

Field Feature Bill of Material (FFBM)

PN 17G5454

CONVERT

an IBM 3745 Model 210 to 21A

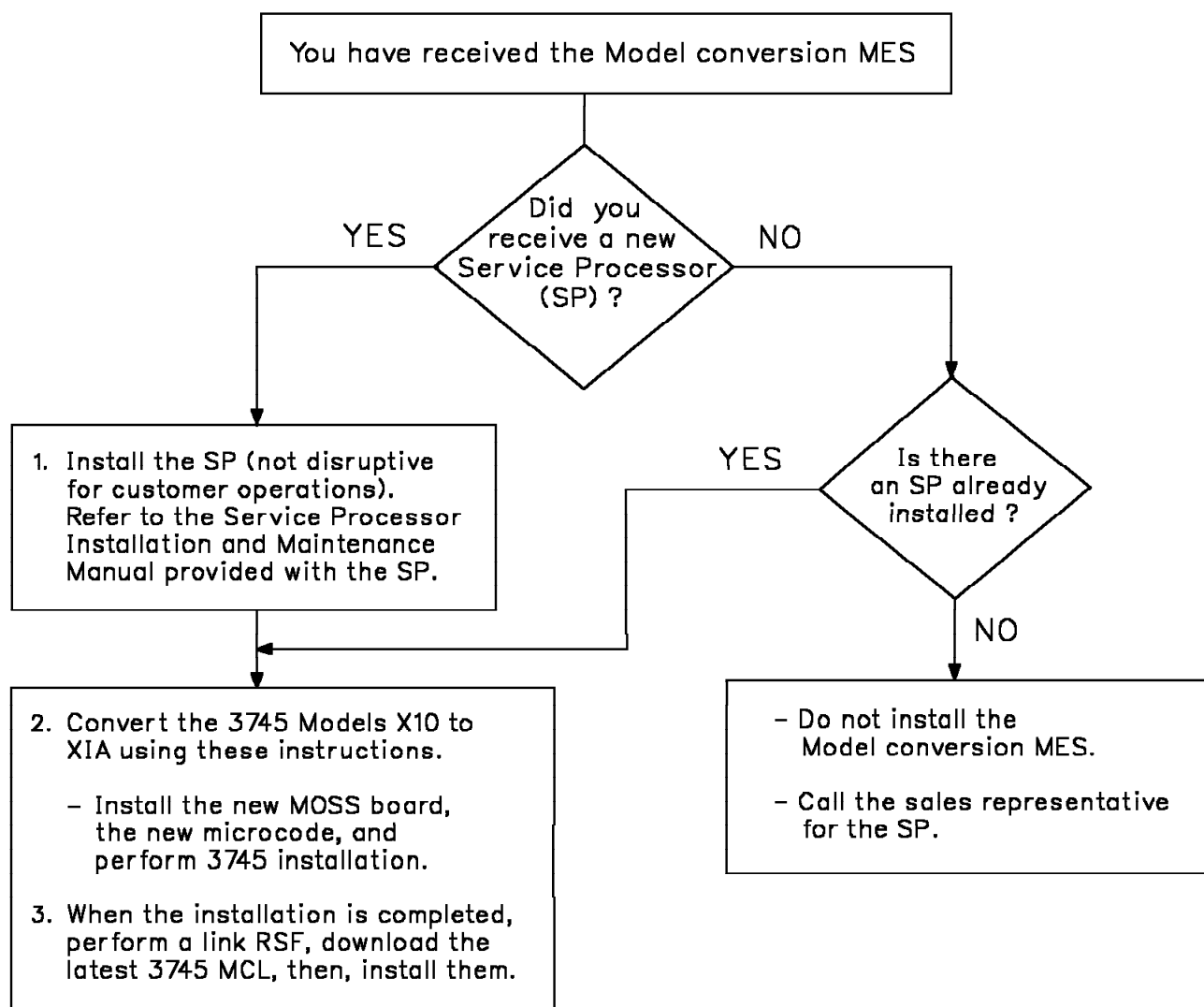
or

an IBM 3745 Model 410 to 41A

Written by: J. Michaut
Checked by: J. Combes
Approved by: A. Badino
Reviewed by: B. Smith

3745 FFBM	PN 17G5454 1 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

3745 FFBM	PN 17G5454 2 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------



Before Installation (steps 1-8)

VERY IMPORTANT

MES should be installed without delay, after receipt, to avoid multiple MCLs needed for the microcode.

Net Priced Feature

All parts removed from this machine are IBM property and must be returned to IBM.

3745 FFBM	PN 17G5454 3 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

1.0 Machines Affected

3745 Models 210 or 410.

This feature should only be applied on the machine serial for which it is specified.

2.0 Related BMs or ECs

2.1 Prerequisites

(Must be installed prior to this installation)

- 72MB HDD must be installed.
Checkpoint: Check in Machine History for EC A97883, A98113, or A97906.
- NCP minimum level V6R2 must be installed and validated before starting the Model conversion MES.
Checkpoint: Perform MLT function on MOSS.
- A Service Processor must be installed before starting the Model conversion MES.
A Service Processor can connect to a maximum of four 3745 Model XXAs.

2.2 Concurrent

(Must be installed together)

None.

3.0 FFBMs to be Installed

- Model conversion MES:
 - 17G5454 - Installation Instructions.
 - 17G5441 - Convert a 3745 Model 210 to 21A
 - or 17G5445 - Convert a 3745 Model 410 to 41A
- An external console cable is provided:
 - 43G3172 - Console cable (US only)
 - or 43G3173 - Console cable (World Trade)
- An SP is required for 3745 operations.
One of these FFBMs is shipped on request.
 - 58G5543 - Service Processor (World Trade)
 - or 58G5547 - Service Processor (US/Canada)

- If there is neither HSS nor ELA installed in your 3745, install one of the following FFBMs:
 - 66X0095 - DMSW card logic on Model 210.
 - or 66X1392 - DMSW card logic on Model 410.

3.1 As Required FFBM

- 05F2581 - SCTL1 Card
- 80G5106 - CSP Card Exchange
- 80G5108 - CADS Card Exchange
- 80G5110 - TRM Card Exchange
- 80G5112 - Hard Disk Drive Exchange

4.0 Preparation

- Familiarize yourself with the purpose and details of the installation instruction before negotiating machine time with the customer.
- Check all items listed on the BM(s) to determine that all parts have been received.
- The installation must be performed off-line.
- Ensure that RETAIN search has been performed and all prerequisites have been installed. Perform a search using **3745AUPGRADE** as SAS keyword.

Note: To avoid a critical situation it is recommended to **have a spare 80 Meg hard disk** available on site.

- Ensure that a current set of backup diskettes have been created by saving the hard disk contents onto diskettes before powering OFF the 3745 (refer to **Disk/diskette Management Function** in *Service Function Manual*).
- Ensure that RSF link is installed and working. If the customer has not provided a RSF link, review or have marketing review with the customer for maintenance exposure. Before performing the RSF link, register the 3745 new Model in CCPF.
- To check if a new MCLs level is necessary, perform a RETAIN search using **3745UPGRADE CODE LEVEL** for the TDR which gives the most recent level of micro-code available for this machine (model).

