

## Field Feature Bill of Material (FFBM)

**PN 58G5179**

**REMOVAL of a Token Ring Adapter (FC 4760), 4MB,  
or a Token Ring Adapter (FC 4770), 16MB,  
from IBM 3745 Models X10/X1A**

Written by	J. Michaut
Checked by	C. Menanteau
Approved by	A. Badino
Reviewed by	J. Combes

3745 FFBM	PN 58G5179 1 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--



3745  
FFBM

PN 58G5179 2 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
-----------------------	----------------------	----------------------	--	--	--

## Before Removal (steps 1-8)

### 1.0 Machines Affected

3745 Models 210/21A/310/31A/410/41A/610/61A.

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

### 2.0 Related BMs and ECs

None.

## 3.0 BM(s) to be Used

**Note:** Review each numbered item in this section to determine your needs.

### 3.1 FFBM(s) to be Used

P/N	Title
66X0036	TRA 4Mb removal, or
66X1398	TRA 16Mb removal

### 3.2 As required BM(s)

P/N	Title
66X0057	BPC2 card installation

## 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(s) to be used to determine whether all the parts were received.

#### Notes:

- a. A TRSS can be removed only from the base frame (board 01G-A1).
- b. The BPC2 card will be plugged in place of TRM card to allow the IOC continuity between adapters.
- 3. Using the *HONE configurator sheet* and the following table, determine the adapter cards and power (if required) positions to be removed.

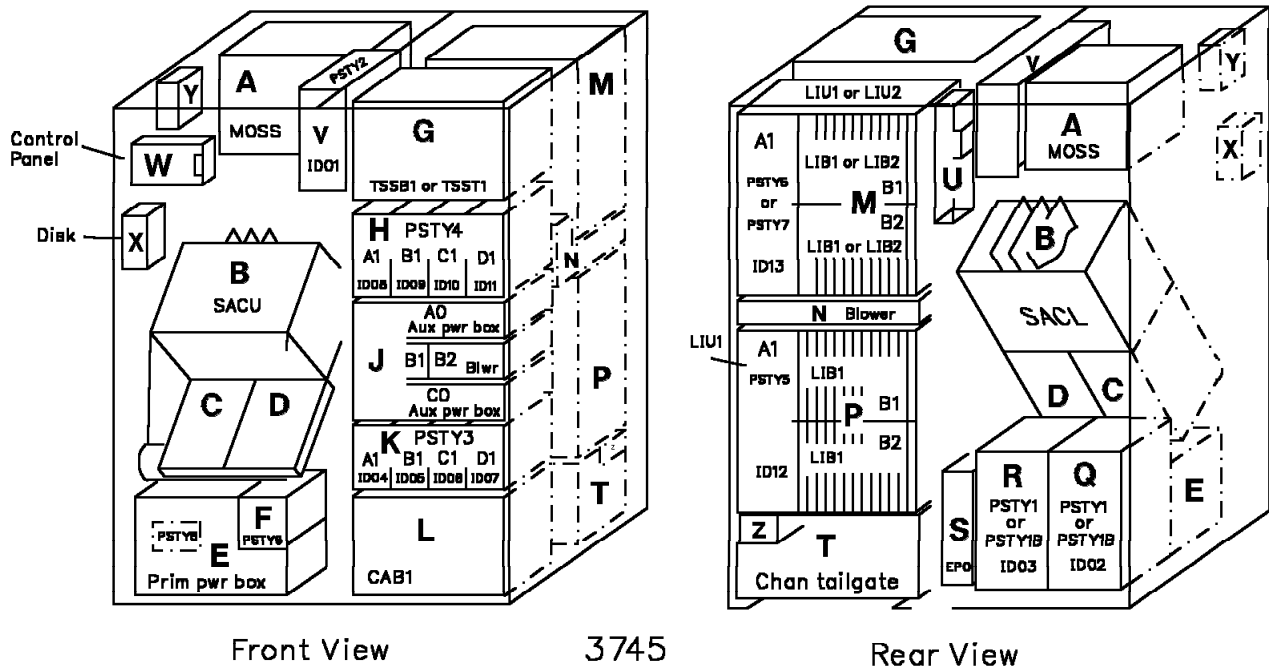
TRSS adapter removal from TSST board (01G-A1 board only).

