Field Feature Bill of Material (FFBM)

PN 03F5153

REMOVAL of a Low Speed Scanner (FC 4721)
from IBM 3745 Models 170 and 17A

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Before Removal (steps 1-8)

1.0 Machines Affected

3745 Models 170 and 17A.

2.0 Related BMs and ECs

None.

3.0 BMs to be Used

- 03F5153 - Installation Instructions
- 03F5055 - Low speed scanner removal.

3.1 As Required BM

- 03F5056 - BPC1 card installation (if a TRA feature is installed).

4.0 Preparation

1. Familiarize yourself with the purpose and details of these removal instructions before negotiating machine time with the customer.

2. Check all the items and count the parts listed on the BM to be used to determine whether all parts were received.

   Notes:

   a. Up to **6 ALC** scanners can be installed in 3745 Models 170/17A.

   b. Both Low speed scanners (FC4721) and ALC scanners (RPQ 7L1148) can be installed in the same 3745 Model 170/17A if the total number does not exceed 6.

3. Based on the *Hone Configurator sheet* and the following table, determine the adapter(s) card position(s) to be removed and the BPC1 card position(s) to be installed if required.

Adapter Number	12	11	10	9	4	3
Removal Sequence	3	4	5	6	2	1
CSC card position	M2	N2	P2	Q2	R2	T2
PBC1 card position	M4	N4	P4	Q4	R4	T4

4. Identify the LIU enclosure associated with the scanner to be removed and the DMUX/SMUX connector where MUX cable will be unplugged.

5. DMUX in LIU1 and SMUX in LIU2 are plugged in position B0 and are protected by a cover.

6. LIB in position 01M-A1 or A2 is always a LIU1.

7. LIB in position 01L-A1 is always a LIU2.

8. LIB in position 01L-A2 can be a LIU1 or a LIU2.

5.0 Programming

5.1 Diagnostic Programs

To reflect this change, the CDF will be performed in Step 11.0. This is essential to allow internal diagnostics to be run properly.

5.2 System Programs

The customer has to update the control program to implement this change.

```
NCP Tier   Usage Limits  (Up to...)
--------   -----------------------
 1          1 TSS/HPTSS  + 1 TRA +  2 CA
 2          2 TSS/HPTSS  + 1 TRA +  2 CA
2.5         6 TSS/HPTSS  + 0 TRA +  4 CA
   or       2 TSS/HPTSS  + 2 TRA +  4 CA
 3          8 TSS/HPTSS  + 0 TRA +  8 CA
   or       4 TSS/HPTSS  + 4 TRA +  8 CA
 4         24 TSS/HPTSS  + 0 TRA + 16 CA
   or      20 TSS/HPTSS  + 4 TRA + 16 CA
```

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6.0 Purpose and Description

6.1 Purpose

Remove a LSS scanner (FC 4721).

6.2 Description

Remove Adapter Cards, MUX cable.

7.0 Removal Time

FFBM	Machine Hours	System Hours
03F5055	1.0	00.0
Test time	0.7	
Total time	1.7	

8.0 Tools/Materials Required

- ESD kit (PN 6428316).

Removal (steps 9-11)

9.0 Safety

- The adapter removal must be performed offline.
- Review the **Safety Notices** and the **Safety Inspection Procedures** located at the beginning of the *3745 Maintenance Information Procedures (MIP)* manual (SY33-2070).

10.0 Details of Removal

Before the removal, ask the customer:

- __ • To set all the lines and channel addresses offline for this controller.
- __ • To deactivate all resources of the 3746 Model 900, if attached.
- __ • For the maintenance password.
- __ • To logoff the console (3745-170) or the Service Processor (SP) (3745-17A), if not already done.

10.1 Checking, Diagnostics, Power OFF

10.1.1 Checking

10.1.1.1 From the 3745 Control Panel

- __ 1. Check that **Power Control** displays **3**.
- __ 2. If it does not, record the value __.
  Set the **Power Control** value to **3**.
  Press the **Validate** key.