3745 FFBM	PN 17G5454 4 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

To install the last level of MCLs, the most efficient way is with the LIC upgrade procedure. Use the RETAIN search, **3745ECA134 COF**, for the TDR which explains the procedure for ordering the latest level microcode from COF.

Third party can get the latest level of code through their normal microcode ordering procedures.

MCLs can be obtained from RETAIN (If if the customer provide an RSF link), or by ordering the 3746 optical disk MCL via CCSS.

8. Do not damage the packing boxes. They will be use for repacking.
9. To support the new Model, ACF/NCP V6R2 (or later) must be installed.
10. Before starting this MES, verify that the serial number displayed on the 3745 console matches the serial number printed on the *3745 Installation parameters* diskette (PN 43G3225).

Important Note

If the last five digits of the 3745 machine serial number do not agree with the serial number printed on the *3745 Installation Parameters* diskette (PN 43G3225), stop the installation immediately and call the IBM Support Center.

Verify also the plant ID. If plant ID = **00** it will be replaced by **23** (see note in Step 10.7.2).

11. Use the DII function to purge all NCP dumps from the MOSS hard disk.
12. Use the DDD function to delete the MOSS dump (CHGDMP) from the MOSS hard disk.

5.0 Programming

5.1 Diagnostic Programs

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

5.2 System Programs

NCP V6R2 is the minimum level required to support the 3745 Model XXA.

6.0 Purpose and Description

6.1 Purpose

To convert a 3745 Model 210 to a Model 21A or a Model 410 to a Model 41A.

6.2 Description

1. Install a Service Processor.
2. Replace the MOSS board and cards.
3. Replace the console tailgate.

7.0 Installation Time

To be reported as MES.

FFBMs	Machine Hours	System Hours	Nbr of CE
17G5441 or 17G5445	2.5	0.0	2

8.0 Tools/Materials Required

- ESD kit (PN 6428316)
- Isopropyl Alcohol.

3745 FFBM	PN 17G5454 5 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

Installation (Steps 9-11)

9.0 Safety

- Review the **Safety Notices** and the **Safety Inspection Procedures** located at the beginning of the *3745 Maintenance Information Procedures (MIP)* manual, SY33-2054.

10.0 Details of Installation

Note

Before starting the Model conversion installation, be sure that a Service Processor is available.
If you received the Service Processor as part of the MES, install the SP within 10m (33 feet) of 3745.

Before the installation of this MES, ask the customer:

- To set all lines and channel addresses off-line for this 3745.
- To provide the maintenance password.
- To logoff the console, if not already done.

10.1 Checking, Diagnostics

10.1.1 MOSS IML

From the control panel:

1. Check that the **Power Control** indicator displays **3**. If it does not, record the value _____. Then, set the **Power Control** indicator to **3**.
Press the **Validate** key.
2. Set the **Service Mode** indicator to **1**.
Press the **Validate** key.
3. Set the **Function** indicator to **1**.
Press the **Validate** key.

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

10.1.2 Disable CA(s)

From the local console:

1. When the **CA INTERFACE DISPLAY** screen is displayed, record **Enabled Channel adapters** then **Disable** all channel adapters.

Note: If a 3746 A11 is installed, press **F8** to display the channel adapters 8 to 16.
2. Wait for **Interface Status Disabled** for all CAs.
Press **F4**.
3. Enter the maintenance password, press **Send**.
If the MOSS is in **MOSS ALONE** state, go to next Step.
4. If **NCP LOADED** and **CCU RUNNING**, enter **RST** to reset the CCU.

The MOSS goes in **MOSS ALONE** state.

Note: If Model 410, perform **CSR** function to select the CCU first. Then perform **CSR/RST** sequence for each CCU.

10.1.3 Verify the CDF

1. Enter **CDF**, press **Send**.
2. Enter **4 (VERIFY)**, press **Send**.
The value from the **CDF DATA** and the **MACHINE DATA** should be identical. If it does not, physically, verify the features, and if it is correct update the CDF data with the machine value, enter **2**, press **Send**.
If **CDF VERIFY COMPLETED** is displayed, press **F1**.

10.1.4 Record Scheduled Power ON

1. Enter **TIM**, press **Send**.
2. Enter **2**, press **Send**.
3. Record, on the screen below, the **SCHEDULED POWER ON DATA** if filled.

3745 FFBM	PN 17G5454 6 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

```

FUNCTION ON SCREEN:  TIME SERVICES
                     SCHEDULED POWER ON DATA

- FILL IN, MODIFY, OR BLANK APPROPRIATE FIELD, PRESS SEND.

SUNDAY      (HH:MM) ==>
MONDAY      (HH:MM) ==>
TUESDAY     (HH:MM) ==>
WEDNESDAY   (HH:MM) ==>
THURSDAY    (HH:MM) ==>
FRIDAY      (HH:MM) ==>
SATURDAY    (HH:MM) ==>

SCHEDULING ACTIVE (Y=YES, N=NO) ==>

```

___ 4. Press **F1**.

10.1.5 Power Configuration Table

- ___ 1. Enter **POS**, press **Send**.
- ___ 2. Enter **C**, press **Send**.
- ___ 3. Record, on the screen below, the displayed **Created power configuration table**.

```

FUNCTION ON SCREEN: POWER SERVICES
                     CREATED POWER CONFIGURATION TABLE

3745      : - - - - -
3746-A11  : - - - - -
3746-A12  : - - - - -
3746-L13  : - - - - -
3746-L14  : - - - - -
3746-L15  : - - - - -

```

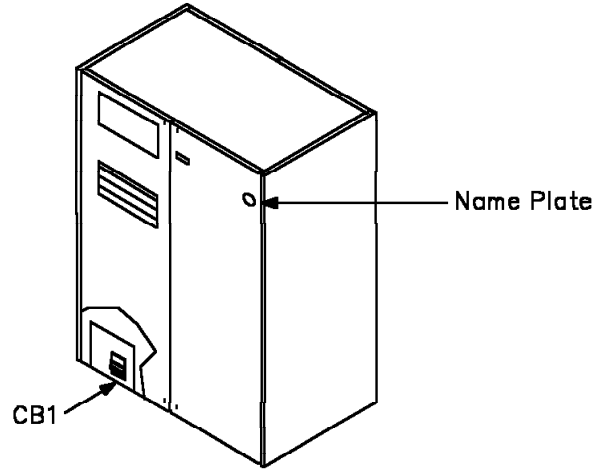
- ___ 4. Enter a **Y** to confirm, press **Send**.
- ___ 5. Press **F1**.

10.1.6 Diagnostics

- ___ 1. Enter **ODG**, press **Send**.
- ___ 2. Enter **3** (IOCB), press **Send**.
 - When **NO ERROR FOUND** is displayed, press **F1**.
 - If an error is displayed, see the *MIP*, Chapter 1, and follow the appropriate procedure.
- ___ 3. Power OFF the 3745 local console.