Adapt. Position	1	2	3	4	5	6	7	8
CARDS TRM	A2	D2	N/A	N/A	L2	P2	N/A	N/A
IN TIC-A	B2	E2	N/A	N/A	M2	Q2	N/A	N/A
01G-A1 TIC-B	C2	F2	N/A	N/A	N2	R2	N/A	N/A
Power Supply (PSTY4)	08 01H-A1		N/A		10 01H-C1		N/A	
01U-A0 Tailgate TRSS	A	D	N/A	N/A	L	P	N/A	N/A

3745 FFBM	PN 58G5179 3 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
-----------	-----------------------	----------------------	----------------------	--	--	--

4. For 3745-X1A and 3746-900:

Configuration modification in a line adapter chain, in 3745-X1A with 3746-900 connected, requires the relocation of ACTIVE/PASSIVE bypass cards in IOC/DMA bus for proper signals propagation. This will be done in section 11.0. Parts to be used for relocation are part of the 3746-900 shipping group (holders, BPC1, ABP, cables...).



## 5.0 Programming

### 5.1 Diagnostic Programs

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

### 5.2 System Programs

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

3745 FFBM	PN 58G5179 4 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--

- 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
5	32 TSS/HPTSS + 0 TRA + 16 CA
or	28 TSS/HPTSS + 4 TRA + 16 CA

## 6.0 Purpose and Description

### 6.1 Purpose

Remove a Token Ring Adapter (TRSS).

### 6.2 Description

Remove adapter cards and associated power supplies (if required).

## 7.0 Removal Time

FFBM	Machine Hrs.	System Hrs.
-----	-----	-----
66X0036 (TRSS type 1) with 66X0057 (BPC2)		
or 66X1398 (TRSS type 2) with 66X0057 (BPC2)	1.3	00.0
66X0038 (POWER)	0.4	00.0
TEST TIME	0.7	00.0
	-----	
TOTAL TIME	2.0	
with power:	2.4	
Add 0.3 for ABP card relocation (if 3746-900 attached).		

## 8.0 Tools/Materials Required

ESD kit (PN 6428316).

3745 FFBM	PN 58G5179 5 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--

## Removal (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 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 3745 and the 3746-900 (if installed).
- \_\_\_ • For the maintenance password.
- \_\_\_ • To logoff the console, if not already done.

#### 10.1.1 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 Model X1A, go to Step 10.1.3, "Log the Service Processor on."
- Otherwise, continue.

#### 10.1.2 Log the 3745-X10 Console on

- \_\_\_ 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**.

**Note:** If Model 410/610, the CCU must be selected with **CSR** function before **RST**.  
Perform the **CSR/RST** sequence for each CCU.

- \_\_\_ 4. If the CCU is running, enter **CSR** and select CCU A or/and CCU B. Then, enter **RST** to reset the CCU(s).

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

- Go to Step 10.1.4, "Display the CDF."

#### 10.1.3 Log the Service Processor on

- \_\_\_ 1. On the **MOSS-E View** window, click on **Program**.
- \_\_\_ 2. Click on **LOG ON MOSS-E**.
- \_\_\_ 3. Enter the maintenance password, press **Enter**.

##### 10.1.3.1 Open MOSS/MOSS-E Session

- \_\_\_ 1. On the **MOSS-E View** window, double click on the icon of the identified 3745.
- \_\_\_ 2. On the **3745 Menu** window, double click on **MOSS Console**.
- \_\_\_ 3. When **MOSS Console** screen is displayed, enter **CID**, press **Enter**.
- \_\_\_ 4. From the **CA INTERF DISPLAY** screen, record **Enabled channel adapters**. Then, **disable** all channel adapters.
- \_\_\_ 5. When all CAs are **DISABLED**, press **F1**.

**Note:** On Models 41A/61A, CCU must be selected with **CSR** function before performing **RST**.

Perform **CSR/RST** sequence for each CCU.