- **If you are removing an adapter from a 3745-17A, go to Step 10.1.1.3, "From the Service Processor" on page 5.**
- **Otherwise, continue.**

10.1.1.2 From the 3745-170 Console

- __ 1. From the **CA INTERFACE DISPLAY** screen, record **Enabled channel adapters**. Then, **disable** all channel adapters.
- __ 2. Wait for **Interface Status Disabled** for all CAs. Press **F4**.
- __ 3. Enter the maintenance password, press **Send**.
- __ 4. If the CCU is running, enter **RST** to reset the CCU.
  The MOSS goes in **MOSS ALONE** state.

- **Go to Step 10.1.1.4, "Display the CDF" on page 5.**

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10.1.1.3 From the Service Processor

__ 1. On the **MOSS-E View** window, click on **Program**.

__ 2. Click on **LOG ON MOSS-E**.

__ 3. Enter the maintenance password, press **Enter**.

__ 4. On the **MOSS-E View** window, double click on the icon of the identified 3745.

__ 5. On the **3745 Menu** window, double click on **MOSS Console**.

__ 6. When **MOSS Console** screen is displayed, enter **CID**, press **Enter.**

__ 7. From the **CA INTERF DISPLAY** screen, record **Enabled channel adapters**. Then, **disable** all channel adapters.

__ 8. When all CAs are **DISABLED**, press **F1**.

__ 9. If CCU running, enter **RST** to reset the CCU.
The MOSS goes in **MOSS ALONE** state.

10.1.1.4 Display the CDF

Note: From this point, the **Send** key is used only for a local console. For a Service Processor, press the **Enter** key.

__ 1. Enter **CDF**, press **Send/Enter**.

__ 2. Enter **1** (DISPLAY/UPDATE), press **Send/Enter**.

__ 3. Enter **10** (LINE ADAPTERS (LA)), press **Send/Enter**.
Check for the presence of a **Y** for the LA position to be removed according to the *HONE configurator sheet* and table in step 4.0, "Preparation" on page 3.
Press **F1**.

10.1.2 Diagnostics

__ 1. Enter **ODG**, press **Send/Enter**.

__ 2. Enter **3** (IOCB), press **Send/Enter**.

• If **NO ERROR FOUND** is displayed, press **F1**.

• Otherwise, see the *MIP*, Chapter 1.

10.1.3 Power OFF

__ 1. From the control panel, press the **Power off** key.

__ 2. Open the system cover and switch off **CB1**.
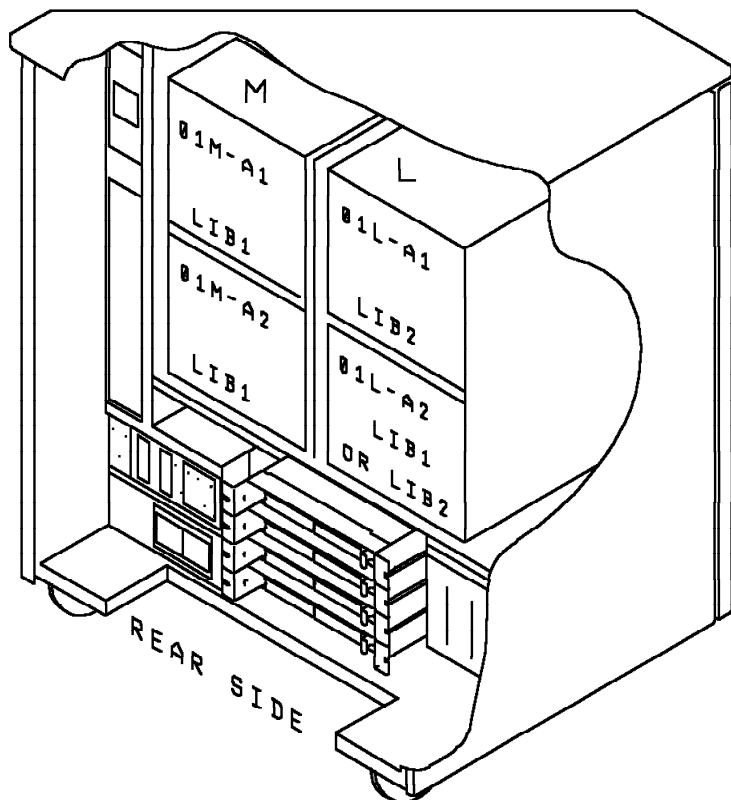

Basic Board

Cover 'A'