10.1.7 Power OFF

- ___ 1. From the control panel, press the **Power OFF** key.
- ___ 2. Open the front system cover and switch **CB1** OFF.

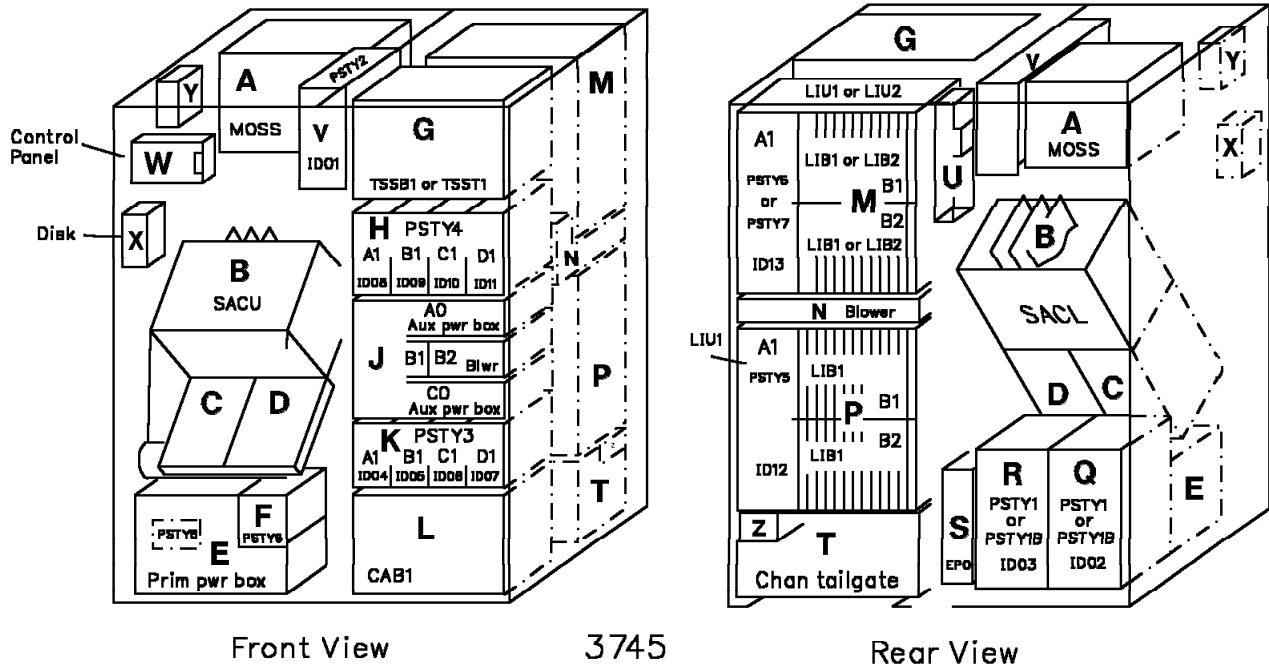


3745 FFBM	PN 17G5454 7 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.2 MOSS Board Exchange

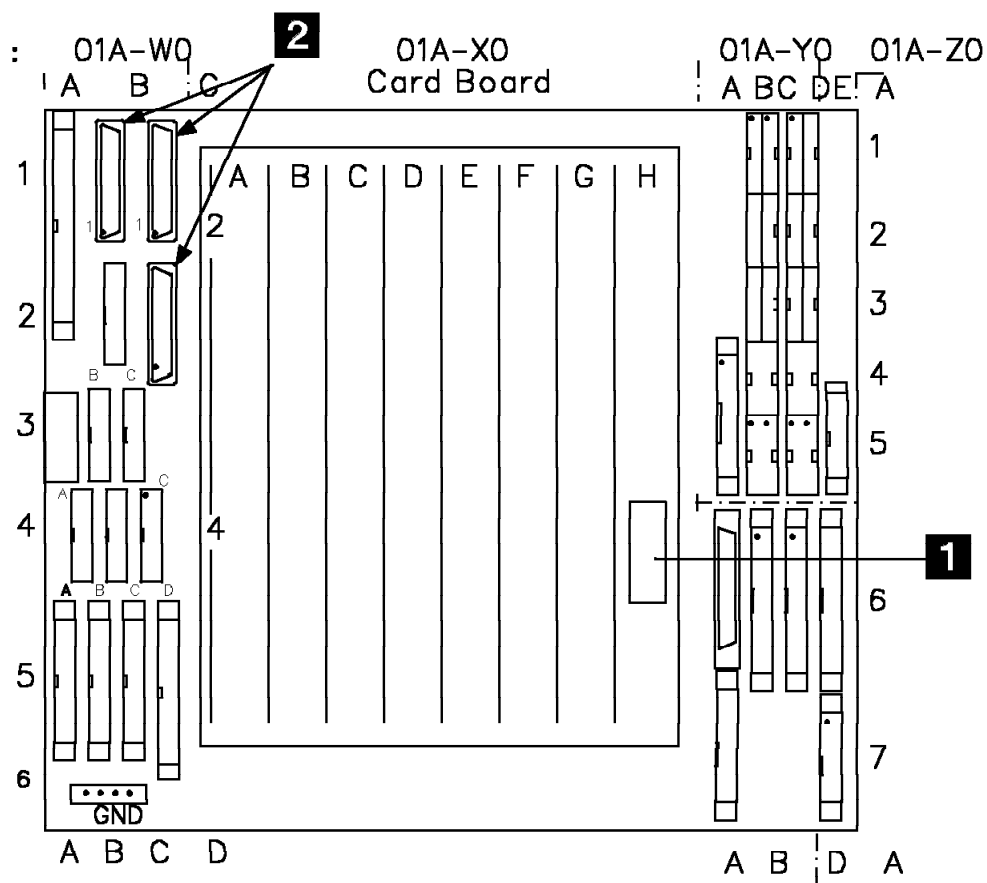
Warning: Follow existing ESD procedures when handling logic parts.

10.2.1 MOSS Board Removal



1. Open the two rear system covers of 3745, and locate the MOSS board in 01A and console tailgate in 01U.

3745	PN 17G5454	See EC	EC D55659B	EC D55799	EC D55883	EC E27926
FFBM	8 of 22	History	09MAR94	16SEP94	11MAY95	14MAR97

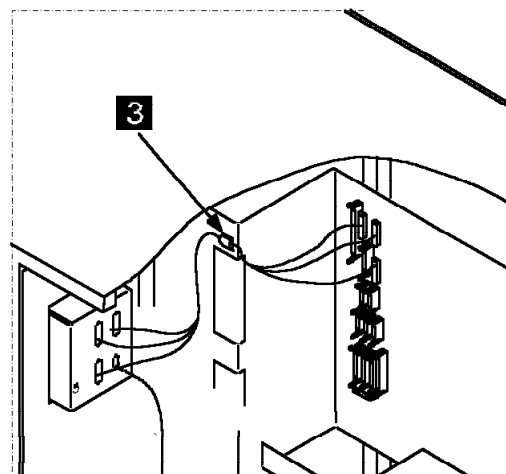


- ___ 2. To prevent small parts from falling into the CCU board, cover the CCU board assembly with cloth, plastic, etc.
- ___ 3. Disconnect the cable from the MAC card in 01A-X0H1 .**1**.
- ___ 4. From MOSS board positions 01A-W0B1, C1, and C2, disconnect the internal console cables .**2**.
- ___ 5. In the next Steps, all the remaining cables connected on MOSS board will be unplugged from the MOSS board, then reconnected on the new MOSS board. To identify the positions of the cables to be re-installed, mark the positions of MOSS cables in the above figure.

