Meridian SuperNode

Commercial Systems

Alarm Clearing Procedures

NORTEL
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Commercial Systems

Alarm Clearing Procedures

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Version 11.01, Standard release, MSL 14. This book must be used with the following DMS-100 procedures and extended peripheral module (XPM) maintenance manuals for the full complement of documentation (see *About this document* for more information):

- *DMS-100 Alarm Clearing and Performance Monitoring Procedures*, 297-8001-543.

- XPM-specific maintenance manuals, numbered 297-8yyy-550.

May 2000

Version 10.01, Standard release, MSL12. This book must be used with the following DMS-100 procedures and extended peripheral module (XPM) maintenance manuals for the full complement of documentation (see *About this document* for more information):

- *DMS-100 Alarm Clearing and Performance Monitoring Procedures,* 297-8001-543

- XPM-specific maintenance manuals, numbered 297-8yyy-550

November 1999

Version 09.01, Standard release, MSL11. This version adds the Spectrum product information, and represents the standard release of this document for the MSL11 software release.

Contents

About this document

When to use this document

This publication contains alarm-clearing procedures. These procedures are used by switch maintenance personnel.

> *Note:* The MSL14 software delivery is part of an on-going evolution. This book is one of several transitional documents that must be used with the following DMS-100 procedures and extended peripheral module (XPM) maintenance manuals for the full complement of documentation:
>
> * *DMS-100 Alarm Clearing and Performance Monitoring Procedures,* 297-8001-543
>
> * XPM-specific maintenance manuals, numbered 297-8yyy-550
>
> Disregard the signaling point (SP), Traffic Operator Position System (TOPS), and SuperNode Data Manager (SDM) information as it does not apply to the MSL-100 switch.

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:

- *Magnetic Tape Reference Manual*, 297-1001-118
- *S/DMS AccessNode Alarm and Trouble Clearing Procedures*, 323-3001-543
- *Trouble Locating and Clearing Procedures*
- *Recovery Procedures*
- *Card Replacement Procedures*

What precautionary messages mean

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

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

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

ATTENTION

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

DANGER - Possibility of personal injury

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

WARNING - Possibility of equipment damage

<table>
<tr><td></td><td>

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.
</td></tr>
</table>

CAUTION - Possibility of service interruption or degradation

<table>
<tr><td></td><td>

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.
</td></tr>
</table>

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 PM alarm clearing procedures

Introduction

This book provides alarm clearing procedures for the peripheral module (PM). Peripheral module alarms appear under the PM header of the alarm banner in the maintenance and administration (MAP) display. Each procedure contains the following sections:

- Alarm display
- Indication
- Meaning
- Result
- Common procedures
- Action

Alarm display

This section indicates how the alarm appears at the maintenance and administration (MAP) terminal.

Indication

This section indicates the following:

- Appearance of the alarm
- Model of the alarm
- Affected subsystems
- Alarm intensity

Meaning

This section indicates the cause of the alarm.

Result

This section indicates the results of the alarm condition.

Common procedures

This section lists common procedures used during the alarm clearing procedure. A common procedure consists of a series of repeated steps within maintenance procedures, for example, removal and replacement of a card. Common procedures are in the common procedures chapter of the Nortel Networks technical publication (NTP), *DMS-100 Alarm Clearing and Performance Monitoring Procedures,* 297-8001-543.

Do not go to a common procedure unless the step-action procedure directs you to go.

Action

This section provides a summary flowchart of the alarm clearing procedure. A detailed step-action procedure follows the flowchart.

**PM LCME
critical**

Alarm display
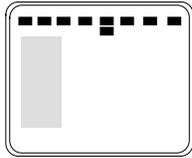
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1LCME**	.	.	.	.	.
					C					

Indication

If 1LCME *C* under the PM subsystem header at the MTC level of the MAP terminal exists, a critical condition in the LCME is indicated.

Meaning

The indicated number of LCME units are in the System-Busy (SysB) state.

Impact

LCME can be a peripheral module in an MCRM-S configuration. If all LCME units fail, a loss of subscriber service occurs. No call processing support exists.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM LCME
critical (continued)

Summary of clearing a PM LCME alarm

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│   ┌──────────────┐           ┌──────────────┐                         │
│   │Access PM level│    ┌─┐   │RTS the LCME  │                         │
│   │at the MAP     │───(1)────│unit          │                         │
│   │terminal and   │    └─┘   │              │                         │
│   │silence alarm  │          └──────┬───────┘                         │
│   └──────┬───────┘                  │                                 │
│          │                          ▼                                 │
│   ┌──────────────┐            ◇─────────────◇     Y   ┌──────────────┐│
│   │Post SysB     │           ◇ RTS passed?  ◇────────│End of        ││
│   │LCME          │            ◇─────────────◇         │procedure     ││
│   └──────┬───────┘                  │                 └──────────────┘│
│          │                        N │                                 │
│ ┌─┐┌──────────────┐            ┌──────────────┐                       │
│(3)│Query for     │            │Contact next  │                        │
│ └─┘│faults        │            │level of      │                       │
│   └──────┬───────┘            │support       │                        │
│          │                    └──────────────┘                        │
│          ▼                                                            │
│ ┌─┐ ◇─────────◇   Y                       ┌──────────────┐   ┌──┐     │
│(2)◇ Faulty   ◇──────────────────────────│To replace    │───│3 │     │
│ └─┘ ◇cards list?◇                          │faulty cards, │   └──┘     │
│     ◇─────────◇                           │go to Card    │            │
│          │                                │Replacement   │            │
│        N │                                │Procedures.   │            │
│          ▼                                └──────────────┘            │
│   ┌──────────────┐                                                    │
│   │Busy the LCME │                                                    │
│   │unit          │                                                    │
│   └──────┬───────┘                                                    │
│          │                                                            │
│   ┌──────────────┐                                                    │
│   │TST the LCME  │                                                    │
│   │unit          │                                                    │
│   └──────┬───────┘                                                    │
│          │                                                            │
│      ◇─────────◇   Y   ┌──┐                                           │
│     ◇TST passed?◇──────│1 │                                           │
│      ◇─────────◇       └──┘                                           │
│          │                                                            │
│        N │                                                            │
│          ▼                                                            │
│        ┌──┐                                                           │
│        │2 │                                                           │
│        └──┘                                                           │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```
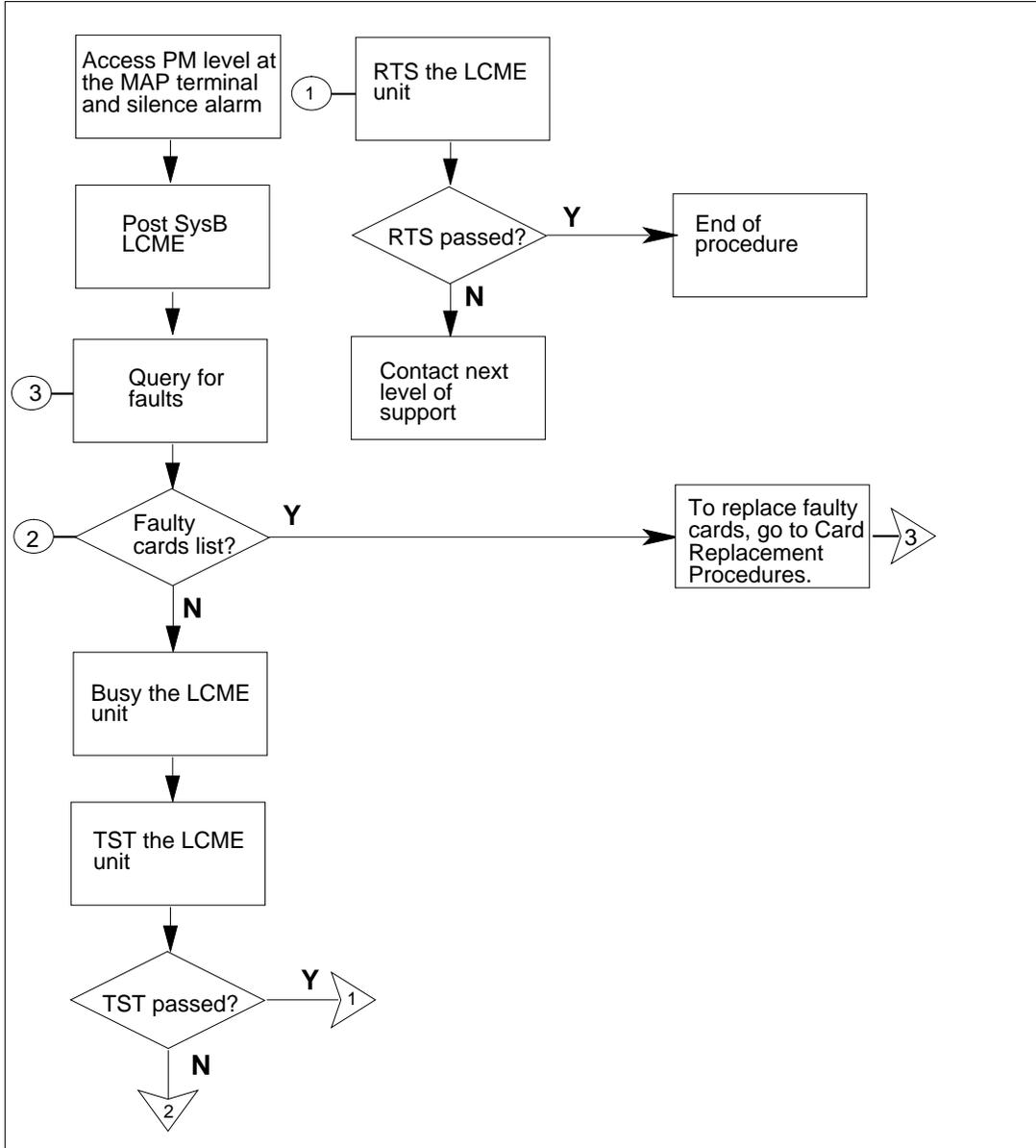
PM LCME
critical (continued)

Clearing a PM LCME alarm

At the MAP terminal

1   Silence the alarm, if required, by typing the following string:

> *MAPCI;MTC;PM;SIL*

and pressing the ENTER key.

2   Identify the faulty LCME by typing the following string:

> `DISP STATE SYSB lcme_no`

and pressing the ENTER key.

where

lcme_no is the number of the faulty LCME

Example of a MAP display

SysB LCME: 2

3   Post the SysB LCME identified in Step 2 by typing the following string:

> `POST LCME  lcme_site_name  lcme_cabinet_no  lcme_no`

and pressing the ENTER key.

where

lcme_site_nameis the site name for the faulty LCME
lcme_cabinet_nois the number of the associated LCME equipment cabinet
lcme_no is the number of the faulty LCME

PM LCME
critical (continued)

Example of a MAP display:

```
 CM      MS      IOD     Net     PM      CCS     Lns     Trks     Ext
 .       .       .       .      1LCME    .       .       .        .
                                 *C*

LCME                    SysB    ManB     OffL    CBsy     ISTb      InSv
  0 Quit     PM          1       0        2       0        2        12
  2 Post_    LCME        0       0        2       0        2         9
  3 ListSet
  4 SwRG     LCME   RSC-S 14 1 SysB  Links_OOS:  CSide  0    PSide   0
  5 Trnsl_   Unit0:   SysB                  /RG: 1
  6 Tst_     Unit1:   SysB                  /RG: 1
  7 Bsy_                            11  11  11  11  11  RG:Pref 1 InSv
  8 RTS_     Drwr:  01  23  45  67  89  01  23  45  67  89   Stby 0 InSv
  9 OffL             ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
 10 LoadPM_
 11 Disp_
 12 Next
 13
 14 QueryPM
 15
 16
 17
 18
```

4   Check for fault indicators by typing the following string:

> *QUERYPM FLT*

and pressing the ENTER key.

PM LCME
critical (continued)

Example of a MAP display:

```
 CM     MS     IOD     Net     PM     CCS     Lns     Trks     Ext
  .      .      .       .     1LCME    .       .       .        .
                               *C*
LCME              SysB      ManB       OffL      CBsy      ISTb       InSv
 0 Quit    PM      1         0          2         0         2         12
 2 Post_   LCME    0         0          2         0         2          9
 3 ListSet
 4 SwRG    LCME   RSC-S 14 1 SysB   Links_OOS:  CSide  0    PSide   0
 5 Trnsl_  Unit0:  SysB                          /RG: 1
 6 Tst_    Unit1:  SysB                          /RG: 1
 7 Bsy_                              11   11   11   11   11  RG:Pref 1 InSv
 8 RTS_    Drwr:  01  23  45  67  89  01  23  45  67  89    Stby 0 InSv
 9 OffL             ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_  QUERYPM FLT
11 Disp_    Node inservice troubles exist:
12 Next        One or both Units inservice trouble
13           LCME   UNIT 0  Out of Service Troubles Exist:
14 QueryPM  LCME   UNIT 1  Out of Service Troubles Exist:
15
16           SITE  FLR   RPOS   BAY_ID  SHF    DESCRIPTION    SLOT   EQPEC
17           RSCS0  01   A00   LCME 00  32    LCME  : 000  : 21     BX34
18           RSCS0  01   A00   LCME 00  32    LCME  : 000  : 19     BX35
             RSCS0  01   A00   LCME 00  32    LCME  : 000  : 20     BX35
```

If faulty card is	Do
indicated	Step 22
not indicated	Step 6

5   Manually Busy (ManB) the LCME posted in Step 3 by typing the following string:

>*BSY PM*

and pressing the ENTER key.

6   Test the ManB LCME by typing the following string:

>*TST PM*

and pressing the ENTER key.

Example of a MAP display:

Test Passed

or

Test Failed

7   Proceed as shown in the following table:

If TST	Do
passed	Step 20

PM LCME
critical (continued)

If TST	Do
failed	Step 22
unable to test CBsy	Step 8

8   Identify C-side links that are in a SysB condition by typing the following string:

> **TRNSL C**

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0    RCC2 2 ;CAP MS;STATUS: SYSB,;MSGCOND:CLS,Restricted
LINK 1    RCC2 2  CAP S; STATUS:   SYSB
LINK 2    RCC2 2 ;CAP MS;STATUS:   SYSB,;MSCOND:CLS,Restricted
```

9   Proceed as shown in the following table:

If links are	Do
SysB	Step 10
open	Step 27

10   Post the RCC2 unit associated with the LCME by typing the following string:

> **POST RCC2   rcc2_no**

and pressing the ENTER key.

where

rcc2_nois the RCC2 unit identified in Step 8

PM LCME
critical (continued)

Example of a MAP display:

```
 CM      MS      IOD     Net      PM     CCS      Lns      Trks      Ext
 .       .       .        .     1LCME    .        .        .         .
                                 *C*

RCC2                  SysB     ManB     OffL     CBsy     ISTb      InSv
 0 Quit    PM          3        0         1        0         4        12
 2 Post_   RCC2        0        0         2        0         2         9
 3 ListSet
 4         RCC2     1 ISTb  Links_OOS:  CSide  0, PSide   2
 5 Trnsl_  Unit0:    Act ISTb
 6 Tst_    Unit1:    Inact InSv
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17
18
```

11   Identify the faulty P-side links and choose a faulty link by typing the following
string:

> **TRNSLP**

and pressing the ENTER key.

Example of a MAP display:

```
:LCME    1     0;CAP MS;STATUS:    SYSB;MSGCOND:CLS,Restricted
:LCME    1     1;CAP  S;STATUS:    OK
:LCME    1     2;CAP MS;STATUS:    SYSB;MSGCOND:CLS,Restricted
:LCME    1     4;CAP  S;STATUS:    SYSB
:LCME    1     4;CAP  S;STATUS:    OK
:LCME    1     4;CAP  S;STATUS:    OK
:LCME    1     4;CAP  S;STATUS:    OK
```

12   Busy the faulty link by typing the following string:

> *BSY LINK* **link_no**

and pressing the ENTER key.

where

link_no is the number of the faulty P-side link chosen in Step 11

13   Test the ManB link by typing the following string:

> *TST LINK* **link_no**

PM LCME
critical (continued)

where

link_no is the number of the link manually busied in Step 12

14   Proceed as shown in the following table:

If faulty card is	Do
indicated	Step 22
not indicated	Step 15

15   Return the ManB link to service by typing the following string:

> **> RTS LINK link_no**

and pressing the ENTER key.

where

link_no is the number of the link tested in Step 13

16   Proceed as shown in the following table:

If RTS	Do
passed	Step 18
failed	Step 27

Note: If other faulty lines are identified, execute the procedures in Steps 12-16 for each link until all links are busied, tested, and returned to service.

17   Post the LCME identified in Step 2 by typing following string:

> **> *POST LCME* lcme_site_name lcme_cabinet_no lcme_no**

and pressing the ENTER key.

where

lcme_site_nameis the site name for the faulty LCME
lcme_cabinet_nois the number of the associated LCME
lcme_nois the number of the faulty LCME

18   Test the LCME by typing the following string:

> **> *TST PM***

and pressing the ENTER key.

19   Proceed as shown in the following table:

If TST	Do
passed	Step 20

If TST	Do
failed	Step 22

20   Return the ManB LCME to service by typing the following string:

> **RTSPM**

and pressing the ENTER key.

21   Proceed as shown in the following table:

If RTS	Do
passed	Step 28
failed	Step 27

22   Observe the card listing as shown in the following MAP display.

Example of a MAP display

