Field Feature Bill of Material (FFBM)

PN 17G5557

CONVERT an IBM 3745 Model 310 to 61A

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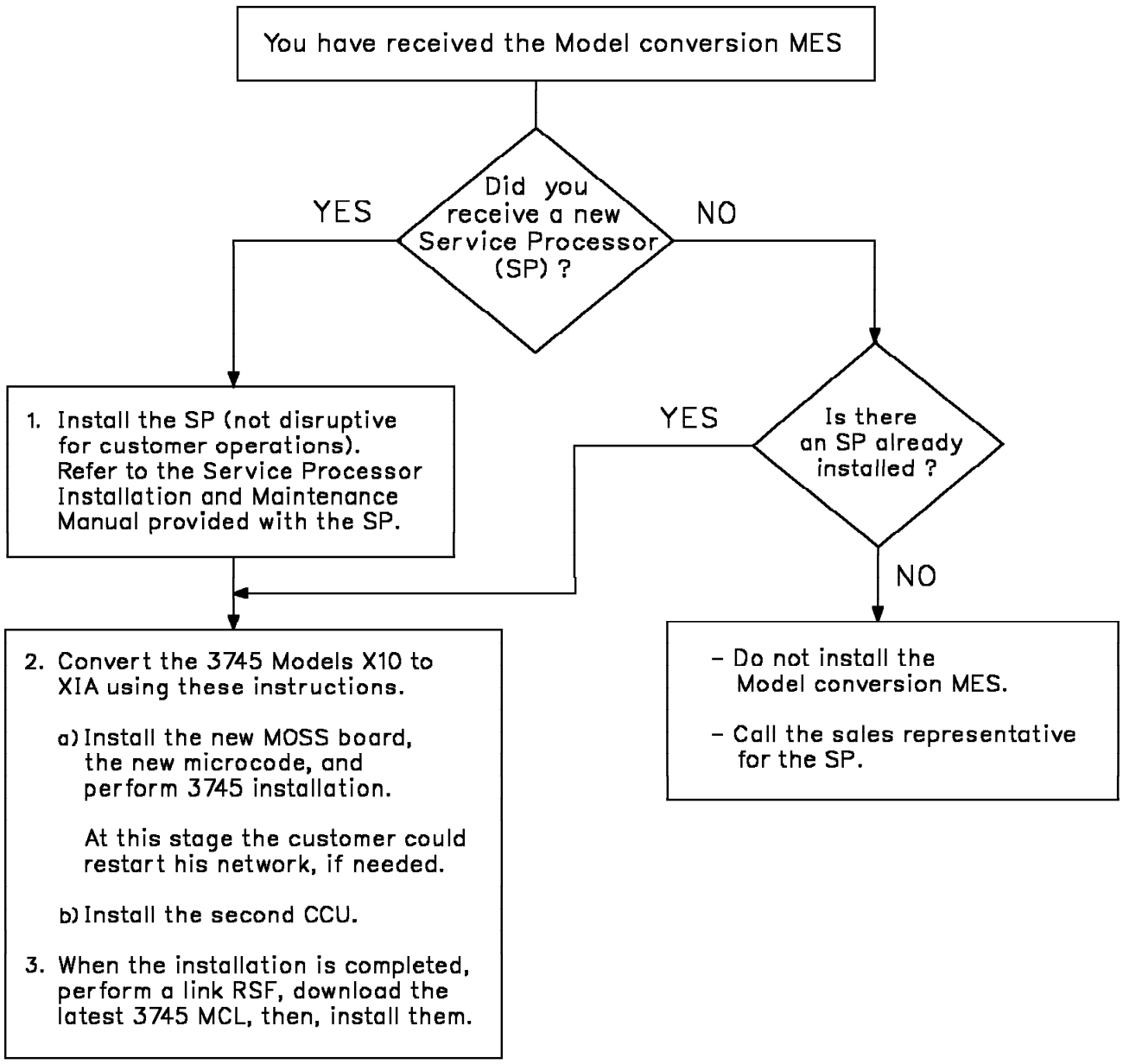
- To meet the customer's requirements for machine availability, the installation of this MES can be performed in either ONE or TWO stages.
- When performed in TWO stages, the installation will be halted after Part 1 and the machine will be tested. At this point, the machine can be restarted and the NCP reloaded. If the customer must use the machine at this point, completion of Part 2 may be delayed until additional machine time is available.
- If you elect to complete this installation in one stage, both Parts 1 and 2 will be completed before testing and returning the machine to the customer.
  1. Part 1: Install the MOSS board and the microcode. Connect the (SP) Service Processor (Steps 10.0 through 10.4).
  2. Part 2: CCU enclosure replacement (Steps 10.5 through 10.8).