- \_\_\_ 6. If CCU running, enter **CSR** and select CCU A or CCU B. Then, enter **RST** to reset CCU(s).

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

#### 10.1.4 Display the CDF

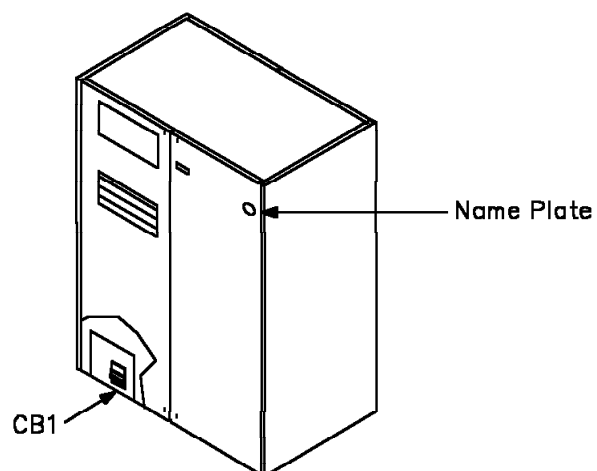
**Note:** From this point, the **Send** key is used only for a local console. For a Service Processor, press the **Enter** key.

- \_\_\_ 1. Enter **CDF**, press **Send/Enter**.
- \_\_\_ 2. Enter **1** (DISPLAY/UPDATE), press **Send/Enter**.
- \_\_\_ 3. Enter **7** (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*.  
Press **F1**.

3745 FFBM	PN 58G5179 6 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--

## 10.1.5 Power OFF

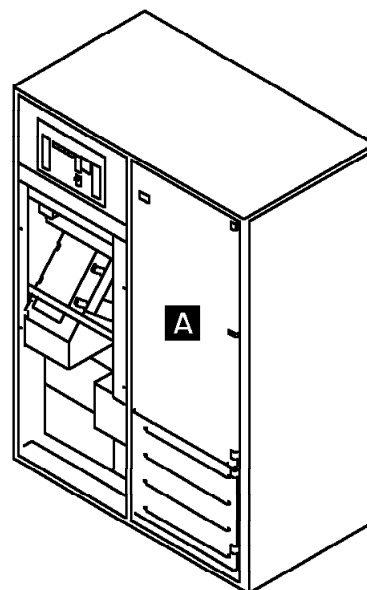
- 1. From the 3745 control panel, press the **Power OFF** key.
- 2. Open the left cover of the 3745, then switch **CB1** OFF.



## 10.2 TRSS Removal

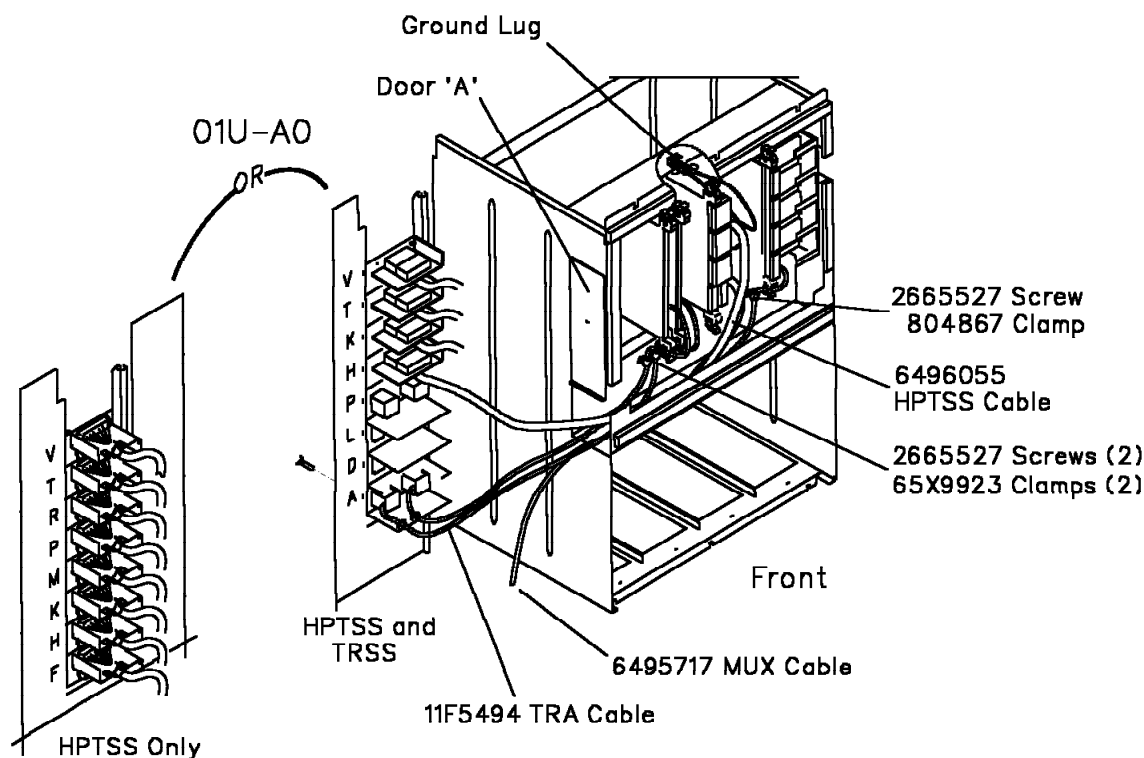
**Warning:** Follow the existing ESD procedures when handling logic parts.