```
SITE      FLR   RPOS   BAY_ID      SHF   DESCRIPTION   SLOT   EQPEC
RSCS0     01    A00    LCME    00  32    LCME   :000   : 19   BX35
RSCS0     01    A00    LCME    00  32    LCME   :000   : 20   BX35
RSCS0     01    A00    LCME    00  32    LCME   :000   : 21   BX34
```

23   Proceed as shown in the following table:

If all cards on the list have	Do
been replaced	Step 24
not been replaced	Step 25

24   Determine if the NTBX48 circuit card has been replaced.

If the NTBX48 card has	Do
been replaced	Step 27
not been replaced	Step 26

25   Go to the card replacement procedure for the NTBX48 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 18 of this procedure.

26   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 19 of this procedure.

27   Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

PM LCME
critical (end)

28   This procedure is completed. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

**PM LCME
major**

Alarm display
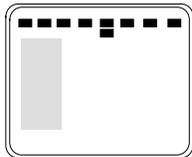
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1LCME**	.	.	.	.	.
					M					

Indication

A 1LCME M under the PM subsystem header at the MTC level of the MAP screen indicates an LCME major alarm.

Meaning

The indicated number of LCME units are in the In-Service (InSv) or System-Busy (SysB) state.

Impact

LCME is a peripheral module in an MCRM-S configuration. Subscriber service is affected. You will have no local LCME backup if the other LCME units fail.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM LCME
major (continued)

Summary of clearing a PM LCME alarm

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│   ┌──────────────┐        ┌──────────────┐   ┌──────────────────────────┐│
│   │ Access PM    │    ╱1╲ │ RTS the LCME │   │ This flowchart summarizes││
│   │ level at MAP │    ╲_╱ │ unit         │   │ the procedure.           ││
│   │ and silence  │        │              │   │                          ││
│   │ alarm        │        └──────┬───────┘   │ Use the instructions in  ││
│   └──────┬───────┘               │           │ the procedure that       ││
│          │                       ▼           │ follows this flowchart   ││
│          ▼              ╱────────────────╲   │ to perform.              ││
│   ┌──────────────┐     ╱                  ╲ Y└──────────────────────────┘│
│   │ Post SysB    │    ⟨   RTS passed?      ⟩────▶ ┌──────────────────┐   │
│   │ LCME         │     ╲                  ╱       │ End of procedure │   │
│   └──────┬───────┘      ╲────────────────╱        └──────────────────┘   │
│          │                      │ N                                      │
│          ▼                      ▼                                        │
│   ┌──────────────┐     ┌──────────────────┐                             │
│   │ Query for    │     │ Contact next     │                             │
│   │ faults       │     │ level of support │                             │
│   └──────┬───────┘     └──────────────────┘                             │
│          │                                                               │
│          ▼                                                               │
│  ╱2╲ ╱────────────╲  Y                          ┌──────────────────┐    │
│  ╲_╱⟨  Faulty      ⟩───────────────────────────▶│ Replace faulty   │    │
│      ⟨  cards list? ⟩                            │ cards            │    │
│       ╲────────────╱                             └──────────────────┘    │
│            │ N                                                           │
│            ▼                                                             │
│     ┌──────────────┐                                                     │
│     │ Busy the     │                                                     │
│     │ LCME unit    │                                                     │
│     └──────┬───────┘                                                     │
│            ▼                                                             │
│     ┌──────────────┐                                                     │
│     │ TST the      │                                                     │
│     │ LCME unit    │                                                     │
│     └──────┬───────┘                                                     │
│            ▼                                                             │
│     ╱────────────╲  Y   ╱1╲                                             │
│    ⟨  TST passed? ⟩────▶ ╲ ╱                                            │
│     ╲────────────╱                                                       │
│            │ N                                                           │
│            ▼                                                             │
│           ╱2╲                                                           │
│           ╲ ╱                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```
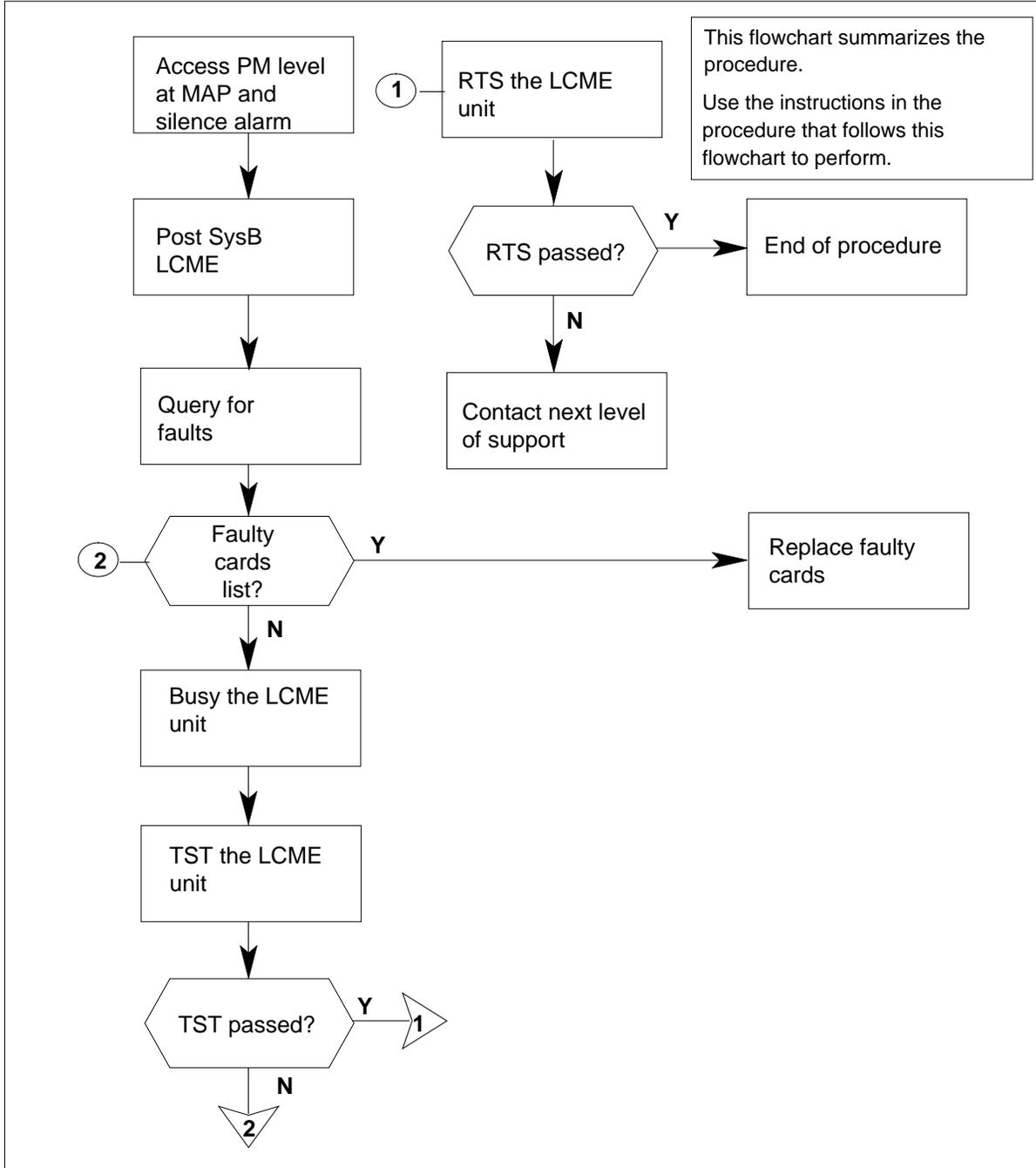
PM LCME
major (continued)

Clearing a PM LCME major alarm

1   You should be entering this procedure from a PM system level alarm clearing procedure step that identified an LCME associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

>**MAPCI;MTC;PM;SIL**

and pressing the ENTER key.

3   Identify the SysB LCME by typing the following string:

> **DISP STATE ISTB LCME**

and pressing the ENTER key.

Example of a MAP display:
SysB LCME : 2

4   Post the SysB LCME identified in Step 3 by typing the following string:

> **POST LCME lcme_site_name lcme_frame_no   lcme_no**

and pressing the ENTER key.

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME equipment frame

lcme_no is the number of the faulty LCME

PM LCME
major (continued)

Example of a MAP display:

```
 CM       MS      IOD      Net      PM       CCS       Lns      Trks      Ext
  .        .        .        .     1LCME      .         .         .         .
                                     M

LCME              SysB      ManB      OffL      CBsy      ISTb      InSv
 0 Quit     PM       1        0         2         0         2        12
 2 Post_    LCME     1        0         2         0         2         9
 3 ListSet
 4 SwRG     LCME   RSCS 14 1 ISTb  Links_OOS:  CSide  0    PSide   0
 5 Trnsl_   Unit0:   InSv  Takeover       /RG: 1
 6 Tst_     Unit1:   SysB                 /RG: 1
 7 Bsy_                                11  11  11    RG:Pref 1 InSv
 8 RTS_     Drwr:  01  23  45  67  89  01  23  45       Stby 0 InSv
 9 OffL            ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

5   Check for fault indicators by typing the following string:

> **QUERYPM FLT**

and pressing the ENTER key.

PM LCME
major (continued)

Example of a MAP display:

```
CM      MS     IOD     Net     PM      CCS     Lns     Trks     Ext
 .       .      .       .     1LCME    .       .       .        .
                                M

LCME                SysB    ManB      OffL     CBsy     ISTb       InSv
 0 Quit      PM      1        0         2        0        2         12
 2 Post_     LCME    1        0         2        0        2          9
 3 ListSet
 4 SwRG      LCME    RSCS 14 1 ISTb  Links_OOS:  CSide  0    PSide   0
 5 Trnsl_    Unit0:   InSv  Takeover      /RG: 1
 6 Tst_      Unit1:   SysB                /RG: 1
 7 Bsy_                                11  11  11    RG:Pref 1 InSv
 8 RTS_      Drwr:  01  23  45  67  89  01  23  45      Stby 0 InSv
 9 OffL             ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_   QUERYPM FLT
11 Disp_     Node inservice troubles exist:
12 Next         One or both Units inservice trouble
13           LCME    UNIT 0  Inservice No Troubles Exist:
14 QueryPM   LCME    UNIT 1  Out of service Troubles Exist:
15
16       SITE   FLR   RPOS   BAY_ID    SHF   DESCRIPTION   SLOT  EQPEC
17       RSCS0  01    A00    LCME  00  32    LCME  : 000  : 19   BX35
18       RSCS0  01    A00    LCME  00  32    LCME  : 000  : 20   BX35
```

If faulty card is	Do
indicated	Step 17
not indicated	Step 6

6   Manually busy the LCME posted in Step 4 by typing the following string:

> BSY UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the SysB LCME

7   Test the LCME by typing the following string:

>TST UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the LCME unit manually busied in Step 6

PM LCME
major (continued)

Example of a MAP display:

Test Passed

or

Test Failed

If TST	Do
passed	Step 16
failed	Step 17
unable to test CBsy links	Step 8

8   Identify C-side links that are in a SysB condition by typing the following string:

>TRNSLC

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0: RCC2   2      ;CAP MS;STATUS: SysB,;MSGCOND:OPN,Restricted
LINK 1: RCC2   2       CAP  S;STATUS: OK
```

If links are	Do
SysB	Step 9
open	Step 21

9   Post the RCC2 unit associated with the LCME by typing the following string:

> *POST RCC2* rcc2_no

and pressing the ENTER key.

where

rcc2_no is the RCC2 unit identified in Step 8

PM LCME
major (continued)

Example of a MAP display:

```
CM      MS      IOD      Net      PM       CCS      Lns      Trks      Ext
.       .       .        .        1LCME    .        .        .         .
                                  M

RCC2                SysB     ManB     OffL     CBsy     ISTb      InSv
 0 Quit     PM        3        0        1        0        4        12
 2 Post_    RCC2      0        0        2        0        2         9
 3 ListSet
 4          RCC2   1 ISTb  Links_OOS:  CSide  0, PSide   1
 5 Trnsl_   Unit0:    Act InSv
 6 Tst_     Unit1:    Inact InSv
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17
18
```

10   Identify the faulty P-side links and choose a faulty link by typing the following string:

> *TRNSL P*

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0:LCME    1    0;CAP MS;STATUS:     SysB,;MSGCOND:CLS,Restricted
LINK 1:LCME    1    1;CAP  S;STATUS:     OK
LINK 2:LCME    1    2;CAP MS;STATUS:     OK,;MSGCOND:OPN,Unrestricted
LINK 4:LCME    1    4;CAP  S;STATUS:     OK
LINK 5:LCME    1    4;CAP  S;STATUS:     OK
LINK 6:LCME    1    4;CAP  S;STATUS:     OK
LINK 7:LCME    1    4;CAP  S;STATUS:     OK
```

11   Busy the faulty link by typing the following string:

> **BSY LINK link_no**

and pressing the ENTER key.

where

link_no is the number of the faulty P-side link chosen in Step 10

12   Test the ManB link by typing the following string:

>**TST LINK link_no**

and pressing the ENTER key.

PM LCME
major (continued)

where

link_no is the number of the link manually busied in Step 11

If faulty card is	Do
indicated	Step 17
not indicated	Step 13

13   Return the ManB link to service by typing the following string:

>RTS LINK link_no

and pressing the ENTER key.

where

link_no is the number of the link tested in Step 12

> **Note:** If other faulty cards are identified, execute the procedures in Steps 11 through 13 for each link until all links are busied, tested, and returned to service.

If RTS	Do
passed	Step 14
failed	Step 21

14   Post the LCME identified in Step 3 by typing the following string:

> *POST LCME* lcme_site_name lcme_frame_no lcme_no

and pressing the ENTER key.

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME

lcme_no is the number of the faulty LCME

15   Test the LCME unit by typing the following string:

>*TST UNIT* unit_no

and pressing the ENTER key.

where

unit_no is the number of the LCME unit posted in Step 14

If TST	Do
passed	Step 16
failed	Step 17

16   Return the LCME to service by typing the following string:

> *RTS UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME tested in Step 15

If RTS	Do
passed	Step 22
failed	Step 21

17   Observe the card listing as shown in the following MAP display.

Example of a MAP display:

```
SITE    FLR    RPOS    BAY_ID        SHF        DESCRIPTION    SLOT    EQPEC
RSCS0   01     A00     LCME    00    32         LCME  :000     : 21    BX34
RSCS0   01     A00     LCME    00    32         LCME  :000     : 19    BX35
RSCS0   01     A00     LCME    00    32         LCME  :000     : 20    BX35
```

> *Note:*   If no card list is generated, check the logs and escalate to a higher level of maintenance support by going to Step 28.

If all cards on the list have	Do
been replaced	Step 18
not been replaced	Step 20

18   Determine if the NTMX74 circuit card has been replaced.

If NTMX74 card has	Do
been replaced	Step 21
not been replaced	Step 19

> *Note:*   If the NTMX74 card is indicated, check to see if one link or several links are faulty. Repeat clearing procedure as necessary.

19   Go to the card replacement procedure for the NTMX74 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 12 of this procedure.

20   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 15 of this procedure.

21   Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

PM LCME
major (end)

    22   Procedure is completed. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

**PM LCME
minor**

Alarm display
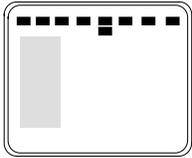
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1LCME**	.	.	.	.	.

Indication

The 1LCME under the PM subsystem header at the MTC level of the MAP terminal indicates an LCME minor alarm.

Meaning

The indicated number of LCME units are in the In-Service Trouble (ISTb) state.