Warning

To prevent loss of the screws securing the cable, pull lightly on the cable while you are loosening the screws.

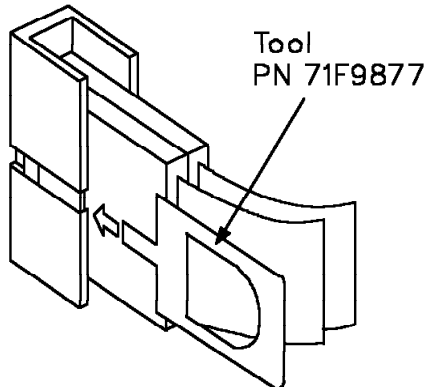
Remove the cables from the clamp .**3**., and route them back to the console tailgate. They will not be re-connected.



3745 FFBM	PN 17G5454 9 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	-----------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

Note

To prevent damage to the cables and the board, use tool (PN 71F9877) to unlock the connector as shown on the following figure.
Gently, insert the blade. Then, pull on the cable housing to remove the cable.

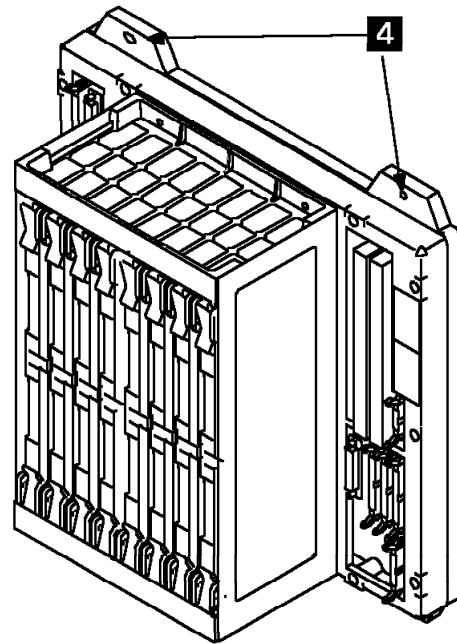


Disconnect all the cables from the MOSS board (01A-W0, 01A-Y0, and 01A-Z0 areas).

Verify that cables are labelled according to their positions.

If they are not, use labels (PN 811825).

- 6. Cables Y0C1, Y0C2, Y0C3, Y0D6, Y0E3, and Z0A6 can be pulled through the access holes to the front area of the 3745. This will provide more clearance for the removal/installation of the MOSS board.
- 7. Secure the remainder of the cables to the right side of the frame to prevent interference during the MOSS board removal and installation.



- 8. Remove 4 screws securing the MOSS board assembly to the frame **4**. Save screws for re-installation.
- 9. Carefully, remove the MOSS board assembly from the 3745. Disengage the right side of the board assembly first. Place the MOSS board assembly in a safe place.

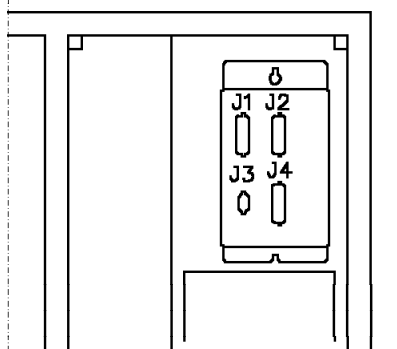
10.2.2 New MOSS Board Installation

- 1. Carefully, install the new MOSS board assembly provided by the FFBM, using saved screws.
- 2. Reconnect all the removed cables to the MOSS board, except the three internal console cables.
- 3. Verify that all cables have been re-plugged in MOSS Board in all positions they were marked in figure on previous page.
- 4. Reconnect the cable to the MAC card.

3745 FFBM	PN 17G5454 10 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.3 Cable Installation

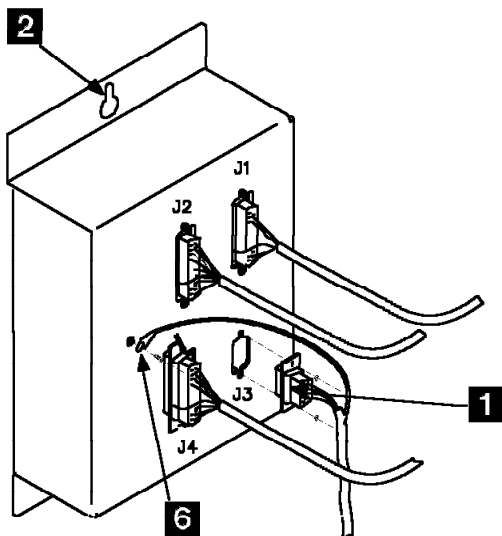
10.3.1 Console Cables Removal



From the console tailgate:

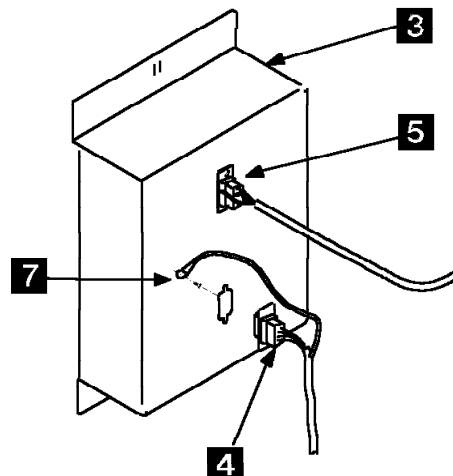
- 1. Disconnect the external cables from J1, J2, and J4 positions. Remove them from the machine. They will not be re-used.
- 2. If present, disconnect the external cable from J3. It will be reconnected later.

10.3.2 Console Tailgate Replacement



- 1. Remove screws and nuts securing the **Power On Operate** cable in position J3 .1. Save screws and nuts.
- 2. Remove the screw .6. securing the ground cable to the tailgate taking care not to lose the washer. Save screw and washer.

- 3. Remove the cable .1. it will be re-installed later.
- 4. Loosen two screws .2. and remove the tailgate from the machine with the 3 internal cables attached (RSF, REMOTE, and LOCAL).
- 5. In the same position, install the new tailgate asm (PN 17G5608) .3..