CB1

Front View
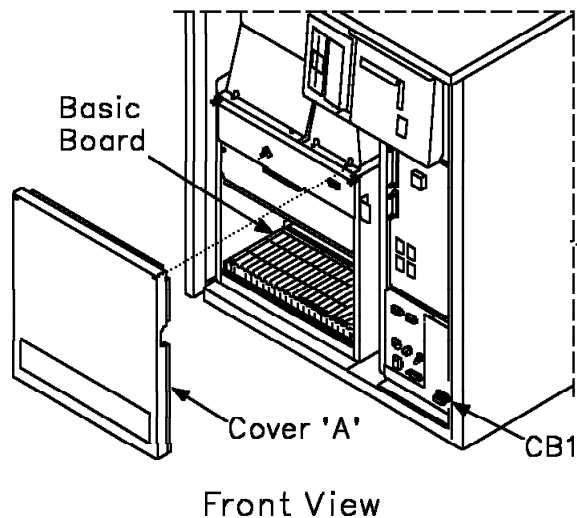
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10.2 Hardware Installation

Warning: Follow existing ESD procedures when handling logic parts.

___ • Open the 3745 rear cover.

• **If you are removing a LSS scanner connected to a LIB1/2 in position 01L-A1 or A2, go to step 10.2.2, "MUX Cable PN 03F4503 Removal from LIB1/2 Position 01L-A1 or A2" on page 8.**

• **If you are removing a LSS scanner connected to a LIB1 in position 01M-A1 or A2, continue.**

10.2.1 MUX Cable PN 03F4503 Removal from LIB1 Position 01M-A1 or A2

___ 1. Keeping the external LIC cables connected on LICs, remove all LICs from LIB positions 01M-A1 and A2 if installed.

Note: Be sure that LICs positions are well identified.

___ 2. If no LIB in 01M-A1, remove the cover 'B'.

___ 3. Unfasten 2 screws and remove the cover 'A'.

___ 4. Remove the DMUX card(s) from board.

___ 5. Unfasten two screws and remove the cover 'C' over the raceway between the two LIBs.

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Cover 'A'

Cover 'B'

Cover 'C'

Rear View
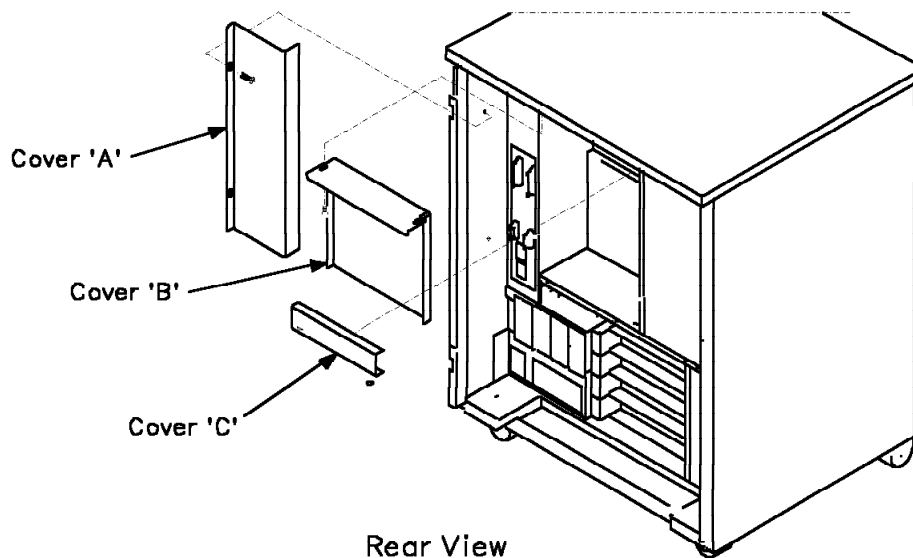
___ 6. Disconnect the MUX cable from the identified DMUX connector.

   Note: To make the cable removal easier, remove the DMUX card.