Impact

LCME can be a peripheral module in an MCRM-S configuration. Subscriber service is not affected. However, there is no local backup if the other LCME units fail.
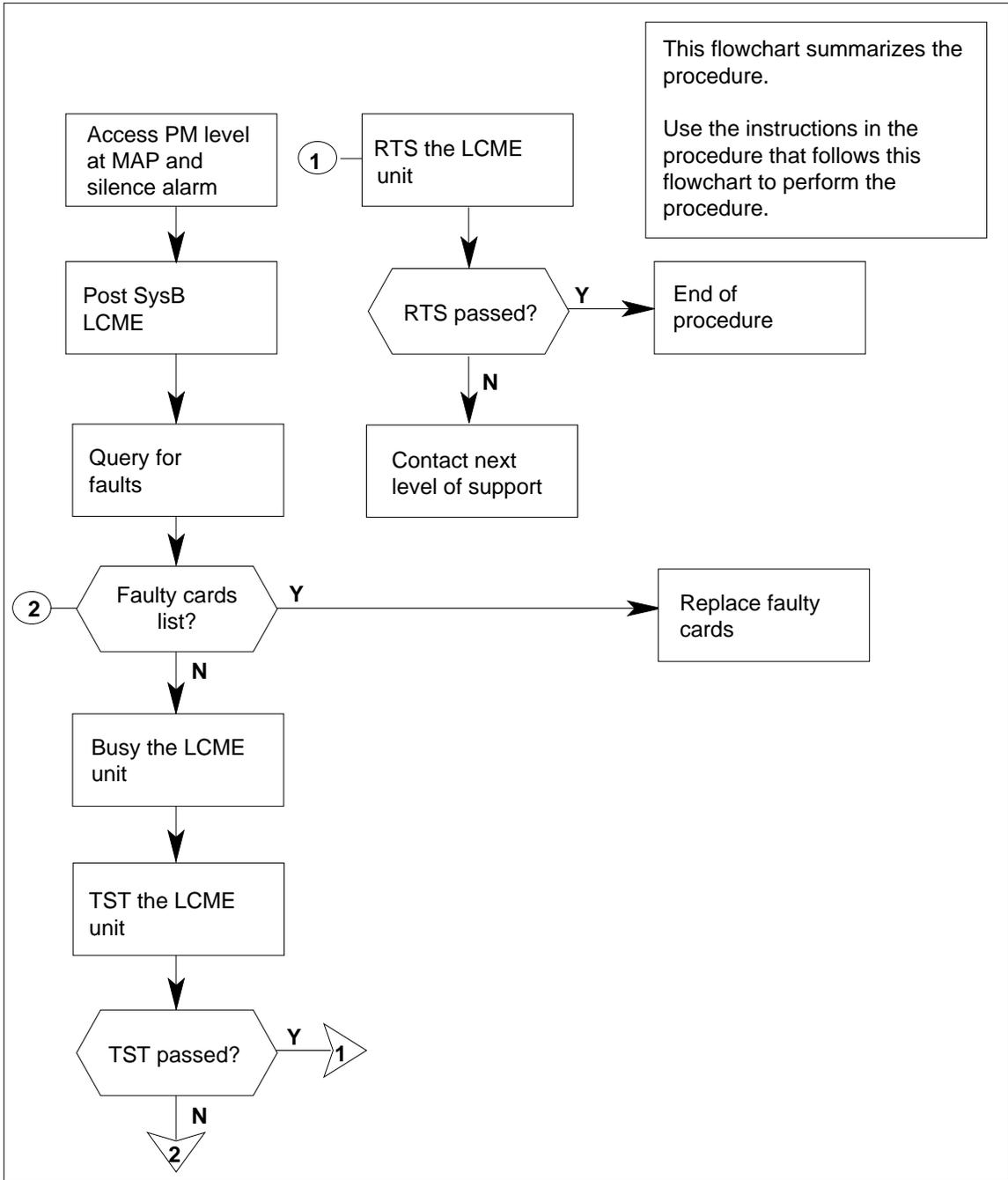
Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM LCME
minor (continued)

Summary of clearing a PM LCME alarm

```
Access PM level          RTS the LCME          This flowchart summarizes the
at MAP and          1    unit                  procedure.
silence alarm
                                               Use the instructions in the
                                               procedure that follows this
     |                        |                flowchart to perform the
     v                        v                procedure.

Post SysB                RTS passed? ---Y---> End of
LCME                                           procedure

     |                        |N
     v                        v

Query for                Contact next
faults                   level of support

     |
     v
  2  Faulty cards ---Y----------------------------> Replace faulty
     list?                                           cards

     |N
     v

Busy the LCME
unit

     |
     v

TST the LCME
unit

     |
     v

TST passed? ---Y---> 1

     |N
     v
     2
```

PM LCME
minor (continued)

Clearing a PM LCME minor alarm

ATTENTION
You should be entering this procedure from a PM system level alarm clearing procedure step that identified an LCME associated fault.

At the MAP terminal

1   Silence the alarm, if required, by typing the following string:

> *MAPCI;MTC;PM;SIL*

and pressing the ENTER key

2   Identify the faulty LCME by typing the following string:

> *DISP STATE ISTB LCME*

and pressing the ENTER key

Example of a MAP display:

ISTb LCME : 2

3   Post the ISTb LCME identified in Step 3 by typing the following string:

> *POST LCME lcme_site_name lcme_cabinet_no lcme_no*

and pressing the ENTER key

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME

lcme_no is the number of the faulty LCME

PM LCME
minor (continued)

Example of a MAP display:

```
 CM      MS      IOD      Net      PM      CCS      Lns     Trks     Ext    APPL
  .       .       .        .      1LCME     .        .        .        .


LCME                     SysB      ManB      OffL      CBsy      ISTb        InSv
  0 Quit      PM          1         0          2         0         2          12
  2 Post_     LCME        0         0          2         0         2           9
  3 ListSet
  4 SwRG      LCME   RSCS 14 1 ISTb  Links_OOS:  CSide  0    PSide   0
  5 Trnsl_    Unit0:   InSv  Takeover       /RG: 1
  6 Tst_      Unit1:   ISTb                 /RG: 1
  7 Bsy_                                11   11   11    RG:Pref 1 InSv
  8 RTS_      Drwr:  01  23  45  67  89  01   23   45       Stby 0 InSv
  9 OffL             ..  ..  ..  ..  ..  ..   ..   ..   ..   ..
 10 LoadPM_
 11 Disp_
 12 Next
 13
 14 QueryPM
 15
 16
 17
 18
```

4   Check for fault indicators by typing the following string:

> ***QUERYPM FLT***

and pressing the ENTER key.

PM LCME
minor (continued)

Example of a MAP display:

```
 CM      MS      IOD     Net     PM      CCS     Lns     Trks    Ext    APPL
  .       .       .       .     1LCME    .       .       .       .       .


LCME              SysB      ManB      OffL      CBsy      ISTb      InSv
 0 Quit    PM       1         0         2         0         2        12
 2 Post_   LCME     0         0         2         0         2         9
 3 ListSet
 4 SwRG    LCME   RSCS 14 1 ISTb  Links_OOS:  CSide  1    PSide   0
 5 Trnsl_  Unit0:   InSv  Takeover       /RG: 1
 6 Tst_    Unit1:   ISTb                 /RG: 1
 7 Bsy_                              11   11   11    RG:Pref 1 InSv
 8 RTS_    Drwr:  01  23  45  67  89  01  23  45       Stby 0 InSv
 9 OffL            ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_  QUERYPM FLT
11 Disp_    Node inservice troubles exist:
12 Next        One or both Units inservice trouble
13           LCME   UNIT 0  Inservice No Troubles Exist:
14 QueryPM  LCME   UNIT 1  Inservice Troubles Exist:
15
16
17
18
```

If faulty card is	Do
indicated	Step 18
not indicated	Step 6

5   Manually busy the LCME posted in Step 4 by typing the following string:

> *BSY UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the ISTb LCME unit

6   Test the ManB LCME by typing the following string:

>*TST UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME unit manually busied in Step 6

PM LCME
minor (continued)

Example of a MAP display:

Test Passed

or

Test Failed

If TST	Do
passed	Step 17
failed	Step 18
unable to test CBsy	Step 8

7 Identify C-side links that are in a SysB condition by typing the following string:

>TRNSL C

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0: RCC2   2     ;CAP MS;STATUS:    OK,;MSGCOND:OPN,Restricted
LINK 1: RCC2   2     ;CAP  S;STATUS:    SysB
```

If links are	Do
SysB	Step 9
open	Step 22

8 Post the RCC2 unit associated with the LCME by typing the following string:

> POST RCC2 rcc2_no

and pressing the ENTER key.

where

rcc2_no is the RCC2 unit identified in Step 8

Example of a MAP display:

```
CM      MS     IOD      Net      PM      CCS      Lns      Trks     Ext   APPL
.       .      .        .      1LCME      .        .        .        .     .

RCC2               SysB       ManB       OffL      CBsy       ISTb       InSv
 0 Quit     PM        0          0          0          0          4         12
 2 Post_    RCC2      0          0          0          0          2          9
 3 ListSet
 4          RCC2   2 ISTb  Links_OOS:  CSide  0, PSide   1
 5 Trnsl_  Unit0:    Act InSv
 6 Tst_    Unit1:    Inact InSv
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17
18
```

9   Identify the faulty P-side links and choose a faulty link by typing the following string:

> *TRNSL P*

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0:   RCC2 1    0;CAP MS;STATUS:     OK,;MSGCOND:OPN,Restricted
LINK 1:   RCC2 1    1;CAP  S;STATUS:     SysB
LINK 2:   RCC2 1    2;CAP MS;STATUS:     OK,;MSGCOND:OPN,Unrestricted
LINK 4:   RCC2 1    4;CAP  S;STATUS:     OK
LINK 5:   RCC2 1    4;CAP  S;STATUS:     OK
LINK 6:   RCC2 1    4;CAP  S;STATUS:     OK
LINK 7:   RCC2 1    4;CAP  S;STATUS:     OK
```

10   Busy the faulty link by typing the following string:

>**BSYLINK link_no**

and pressing the ENTER key.

where

link_no is the number of the faulty P-side link manually busied in Step 10

11   Test the ManB link by typing the following string:

> *TST LINK* **link_no**

and pressing the ENTER key.

PM LCME
minor (continued)

where

link_no is the number of the faulty link manually busied in Step 11

If TST	Do
passed	Step 17
failed	Step 13

12   Determine where to proceed next by reading the following table.

If faulty card is	Do
indicated	Step 18
not indicated	Step 14

13   Return the ManB link to service by typing the following string:

>RTS LINK link_no

and pressing the ENTER key.

where

link_no is the number of the link tested in Step 12

If RTS	Do
passed	Step 23
failed	Step 22

> **Note:** If other faulty links are identified, execute the procedures in Steps 11 through 14 for each link until all links are busied, tested, and returned to service.

14   Post the LCME identified in Step 3 by typing following string:

> *POST LCME* lcme_site_name lcme_cabinet_no lcme_no

and pressing the ENTER key.

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME

lcme_no is the number of the faulty LCME

15   Test the LCME unit by typing the following string:

> *TST UNIT* unit_no

and pressing the ENTER key.

PM LCME
minor (continued)

where

unit_no is the number of the LCME unit posted in Step 15

If TST	Do
passed	Step 17
failed	Step 18

16   Return the LCME unit to service by typing the following string:

> *RTS UNIT* **unit_no**

and pressing the ENTER key

where

unit_no is the number of the LCME unit tested in Step 16

If RTS	Do
passed	Step 23
failed	Step 22

17   Observe the card listing as shown in the following MAP display.

Example of a MAP display:

```
SITE      FLR   RPOS BAY_ID    SHF        DESCRIPTION   SLOT      EQPEC
RSCS0     01    A00 LCME    00  32        LCME  :000    : 19      BX35
RSCS0     01    A00 LCME    00  32        LCME  :000    : 20      BX35
RSCS0     01    A00 LCME    00  32        LCME  :000    : 21      BX34
```

If all cards on the list have	Do
been replaced	Step 19
not been replaced	Step 21

18   Determine if the NTMX74 circuit card has been replaced.

If the NTMX74 card has	Do
been replaced	Step 22
not been replaced	Step 20

> **Note:**   If the MX74 card is indicated, check to see if one link or several links
> are faulty. Repeat the alarm clearing procedure as necessary.

19   Go to the card replacement procedure for the NTMX74 circuit card in *Card Replacement Procedures.* When you have finished with the card replacement procedures, go to Step 12 of this procedure.

PM LCME
minor (end)

20   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 16 of this procedure.

21   Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

22   This procedure is complete. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM LCME (RG)
major

Alarm display
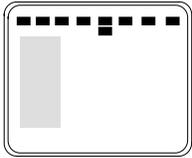
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1LCME**	.	.	.	.	.
					M					

Indication

A major condition involving an LCME ringing generator is indicated by a 1LCME M under the PM subsystem header at the MTC level of the MAP screen display.

Meaning

One ringing generator unit is in the InService Trouble (ISTb) state and the other Ringing Generator (RG) is System-Busy (SysB).

Impact

LCME can be a peripheral module in an MCRM-S configuration. Subscriber service is affected because ringing is not provided to the subscribers.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM LCME (RG)
major (continued)

Summary of clearing a PM LCME (RG) major alarm
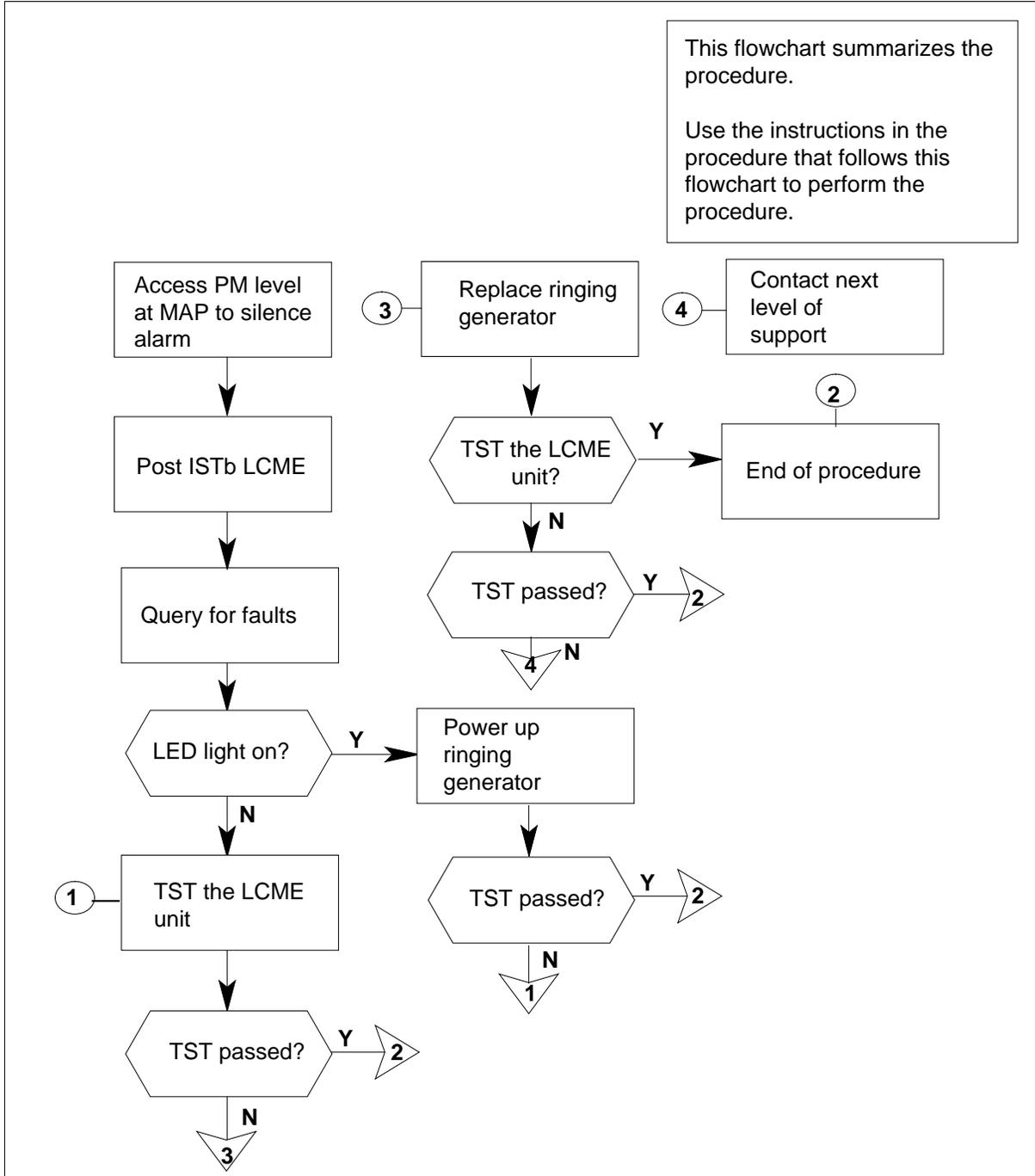
PM LCME (RG)
major (continued)

Clearing a PM LCME (RG) major alarm

1   You should be entering this procedure from a PM system level alarm clearing
procedure step that identified an LCME associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

> *MAPCI;MTC;PM;SIL*

and pressing the ENTER key.

3   Identify the faulty LCME by typing the following string:

> *DISP STATE ISTB LCME*

and pressing the ENTER key.

Example of a MAP display:
ISTb LCME : 2

4   Post the ISTb LCME identified in Step 3 by typing the following string:

>**POST LCME lcme_site_name lcme_cabinet_no lcme_no**

and pressing the ENTER key.