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.

1.0 Machines Affected

3745 Model 310.

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

2.0 Related BMs and ECs

2.1 Prerequisites

(Must be installed prior to this installation)

- 72MB HDD must be installed.
  Checkpoint: Check in machine history for EC A97883, or 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 this 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:

```
   17G5557 - Installation instructions
   17G5451 - Convert a 3745 Model 310 to 61A
             MOSS board + 2nd CCU 4 MB
or 17G5453 - Convert a 3745 Model 310 to 61A
             MOSS board + 2nd CCU 16MB
```

- An external console cable is provided.

```
   53G3172 - Console cable (US only)
or 43G3173 - Console cable (World Trade)
```

- A SP is required for 3745 operations.
  One of these FFBMs is provided 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 the following FFBM.

```
   66X0095 - DMSW card logic on Model 310
```

As required FFB/M(s):

```
80G5112 - Hard Disk Drive Exchange.
```

4.0 Preparation

1. Familiarize yourself with the purpose and details of the installation instruction before negotiating machine time with the customer.
2. Check all items listed on the BM(s) to determine that all parts have been received.
3. The installation must be performed off-line.
4. Ensure that RETAIN search has been performed and all prerequisites have been installed. Perform a search using **3745AUPGRADE** and **CCUPGRADE** as SAS keywords.
5. Ensure that a current set of backup diskettes has been created by saving the hard disk contents onto diskettes before powering OFF the 3745.

6. Ensure that RSF link is installed and working. If the customer has not provided an 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.
7. 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 microcode available for this machine (model).

   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. Follow the unpacking instructions attached to the case, to unpack the MES material. Do not damage the packing boxes. They will be used for repacking.
9. To support the new Model, ACF/NCP V6R2 (or later) must be installed.
10. The DMA bus is required on the 3745 Model 61A. If the HSS or ELA feature is not already installed, you will receive DMSW and DTER cards to be installed in Step 10.4, “DMA Bus Card Installation” on page 13.

Additional information:

- All parts to be returned should be handled carefully. Returnable parts must be received at the factory in a good working order.
- In 61A, the memory size must be the same in both CCUs. If you install the FFBM 17G5453, be sure that the CCU A houses 16MB, or is to be upgraded to 16MB. If you install the FFBM 17G5451, and CCU A houses 8MB, you should received additional FFBM to increment CCU B memory to 8MB.
- Before starting the MES, verify that the serial number displayed on the 3745 MOSS 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 10.12.2).
- Use the DII function to purge all NCP dumps from the MOSS hard disk.
- 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

ACF/NCP V6R2 is the minimum level required to support the Model 61A.

6.0 Purpose and Description

6.1 Purpose

To convert a 3745 Model 310 to a Model 61A.

6.2 Description

1. MOSS Changes.
   - Exchange MOSS Board/card assembly.
   - Replace console tailgate.
   - Install new MOSS microcode.
2. CCU B installation.
   - Install logic cards.
   - Install PSTY1B power supply.
   - Install FAN and associated cables.

7.0 Installation Time

To be reported as MES.

FFBMs	Machine Hours	System Hours	Nbr of CE
17G5451 or 17G5453	4.5	0.0	2

Installation may be staged with a checkpoint before installing the second CCU.
Estimated time:
Part 1: 2.7 Hours.
Part 2: 2.5 Hours.

8.0 Tools/Materials Required

- ESD kit (PN 6428316).
- Isopropyl Alcohol.

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 the Service Processor is available.
If you received the SP as part of this MES, install the SP within 10m (33 feet) of 3745.

Before the installation, 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.

10.1.2 Installing in Stages

- If you are beginning the installation, go to Step 10.1.3, “Disable CA(s).”
- If you are resuming the installation after staging following the Service Processor installation and MOSS board exchange, and have returned the machine to the customer as a Model 31A, continue with this Step.

From the Service Processor:

__ 1. If not logged ON, and the **MOSS-E View** window displayed, click on **Program**. Then, click on **LOG ON MOSS-E**.