- 1. Open the front and rear covers of the basic frame.
- 2. From the front of the machine, open the shield **A**, if present.
- 3. Locate the TSST board in position 01G-A1. Then, identify the adapter cards you have to remove (see table in Step 4.0, "Preparation" on page 3).



3745 FFBM	PN 58G5179 7 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--

- 4. See the following figure. On the left side of the enclosure, slide the door marked 'A' up.



#### Warning

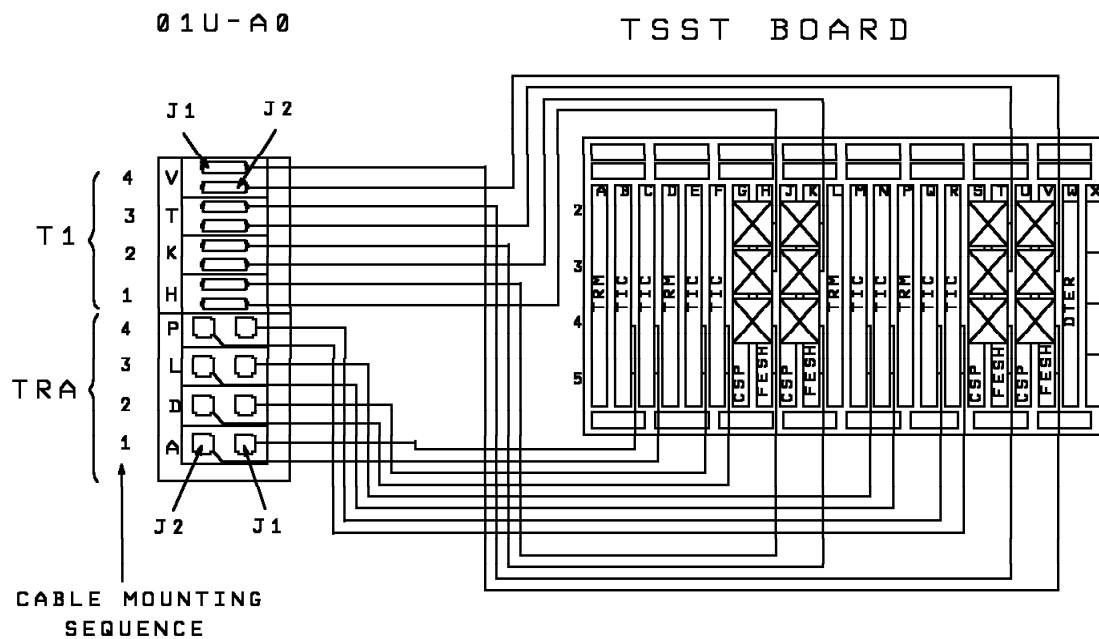
Hazardous voltages can exist on the ground shields of cables due to various faults. When removing token-ring cables, verify that the ground potential difference between the cable shields and the 3745/46 frame ground is no more than 1.0 VAC. If the voltage is exceeded, notify the customer immediately and do not proceed until the problem is corrected. Avoid removal or reconfiguration work during lightning activity.