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME equipment frame

lcme_no is the number of the faulty LCME

PM LCME (RG)
major (continued)

Example of a MAP display

```
CM      MS     IOD     Net      PM     CCS     Lns     Trks    Ext
 .       .      .       .     1LCME    .       .       .       .
                               M

LCME               SysB     ManB     OffL     CBsy     ISTb      InSv
 0 Quit     PM       1        0        2        0        2        12
 2 Post_    LCME      0        0        2        0        2         9
 3 ListSet
 4 SwRG     LCME   RSCS 14 1 ISTb  Links_OOS:  CSide  0   PSide  0
 5 Trnsl_   Unit0:   InSv    Takeover      /RG: 1
 6 Tst_     Unit1:   ISTb                  /RG: 1
 7 Bsy_                           11   11   11   11   11  RG:Pref 1 InSv
 8 RTS_     Drwr:  01  23  45  67  89  01  23  45  67  89    Stby 0 ISTb
 9 OffL            ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

5   Check for fault indicators by typing the following string:

>QUERYPM FLT

and pressing the ENTER key.

Example of a MAP display:

```
CM      MS      IOD     Net      PM     CCS     Lns     Trks     Ext
.       .       .        .     1LCME    .       .        .        .
                                 M

LCME               SysB    ManB     OffL     CBsy     ISTb        InSv
 0 Quit    PM        1       0        2        0        1          12
 2 Post_   LCME      0       0        2        0        1           9
 3 ListSet
 4 SwRG    LCME  RSCS  14 1 ISTb  Links_OOS:  CSide  0   PSide  0
 5 Trnsl_  Unit0:  InSv   Takeover      /RG: 1
 6 Tst_    Unit1:  ISTb                 /RG: 1
 7 Bsy_                         11  11  11  11  11  RG:Pref 1 InSv
 8 RTS_  Drwr: 01  23  45  67  89  01  23  45  67  89    Stby 0 ISTb
 9 OffL         ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_  QUERYPM FLT
11 Disp_    Node in-service troubles exist:
12 Next        One or both Units in-service trouble
13           LCME   UNIT 0  In-service Troubles Exist:
14 QueryPM  Ringing Generator Failure :Ring Generator in Excess load
15           LCME   UNIT 1  In-service Troubles Exist:
16           Ring Generator in Excess load
17
18
```

If faulty card is	Do
indicated	Step 11
not indicated	Step 6

At the LCME

6   Make a visual inspection of the ringing generator. Check to see if the LED light is on.

If the LED light is	Do
ON	Step 7
OFF	Step 8

7   Power up the ringing generator by moving the power switch to the ON position. (The LED light should go off.) These switches are identified as follows: RG 0 and RG 1.

If power is	Do
restored	Step 16
not restored	Step 8

PM LCME (RG)
major (continued)

At the MAP terminal

8   Manually busy the LCME unit that is ISTB by typing the following string:

> **`> BSY UNIT`** **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME unit posted in Step 4

9   Test the ManB LCME by typing the following string:

> **`> TST UNIT`** **unit_no**

where

unit_no is the number of the LCME unit manually busied in Step 8

Example of a MAP display:

```
LCME       RSCS0    14   1          Unit 1    InSvce Test Initiated
LCME       RSCS0    14   1          Unit 1    Tst Failed: (Reason for
                          or                                   failure)

LCME       RSCS0    14   1          Unit 1    InSvce Test Initiated
LCME       RSCS0    14   1          Unit 1    Tst passed
```

If TST	Do
passed	Step 10
failed	Step 11

10   Return the ManB LCME to service by typing the following string:

> **`> RTS UNIT`** **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME tested in Step 9

If RTS	Do
passed	Step 16
failed	Step 15

11   Observe the card listing as shown in the following MAP display (resulting from Step 9).

PM LCME (RG)
major (end)

Example of a MAP display:

SITE FLR RPOS BAY_ID SHF DESCRIPTION SLOTEQPEC

RSCS0 01 A00 LCME 00 32 LCME :000 : 20 BX35

RSCS0 01 A00 LCME 00 32 LCME :000: 21 BX34

If all cards on the list have	Do
been replaced	Step 12
not been replaced	Step 14

12   Determine if the NT6X30 circuit card has been replaced.

If the NT6X30 card has	Do
been replaced	Step 15
not been replaced	Step 13

13   Go to the card replacement procedure for the NT6X30 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 9 of this procedure.

14   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 9 of this procedure.

15   Obtain further assistance in clearing this alarm, by contacting the personnel responsible for higher level support.

16   You have successfully completed this procedure. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM LCME (RG)
minor

Alarm display
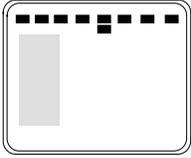
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1LCME**	.	.	.	.	.

Indication

A minor alarm involving an LCME ringing generator is indicated by 1LCME under the PM subsystem header at the MTC level of the MAP terminal.

Meaning

One of the Ringing Generator (RG) units is in the In-Service Trouble (ISTb) state.

Impact

LCME can be a peripheral module in an MCRM-S configuration. Service is not affected since a switching of support to a backup ringing generator (SwRG) automatically occurs. However, if the backup ringing generator fails, ringing will not be produced.
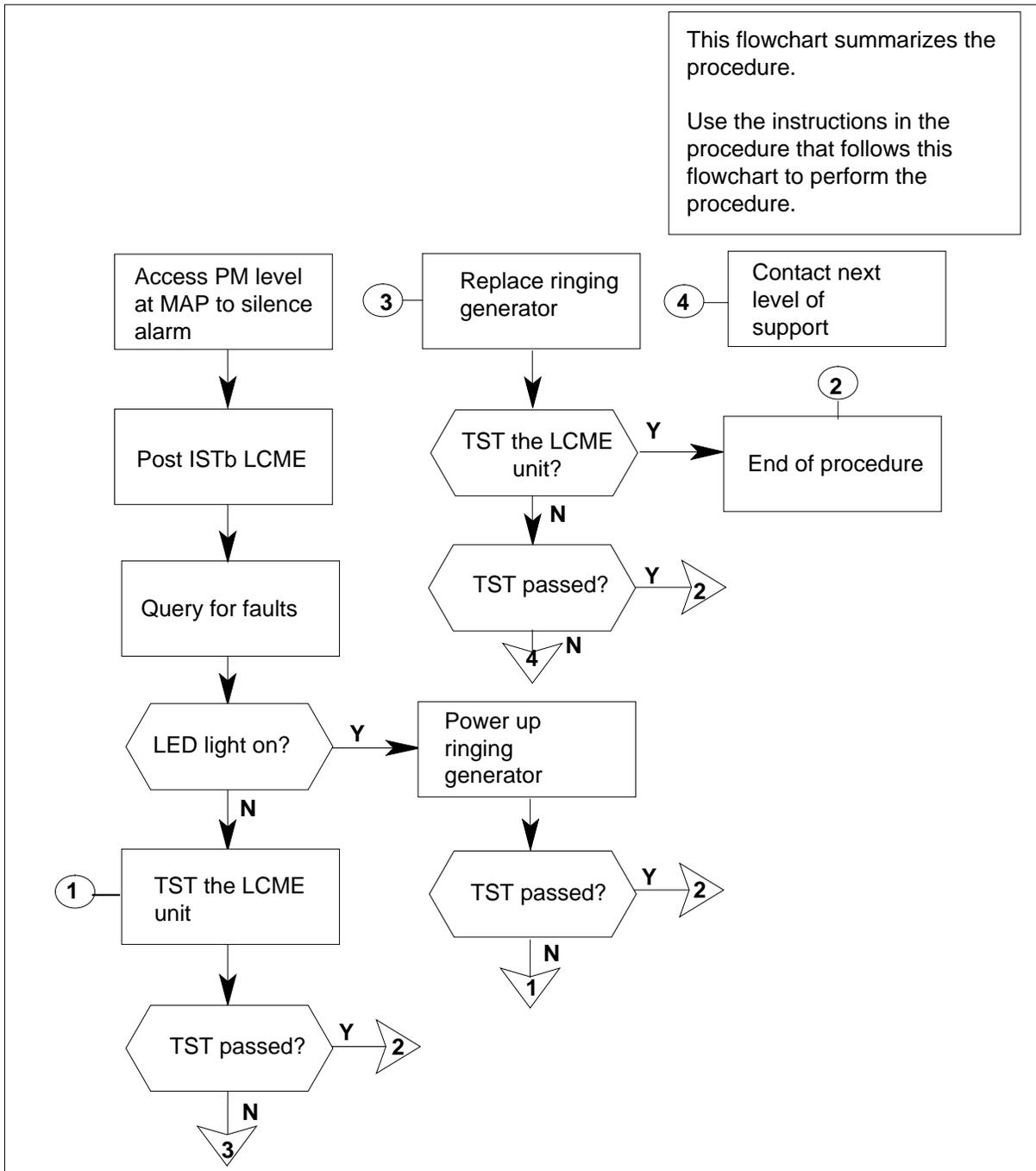
Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Summary of clearing a PM LCME (RG) alarm

This flowchart summarizes the procedure.

Use the instructions in the procedure that follows this flowchart to perform the procedure.

Access PM level at MAP to silence alarm

3 → Replace ringing generator

4 → Contact next level of support

Post ISTb LCME

TST the LCME unit? —**Y**→ **2** End of procedure

Query for faults

TST passed? —**Y**→ **2**

4 **N**

LED light on? —**Y**→ Power up ringing generator

N

1— TST the LCME unit

TST passed? —**Y**→ **2**

N

1

TST passed? —**Y**→ **2**

N

3

PM LCME (RG)
minor (continued)

Clearing a PM LCME (RG) alarm

1   You should be entering this procedure from a PM system level alarm clearing
procedure step that identified an LCME associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

>*MAPCI;MTC;PM;SIL*

and pressing the ENTER key.

3   Identify the faulty LCME by typing the following string:

> *DISP STATE ISTB LCME*

and pressing the ENTER key.

Example of a MAP display:

ISTb LCME : 2

4   Post the ISTb LCME identified in Step 3 by typing the following string:

>**POST LCME lcme_site_name lcme_cabinet_no lcme_no**

and pressing the ENTER key.

where

lcme_site_name is the site name for the faulty LCME

lcme_frame_no is the number of the associated LCME equipment frame

lcme_no is the number of the faulty LCME

Example of a MAP display:

```
 CM      MS      IOD     Net      PM     CCS      Lns     Trks     Ext
 .       .       .        .     1LCME    .        .        .        .


LCME               SysB     ManB     OffL     CBsy      ISTb       InSv
 0 Quit    PM        1        0        2        0         2          12
 2 Post_   LCME      0        0        2        0         2           9
 3 ListSet
 4 SwRG    LCME   RSCS 14 1 ISTb  Links_OOS:  CSide  0    PSide   0
 5 Trnsl_  Unit0:   InSv   Takeover        /RG: 1
 6 Tst_    Unit1:   ISTb                   /RG: 1
 7 Bsy_                           11   11   11   11   11  RG:Pref 1 InSv
 8 RTS_    Drwr:  01  23  45  67  89  01  23  45  67  89       Stby 0 ISTb
 9 OffL           ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

5   Check for fault indicators by typing the following string:

> *QUERYPM FLT*

and pressing the ENTER key.

PM LCME (RG)
minor (continued)

Example of a MAP display:

```
 CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext
 .       .       .        .       1LCME    .        .        .         .


LCME                 SysB      ManB      OffL      CBsy      ISTb        InSv
 0 Quit     PM         1         0         2         0         1          12
 2 Post_    LCME       0         0         2         0         1           9
 3 ListSet
 4 SwRG     LCME    RSCS   14 1 ISTb  Links_OOS:  CSide  0     PSide   0
 5 Trnsl_   Unit0:   InSv   Takeover       /RG: 1
 6 Tst_     Unit1:   ISTb                  /RG: 1
 7 Bsy_                                  11  11  11  11  11  RG:Pref 1 InSv
 8 RTS_  Drwr:  01  23  45  67  89  01  23  45  67  89     Stby 0 ISTb
 9 OffL           ..  ..  ..  ..  ..  ..  ..  ..  ..  ..
10 LoadPM_  QUERYPM FLT
11 Disp_    Node in-service troubles exist:
12 Next        One or both Units in-service trouble
13           LCME   UNIT 0  In-service Troubles Exist:
14 QueryPM  Ringing Generator Failure :Ring Generator in Excess load
15           LCME   UNIT 1  In-service Troubles Exist:
16           Ring Generator in Excess load
17
18
```

If faulty card is	Do
indicated	Step 11
not indicated	Step 6

At the LCME

6   Make a visual inspection of the ringing generator. Check to see if the LED light is on.

If the LED light is	Do
ON	Step 7
OFF	Step 8

7   Power up the ringing generator by moving the power switch to the ON position. (The LED light should go off.) These switches are identified as follows: RG 0 and RG 1.

If the power is	Do
restored	Step 16
not restored	Step 15

At the MAP terminal

8   Manually busy the LCME unit that is ISTB by typing the following string:

>**BSY UNIT unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME unit posted in Step 4

9   Test the ManB LCME by typing the following string:

> *TST UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME unit manually busied in Step 8

Example of a MAP display:

```
LCME      RSCS0    14   1          Unit 1   InSvce Test Initiated
LCME      RSCS0    14   1          Unit 1   Tst Failed: (Reason for
failure)
                       or
LCME      RSCS0    14   1          Unit 1   InSvce Test Initiated
LCME      RSCS0    14   1          Unit 1   Tst passed
```

If TST	Do
passed	Step 10
failed	Step 11

10   Return the ManB LCME to service by typing the following string:

>**RTS UNIT unit_no**

and pressing the ENTER key.

where

unit_no is the number of the LCME tested in Step 9

If RTS	Do
passed	Step 16
failed	Step 11

11   Observe the card listing as shown in the following MAP display (resulting from Step 11).

PM LCME (RG)
minor (end)

Example of a MAP display:

```
 SITE    FLR  RPOS BAY_ID    SHF    DESCRIPTION     SLOT   EQPEC
RSCS0    01   A00 LCME    00   32    LCME  :000    : 21    BX34
RSCS0    01   A00 LCME    00   32    LCME  :000    : 19    BX35
RSCS0    01   A00 LCME    00   32    LCME  :000    : 20    BX35
```

If all cards on the list have	Do
been replaced	Step 12
not been replaced	Step 14

12 Determine if the NT6X30 circuit card has been replaced.

If the NT6X30 card has	Do
been replaced	Step 15
not been replaced	Step 13

13 Go to the card replacement procedure for the NT6X30 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 9 of this procedure.

14 Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 9 of this procedure.

15 Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

16 This procedure is completed. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM RCC2
critical

Alarm display
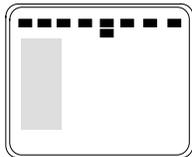
	CM	MS	IOD	Net	**PM**	Lns	Trks	Ext	APPL
	.	.	.	.	**nRCC2**	.	.	.	.
					C				

Indication

An RCC2 *C* under the PM subsystem header at the MTC level of the MAP terminal display indicates an RCC2 critical alarm.

Meaning

Both RCC2 units are in the System-Busy (SysB) or C-side Busy (CBsy) state.