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

__ 3. On the **MOSS-E View** window, double click on the ICON of the identified 3745.

__ 4. On the **3745 Menu** window, double click on **MOSS Console**.
Wait for **Function Selection Rules** screen.

__ 5. Enter **CID**; Go to Step 10.1.3, “Disable CA(s),” and skip item 3.

10.1.3 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 through 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.

10.1.4 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**.
When **CDF VERIFY COMPLETED** is displayed, press **F1**.

10.1.5 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.

```
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**.

10.1.6 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**.

10.1.7 Run diagnostics

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

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

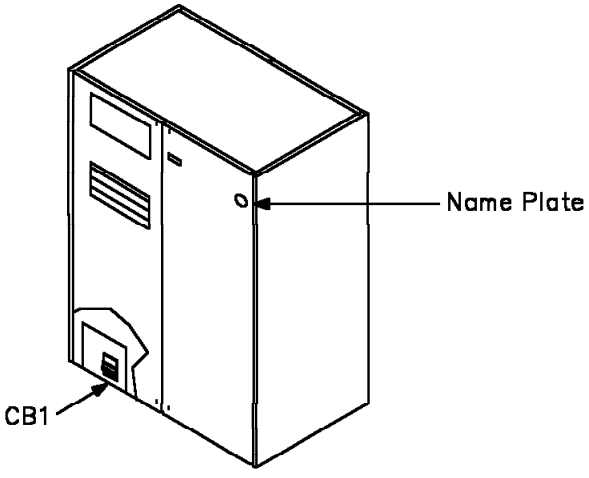
- If **NO ERROR FOUND** is displayed, press **F1**.
- Otherwise, see the *MIP*, Chapter 1.