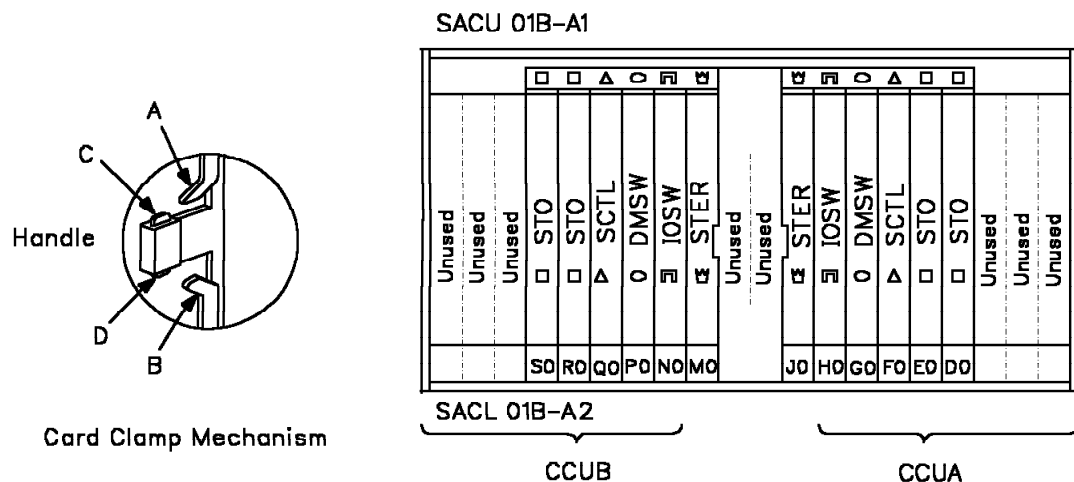
- 6. Route and connect the internal console cable .5. attached to the console tailgate to the MOSS card 01A-E0 (MOSS LAN attachment card). Secure the cable in the clamp (see figure on page 9).
- 7. Re-install the **Power On Operate** cable in connector position J3 of tailgate .4., using the screws and nuts saved earlier. Attach the ground wire .7. using screw and washer saved earlier.
- 8. If present, reconnect the external cable to connector J3.

10.3.3 External Console Cable

- 1. Connect external console cable (PN 76F9440 or 76F9441) provided by FFB/M 43G3172 or 43G3173 to connector J1 of the console tailgate.
- 2. Route the cable to the **Service Processor Access Unit**.
- 3. Connect the cable end in any empty slot of the **Service Processor Access Unit**.
- 4. If you have just installed the Service Processor as part of this MES, check that the SP is connected to the Service Processor Access Unit.

3745 FFBM	PN 17G5454 11 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.4 DMA Bus Card Installation



Check locations 01B-A1G0 (and P0 if Model 410) for the presence of DMSW cards. If present, skip to Step 10.5, "Switch, Label Installation" on page 13.

If they are not, proceed with the installation of DMSW and DTER cards provided by FFBM 66X0095 (210), or 66X1392 (410).

10.4.1 DMSW Card(s) Installation

- ___ 1. If present, loosen 4 screws and remove the shield over the 01B area.
- ___ 2. At positions:

3745 Model 210: 01B-G0
 3745 Model 410: 01B-G0, and 01B-P0.

Using both hands, move the levers A and B outwards simultaneously to their fullest extent.

- ___ 3. Remove the dummy card(s) from the board.
- ___ 4. Carefully, install the DMSW card(s) as follows: (see figure for card clamp mechanism).
 - a. If present, remove the yellow tag from the card handle. Open the card handle by pressing catches C and D in gently and pulling the handle.
 - b. Insure that levers A and B are still open to their fullest extent.

- c. Insert card in slot G0 (Model 21A) or G0 and P0 (if Model 41A) and allow it to seat under its own mass, ensuring that it has reached the end of the slot.
- d. Press in the catches C and D, and gently push the handle until the card(s) lock(s) in the closed position.
- e. Using both hands, move the levers A and B inwards simultaneously.
- f. To improve contact, actuate the levers 3 times.

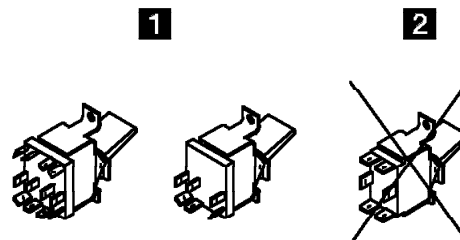
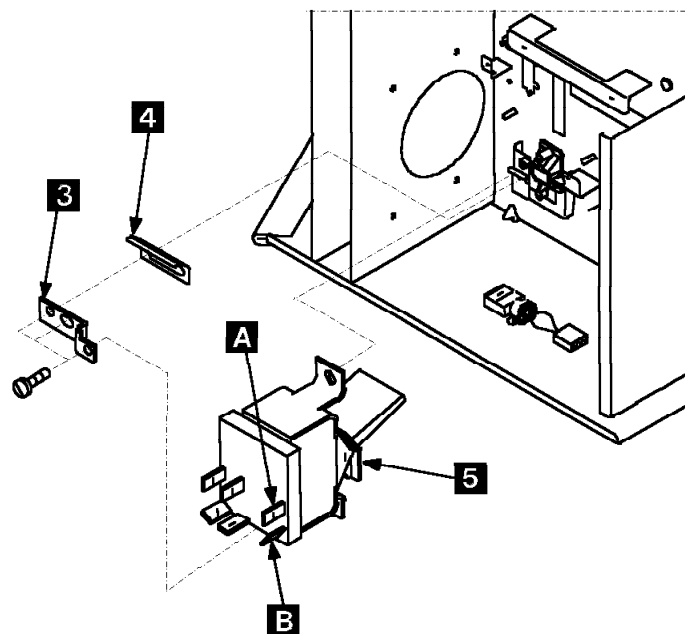
- ___ 5. If present, reinstall the shield over the 01B area.

10.4.2 DTER Card Installation

- ___ 1. Open the right front system cover of 3745 and the internal shield (if present).
- ___ 2. Locate the TSS board in 01G-A1 (refer to figure page 8), and remove the dummy card from position 01G-A1W2.
- ___ 3. Plug the DTER card in 01G-A1W2.
- ___ 4. Close the internal shield (if present) and the cover.

3745 FFBM	PN 17G5454 12 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.5 Switch, Label Installation



10.5.1 EPO Switch Exchange

1. Open the 3745 control panel gate.
2. From the rear of the gate, locate the EPO switch, and check it with the figure:
If it looks like switches **1**, go to Step 10.5.2, "Labels, Name Plate" on page 14.
If it looks like switch **2**, you must install the switch (PN 8492368) with the bracket (PN 43G3154) provided by the FFBM as follows:

- a. Remove the bracket **3** by removing three screws.
Save screws and spring **4**.