___ 7. Remove the DMUX cable from the raceway.

___ 8. Route the cable to the front of the 3745 thru the window in the frame.

___ 9. Secure the remaining cables in the raceways, and re-install the cover 'C'.

Cable 2

DMUX

Cable 1
First installed
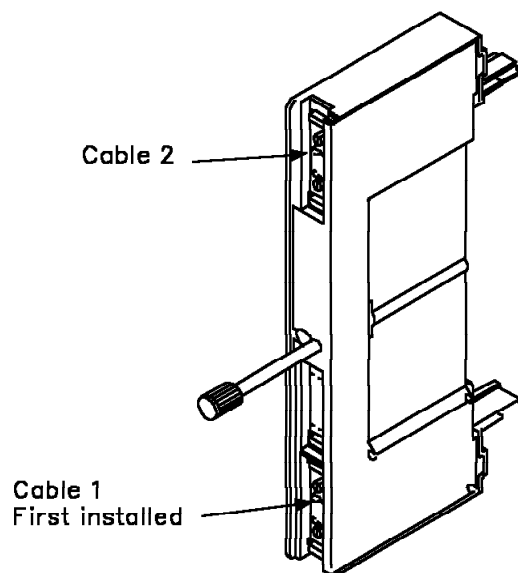
___ 10. Re-install the DMUX card(s) and connect the MUX cable in the DMUX connector based on the *HONE configuration sheet*.

___ 11. Re-install all LICs in their positions.

___ 12. Re-install the power/DMUX cover 'A' and the cover 'B' if required.

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10.2.2 MUX Cable PN 03F4503 Removal from LIB1/2 Position 01L-A1 or A2

___ 1. Remove cover 'D' from the identified DMUX/SMUX.

___ 2. Unplug the cable of the identified DMUX/SMUX.

Note: To make the cable removal easier, you may remove the SMUX/DMUX cards and LIC cassettes in the first positions of board.
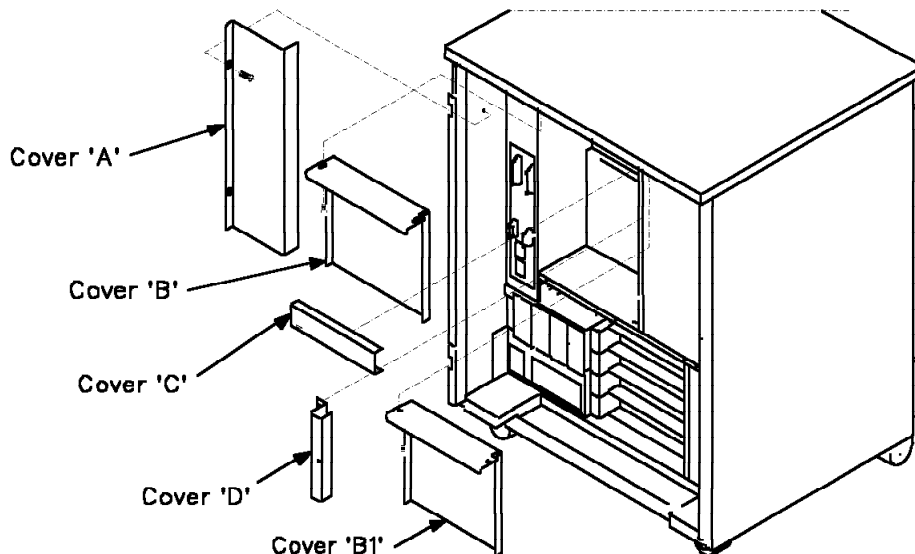
___ 3. Route the cable from the LIB to the front of the 3745 thru the window in the frame.
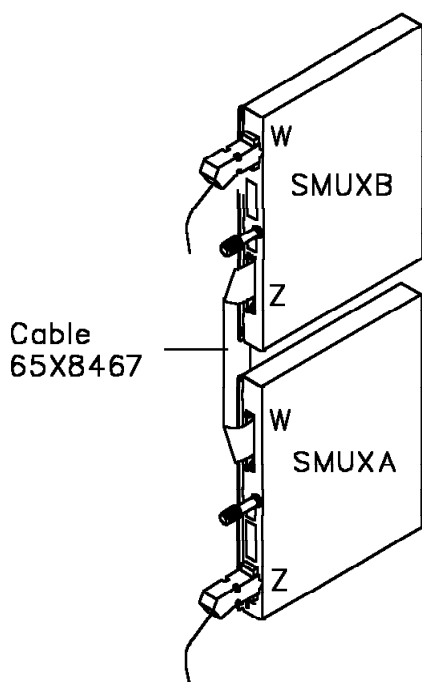
Notes:

  a. If only SMUXB present, disconnect the MUX cable from position W of SMUXB cassette.

  b. If both SMUXA and SMUXB present, disconnect the MUX cable from position Z of SMUXA.