__ 3. Power OFF the 3745 local console.

10.1.8 Power OFF

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

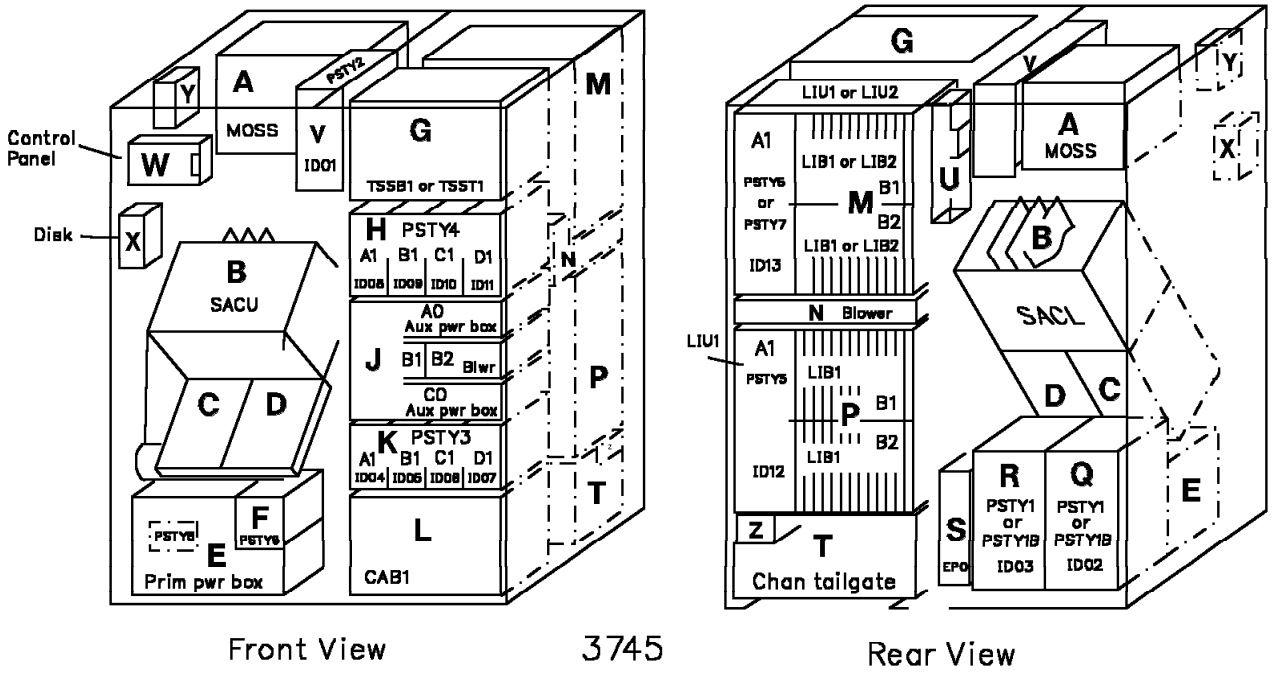
__ 2. Open the front system cover and switch **CB1** OFF.



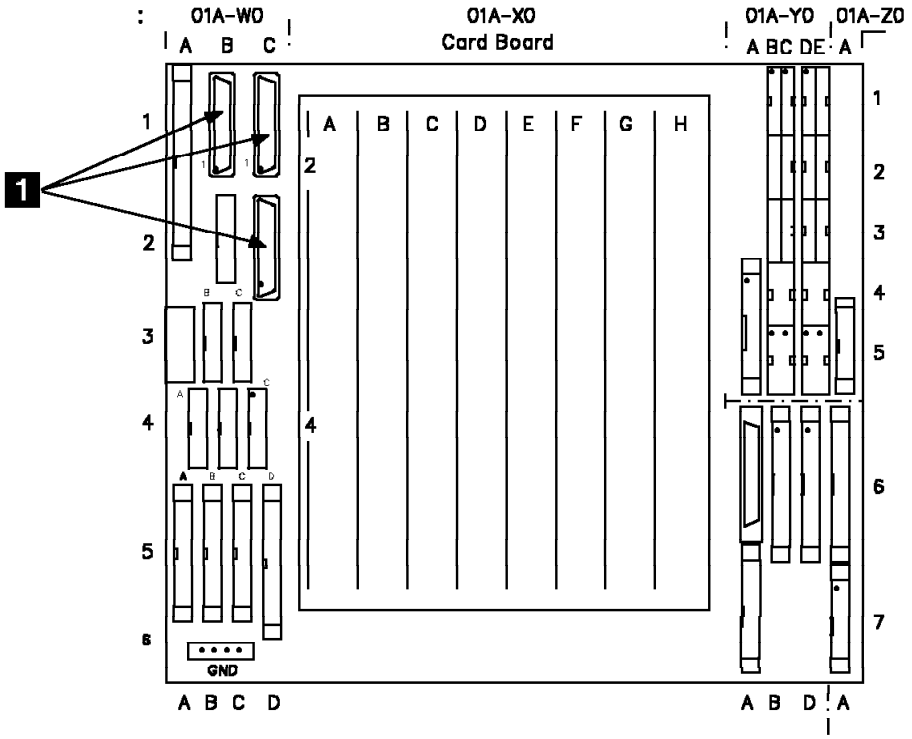
10.2 MOSS Board Exchange

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.



__ 2. To prevent small parts from falling into the CCU board, cover the CCU board assembly with cloth, plastic, etc.

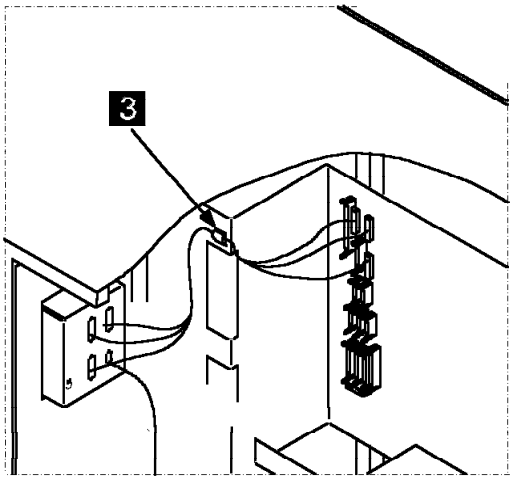
__ 3. From MOSS board positions 01A-W0B1, C1, and C2, disconnect the internal console cables .1..

Warning.

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

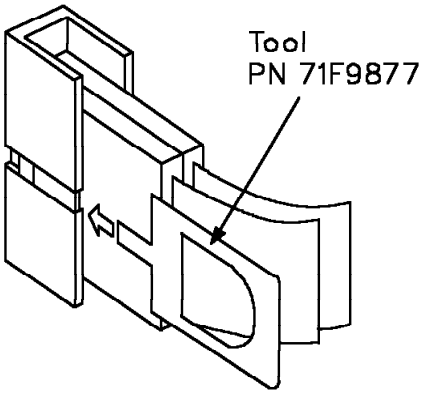
Remove the cables from the clamp (3), and route them back to the console tailgate. They will not be re-connected.

__ 4. 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-connected, mark the positions of removed cables in the above figure.



Note.

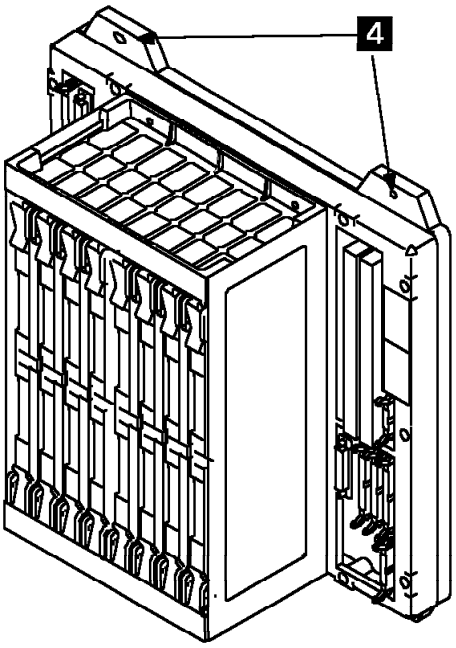