### 10.2.1 Adapter Internal Cable and Cards Removal

- 1. From the rear of the 3745, locate the 01U-A0 tailgate.
- 2. Unplug the external token-ring cables from the tailgate positions identified in table, Step 4.0, "Preparation" on page 3.
- 3. On the front of the 01G gate, remove the two clamps (PN 65X9923) securing the adapter internal cable.
- 4. Unplug the TIC cards from 01G-A1, and the internal cables from the TIC cards. Unplug the TRM card.
- 5. Insert the removed cards into the bags provided by this FFBM.
- 6. Install 2 dummy cards (PN 2733278) in the TIC cards positions.

3745 FFBM	PN 58G5179 8 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	-----------------------	----------------------	----------------------	--	--	--



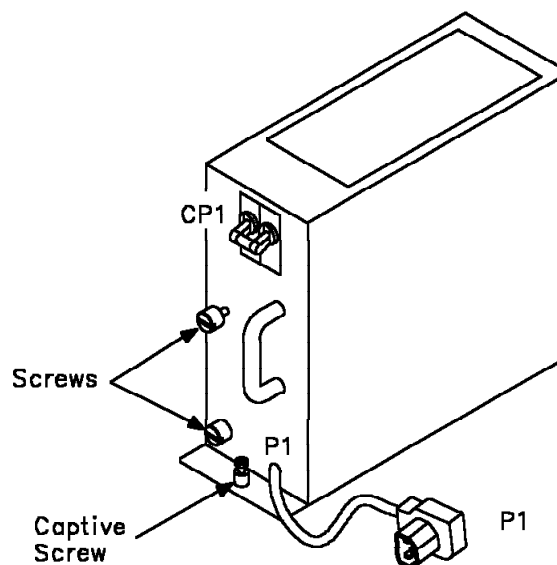


7. From FFBM 66X0057, plug the BPC2 card in place of the removed TRM card.
8. Remove the internal adapter cable asm from the tailgate (two screws).
9. In the same location, install a dummy bracket (PN 58X9369) with the screws removed in previous Step.

- If you remove a line adapter from an odd position (1 or 5), and the next adjacent adapter position is empty, you must remove the associated power block (PSTY4).
- Otherwise, go to Step 10.3, "Covers" on page 10.

## 10.2.2 PSTY4 Removal (ODD Adapter)

1. Under the enclosure where you have removed the adapter, identify (with table in Step 4.0, "Preparation" on page 3) the PSTY4 to be removed.
2. On the PSTY4, set the CP1 OFF.
3. Unplug the PSTY4 cable P1 from the connector (J1, J2, J3, or J4 of the auxiliary power box) just under the PSTY4.
4. Unfasten the two front screws, then the captive screw at the bottom front of the power.



5. Slide the PSTY4 out of the enclosure.

3745	PN 58G5179	EC C38411	EC E46544			
FFBM	9 of 12	18JUN93	17JAN97			

- \_\_\_ 6. Install a dummy bracket (PN 58X9377) with a screw (PN 2665527) in the same location.

## 10.3 Covers

- \_\_\_ 1. Slide down the door marked 'A' on the left side of adapter enclosure (see the second figure in Step 10.2, "TRSS Removal" on page 7).
- \_\_\_ 2. Reinstall covers and shields removed in previous Steps.

## 10.4 Power ON

Switch **CB1** ON, and close the system covers.  
From the 3745 control panel:

- \_\_\_ 1. Set the **Function** to 1.  
Press the **Validate** key.
- \_\_\_ 2. Press the **Power ON Reset** key.

The MOSS IML is completed when **F0E** is displayed.

## 11.0 Test Procedures

- If you have removed an adapter from a Model X1A, go to Step 11.1.2, "Open MOSS/MOSS-E Session."
- Otherwise, continue.