___ 4. Re-install the cover over the DMUX/SMUX.

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10.2.3 Card Removal

__ 1. From the front of the machine, remove the basic board cover 'A'.
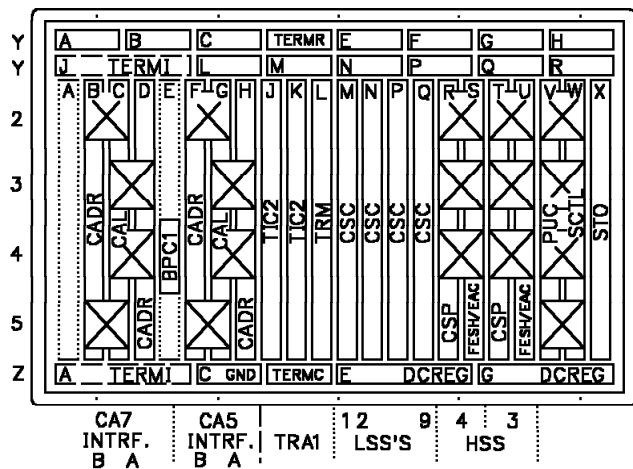
__ 2. Unplug and remove the CSC card of the identified adapter.
__ 3. Remove the MUX cable from the connector J1 of the card.
__ 4. Put the card in the bag provided by the FFBM.
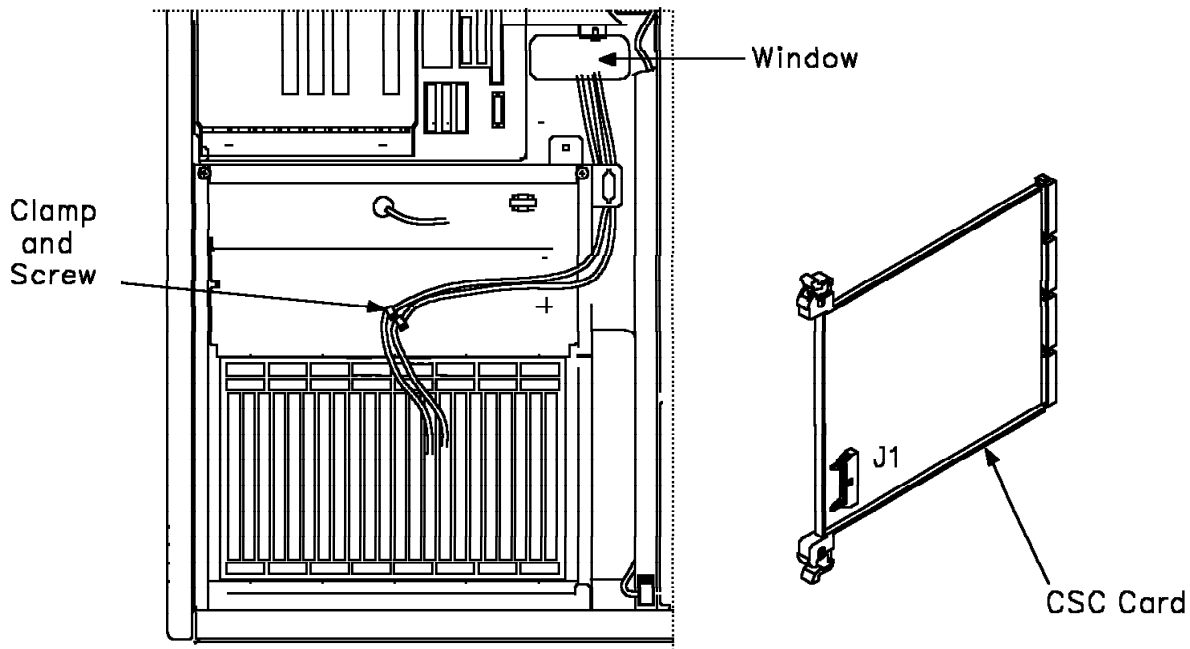
__ 5. Remove the clamp (PN 804867) and screw (PN 1621197), and remove the cable from the machine.
__ 6. If no TRA(s) installed (cards in positions J2, K2, or L2), re-install the basic board cover and go to step 10.3, "Power ON" on page 10.
__ 7. Otherwise, install a BPC1 card (with extender PN 1953093) in place of CSC card (provided by FFBM 03F5056).
__ 8. Secure the BPC1 card with intermix bracket (PN 1953110).
__ 9. Re-install the basic board cover.