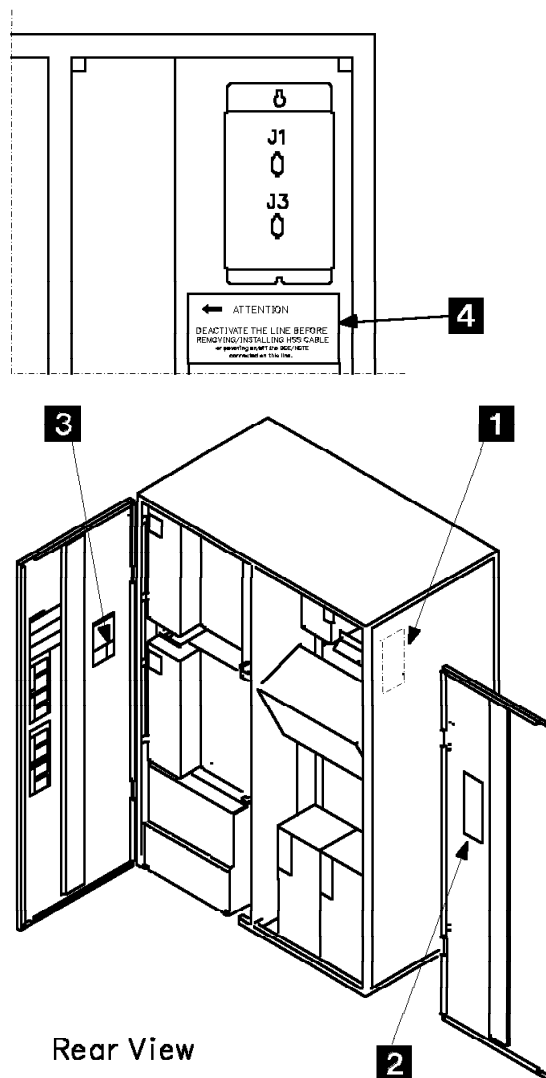
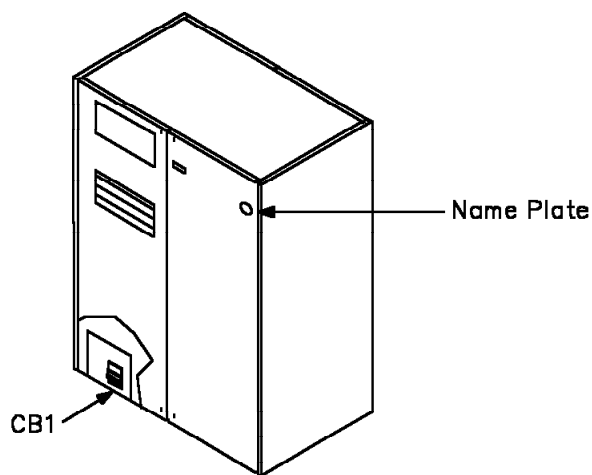
- b. Remove the switch **5** by removing the upper screw.
Save the screw.
- c. Install the new EPO switch using the screw saved in previous Step.
- d. Install the new bracket (PN 43G3154) **3** and the spring **4**. Use the three screws saved earlier.

Note: Push the spring to the right for switch locking.

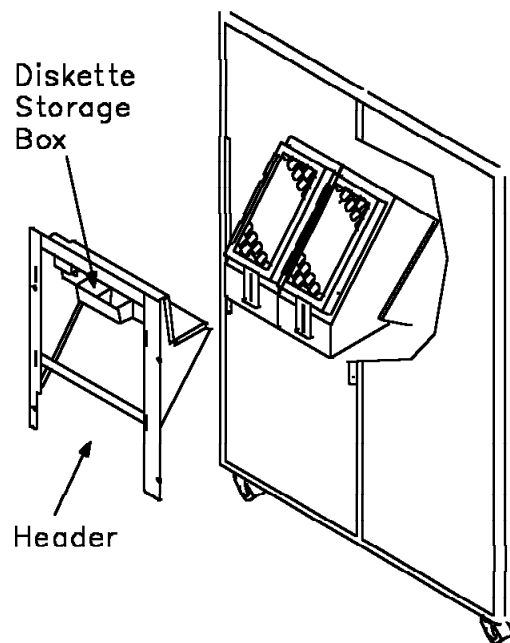
- e. Disconnect the wires from the old switch, and reconnect one wire (1) on contact **A** and second wire (2) on contact **B**.
- f. Close the control panel gate.

10.5.2 Labels, Name Plate

- 1. Affix the label PN 17G5564 .1. on the right side of the frame, over the existing one, close to the MOSS board.
- 2. Inside the right rear 3745 cover affix label (PN 03F4376) .2. over existing label.
- 3. Inside the left rear 3745 cover affix label (PN 43G3202) .3. over existing label (Console Tailgate).
- 4. From the right front 3745 door, remove the existing name plate and clean any adhesive residue from the recessed area with Isopropyl alcohol. Remove the paper from the back of new name plate PN 17G5636 (21A) or PN 17G5637 (41A) and affix the plate.
- 5. Strike out the model number on the S/N label, only the nameplate will identify the model type from now on.
- 6. From the front of the machine, install the diskette storage box (PN 57G7502) to the header as shown on the figure.



3745	PN 17G5454	See EC	EC D55659B	EC D55799	EC D55883	EC E27926
FFBM	14 of 22	History	09MAR94	16SEP94	11MAY95	14MAR97



- 7. If you have installed DMSW card and DTER card, affix according to your language, part of the label PN 11F6521 provided with the DMSW FFBM below the console tailgate .4..

3745 FFBM	PN 17G5454 15 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.6 Power ON

From the primary power box, switch CB1 ON and close the system cover(s).

10.7 MOSS/MOSS-E Connection

From the Service Processor:

- 1. When the **MOSS-E Logon** window is displayed, enter the maintenance password (the default password is IBM3745).
- 2. Click on **OK**.
- 3. On the **MOSS-E View** window, double click on the **Service Processor** Icon (green).
- 4. On the **Service Processor Menu** window, click on **Configuration Management**. Then, double click on **Manage 3745/3746-900 Installation/Removal** (scroll in the window or set the window in full screen).
- 5. On the **Controller Installation** window, if not already selected (black line), click on the first 3745 flagged not installed.
- 6. Click on **ADD**.

Note: During the following procedure, ALARM panels can be displayed. Click on **OK** to remove them.

10.7.1 IML From Diskette

Find two sets (NORMAL and BACKUP) of diskettes shipped with this MES. If not already done, mark one set NORMAL and one set BACKUP.

Note: From now, use **only the new set of six diskettes** shipped with the MES. The set of the old five diskettes can be use only if for any reason you have to remove the model A and to return to the previous 3745 model XX0.

- 1. Insert the new **NORMAL PRIMARY** diskette, into the 3745 diskette drive.
- 2. From the control panel, check that **Service Mode** indicator displays **1**. If it does not, set the **Service Mode** indicator to **1**.

Press the **Validate** key.

- 3. Set the **Function** indicator to **9** (load from diskette).
Press the **Validate** key.
- 4. Press the **Power ON Reset** key.

A MOSS IML will be complete with **F0E** or **FE9** displayed on the control panel.