### 11.1.1 From the 3745-X10 Console

- \_\_\_ 1. When the **CA INTERFACE DISPLAY** screen is displayed, press **F4**.
- \_\_\_ 2. Enter the maintenance password, press **Send**.

- If you have not removed a PSTY4, go to Step 11.1.4, "Update the CDF."
- Otherwise, go to Step 11.1.3, "Create the Power Configuration Table."

### 11.1.2 Open MOSS/MOSS-E Session

From the Service Processor:

- \_\_\_ 1. Wait until the 3745 icon becomes **PURPLE**.
- \_\_\_ 2. On the **3745 Menu** window, double click on **MOSS console**.

- If you have not removed a PSTY4, go to Step 11.1.4, "Update the CDF."
- Otherwise, continue.

### 11.1.3 Create the Power Configuration Table

- \_\_\_ 1. Enter **POS**, press **Send/Enter**.
- \_\_\_ 2. Enter **C** (RE-CREATE), press **Send/Enter**.
- \_\_\_ 3. When the **Created power configuration table** is displayed, check that the ID of the PSTY4 you have removed is blanked (-).
- \_\_\_ 4. Enter a **Y** to confirm, press **Send/Enter**. Press **F1**.

### 11.1.4 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 removed.
- \_\_\_ 3. To update the CDF with machine values, enter **2**, press **Send/Enter**.
- When **CDF VERIFY COMPLETED** is displayed, press **F6**.
- If adapters are not recognized, see the *MIP*, Chapter 1, and follow the appropriate procedure.

### 11.1.5 Display the CDF

- \_\_\_ 1. Enter **CDF**, press **Send/Enter**.
- \_\_\_ 2. Enter **1** (DISPLAY/UPDATE), press **Send/Enter**.
- \_\_\_ 3. Enter **7** (LINE ADAPTERS (LA)), press **Send/Enter**.

An **N** should appear under the LA number you have just removed.  
Press **F1**.

### 11.1.6 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 the function is completed, press **F1**.

- If you have removed an adapter from a Model X1A, go to Step 11.1.8, "Relocate the Bypass Cards."
- Otherwise, continue.

### 11.1.7 Log the 3745-X10 Console off

Re-enable the channel adapters disabled in Step 10.1.2, "Log the 3745-X10 Console on" on page 6.

- Go to Step 11.1.10, "General IPL."

### 11.1.8 Relocate the Bypass Cards

**Note:** Follow this Step if a 3746-900 is attached.  
From the Service Processor:

- \_\_\_ 1. On the **3745 Function Selection** screen, enter **OFF**, press **Enter**.
- \_\_\_ 2. On the **3745 menu** window, click on **OPERATION MANAGEMENT**.
- \_\_\_ 3. Double click on **Locate Bypass Card Position**.
- \_\_\_ 4. Follow the instructions.

**Note:** Refer to the *3746 Model 900 Installation Guide* (SY33-2088), Chapter 4, section: 'Plugging the Active and Bypass Cards and Connecting +5V Cables'. Then, Chapter 5, perform steps 1, 2, and 5, to verify the CDF and test the IOC/DMA bus.

### 11.1.9 Logoff MOSS-E

- \_\_\_ 1. On the **3745 Menu** window, double click on **MOSS Console**,
- \_\_\_ 2. Enter **CID**, press **Enter**.
- \_\_\_ 3. Enable the channel adapter recorded in Step 10.1.3, "Log the Service Processor on" on page 6.  
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**.

### 11.1.10 General IPL

From the 3745 Control Panel:

- \_\_\_ 1. Set the **Power Control** indicator to its original value recorded in Step 10.1.1, "From the 3745 Control Panel" on page 6.
- \_\_\_ 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.

3745 FFBM	PN 58G5179 11 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	------------------------	----------------------	----------------------	--	--	--

---

## 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.**

3745 FFBM	PN 58G5179 12 of 12	EC C38411 18JUN93	EC E46544 17JAN97			
--------------	------------------------	----------------------	----------------------	--	--	--