Impact

A loss of subscriber service may occur. The RCC2 may be in Emergency Stand-Alone (ESA) status.
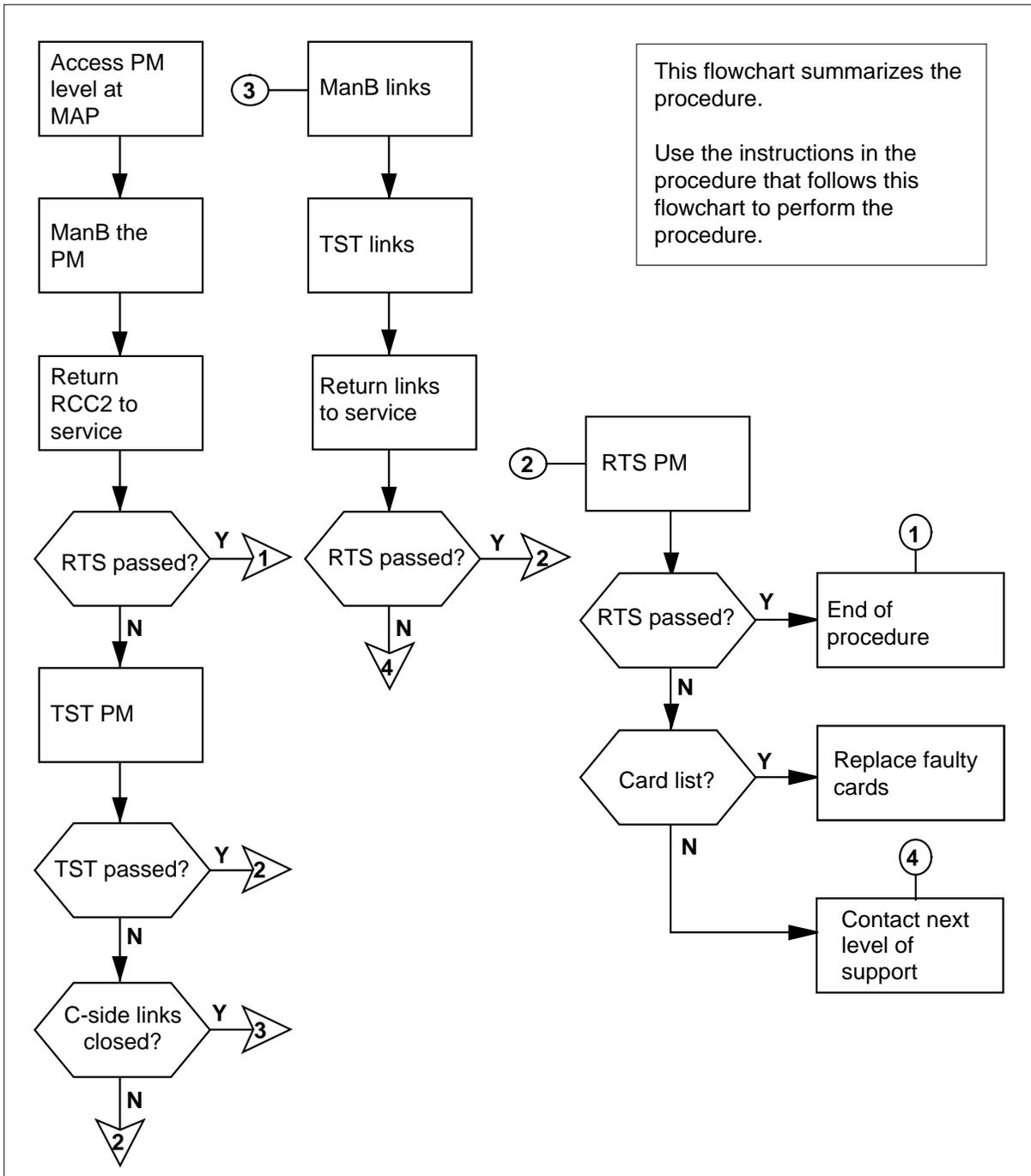
Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM RCC2
critical (continued)

Summary of clearing a PM RCC2 critical alarm

<div align="right">

PM RCC2
critical (continued)

</div>

Clearing a PM RCC2 critical alarm

1   You should enter this procedure from a PM system level alarm clearing
procedure step that identified an RCC2 associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

MAPCI;MTC;PM;SIL

and pressing the ENTER key.

3   Identify the faulty RCC2 by typing the following string:

>PM;DISP STATE CBSY RCC2

and pressing the ENTER key.

Example of a MAP response:

CBsy RCC2: 2

or

None

If *None* appears on the MAP screen, display the SysB RCC2 by typing the
following string:

>DISP STATE SYSB RCC2

and pressing the Enter key.

Example of a MAP response:

SysB RCC2: 2

4   Post the CBsy or SysB RCC2 by typing the following string:

> POST RCC2 rcc2_no

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 displayed in Step 3

Example of a MAP display:

RCC2SysBManBOfflCBsyISTbInSv

PM 3 0 1 1 4 12

RCC2 0 0 2 1 2 9

5   Check for fault indicators by typing the following string:

> QUERYPM FLT

and pressing the ENTER key.

PM RCC2
critical (continued)

Example of a MAP display:

```
   CM    MS    IOD    Net    PM     CCS    Lns    Trks    Ext    APPL
   .     .     .      .     1RCC    .      .       .      .      .
                             *C*

RCC                  SysB    ManB    OffL    CBsy    ISTb    InSv
 0 Quit     PM        3       0       1       1       4       12
 2 Post_    RCC       0       0       2       1       2       9
 3 ListSet
 4          RCC   0 CBsy  Links_OOS:  CSide  1, PSide   0
 5 TRNSL_  Unit0:   Act   CBsy
 6 Tst_    Unit1:   Inact CBsy
 7 Bsy_    QUERYPM FLT
 8 RTS_       Unit0  Static data not updated
 9 OffL       Unit1  Reset
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

6

> **CAUTION**
> **The RCC2 may be in ESA**
> A CBsy indicator could change to a SysB indicator that
> would indicate that the RCC2 is in Emergency Stand-Alone
> mode. During ESA, PM180 and PM181 logs are generated
> indicating ESA. Only local calls are supported.

Proceed as shown in the following table:

If the RCC2 is	Do
SysB	Step 7
CBsy	Step 16

7   Check PM180 and PM181 logs that may indicate that the RCC2 is in
Emergency Stand-Alone state. This should be done according to local policy
and according to the type of device used to generate log reports.

If log reports are	Do
available	Step 11
not available	Step 8

8   Activate the LOGUTIL database by typing the following string:

>QUIT ALL;LOGUTIL PM

and pressing the ENTER key.

9   Display PM180 and PM181 log reports by typing the following string:

>WHILE (BACK)(SLEEP 2)

and pressing the ENTER key.

10   The MAP display scrolls PM181 and PM180 log reports as well as other types of log reports. Scan these reports to determine possible reasons for the critical alarm in the RCC2. When the MAP display finishes scrolling and you have the necessary information, return to the CI command level by typing the following string:

>QUIT

and pressing the ENTER key.

11   Post the RCC2 again by typing the following string:

>MAPCI;MTC;PM;POST RCC2 rcc2_no

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 displayed in Step 3

If the PM logs	Do
indicate ESA	Step 36
do not indicate ESA	Step 12

12   Manually busy the RCC2 by typing the following string:

>BSY PM

and pressing the ENTER key.

13   Restore PM service by typing the following string:

>RTS PM FORCE

and pressing the ENTER key.

Example of a MAP response:

```
UNIT unit_no in ESA MODE.
THIS ACTION WILL CAUSE ESA EXIT AND ABORT n CALLS
PLEASE CONFIRM ("YES" OR "NO")
```

where

unit_nois the number of the RCC2 identified in Step 3

nis the number of calls currently in progress

PM RCC2
critical (continued)

14   Confirm the command in Step 13 by typing the following string:

>**YES**

and pressing the ENTER key.

If RTS PM FORCE	Do
passes for both units	Step 38
fails for both units	Step 15
fails for one unit	alarm clearing procedure for an RCC2 ISTb major alarm

15   Perform an in-service test on the ManB RCC2 by typing the following string:

>**TST PM**

and pressing the ENTER key.

Example of a MAP response:

Test Passed

or

Test Failed

If TST	Do
passes	Step 13
fails because C-side links are closed	Step 16
fails and a card list appears	Step 32

16   Identify C-side links to the host PM that are CBsy by typing the following string:

>**TRNSL C**

and pressing the ENTER key.

A host PM is either a Line Group Controller (LGC) or a Line Trunk Controller (LTC). In the following example, the host PM is an LTC.

Example of a MAP response: (Sheet 1 of 2)

LINK 0: LTC	1	0;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Restricted
LINK 1: LTC	1	1;CAP	S; STATUS:	OK
LINK 2: LTC	1	2;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Unrestricted

Example of a MAP response: (Sheet 2 of 2)

LINK 4: LTC   1   4;CAP   S; STATUS: CBsy

LINK 5: LTC   1   4;CAP   S; STATUS: OK

LINK 6: LTC   1   4;CAP   S; STATUS: OK

LINK 7: LTC   1   4;CAP   S; STATUS: OK

17   Post the host PM identified in Step 16 by typing the following string:

>POST host_pm host_pm_no

and pressing the ENTER key.

where

host_pm is either an LGC(I) or an LTC(I)

host_pm_no is the number of either the LGC(I) or LTC(I)

Example of a MAP display:

```
     CM     MS     IOD     Net     PM     CCS     Lns     Trks     Ext     APPL
     .      .      .       .      1RCC2    .       .       .        .       .
                                   *C*
LTC                     SysB     ManB     OffL     CBsy     ISTb     InSv
  0 Quit     PM          3        0        1        1        4        12

  2 Post_    LTC         0        0        2        1        2        9
  3 ListSet
  4          LTC    1 ISTb  Links_OOS:  CSide  0, PSide   1
  5 Trnsl_   Unit0:   Act InSv
  6 Tst_     Unit1:   Inact InSv
  7 Bsy_
  8 RTS_
  9 OffL
 10 LoadPM_
 11 Disp_
 12 Next
 13 SwAct
 14 QueryPM
 15
 16
 17 Perform
 18
```

PM RCC2
critical (continued)

18   Identify the faulty P-side links and choose a faulty link by typing the following string:

>**>TRNSL P**

and pressing the ENTER key.

Example of a MAP response:

LINK 0: RCC2	1	0;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Restricted
LINK 1: RCC2	1	1;CAP	S; STATUS:	OK
LINK 2: RCC2	1	2;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Unrestricted
LINK 4: RCC2	1	4;CAP	S; STATUS:	ISTb
LINK 5: RCC2	1	4;CAP	S; STATUS:	OK
LINK 6: RCC2	1	4;CAP	S; STATUS:	OK
LINK 7: RCC2	1	4;CAP	S; STATUS:	OK

19   Busy the faulty link by typing the following string:

>**>BSY LINK link_no**

and pressing the ENTER key.

where

link_nois the number of the faulty P-side link indicated in Step 18

20   Test the faulty link by typing the following string:

>**>TST LINK link_no**

and pressing the ENTER key.

where

link_nois the number of the link manually busined in Step 19

> ***Note:*** Repeat Steps 19 and 20 for each faulty link identifed in Step 18.

If TST on all links	Do
passes and the alarm clears	Step 26
fails	Step 21

21   Display any faulty trunks by typing the following string:

>**>TRKS;CARRIER;POST REMOTE**

and pressing the ENTER key.

Example of a MAP response:

```
CLASS ML OS ALARM SYSB  MANB UNEQ OFFL CBSY PBSY    INSV
TRUNKS 0 0  0     0     0    0    0    0    0       0
REMOTE 0 0  0     5     1    0    0    1    0       10

NO CLASS SITE RCC2 CKT D ALARM SLIP FRAME BER SES STATE
0  TRUNKS BRSC 0    2  C       0    0     <-.7 0   INSV
1  REMOTE BRSC 0    12 C       0    0     <-.7 0   INSV
2  REMOTE BRSC 0    13 C       0    0     <-.7 0   MANB

                                         MORE . . .
```

> *Note:* The MORE . . . at the bottom of the display indicates more links can be observed by typing the following string:

>NEXT

and pressing the ENTER key.

22   Carry out the repair/corrective procedure indicated by the MAP display in Step 21.

> *Note:* If faulty message links are indicated, these links must be ManB before they can be Returned To Service (RTS).

23   Test the ManB link by typing the following string:

>*TST* link_no

and pressing the ENTER key.

where

link_no is the number of the ManB link. This link number is listed under the NO column as shown in the MAP display in Step 21. The number for the ManB link in the example is 2.

If TST	Do
passes and the alarm clears	Step 24
fails	Step 37
fails and a card list appears	Step 32

24   Post the host PM by typing the following string:

>PM;POST host_pm host_pm_no

and pressing the ENTER key.

where

host_pm is the host PM LGCI or LTCI posted in Step 17

host_pm_no is the number of the host PM

PM RCC2
critical (continued)

25   Verify the status of the P-side links by typing the following string:

>**TRNSL P**

and pressing the ENTER key.

Example of a MAP response:

LINK 0: RCC2	1	0;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Restricted
LINK 1: RCC2	1	1;CAP	S; STATUS:	OK
LINK 2: RCC2	1	2;CAP	MS; STATUS:	OK,; MSGCOND: OPN, Unrestricted
LINK 4: RCC2	1	4;CAP	S; STATUS:	OK
LINK 5: RCC2	1	4;CAP	S; STATUS:	OK
LINK 6: RCC2	1	4;CAP	S; STATUS:	OK
LINK 7: RCC2	1	4;CAP	S; STATUS:	OK

26   Return the link to service by typing the following string:

>**RTS LINK link_no**

and pressing the ENTER key.

where

link_no is the number of the link identified in Step 18

   Note: This step must be performed for each faulty link that was busied.

27   Post the *inactive* RCC2 by typing the following string:

>**POST RCC2 rcc2_no**

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 identified in Step 3

   Note: This RCC2 should be SysB.

28   Return the *inactive* PM unit to service by typing the following string:

>**RTS PM**

and pressing the ENTER key.

If RTS for both RCC2 units	Do
passes	Step 38

PM RCC2
critical (continued)

If RTS for both RCC2 units	Do
fails	Step 29

29 Manually busy the *inactive* RCC2 unit by typing the following string:

>*BSU UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the inactive RCC2 unit from Step 27

30 Perform an out-of-service (OOS) test on the *inactive* RCC2 unit by typing the following string:

>*TST UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the RCC2 unit manually busied in Step 29

If TST	Do
passes	Step 31
fails	Step 32

31 Return the *inactive* RCC2 unit to service by typing the following string:

>*RTS UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the RCC2 tested in Step 30

If RTS	Do
passes	Step 38
fails	Step 37

PM RCC2
critical (end)

32   Observe the card listing shown on the MAP display.

Example of a MAP response:

```
SITE        FLR         RPOS BAY_ID    SHF         DESCRIPTION  SLOT    EQPEC
RSCS0       01          A00 RCE    00  32          RCC2 :  000   :20    6X50
RSCS0       01          A00 RCE    00  32          RCC2 :  000   :19    6X72
RSCS0       01          A00 RCE    00  32          RCC2 :  000   :17    6X69
RSCS0       01          A00 RCE    00  32          RCC2 :  000   :13    6X45
RSCS0       01          A00 RCE    00  32          RCC2 :  000   :08    6X45
```

If all cards on the list were	Do
replaced	Step 33
not replaced	Step 35

33   Determine if the NTMX81 circuit card has been replaced.

If the NTMX81 card has	Do
been replaced	Step 37
not been replaced	Step 34

34   Go to the card replacement procedure for the NTMX81 circuit card in *Card Replacement Procedures.* When you have finished with the card replacement procedures, go to Step 24 of this procedure.

35   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you finish the card replacement procedures, go to Step 30 of this procedure.

36   *Go to Recovery Procedures for instructions on recovering the RCC2.* When you have completed the recovery procedure, return to Step 5 and complete the alarm clearing procedure.

37   Obtain further assistance in clearing this alarm by contacting personnel responsible for higher level support.

38   You have successfully completed this procedure. If other alarms are displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM RCC2
major

Alarm display
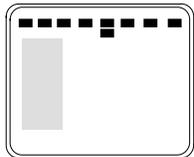
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1RCC2**	.	.	.	.	.
					M					

Indication

A 1RCC2 M under the PM subsystem header at the MTC level of the MAP screen display indicates an RCC2 major alarm.

Meaning

The indicated number of RCC2 units are in the System-Busy (SysB) state.

Impact

Subscriber service is not affected. However, if both RCC2 units fail, a loss of subscriber service occurs.
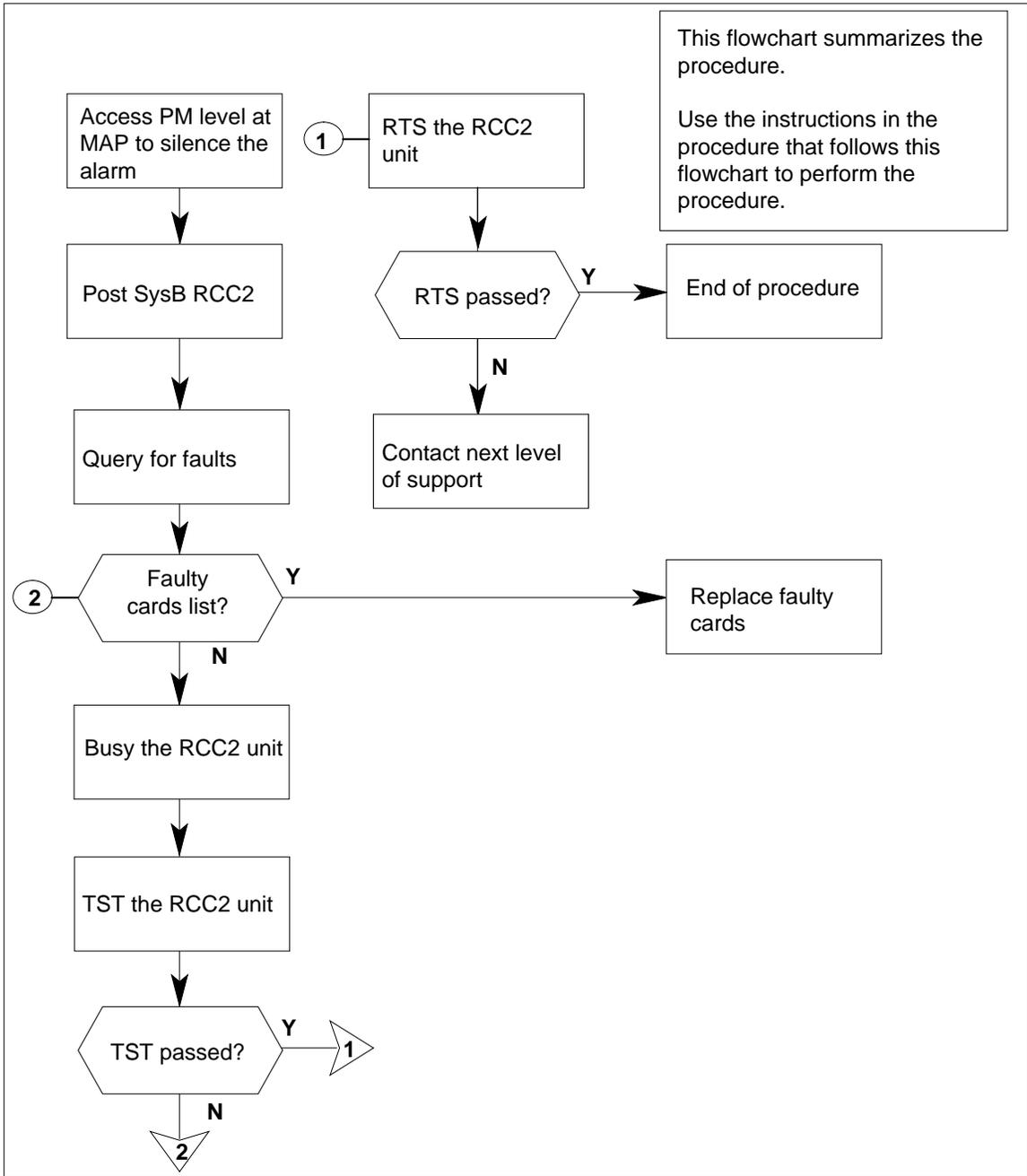
Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM RCC2
major (continued)

Summary of clearing a PM RCC2 major alarm

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│  ┌──────────────┐        ┌──────────────┐   ┌─────────────────────┐   │
│  │ Access PM    │    ┌──┐│ RTS the RCC2 │   │ This flowchart      │   │
│  │ level at     │    │ 1││ unit         │   │ summarizes the      │   │
│  │ MAP to       │    └──┘│              │   │ procedure.          │   │
│  │ silence the  │        └──────────────┘   │                     │   │
│  │ alarm        │              │            │ Use the instructions│   │
│  └──────────────┘              ↓            │ in the procedure    │   │
│         │              ┌──────────────┐  Y  │ that follows this   │   │
│         ↓              │ RTS passed?  │────→ │ flowchart to perform│   │
│  ┌──────────────┐      └──────────────┘     │ the procedure.      │   │
│  │ Post SysB    │              │ N          └─────────────────────┘   │
│  │ RCC2         │              ↓                ┌──────────────┐      │
│  └──────────────┘      ┌──────────────┐         │ End of       │      │
│         │              │ Contact next │         │ procedure    │      │
│         ↓              │ level of     │         └──────────────┘      │
│  ┌──────────────┐      │ support      │                               │
│  │ Query for    │      └──────────────┘                               │
│  │ faults       │                                                     │
│  └──────────────┘                                                     │
│         │                                                             │
│         ↓        Y                        ┌──────────────┐            │
│     ┌────────┐────────────────────────────│ Replace      │            │
│  ┌─┐│ Faulty │                            │ faulty cards │            │
│  │2││ cards  │                            └──────────────┘            │
│  └─┘│ list?  │                                                        │
│     └────────┘                                                        │
│         │ N                                                           │
│         ↓                                                             │
│  ┌──────────────┐                                                     │
│  │ Busy the     │                                                     │
│  │ RCC2 unit    │                                                     │
│  └──────────────┘                                                     │
│         │                                                             │
│         ↓                                                             │
│  ┌──────────────┐                                                     │
│  │ TST the RCC2 │                                                     │
│  │ unit         │                                                     │
│  └──────────────┘                                                     │
│         │                                                             │
│         ↓         Y                                                   │
│     ┌────────┐──────→ 1                                               │
│     │ TST    │                                                        │
│     │ passed?│                                                        │
│     └────────┘                                                        │
│         │ N                                                           │
│         ↓                                                             │
│         2                                                             │
└─────────────────────────────────────────────────────────────────────┘
```

PM RCC2
major (continued)

Clearing a PM RCC2 major alarm

1   You should be entering this procedure from a PM system level alarm clearing
procedure step that identified an RCC2 associated fault.

At the MAP display

2   Silence the alarm, if required, by typing the following string:

> *MAPCI;MTC;PM;SIL*

and pressing the ENTER key.

3   Identify the faulty RCC2 by typing the following string:

> *DISP STATE ISTB RCC2*

and pressing the ENTER key.

Example of a MAP display:
SysB RCC2 : 2

4   Post the SysB RCC2 by typing the following string:

>**POST RCC2 rcc2_no**

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 displayed in Step 3

Typical response on the MAP display:

```
RCC2  2      SysB    ManB    Offl    CBsy    ISTb    InSv
        PM      3       0       1       0       4      12
        RCC2    1       0       2       0       2       9
```

5   Check for fault indicators by typing the following string:

>**QUERYPM FLT**

and pressing the ENTER key.

PM RCC2
major (continued)

Example of a MAP display:

```
  CM      MS      IOD     Net     PM      CCS     Lns     Trks     Ext
  .       .       .       .     1RCC2    .       .       .        .
                                  M
RCC2              SysB    ManB    OffL    CBsy    ISTb    InSv
 0 Quit    PM       1       0       1       0       0       12
 2 Post_   RCC2     1       0       2       0       0        9
 3 ListSet
 4         RCC2  2  ISTb  Links_OOS: CSide  0, PSide   0
 5 TRNSL_  Unit0:   Act    InSv
 6 Tst_    Unit1:   Inact  SysB
 7 Bsy_    QUERYPM FLT
 8 RTS_        Unit0  No fault exists
 9 OffL        Unit1  Reset
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

If faulty card is	Do
indicated	Step 26
not indicated	Step 6

6   Manually busy the SysB RCC2 unit by typing the following string:

   >BSY UNIT unit_no

   and pressing the ENTER key.

   where

   unit_no is the number of the SysB RCC2 indicated in Step 5

7   Test the ManB RCC2 by typing the following string:

   >TST UNIT unit_no

   and pressing the ENTER key.

   where

   unit_no is the number of the RCC2 unit manually busied in Step 6

Example of a MAP display:

Test Passed

or

Test Failed

If TST	Do
passed	Step 25
failed with card list	Step 26
failed with no card list	Step 8

8 Identify C-side links to the host PM that is in a SysB condition by typing the following string:

>TRNSLC

and pressing the ENTER key.

A host PM may be either a Line Group Controller (LGC) or a Line Trunk Controller (LTC) with or without ISDN. In the following example, the host PM is an LTC.

Example of a MAP display:

```
LINK 0:  LTC  1  0;CAP  MS;STATUS:OK,;MSGCOND:OPN,Restricted
LINK 1:  LTC  1  1;CAP     S;STATUS:OK
LINK 2:  LTC  1  2;CAP MS;STATUS:SysB,;MSGCOND:CLS,Unrestricted
LINK 4:  LTC  1  4;CAP     S;STATUS: ISTb
LINK 5:  LTC  1  4;CAP     S;STATUS: OK
LINK 6:  LTC  1  4;CAP     S;STATUS: OK
LINK 7:  LTC  1  4;CAP     S;STATUS: OK
```

If link is	Do
not busy	Step 30
a message link	Step 9
a speech link	Step 9

9 Post the host PM by typing the following string:

>POST host_pm host_pm_no

and pressing the ENTER key.

where

host_pm is either an LGCI or an LTCI

host_pm_no is the number of the LGCI or LTCI

PM RCC2
major (continued)

Example of a MAP display:

```
 CM      MS      IOD     Net      PM      CCS      Lns      Trks      Ext
 .       .       .        .      1RCC2    .        .        .         .
                                   M
LTC(I)             SysB       ManB      OffL     CBsy     ISTb        InSv
 0 Quit     PM       1          0         1        0        1          12
 2 Post_    LTC(I)   0          0         2        0        1           9
 3 ListSet
 4          LTC(I) 1 ISTb  Links_OOS:  CSide   0, PSide    1
 5 Trnsl_   Unit0:   Act InSv
 6 Tst_     Unit1:   Inact InSv
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17 Perform
18
```

10 Identify the faulty P-side links and choose a faulty link by typing the following string:

>**TRNSLP**

Example of a MAP display:

```
LINK 0:    RCC2   1    0;CAP MS;STATUS:OK,;MSGCOND:OPN,Restricted
LINK 1:    RCC2   1    1;CAP  S;STATUS:OK
LINK 2:    RCC2   1    2;CAP MS;STATUS:SysB,;MSGCOND:CLS,Unrestricted
LINK 4:    RCC2   1    4;CAP  S;STATUS:ISTb
LINK 5:    RCC2   1    4;CAP  S;STATUS:OK
LINK 6:    RCC2   1    4;CAP  S;STATUS:OK
LINK 7:    RCC2   1    4;CAP  S;STATUS:OK
```

11 Busy the faulty link by typing the following string:

>**BSY LINK link_no**

and pressing the ENTER key.

where

link_no is the number of the faulty P-side link chosen in Step 10

12 Test the faulty link by typing the following string:

>**TSTLINK link_no**

where

link_no is the number of the link manually busied in Step 11

If TST	Do
passed and alarm clears	Step 30
passed and alarm persists	Step 17
failed	Step 13

13   Display any links that may be faulty by typing the following string:

>TRKS;CARRIER;POST MANB

and pressing the ENTER key.

Example of a MAP display:

```
CLASS ML  OS  ALARM    SYSB    MANB    UNEQ    OFFL CBSY    PBSY     INSV
TRUNKS 0  0   0         0       0       0       0   0       0        0
REMOTE 0  0   0         5       1       0       0   0       0        10

NO  CLASS    SITE    RCC  CKT  D   ALARM    SLIP     FRAME BER SES   STATE
0   TRUNKS   BRSCS   0    0    C            0        0   <-.7  0     INSV
1   REMOTE   BRSCS   0    1    C            0        0   <-.7  0     INSV
2   REMOTE   BRSCS   0    2    C            0        0   <-.7  0     MANB

                                                   MORE ....
```

> **Note:** The MORE . . . . at the bottom of the display indicates that more links can be observed by typing the following string:

>NEXT

and pressing the ENTER key.

14   Test the ManB link by typing the following string:

>TST link_no

and pressing the ENTER key.

where

link_no is the number fo the ManB link. This link number is listed under the NO column as shown in the MAP display in Step 13. The number for the ManB link used in the example is two (2).

If TST	Do
passed and alarm clears	Step 16
failed	Step 30

PM RCC2
major (continued)

15 Carry out the repair/corrective procedure indicated on the MAP screen display in Step 13.

> **Note:** If faulty message links are indicated, then these links must be in ManBusy state before they can be Returned To Service (RTS).

16 Post the host PM by typing following string:

> `> PM;POST host_pm  host_pm_no`

and pressing the ENTER key.

where

host_pm is the host PM (LGCI or LTCI) posted in Step 9

host_pm_no is the number of the host PM (LGCI or LTCI)

17 Return the link to service by typing the following string:

> `>RTS LINK link_no`

and pressing the ENTER key.

where

link_no is the number of the link identified in Step 10

If RTS	Do
passed	Step 18
failed	Step 30

18 Post the RCC2 by typing the following string:

> `>POST RCC2 rcc2_no`

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 identified in Step 3

> **Note:** This RCC2 should be SysB.

19 Return the INACTIVE unit to service by typing the following string:

> `> RTS UNIT unit_no`

and pressing the ENTER key.

where

unit_no is the number of the RCC2 posted in Step 18

If RTS	Do
passed	Step 20
failed	Step 30

PM RCC2
major (continued)

20   Switch Activity (SwAct) of the RCC2 units to ensure the one to be tested is INACTIVE by typing the following string:

> ***SWACT***

and pressing the ENTER key.

Example of a MAP display:

```
RCC2   1   A Warm SwAct will be performed
Please confirm ("YES" or "NO")
```

If the prompt indicates a	Do
cold SwAct will be performed	Step 22
warm SwAct will be performed	Step 21

21

	CAUTION
	Loss of service
	All calls, including data calls, being handled by this PM will be lost. Perform the next step during a period of low traffic only.

22   Confirm the SwAct initiated in Step 20 by typing the following string:

>YES

and pressing the ENTER key.

After both units are in-service, determine where to proceed from the following information.

If SWACT	Do
passed	Step 23
failed	Step 30

23   Busy the INACTIVE RCC2 unit by typing the following string:

>BSY UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the inactive RCC2 unit

PM RCC2
major (continued)

24   Perform an Out-Of-Service (OOS) test on the INACTIVE RCC2 unit by typing the following string:

>TST UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the RCC2 unit busied in Step 23

If TST	Do
passed	Step 25
failed	Step 26

25   Return the INACTIVE RCC2 unit to service by typing the following string:

>RTS UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the RCC2 unit tested in Step 24

If RTS	Do
passed	Step 31
failed	Step 30

26   Observe the card listing as shown in the following MAP display.

Example of a MAP display:

```
SITE    FLR    RPOS    BAY_ID       SHF   DESCRIPTION    SLOT      EQPEC
RSCS0   01     A00     RCE    00    32    RCC2 :   000   : 03      MX77
RSCS0   01     A00     RCE    00    32    RCC2 :   000   : 08      6X69
RSCS0   01     A00     RCE    00    32    RCC2 :   000   : 11      MX73
RSCS0   01     A00     RCE    00    32    RCC2 :   000   : 15      MX74
RSCS0   01     A00     RCE    00    32    RCC2 :   000   : 17      MX73
```

If all cards on the list have	Do
been replaced	Step 27
not been replaced	Step 29

27   Determine if the NTMX81 circuit card has been replaced.

If the NTMX81 card has	Do
been replaced	Step 30
not been replaced	Step 28

28   Go to the card replacement procedure for the NTMX81 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 14 of this procedure.

29   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 24 of this procedure.

30   Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

31   This procedure is complete. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM RCC2
minor

Alarm display
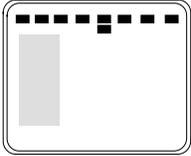
CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
.	.	.	.	**1RCC2**	.	.	.	.	.

Indication

A 1RCC2 under the PM subsystem header at the MTC level of the MAP indicates an RCC2 minor alarm.

Meaning

The indicated number of RCC2 units are in the In-Service Trouble (ISTb) state.

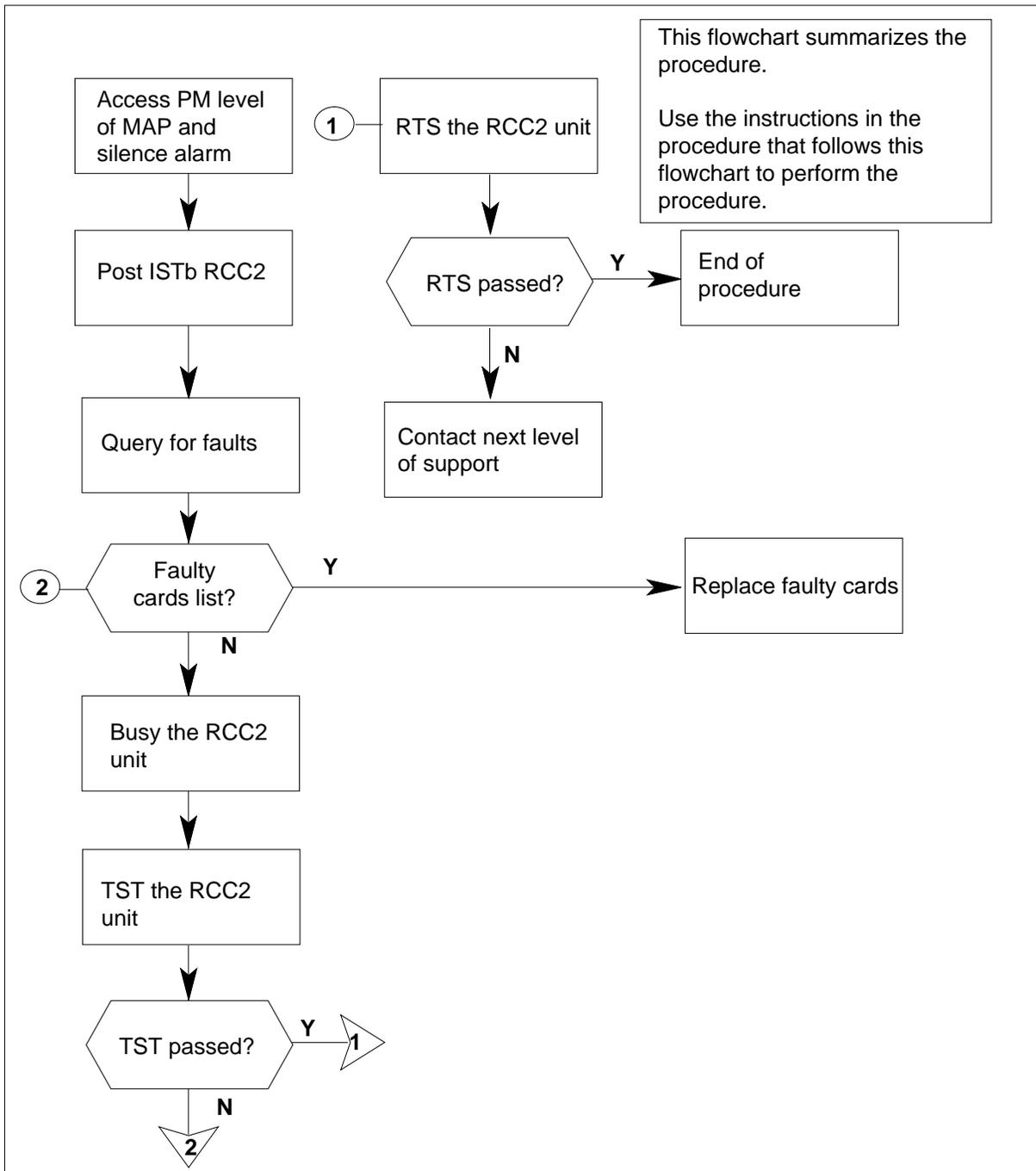## Impact

Subscriber service is not affected.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM RCC2
minor (continued)

Summary of clearing a PM RCC2 minor alarm