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10.3 Power ON

Switch **CB1** ON, and close system covers.

10.3.1 From the 3745 Control Panel

__ 1. set the **Function** indicator to **1**.
      Press the **Validate** key.

__ 2. Press the **Power ON Reset** key.

The MOSS IML is completed when **F0E** is displayed on the 3745 control panel.

- **If you have removed an adapter from a 3745-17A, go to Step 10.3.3, "From the Service Processor."**

- **Otherwise, continue.**

10.3.2 From the 3745-170 Console

__ 1. When the **CA INTERFACE DISPLAY** screen is displayed, press **F4**.

__ 2. Enter the maintenance password, press **Send**.

- **Go to Step 11.1, "Update the CDF."**

10.3.3 From the Service Processor

__ 1. Double click on the 3745 icon when it becomes PURPLE.

__ 2. On the **3745 Menu** window, double click on **MOSS console**.

Wait for the **Function Selection Rules** screen.

11.0 Test Procedures

11.1 Update the CDF

__ 1. Enter **CDF**, press **Send/Enter**.

__ 2. Enter **4** (VERIFY), press **Send/Enter**.
      The values from the **CDF DATA** and the **MACHINE DATA** should be identical, except for the adapter you have just installed.

__ 3. To update the CDF with machine values, enter **2**, press **Send/Enter**.

- If **CDF VERIFY COMPLETED** is displayed, press **F6**.

- Otherwise, see the *MIP*, Chapter 1.

11.2 Display the CDF

__ 1. Enter **CDF**, press **Send/Enter**.

__ 2. Enter **1** (DISPLAY/UPDATE), press **Send/Enter**.

__ 3. Enter **10** (LINE ADAPTERS (LA)), press **Send/Enter**.
      An **N** should appear under the LA number you have just removed. Check the **LA TYPE** value: 1 for TSS. Press **F1**.

11.3 Diagnostics

__ 1. Enter **ODG**, press **Send/Enter**.

__ 2. Enter **5** (TSS). Enter the **Adapter Number**, press **Send/Enter**.

- If **NO ERROR FOUND** is displayed, press **F1**.

- Otherwise, see the *MIP*, Chapter 1.

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11.4 Save Hard Disk Contents Onto the Backup set of Diskettes

__ 1. Select **DIF**, press **Send/Enter**.

__ 2. Select **2**. Enter the date and save-ID, press **Send/Enter**.
Follow the prompts on the console.

__ 3. When function is completed, press **F1**.

- **If you have removed an adapter from a 3745-17A, go to Step 11.6, "From the Service Processor."**

- **Otherwise, continue.**

11.5 From the 3745-170 Console

Re-enable the channel adapters disabled in Step 10.1.1.2, "From the 3745-170 Console" on page 4.

- **Go to Step 11.7, "General IPL."**

11.6 From the Service Processor

__ 1. On the **3745 Menu** window, double click on **MOSS Console**,

__ 2. Enter **CID**, press **Enter**.

__ 3. Enable the channel adapter recorded in Step 10.1.1.3, "From the Service Processor" on page 5.
Wait until all channels are **E** in the E/D REQUEST column.
Press **F1**.

