISP AGENT ID agent_no
```

and press the Enter key.

*where*

---

## Using the frame relay capture tool (continued)

---

**agent\_no**

is the agent ID that you obtained in step 3

Response:

```
AGENT DN NP SPEED CONDEV AB CUSTOMER CONNECT TO
1 6132263770 NATL LS_1536KBS NIL N1 FRIU 121 7
```

**Note:** The FRIU number and channel given to this agent appear under the CONNECT TO header in the MAP response. In the example, the FRIU is 121 and the channel number is 7.

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

```
>QUIT
```

and press the Enter key.

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

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

and press the Enter key.

Example of a MAP response:

```
PM SysB ManB OffL CBsy ISTb InSv
 2 0 0 0 0 70
```

- 7** To post the FRIU, type

```
>POST FRIU friu_no
```

and press the Enter key.

*where*

**friu\_no**

is the number of the FRIU that you obtained in step 4

Example of a MAP response:

```
FRIU 121 InSv Rsvd
```

---

**If the state of the FRIU**
**Do**

is InSv or ISTb

step 9

is other than listed here

step 8

---

- 8** Perform the correct FRIU alarm clearing procedure to clear the major or critical alarm on this FRIU. Complete the procedure and return to this point.

- 9** To access the Carrier level of the MAP display, type

```
>CARR
```

and press the Enter key.

- 10** To access the Channel level of the MAP display, type

```
>CHAN
```

## Using the frame relay capture tool (end)

---

- and press the Enter key.
- 11 Start the frame capture process. To specify the frames you must capture, type
- ```
>CAPSTART dlci_no slice_size frame_type overwrite  
file_name dev_name
```
- and press the Enter key.
- where*
- dlci_no**
is the number of the data link connection identifier (DLCI)
- slice_size**
is the number of octets captured (64, 128, 256, 512, 1024, 2102)
- frame_type**
is the optional parameter for the type of frames that you must capture by the process (rx, tx, or all)
- overwrite**
is the optional parameter for existing file_name (Y or N)
- file_name**
is the optional parameter for the filename under which to record results (12 characters maximum)
- dev_name**
is the optional parameter for the device that you must record on results (default is SFDEV)
- Example input*
- ```
>CAPSTART 900 128 all Y 29NOV_900 PRT1
```
- Note:** The FRIU remains in the in-service trouble state until the frame capture process is complete.
- 12 To terminate the frame relay capture process, type
- ```
>CAPSTOP
```
- and press the Enter key.
- ```
>CAPSTART 900 128 all Y 29NOV_900 PRT1
```
- Note:** After you stop the frame capture process, wait for the CM to complete the capture file. This procedure can take several minutes. Do not attempt another CAPSTART command until the CAPQUERY command returns the message `Frame capture not running`.
- 13 Retrieve the ASCII file from the CM. Examine the file to determine if any faults are present.
- 14 The procedure is complete.

## Verifying and adjusting the time-of-day clock

---

### Application

Use this procedure to verify and adjust the setting of the time-of-day clock in the computing module (CM).

### Interval

Perform this procedure daily.

### Common procedures

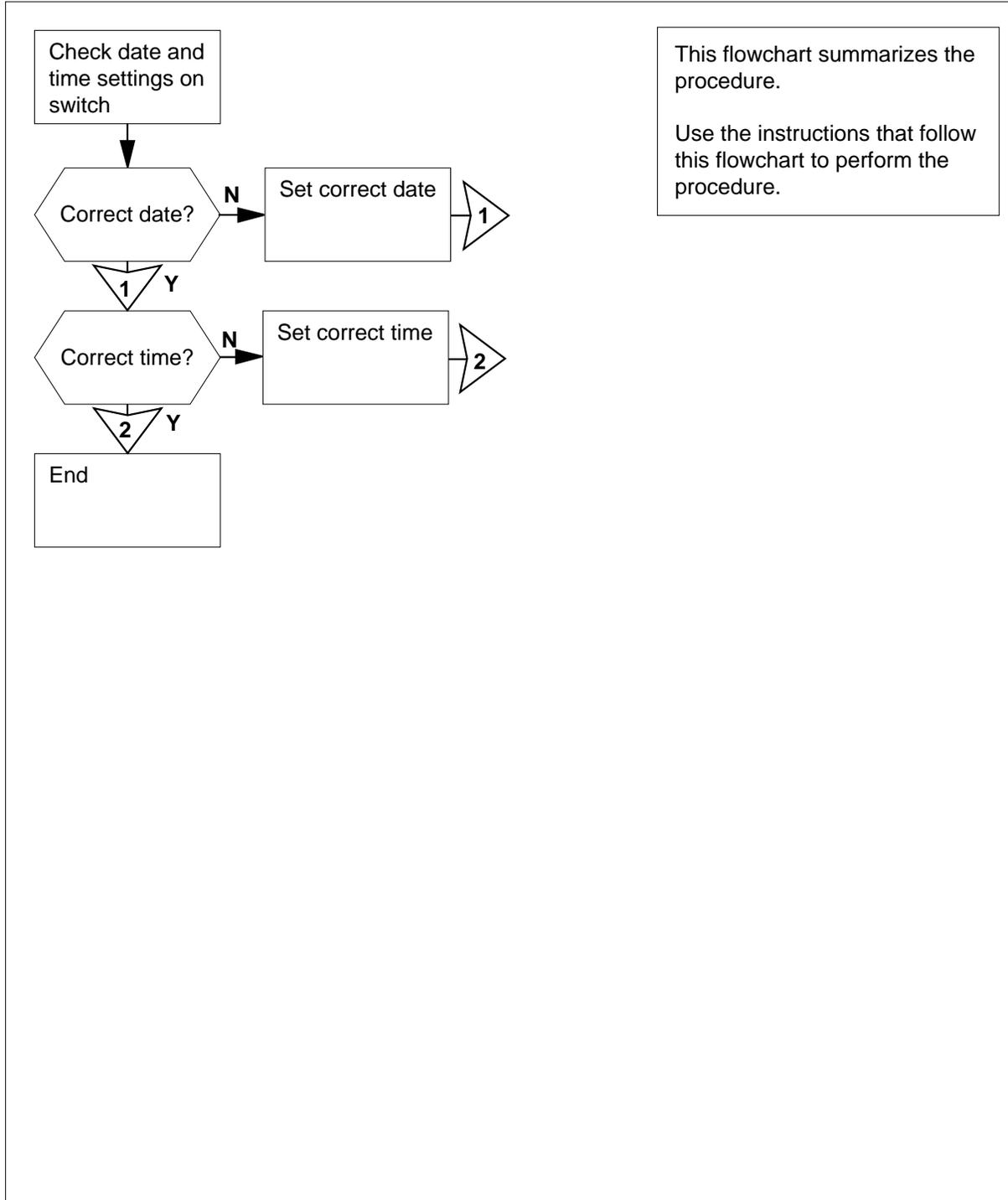
There are no common procedures.

### 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.

## Verifying and adjusting the time-of-day clock (continued)

### Summary of Verifying and adjusting the time-of-day clock



---

## Verifying and adjusting the time-of-day clock (continued)

---

### Verifying and adjusting the time-of-day clock

#### *At the MAP terminal*

- 1 To determine if the switch is set to the correct date, type

>DATE

and press the Enter key.

*Example of a MAP response:*

Date is MON. 8/OCT/1990 05:55:40

| If the date | Do     |
|-------------|--------|
| is correct  | step 6 |
| is wrong    | step 2 |

- 2 To set the correct date, type

>SETDATE dd mm YYYY

and press the Enter key.

where

**dd**

is the day (01 to 31)

**mm**

is the month (01 to 12)

**yyyy**

is the year

*Example input:*

>SETDATE 24 10 1996

*Example of a MAP response:*

setdate 24 10 1996

Warning: There is an automated TOD clock change request scheduled on: 1996/10/30 at 1:00 (see table DSTTABLE). Do you want to proceed with this request? Please confirm ("YES", "Y", "NO", or "N"):

- 3 Determine if table DSTTABLE is in use.

**Note:** The MAP response that indicates if table DSTTABLE is in use is in the previous step.

| If table DSTTABLE | Do     |
|-------------------|--------|
| is in use         | step 4 |
| is not in use     | step 5 |

---

## Verifying and adjusting the time-of-day clock (continued)

---

- 4 Determine if a conflict between the SETDATE command entry and an entry in table DSTTABLE is present.

| If a conflict with datafill in DST-TABLE | Do      |
|------------------------------------------|---------|
| is present                               | step 17 |
| is not present                           | step 5  |

- 5 To confirm the command, type  
>Y  
and press the Enter key.

*Example of a MAP response:*