```
Access PM level          ┌─1─┐  RTS the RCC2 unit          This flowchart summarizes the
of MAP and                                                 procedure.
silence alarm
                                                           Use the instructions in the
    │                         │                            procedure that follows this
    ▼                         ▼                             flowchart to perform the
Post ISTb RCC2           < RTS passed? >  ──Y──►  End of    procedure.
                                                  procedure
    │                         │ N
    ▼                         ▼
Query for faults         Contact next level
                         of support
    │
    ▼
┌─2─┐  < Faulty        ──Y──►  Replace faulty cards
       cards list? >
          │ N
          ▼
      Busy the RCC2
      unit
          │
          ▼
      TST the RCC2
      unit
          │
          ▼
      < TST passed? >  ──Y──►  ▷1
          │ N
          ▼
          ▽2
```

PM RCC2
minor (continued)

Clearing a PM RCC2 alarm

1   You should be entering this procedure from a PM system level alarm clearing procedure step that identified an RCC2 associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

> ***MAPCI;MTC;PM;SIL***

and pressing the ENTER key.

3   Identify the faulty RCC2 by typing the following string:

>***DISP STATE ISTB RCC2***

and pressing the ENTER key.

Example of a MAP display:
ISTb RCC2 : 2

4   Post the ISTb RCC2 by typing the following string:

>**POST RCC2 rcc2_no**

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 displayed in Step 3

Example of a MAP display:

RCC2		SysB	ManB	Offl	CBsy	ISTb	InSv
	PM	0	0	1	0	4	12
	RCC2	0	0	2	0	2	9

5   Check for fault indicators by typing the following string:

> ***QUERYPM FLT***

and pressing the ENTER key.

Example of a MAP display:

```
 CM      MS      IOD     Net     PM      CCS     Lns     Trks     Ext
  .       .       .       .     1RCC2     .       .       .        .

RCC2               SysB     ManB     OffL     CBsy    ISTb       InSv
 0 Quit    PM        0        0        1        0        1        12
 2 Post_   RCC2      0        0        2        0        1         9
 3 ListSet
 4         RCC2   0 ISTb  Links_OOS:  CSide  1, PSide   0
 5 TRNSL_  Unit0:   Act InSv
 6 Tst_    Unit1:   Inact ISTb
 7 Bsy_    QUERYPM FLT
 8 RTS_         Unit0  Static data not updated
 9 OffL         Unit1  Reset
10 LoadPM_
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
```

If the faulty card is	Do
indicated	Step 28
not indicated	Step 6

6   Manually busy the ISTb RCC2 unit by typing the following string:

>BSY UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the ISTb RCC2 indicated in Step 5

7   Test the ManB RCC2 by typing the following string:

> *TST UNIT* **unit_no**

and pressing the ENTER key.

where

unit_no is the number of the RCC2 unit manually busied in Step 6

PM RCC2
minor (continued)

Example of a MAP display:

Test Passed

or

Test Failed

If TST	Do
passed	Step 27
failed with card list	Step 28
failed without card list	Step 8

8   Identify C-side links to the host PM that are in a SysB condition by typing the following string:

> *TRNSL C*

and pressing the ENTER key.

A host PM may be either a Line Group Controller with or without ISDN (LGC or LGCI) or a Line Trunk Controller with or without ISDN (LTC or LTCI). In the following example, the host PM is an LTCI.

Example of a MAP display:

```
LINK 0:    LTC(I)    1    0;CAP MS;STATUS:    OK,;MSGCOND: OPN,Restricted
LINK 1:    LTC(I)    1    1;CAP  S;STATUS:    OK
LINK 2:    LTC(I)    1    2;CAP MS;STATUS:    OK,;MSGCOND:OPN,Unrestricted
LINK 4:    LTC(I)    1    4;CAP  S;STATUS:    SysB
LINK 5:    LTC(I)    1    4;CAP  S;STATUS:    OK
LINK 6:    LTC(I)    1    4;CAP  S;STATUS:    OK
LINK 7:    LTC(I)    1    4;CAP  S;STATUS:    OK
```

9   Post the host PM by typing the following string:

>POST host_pm host_pm_no

and pressing the ENTER key.

where

host_pm is either an LGCI or an LTCI

host_pm_no is the number of either the LGCI or LTCI

PM RCC2
minor (continued)

Example of a MAP display:

```
CM      MS     IOD     Net     PM      CCS     Lns     Trks     Ext
.       .      .       .      1RCC2    .       .       .        .

LTC(I)              SysB     ManB     OffL     CBsy     ISTb     InSv
 0 Quit     PM        0        0        1        0        4       12
 2 Post_    LTC(I)    0        0        2        0        2        9
 3 ListSet
 4          LTC(I) 1 ISTb  Links_OOS:  CSide  0, PSide   1
 5 Trnsl_   Unit0:    Act InSv
 6 Tst_     Unit1:    Inact InSv
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17 Perform
18
```

10   Identify the faulty P-side links and choose a faulty link by typing the following string:

>TRNSL P

and pressing the ENTER key.

Example of a MAP display:

```
LINK 0:   RCC2    1    0;CAP MS;STATUS:   OK,;MSGCOND: OPN,Restricted
LINK 1:   RCC2    1    1;CAP  S;STATUS:   OK
LINK 2:   RCC2    1    2;CAP MS;STATUS:   OK,;MSGCOND:OPN,Unrestricted
LINK 4:   RCC2    1    4;CAP  S;STATUS:   ISTb
LINK 5:   RCC2    1    4;CAP  S;STATUS:   OK
LINK 6:   RCC2    1    4;CAP  S;STATUS:   OK
LINK 7:   RCC2    1    4;CAP  S;STATUS:   OK
```

11   Busy the faulty link by typing the following string:

> *BSY LINK* **link_no**

and pressing the ENTER key.

where

link_no is the number of the faulty P-side link chosen in Step 10

12   Test the faulty link by typing the following string:

> *TST LINK* **link_no**

and pressing the ENTER key.

PM RCC2
minor (continued)

where

link_no is the number of the faulty link manually busied in Step 11

If TST	Do
passed and alarm persists	Step 32
passed and alarm clears	Step 18
failed	Step 13

13 Display any links that may be faulty by typing the following string:

> **TRKS;carrier;post manb**

and pressing the ENTER key.

Example of a MAP display:

```
CLASS ML  OS    ALARM     SYSB  MANB    UNEQ  OFFL    CBSY  PBSY  INSV
TRUNKS 0  0     0         0        0    0     0       0        0    0
REMOTE 0  0     0         5        0    0     0       0        0   10

NO  CLASS   SITE    RCC  CKT  D  ALARM  SLIP FRAME    BER   SES    STATE
0    TRUNKS BRSCS   0    0    C         0    0        <-.7  0      INSV
1    REMOTE BRSCS   0    1    C         0    0        <-.7  0      INSV
2    REMOTE BRSCS   0    2    C         0    0        <-.7  0      MANB
                                                    MORE . . .
```

Note: The MORE . . . at the bottom of the display indicates that more links can be observed by typing the following string:

>**NEXT**

and pressing the ENTER key.

14 Test the ManB link by typing the following string:

>**TST link_no**

and pressing the ENTER key.

where

link_no is the number of the ManB link. This link number is listed under the NO column as shown in the MAP display in Step 13. The number for the ManB link used in the example is two (2).

If TST	Do
passed and alarm clears	Step 17
failed	Step 32

PM RCC2
minor (continued)

15   Carry out the repair/corrective procedure indicated on the MAP terminal display in Step 13.

    Note: If faulty message links are indicated, then these links must be in ManB state before they can be Returned To Service (RTS).

16   Post the host PM by typing following string:

    > *PM;POST* **host_pm host_pm_no**

    and pressing the ENTER key.

    where

    host_pm is the host PM (LGCI or LTCI) posted in Step 9

    host_pm_no is the number of the host PM (LGCI or LTCI)

17   Using the information displayed in Step 8, determine which RCC2 unit is associated with the SysB link. The unit identified must be INACTIVE to continue.

If RCC2 unit is	Do
INACTIVE	Step 29
ACTIVE	Step 18

18   Return the link to service by typing the following string:

    >**RTS LINK link_no**

    and pressing the ENTER key.

    where

    link_no is the number of the link identified in Step 10

19   Post the RCC2 by typing the following string:

    >**POST RCC2 rcc2_no**

    and pressing the ENTER key.

    where

    rcc2_no is the number of the RCC2 identified in Step 3

    Note: This RCC2 should be SysB.

20   Return the INACTIVE unit to service by typing the following string:

    > *RTS UNIT* **unit_no**

    and pressing the ENTER key.

    where

    unit_no is the number of the RCC2 posted in Step 19

21   Post the host PM by typing the following string:

    > **POST host_pm host_pm_no**

    and pressing the ENTER key.

PM RCC2
minor (continued)

where

host_pm is either an LGCI or an LTCI

host_pm_no is the number of the LGCI or LTCI

22   Switch Activity (SwAct) of the RCC2 units to ensure the one to be tested is INACTIVE by typing the following string:

>SWACT

and pressing the ENTER key.

Example of a MAP display:

```
RCC2   1   A Warm SwAct will be performed
Please confirm ("YES" or "NO")
```

If the prompt indicates a	Do
warm SwAct will be performed	Step 23
cold SwAct will be performed	Step 24

23

> **CAUTION**
> **Loss of service**
> All calls, including data calls, being handled by this PM will be lost. Perform the next step during a period of low traffic only.

24   Confirm the SwAct initiated in Step 22 by typing the following string:

>YES

and pressing the ENTER key.

After both units are in-service, use the following information to determine which step to perform next.

If SWACT	Do
passed	Step 25
failled	Step 32

25   Busy the INACTIVE RCC2 unit by typing the following string:

>BSY UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the inactive RCC2 unit (from Step 20)

26   Perform and Out-Of-Service (OOS) test on the INACTIVE RCC2 unit by typing the following string:

>TST UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the RCC2 busied in Step 25

If TST	Do
passed	Step 27
failed	Step 28

27   Return the INACTIVE RCC2 unit to service by typing the following string:

>RTS UNIT unit_no

and pressing the ENTER key.

where

unit_no is the number of the RCC2 unit tested in Step 26

If RTS	Do
passed	Step 33
failled	Step 32

28   Observe the card listing as shown in the following MAP display.

Example of a MAP display:

```
 SITE      FLR      RPOS BAY_ID        SHF  DESCRIPTION   SLOT EQPEC
RSCS0      01       A00 RCE     00      32  RCC2 :  000   : 20  6X50
RSCS0      01       A00 RCE     00      32  RCC2 :  000   : 19  6X72
RSCS0      01       A00 RCE     00      32  RCC2 :  000   : 17  6X69
```

If all cards on the list have	Do
been replaced	Step 29
not been replaced	Step 31

PM RCC2
minor (end)

29 Determine if the NTMX81 circuit card has been replaced.

If the NTMX81 card has	Do
been replaced	Step 32
not been replaced	Step 30

30 Go to the card replacement procedure for the NTMX81 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 26 of this procedure.

31 Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 26 of this procedure.

32 Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

33 This procedure is complete. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

PM RMM
major

Alarm display
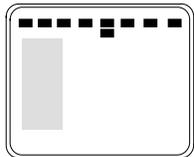
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1SysB**	.	.	.	.	.
					M					

Indication

If *n*SysB M under the PM subsystem header at the MTC level of the MAP screen display exists, a major alarm associated with an RMM is indicated.

Meaning

The indicated number of RMM units are in the System-Busy (SysB) state.

Impact

If the RMM unit fails, maintenance and line testing is discontinued. Subscriber service is not affected.

Common procedures

Not applicable.

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM RMM
major (continued)

Summary of clearing a PM RMM major alarm

```
Access PM level          ┌1┐  RTS the RMM        This flowchart summarizes the
at MAP and                    unit               procedure.
silence alarm
                                                 Use the instructions in the
      │                          │               procedure that follows this
      ▼                          ▼               flowchart to perform the
                                                 procedure.
Post SysB RMM            RTS passed?   ──Y──▶  End of
                                               procedure
      │                          │
      ▼                          N
                                 │
Query for faults                 ▼
                          Contact next
                          level of support
      │
      ▼
┌2┐  Faulty cards    ──Y──────────────────────▶  Replace faulty
     list?                                        cards
      │
      N
      │
      ▼
TST the RMM
unit

      │
      ▼
TST passed?   ──Y──▶ 1

      │
      N
      │
      ▼
      2
```

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PM RMM
major (continued)

Clearing a PM RMM alarm

1   You should be entering this procedure from a PM system level alarm clearing
            procedure step that identified an RMM associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing the following string:

            > *MAPCI;MTC;PM;SIL*

            and pressing the ENTER key.

3   Identify the faulty RMM by typing the following string:

            > *DISP STATE RMM*

            and pressing the ENTER key.

            Example of a MAP display:
            SysB RMM: 2

4   Post the SysB RMM identified in Step 3 typing the following string:

            > *POST RMM* **rmm_no**

            and pressing the ENTER key.

            where

            rmm_no is the number of the faulty RMM.

            Example of a MAP display:

```
    CM     MS     IOD     Net     PM     CCS     Lns     Trks     Ext     APPL
    .      .      .       .     1SysB    .       .       .        .       .


RMM            SysB     ManB     OffL     CBsy     ISTb        InSv
 0 Quit    PM    3       0        1        1         4          12
 2 Post_   RMM   0       0        2        1         2           9
 3
 4         RMM   2      SysB
 5 Trnsl_
 6 Tst_
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next_
13
14 QueryPM
15
16
17
18
```

PM RMM
major (continued)

5 Check for fault indicators or faulty cards by typing:

>**QUERYPM FLT**

and pressing the ENTER key.

Example of a MAP display:

```
   CM    MS    IOD    Net    PM    CCS    Lns    Trks    Ext    APPL
   .     .     .      .    1SysB   .      .      .       .      .


RMM             SysB      ManB     OffL     CBsy     ISTb      InSv
 0 Quit    PM    3         0        1        1        4        12
 2 Post_   RMM   0         0        2        1        2         9
 3
 4         RMM 2 SysB
 5 Trnsl_
 6 Tst_
 7 Bsy_    QUERYPM FLT
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next_
13
14 QueryPM
15
16
17
18
```

If a faulty card is	Do
indicated	Step 17
not indicated	Step 6

6 Manually busy the RMM posted in Step 4 by typing the following string:

>**BSY**

and pressing the ENTER key.

7 Perform an in-service test on the faulty RMM by typing:

>*TST*

and pressing the ENTER key.

PM RMM
major (continued)

Example of a MAP display:

Test Passed

or

Test Failed

If the TST	Do
passes	Step 16
fails because of the C-side links	Step 8
fails and a card list appears	Step 17

8   Identify C-side links to the RCC2 that are in a busy condition by typing the following string:

> *TRNSL C*

and pressing the ENTER key.

Example of a MAP display:

```
LINK 22:  RCC2 2    0;CAP S;STATUS:    OK,;MSGCOND:    OPN,Restricted
LINK 23:  RCC2 2    1;CAP S;STATUS:    SYSB
```

9   Post the RCC2 unit associated with the RMM by typing the following string:

> *POST RCC2* rcc2_no

and pressing the ENTER key.

where

rcc2_no is the number of the RCC2 unit identified in Step 8

PM RMM
major (continued)

Example of a MAP display:

```
  CM     MS     IOD     Net     PM     CCS     Lns     Trks     Ext     APPL
   .      .      .       .    1SysB     .       .       .        .       .