__ 4. Enter **OFF**, press **Enter**.

__ 5. On the **3745 Menu** window, click on **Function**. Then, click on **Exit**.

__ 6. On the **MOSS-E View** window, click on **Program**.

__ 7. Click on **LOG OFF MOSS-E**.

11.7 General IPL

11.7.1 From the 3745 Control Panel

__ 1. Set the **Power Control** indicator to its original value recorded in Step 10.1.1.1, "From the 3745 Control Panel" on page 4.

__ 2. Set the **Function** indicator value to **0** (general IPL).
Press the **Validate** key.

The general IPL starts.

- If **FF4** is displayed on the control panel, ask the customer to load the control program.

- If the control program is loaded from the hard disk, **000** will be displayed when **IPL** is successful.

Note: The control program load can fail if a mismatch exists between the control program and the hardware configuration.

- **If you have removed an adapter in a 3745-17A, go to Step 11.7.3, "From the Service Processor."**

- **Otherwise, continue.**

11.7.2 From the 3745-170 Console

Ask the customer to activate the resources on the new adapter if the NCP is configured.

- **Go to Step "After Removal (steps 12-15)" on page 12.**

11.7.3 From the Service Processor

__ 1. Enter **MON**, press **Enter**.

__ 2. Enter **OFF**, press **Enter**.

__ 3. On the **MOSS-E View** window, click on **Program**.

__ 4. Click on **LOG OFF MOSS-E**.

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After Removal (steps 12-15)

12.0 Field Updating

None.

13.0 Publications Update

None.

14.0 Parts Disposition

14.1 Purchased Machines

Refer to the parts ownership matrix to determine the correct owner of removed/unused parts.

- For EMEA/APG/AG Areas, refer to *Hardware and General Service Code Description*.

- For Domestic Areas, return parts to the customer.

15.0 Machine Records

- Install the new **MACHINE HISTORY** supplied.

- Report installation and quality to existing procedures.

End of instructions.

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┌───┐
│   Processing Options   │
└───┘

Runtime values:
        Document fileid .... P03F5153 SCRIPT
        Document type .... PNCDOC
        Document style .... FBII
        Profile EDFPRF30
        Service Level 21Jun90
        SCRIPT/VS Release 3.2.1
        Date 94.02.03
        Time 09:14:20
        Device 3820A
        Number of Passes 2
        Index .... YES
        SYSVAR G .... INLINE
        SYSVAR P 3820
        SYSVAR R .... XREF
        SYSVAR U FNT382SS
        SYSVAR W .... XREF

Formatting values used:
        Annotation .... NO
        Cross reference listing .... YES
        Cross reference head prefix only .... NO
        Dialog .... LABEL
        Duplex .... SB
        DVCF conditions file .... (none)
        DVCF value 1 .... (none)
        DVCF value 2 .... (none)
        DVCF value 3 .... (none)
        DVCF value 4 .... (none)

```
DVCF value 5  ..........................................................................  (none)
DVCF value 6  ..........................................................................  (none)
DVCF value 7  ..........................................................................  (none)
DVCF value 8  ..........................................................................  (none)
DVCF value 9  ..........................................................................  (none)
Explode  ...................................................................................  NO
Figure list on new page  .........................................................  YES
Figure/table number separation  .............................................  YES
Folio-by-chapter  ....................................................................  NO
Head 0 body text  ...................................................................  (none)
Head 1 body text  ...................................................................  (none)
Hyphenation  ..........................................................................  YES
Justification  ..........................................................................  NO
Language  ...............................................................................  ENGL
Layout  ...................................................................................  2
Leader dots  ...........................................................................  YES
Master index  ..........................................................................  (none)
Partial TOC (maximum level)  .................................................  4
Partial TOC (new page after)  ................................................  INLINE
Print example id's  .................................................................  NO
Print cross reference page numbers  .....................................  YES
Process value  ........................................................................  3820
Punctuation move characters  ...............................................  .,
Read cross-reference file  ......................................................  XREF
Running heading/footing rule  ................................................  NONE
Show index entries  ................................................................  NO
Table of Contents (maximum level)  ......................................  3
Table list on new page  .........................................................  YES
Title page (draft) alignment  ..................................................  CENTER
Write cross-reference file  ......................................................  XREF
```

Imbed Trace