```
Date is THU. 24/OCT/1996 00:00:00
```

- 6 Locate the time-of-day display below the menu on the MAP display.
- 7 Compare the time of day on the MAP display to the time reference that your company uses as a standard.
- 8 Determine if the time is correct.

| If the time | Do      |
|-------------|---------|
| is correct  | step 18 |
| is wrong    | step 9  |

- 9 Read steps 9 to 15. Perform steps 10 to 14 within the next 2 min.

- 10 To enter a time of day that is 2 min later than the correct (reference) time, type  
>SETTIME hh mm

where

**hh**  
is the hour (00 to 23)

**mm**  
is the minute (00 to 59)

**Note:** Do not press the Enter key.

*Example input:*

```
>SETTIME 08 20
```

*Example of a MAP response:*

```
Warning: There is an automated TOD clock change
 request scheduled on:
 1996/10/30 at 1:00 (see table DSTTABLE).
 Do you want to proceed with this request?
 Please confirm ("YES", "Y", "NO", or "N"):
```

---

## Verifying and adjusting the time-of-day clock (end)

---

- 11 Determine if table DSTTABLE is in use.
- | If table DSTTABLE | Do      |
|-------------------|---------|
| is in use         | step 12 |
| is not in use     | step 14 |
- 12 Determine if a conflict between the SETDATE command entry and an entry in table DSTTABLE is present.
- | If                                                      | Do      |
|---------------------------------------------------------|---------|
| you datafilled the time change in DSTTABLE              | step 13 |
| a conflict with the datafill in DSTTABLE is present     | step 17 |
| a conflict with the datafill in DSTTABLE is not present | step 14 |
- 13 To cancel the command, type  
>N  
and press the Enter key.
- 14 To confirm the command, type  
>Y  
**Note:** Do not press the Enter key.
- 15 When the time indicated by the reference is the same as the time you typed in, press the Enter key.  
*Example of a MAP response:*  
Time is 08:20:00 on WED. 1996/10/24  
**Note:** There can be a delay before the new time appears.
- 16 Compare the time of day displayed to the reference time.
- | If the time of day | Do      |
|--------------------|---------|
| is correct         | step 18 |
| is wrong           | step 17 |
- 17 For additional help, contact the next level of support.
- 18 The procedure is complete.



---

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---

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DMS-100 Family  
**North American DMS-100**  
Routine Maintenance Procedures

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