RCO2                  SysB     ManB     OffL     CBsy     ISTb      InSv
 0 Quit     PM         3        0        1        1        4        12
 2 Post_    RCC2       0        0        2        1        2         9
 3 ListSet
 4          RCC2   2 ISTb  Links_OOS:  CSide  0, PSide   1
 5 TRNSL_   Unit0:    Act ISTb
 6 TST_     Unit1:    Inact InSv
 7 BSY_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17
18
```

10   Identify the faulty P-side links by typing the following string the following string:

> **TRNSL P**

and pressing the ENTER key.

Example of a MAP display:

```
LINK 22:  RMM  2    0;CAP MS;STATUS:    OK,;MSGCOND:   OPN,Restricted
LINK 23:  RMM  2    1;CAP  S;STATUS:    SYSB
```

11   Choose a faulty link and busy it by typing the following string:

> *BSY LINK* **link_no**

and pressing the ENTER key.

where

link_no is the number of the link (22 or 23) identified in Step 10.

12   Test the ManB link by typing the following string:

> *TST LINK* **link_no**

and pressing the ENTER key.

PM RMM
major (continued)

where

link_no is the number of the link (22 or 23) manually busied in Step 11

If the TST	Do
passes	Step 13
fails	Step 21

13   Return the link to service by typing the following string:

> **RTS LINK link_no**

and pressing the ENTER key.

where

link_no is the number of the link (22 or 23) tested in Step 12.

> ***Note:*** If other faulty links are identified, execute Steps 11 through 13 for each link until all links are busied, tested, and returned to service.

If the RTS	Do
passes	Step 14
fails	Step 17

14   Post the ManB RMM by typing the following string:

> **POST RMM rmm_no**

and pressing the ENTER key.

where

rmm_no is the number of the RMM busied in Step 6

15   Test the RMM unit by typing the following string:

> **TST**

and pressing the ENTER key.

If the TST	Do
passes	Step 16
fails	Step 17

PM RMM
major (end)

16   Return the ManB RMM to service by typing the following string:

> **RTS**

and pressing the ENTER key.

If the RTS	Do
passes	Step 22
fails	Step 21

17   Observe the card listing as shown on the MAP display.

Example of a MAP display:

```
SITE FLR  RPOS BAY_ID     SHF   DESCRIPTION        SLOT      EQPEC
RSC0  01   A00 RCE    00  32    RMM:000          : 00       6X23
RSC0  01   A00 RCE    00  32    RMM:000          : 04       6X51
RSC0  01   A00 RCE    00  32    RMM:000          : 05       6X52
RSC0  01   A00 RCE    00  32    RMM:000          : 16       6X23
```

If all cards on the list have	Do
been replaced	Step 18
not been replaced	Step 20

18   Determine if the NTMX74 circuit card has been replaced.

If the NTMX74 card has	Do
been replaced	Step 21
not been replaced	Step 19

   Note: If the NTMX74 card is indicated, check to see if one link or
   several links are faulty. Repeat the clearing procedure as necessary.

19   Go to the card replacement procedure for the NTMX74 circuit card in *Card
          Replacement Procedures.* When you have finished with the card
          replacement procedures, go to Step 12 in this procedure.

20   Go to the card replacement procedure in *Card Replacement Procedures* for
          the next card on the card list. When you have finished with the card
          replacement procedures, go to Step 15 in this procedure.

21   Obtain further assistance in clearing this alarm by contacting the personnel
          responsible for higher level support.

22   This procedure is completed. If there are other alarms displayed, reference
          the appropriate alarm clearing procedures for the indicated alarms.

**PM RMM
minor**

Alarm display
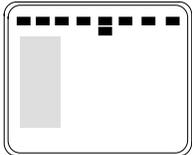
	CM	MS	IOD	Net	**PM**	CCS	Lns	Trks	Ext	APPL
	.	.	.	.	**1CBsy**	.	.	.	.	.

Indication

If *n*CBsy under the PM subsystem header at the MTC level of the MAP terminal exists, a minor alarm associated with an RMM is indicated.

> *Note: n* represents a numeric character.

Meaning

The indicated number of units are in the C-side Busy (CBsy) state.

Impact

Subscriber service is not affected. You will have no local RMM backup if the unit [or both units if the peripheral contains two RMMs] should fail.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

PM RMM
minor (continued)

Summary of clearing a PM RMM minor alarm

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│                                          ┌──────────────────────────┐     │
│   ┌──────────────────┐        ┌─────────┐│ This flowchart summarizes │     │
│   │ Access PM level  │        │ RTS the ││ the procedure.            │     │
│   │ at MAP and       │   (1)──│ RMM     ││                           │     │
│   │ silence alarm    │        │ unit    ││ Use the instructions in   │     │
│   └──────────────────┘        └─────────┘│ the procedure that follows│     │
│            │                       │      │ this flowchart to perform │     │
│            ▼                       ▼      │ the procedure.            │     │
│   ┌──────────────────┐      ╱ RTS passed? ╲   Y   ┌──────────────┐          │
│   │ Post CBsy RMM    │     ╱                ╲─────▶│ End of       │          │
│   └──────────────────┘     ╲                ╱      │ procedure    │          │
│            │                ╲              ╱       └──────────────┘          │
│            ▼                      │ N                                        │
│   ┌──────────────────┐            ▼                                         │
│   │ Query for faults │      ┌──────────────────┐                            │
│   └──────────────────┘      │ Contact next level│                           │
│            │                │ of support       │                            │
│            ▼                └──────────────────┘                            │
│      ╱ Faulty cards ╲  Y                      ┌──────────────────┐          │
│  (2)─╱   list?       ╲────────────────────────▶│ Replace faulty   │         │
│      ╲              ╱                          │ cards            │         │
│            │ N                                 └──────────────────┘         │
│            ▼                                                                │
│   ┌──────────────────┐                                                     │
│   │ TST the RMM      │                                                      │
│   │ unit             │                                                      │
│   └──────────────────┘                                                     │
│            │                                                                │
│            ▼                                                                │
│      ╱ TST passed? ╲  Y   ▷ 1                                               │
│      ╲            ╱                                                         │
│            │ N                                                              │
│            ▽ 2                                                              │
└─────────────────────────────────────────────────────────────────────────┘
```
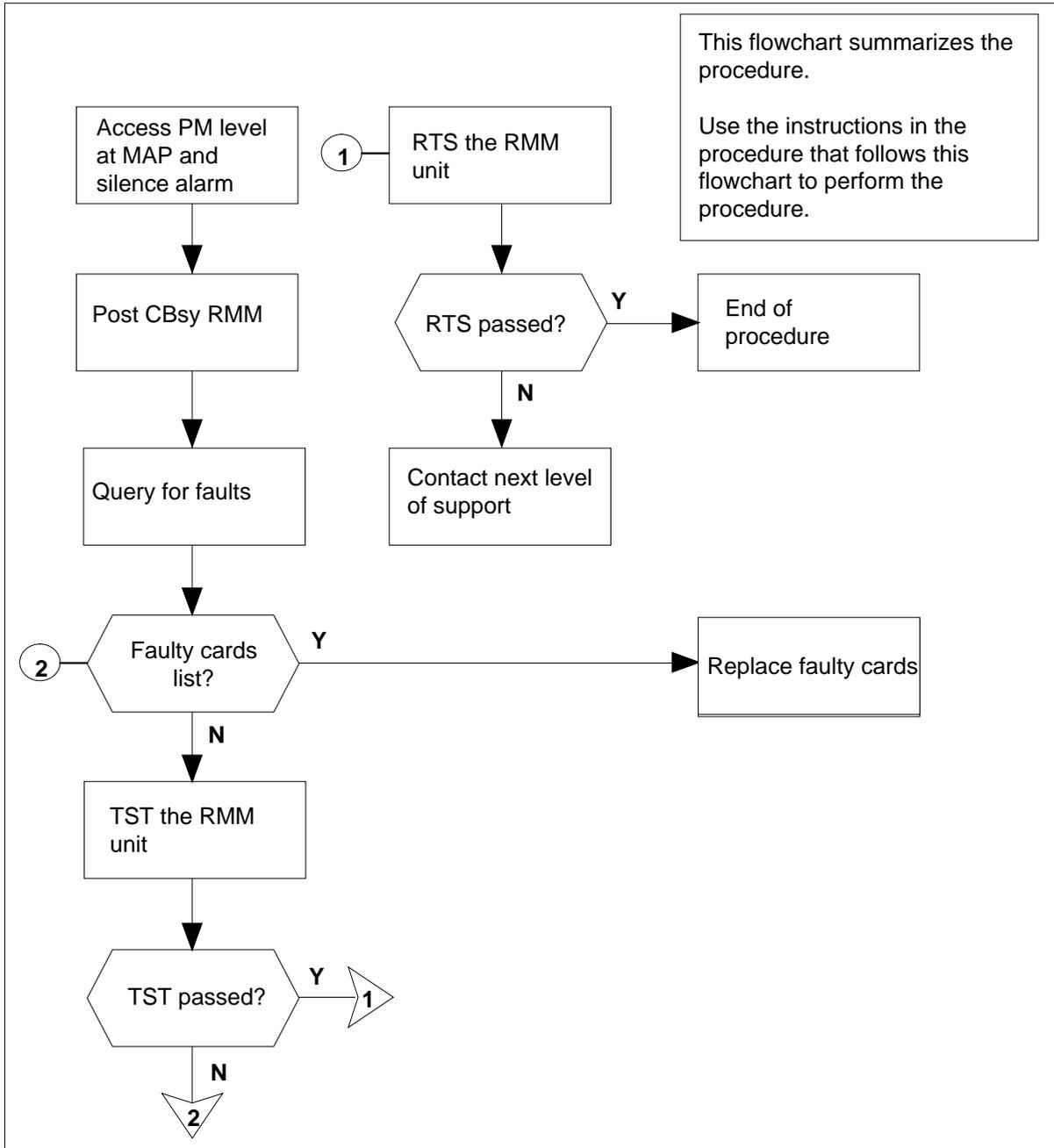
PM RMM
minor (continued)

Clearing a PM RMM minor alarm

1   You should be entering this procedure from a PM system level alarm clearing procedure step that identified an RMM associated fault.

At the MAP terminal

2   Silence the alarm, if required, by typing:

> **MAPCI;MTC;PM;SIL**

and pressing the ENTER key.

3   Identify the faulty RMM by typing:

> **DISP STATE CBSY RMM**

and pressing the ENTER key.

Example of a MAP display:
CBsy RMM: 1

4   Post the CBsy RMM identified in Step 3 by typing:

> **POST RMM rmm_no**

and pressing the ENTER key.

where

rmm_no is the number of the faulty RMM

Example of a MAP display:

```
   CM      MS      IOD     Net     PM      CCS     Lns     Trks    Ext     APPL
   .       .       .       .      1CBsy    .       .       .       .       .


RMM             SysB        ManB        OffL        CBsy        ISTb        InSv
 0 Quit    PM     3           0           0           1           4           12
 2 Post_   RMM    0           0           0           1           2            9
 3
 4         RMM    1         CBsy
 5 Trnsl_
 6 Tst_
 7 Bsy_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next_
13
14 QueryPM
15
16
17
18
```

PM RMM
minor (continued)

5   Check for fault indicators or faulty cards by typing:

> **QUERYPM FLT**

and pressing the ENTER key.

Example of a MAP display:

```
    CM      MS      IOD     Net     PM      CCS     Lns     Trks    Ext     APPL
    .       .       .       .     1CBsy     .       .       .       .       .


RMM             SysB        ManB        OffL        CBsy        ISTb        InSv
 0 Quit   PM     3           0           0           0           4           12
 2 Post_  RMM    0           0           0           0           2            9
 3
 4        RMM    1    CBsy
 5 Trnsl_
 6 Tst_
 7 Bsy_     QUERYPM FLT
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next_
13
14 QueryPM
15
16
17
18
```

If a faulty card is	Do
indicated	Step 17
not indicated	Step 6

6   Busy the RMM posted in Step 4 by typing:

>**BSY**

and pressing the ENTER key.

7   Perform an in-service test on the faulty RMM by typing:

>**TST**

and pressing the ENTER key.

PM RMM
minor (continued)

Example of a MAP display:

Test Passed

or

Test Failed

If TST	Do
passes	Step 16
fails because of the C-side links	Step 8
fails and a card list appears	Step 17

8   Identify C-side links to the RCC2 that are in a busy condition by typing:

>TRNSL C

and pressing the ENTER key.

Example of a MAP display:

```
LINK 22:  RCC2 2 0;CAP  S;STATUS:  OK,;MSGCOND: OPN,Restricted
LINK 23:  RCC2 2 1;CAP  S;STATUS:  CBSY
```

9   Post the RCC2 unit associated with the RMM by typing:

> *POST RCC2* rcc2_no

and pressing the ENTER key.

where

rcc2_no is the RCC2 unit identified in Step 8

PM RMM
minor (continued)

Example of a MAP display:

```
    CM    MS    IOD    Net    PM     CCS    LNS    Trks    Ext    APPL
    .     .     .      .     1CBsy   .      .      .       .      .

RCC2              SysB      ManB      OffL      CBsy      ISTb      InSv
 0 Quit    PM      0         0         0         0         4         12
 2 Post_   RCC2    0         0         0         0         2          9
 3 ListSet
 4         RCC2   2 ISTb  Links_OOS:  CSide   0, PSide   1
 5 TRNSL_  Unit0:   Act ISTb
 6 TST_    Unit1:   Inact InSv
 7 BSY_
 8 RTS_
 9 OffL
10 LoadPM_
11 Disp_
12 Next
13 SwAct
14 QueryPM
15
16
17
18
```

10   Identify the faulty P-side links by typing:

> *TRNSL P*

and pressing the ENTER key.

Example of a MAP display:

```
LINK 22:  RMM  1    0;CAP MS;STATUS:    OK,;MSGCOND:    OPN,Restricted
LINK 23:  RMM  1    1;CAP  S;STATUS:    CBSY
```

11   Choose the faulty link and busy it by typing:

> *BSY LINK* **link_no**

and pressing the ENTER key.

where

link_no is the number of the link identified in Step 10 (22 or 23)

12   Test the ManB link by typing:

> *TST LINK* **link_no**

and pressing the ENTER key.

PM RMM
minor (continued)

where

link_no is the number of the link identified in Step 10 (22 or 23)

If TST	Do
passes	Step 13
fails	Step 17

13   Return the ManB link to service by typing:

>*RTS LINK* link_no

where

link_no is the number of the link (22 or 23) tested in Step 12

If RTS	Do
passes	Step 14
fails	Step 17

Note: If other faulty links are identified, execute the procedures in Steps 11 through 13 for each link until all links are busied, tested, and returned to service.

14   Post the ManB RMM by typing:

> *POST RMM* rmm_no

and pressing the ENTER key.

where

rmm_no is the number of the RMM busied in Step 6

15   Test the RMM unit by typing:

>TST

and pressing the ENTER key.

If TST	Do
passes	Step 16
fails	Step 17

PM RMM
minor (end)

16   Return the ManB RMM to service by typing:

>**RTS**

and pressing the ENTER key.

If RTS	Do
passes	Step 22
fails	Step 21

17   Observe the card listing as shown on the MAP screen.

Example of a MAP display:

```
SITE      FLR  RPOS  BAY_ID      SHF  DESCRIPTION    SLOT     EQPEC
RSCS0     01   A00   RCE    00   32   RMM:000        : 00     6X23
RSCS0     01   A00   RCE    00   32   RMM:000        : 04     6X51
RSCS0     01   A00   RCE    00   32   RMM:000        : 05     6X52
RSCS0     01   A00   RCE    00   32   RMM:000        : 16     6X23
```

If all cards on the list have	Do
been replaced	Step 18
not been replaced	Step 20

18   Determine if the NTMX74 circuit card has been replaced.

If the NTMX74 card has	Do
been replaced	Step 21
not been replaced	Step 19

    Note: If the NTMX74 card is indicated, check to see if one link or several links are faulty. Repeat the alarm clearing procedure as necessary.

19   Go to the card replacement procedure for the NTMX74 circuit card in *Card Replacement Procedures*. When you have finished with the card replacement procedures, go to Step 12 of this procedure.

20   Go to the card replacement procedure in *Card Replacement Procedures* for the next card on the card list. When you have finished with the card replacement procedures, go to Step 15 of this procedure.

21   Obtain further assistance in clearing this alarm by contacting the personnel responsible for higher level support.

22   This procedure is completed. If there are other alarms displayed, reference the appropriate alarm clearing procedures for the indicated alarms.

Meridian SuperNode

Commercial Systems

Alarm Clearing Procedures

NORTEL
NETWORKS