Note: The code **B9F** can be displayed indicating a timeout. This does not affect the proper operation. Continue with next Step.

10.7.2 3745 Installation

From the Service Processor:

- 1. Click on **OK**.
Window **ADD a 3745** is displayed.
- 2. Enter the 3745 Serial Number in the following format: **YY-XXXXXX** (do not forget the dash (-)).

Note: **YY** is the plant ID. If the plant ID = **00**, you must enter **23**.
Click on **OK**.
- 3. When requested, insert the *Installation Parameters* diskette PN 43G3225 (received with the MES) in the SP diskette reader.
Click on **OK**.
- 4. When a panel saying **Controller Parameters successfully loaded**, click on **OK**.
- 5. When a controller installation message saying that **the controller information has been successfully added** is displayed, remove the **Installation Parameters** diskette from the diskette drive of the SP.
Click on **OK**.
- 6. Enter the new system name (provided by the customer), click on **OK** twice.
- 7. On the **Controller Installation** window, click on **Cancel**.
- 8. On **MOSS-E View** window, double click on the 3745 icon.
- 9. On the **3745 Menu** window, double click on **MOSS Console**.

The 3745 **Disk Function Selection** screen will be displayed after a short interval.

3745 FFBM	PN 17G5454 16 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

10.8 Microcode EC Installation

Warning: For this installation, use only the new set of six diskettes (NORMAL) received. The same set must be used for the checking pass and for the pass which installs on the hard disk. Use of a different set can lead to lost CDF data.

From the Service Processor:

- ___ 1. Enter **1** (EC Microcode Installation), press **Enter**.
- ___ 2. Use the **NORMAL** set of diskettes, and follow the prompts on the console until the function is completed.

Note: While reading the PRIMARY diskette you will get the following messages:

- **Increasing in disk size (up to 80 MB) - Please wait several minutes.**

Note: If you have an error while increasing the disk, run "diskette checking" to validate the set of six diskettes received and save the customer data.

From the Service Processor:

- ___ a. Enter **8** (diskettes checking), press **Enter**.
- ___ b. Use the **NORMAL** set of the six diskettes received, and follow the prompts on the console until the function is completed.
- ___ c. Press **F6** to continue with diskette checking. Follow the prompts on Service Processor screen.

If the hard disk requires replacement, see the *Service Function* manual, Chapter 11, hard disk trouble analysis and replacement, Procedure 1.

- **Read checking in progress - Please wait several minutes.**

- **Copy load module in progress** will appear if NCP load modules are on Hard Disk.

(Alternate Track Assignment screen will now be displayed)

Press **F6** to continue with EC Installation. Follow prompts on SP screen.

If Microcode installation fails on 'diskette checking', try again with BACKUP diskettes.

If installation fails during 'diskette loading', see the *Service Function* manual, Chapter 11, hard disk trouble analysis and replacement, Procedure 1.

- ___ 3. When message **EC DXXXXX correctly installed** appears, remove the sixth diskette from the diskette drive.

10.8.1 MOSS IML

From the control panel:

- ___ 1. Press **Power OFF** key.
 - ___ 2. Set the **Function** indicator to 1. Press the **Validate** key.
 - ___ 3. Set the **Service Mode** indicator to 2. Press the **Validate** key.
 - ___ 4. Press the **Power ON Reset** key.
- The **MOSS IML** is completed when **F0E** is displayed on the control panel.
 - If another code is displayed, see the *MIP*, Chapter 2, and follow the appropriate procedure.

10.9 3745 MCLs

- If the diskette *3745 MCL Backup* received with this microcode contains MCLs continue with the following procedure.
- Otherwise, go to Step 10.9.4, "Access to 3745 MOSS" on page 18.

10.9.1 Retrieve 3745 MCLs from Diskette

From the Service Processor:

- ___ 1. Remove the *3745 Installation parameters diskette* from the SP. It will be re-used later on.
- ___ 2. Double click on the **Service Processor Icon**, Click on **Change Management**. Then, double click on **Manage Microcode Changes**.

3745 FFBM	PN 17G5454 17 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

- ___ 3. On the **Change Microcode** screen, click on **Retrieve microcode changes**. Then, click on **OK**.
- ___ 4. Click on **Retrieve from diskette**. Then, click on **OK**.
When requested, insert the *3745 MCL Backup* diskette in the SP diskette reader.
- ___ 5. Click on **ALL changes**. Then, click on **OK**.
Confirm your choice, click on **OK**. Then, follow the prompts.
- ___ 6. When **Retrieve completion** is displayed, click on **OK**.
- ___ 7. On the **Change Microcode screen**, click on **Display cover letter**. Then, click on **OK**.
Read the cover letter information to determine if there are any prerequisites or corequisites before applying the MCLs.
Click on **Cancel** to Exit.

10.9.2 Transfer MCLs to MOSS Disk

Establish the MOSS session:

- ___ 1. When the 3745 icon is PURPLE on the **3745 Menu** window, double click on **MOSS Console**.
Wait for **Function Selection Rules** screen.
- ___ 2. Enter **MCF**, press **Enter**.
- ___ 3. Select option **2** (copy the MCL file), press **Enter**.
Follow the prompts until the function is completed, press **F6**.

10.9.3 Applying MCLs on 3745

- ___ 1. On the **Microcode fixes** screen, select option **1**, press **Enter**.
- ___ 2. Select option **2**, press **Enter**.
When the function is completed, press **Enter**.
- ___ 3. On the 3745 control panel, press the **Power on Reset** key to perform a MOSS IML and to validate the MCLs.

10.9.4 Access to 3745 MOSS

- ___ 1. Wait until the 3745 icon becomes PURPLE.
- ___ 2. On the **3745 Menu** displayed, double click on **MOSS Console**.

Wait for **Function Selection Rules** screen.

11.0 Test Procedures

11.1 Diagnostics

11.1.1 Power Configuration Table

- ___ 1. Enter **POS**, press **Enter**.
- ___ 2. Enter **C**, press **Enter**.
- ___ 3. Compare the displayed **Created Power information table** with the one recorded in Step 10.1.5, "Power Configuration Table" on page 7.
- ___ 4. If the data is the same, enter a **Y** to confirm, press **Enter**.

Note: If there is a discrepancy, check the **Power bus** cable connection on MOSS Board, retry, and if there are still a discrepancy, see the *MIP*, Chapter 2, and follow the appropriate procedure.
- ___ 5. Press **F6**.
- ___ 6. Enter **A**, press **Enter**.
- ___ 7. Enter **B** (acknowledge battery change), press **Enter**.
- ___ 8. Enter **Y** to confirm battery change, press **Enter**.
- ___ 9. Press **F1**.

11.1.2 Update Scheduled Power ON

- ___ 1. Enter **TIM**, press **Enter**.
- ___ 2. Update the screen according to the data recorded in Step 10.1.4, "Record Scheduled Power ON" on page 6.
Press **Enter**.
- ___ 3. Press **F1**.

3745 FFBM	PN 17G5454 18 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

11.1.3 Verify the CDF

- ___ 1. Enter **CDF**, press **Enter**.
- ___ 2. Enter **4** (VERIFY), press **Enter**.
The value from the **CDF DATA** and the **MACHINE DATA** should be identical except for the new hardware you have just installed, Key **2**, press **Enter**. If there is another discrepancy, check the IOC bus cables setting on the MOSS board.
- ___ 3. When **CDF VERIFY COMPLETED** is displayed, press **F1**.

11.1.4 Diagnostics

- ___ 1. Enter **ODG**, press **Enter**.
- ___ 2. Enter **3** (IOCB), press **Enter**.
 - If **NO ERROR FOUND** is displayed, press **F1**.
 - Otherwise, see the *MIP*, Chapter 1.

11.1.5 Record the 3745 Model

From the Service Processor:

- ___ 1. On the **Service Processor** menu, double click on **Manage 3745/3746-900 Installation**.
- ___ 2. Click on the line of the 3745 you have just converted.
- ___ 3. Click on **Change**.
- ___ 4. On **Controller Model Change** message, click on **Yes**.

From the 3745 control panel:

- ___ 5. Press the **Power OFF** key.
- ___ 6. Set the **Service Mode** indicator to **2**. Press the **Validate** key.
- ___ 7. Set the **Function** indicator to **1**. Press the **Validate** key.
- ___ 8. Press the **Power On Reset** key.
The MOSS IML is completed when **F0E** is displayed on the control panel.

From the Service Processor:

- ___ 9. Click on **OK**.
The 3745 Model number is being recorded.

- ___ 10. When the operation is completed, click on **OK**.
- ___ 11. Click on **Cancel**.
- ___ 12. On the **3745 Menu** window, double click on **MOSS Console**.

Wait for **Function Selection Rules** screen.

11.1.6 Air Filter Acknowledge

- ___ 1. Check all frame filters. replace if needed.
- ___ 2. Enter **POS**, press **Enter**.
- ___ 3. Select option **A**, press **Enter**.
- ___ 4. Select option **F** (Acknowledge Air Filter change), press **Enter**.
- ___ 5. Enter a **Y** to confirm, press **Enter**. When completed, press **F1**.

11.1.7 Install Latest MLCs

Prior to returning the 3745 to the customer, you must install the latest MCLs.

- ___ 1. If you have an RSF link:
Refer to the *SP Installation and Maintenance* Manual. Follow the procedure **Reporting problem to retain** in Chapter 3 and, when requested enter **Converting a Model A and testing the RSF link** as short description of the problem. The latest MCLs are automatically downloaded. Then go to **:Handling Microcode Change level** in Chapter 3. When the RSF link is completed and the MCLs are installed, go to 11.1.8, "Close MOSS/MOSS-E Session" on page 20.
- ___ 2. If you use the LIC Upgrade kit:
Refer to the *SP Installation and Maintenance* Manual. Follow the procedure **Installing a new version of the Licensed Internal Code** in Chapter 3. When done go to 11.1.8, "Close MOSS/MOSS-E Session" on page 20.
- ___ 3. If you use the 3746 Optical Disk MCLs:
Refer to the *SP Installation and Maintenance* Manual. Follow the procedure **Handling Microcode Change Level** in Chapter 3. When done go to 11.1.8,

3745 FFBM	PN 17G5454 19 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

“Close MOSS/MOSS-E Session” on page 20.

11.1.8 Close MOSS/MOSS-E Session

- 1. Wait until 3745 Icon is purple, then on **3745 Menu**, double click on **MOSS Console**.
Wait for **Function Selection Rules** screen.
- 2. Enter **CID**, press **Enter**.
- 3. Re-enable the channel adapters disabled in Step 10.1.2, “Disable CA(s)” on page 6.
- 4. When all CAs are enabled, press **F1**.
- 5. Enter **OFF**, press **Enter**.
- 6. On the **3745 Menu** window, click on **Function** then on **Exit**.

The session between the MOSS and the Service Processor is closed.

11.2 General IPL

From the 3745 control panel:

- 1. Set the Power control indicator to its original value recorded in Step 10.1.1.
- 2. Set the **Service Mode** indicator to **0**.
Press the **Validate** key.
- 3. Set the **Function** indicator to **0**.
Press the **Validate** key.

The general IPL starts.

- If **FF4** code 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** successful.

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

11.3 Disk Save

When the customer network is restarted, save the contents of the hard disk on the **BACKUP** set of diskettes.

11.3.1 Open MOSS/MOSS-E Session

From the service processor:

- 1. On the **MOSS-E View** window, double click on the **ICON** of the 3745 you have just installed.
- 2. On the **3745 Menu** displayed, double click on **MOSS Console**.

Wait for **Function Selection Rules** screen.

11.3.2 Save Disk Contents onto Diskettes

- 1. If NCP is restarted and MOSS ONLINE, set the MOSS OFFLINE, enter **MOF**, press **Enter**.

Note: If Model 61A, select the CCU first.

- 2. Select **DIF**, press **Enter**.
- 3. Select **2**.
- 4. Enter the save-ID and press **Enter**.
- 5. Follow prompts on console.
- 6. When function complete, press **F1**.

11.4 Close MOSS/MOSS-E Session

- 1. Enter **OFF**, press **Enter**.
- 2. On the **3745 Menu** window, click on **Function**. Then, click on **Exit**.

The **MOSS-E View** window is displayed.

11.5 Logging OFF from SP

- 1. On **MOSS-E View** window, click on **Program**.
- 2. Click on **LOG OFF MOSS-E**.

11.6 Re-Packing

- 1. Place all the parts removed from the 3745 in the MES packing (MOSS board assembly, console tailgate, console cables).
- 2. If a Service Processor has been provided

3745 FFBM	PN 17G5454 20 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

with the MES and if a new RSF modem has been provided, disconnect the previous 3745 RSF modem, remove the RSF cable and put them in the MES packing.

- 3.

If a new RSF modem has not been provided, remove the previous RSF cable from the 3745 and put it in the MES packing for return.

Note: In US/Canada, the modem is integrated in the Service Processor.

11.6.1 3745 Local Console

- •

Disconnect the previous 3745 local console and return it to customer.

3745 FFBM	PN 17G5454 21 of 22	See EC History	EC D55659B 09MAR94	EC D55799 16SEP94	EC D55883 11MAY95	EC E27926 14MAR97
--------------	------------------------	-------------------	-----------------------	----------------------	----------------------	----------------------

After Installation (steps 12-15)

12.0 Field Updating

None.

13.0 Publications Update

Replace with received documentation.

14.0 Parts Disposition

- For parts listed in the RMER

All these parts become the property of IBM.
You **MUST RETURN** these parts following the instructions given on the Returned Material Equipment Report (RMER) provided with this FFBM.

- For parts not listed in the RMER

All these parts should be returned according to your local procedure.

15.0 Machine Records

- Install the new **MACHINE HISTORY** supplied.
- Report installation (as MES activity) and quality to existing procedures.

End of instructions.