To prevent damage to the cables and the board, use tool (PN 71F9877) to unlock the connector as shown on the following figure.
Gently insert the blade. Then pull on the cable housing to remove the cable.



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 label (PN 811825).

__ 5. 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.

__ 6. Secure the remainder of the cables to the right side of the frame to prevent interference during the MOSS board removal and installation.



__ 7. Remove the 4 screws securing the MOSS board assembly to the frame (4).
Save screws for re-installation.

__ 8. 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

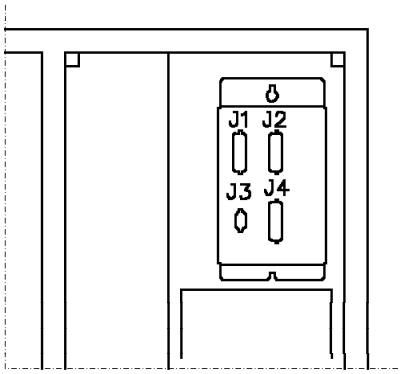
__ 1. Carefully, install the new MOSS board assembly provided by the FFBM using the saved screws.

__ 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.

10.3 Cable Installation

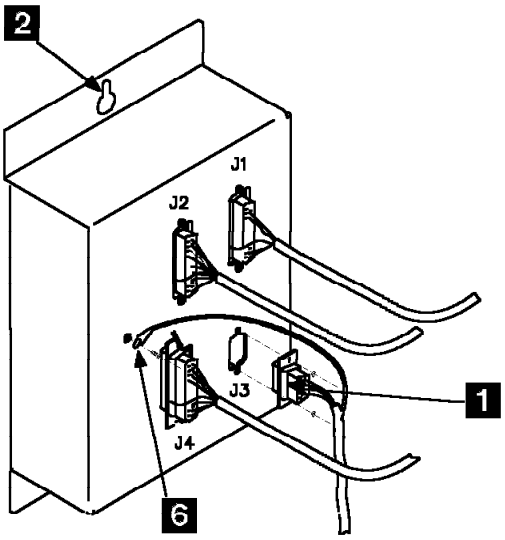
10.3.1 Console Cables Removal



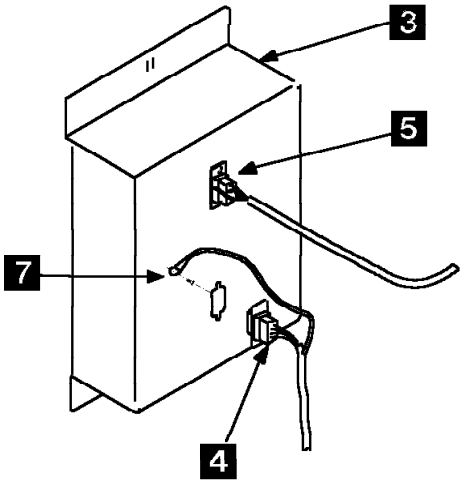
From the console tailgate:

__ 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..

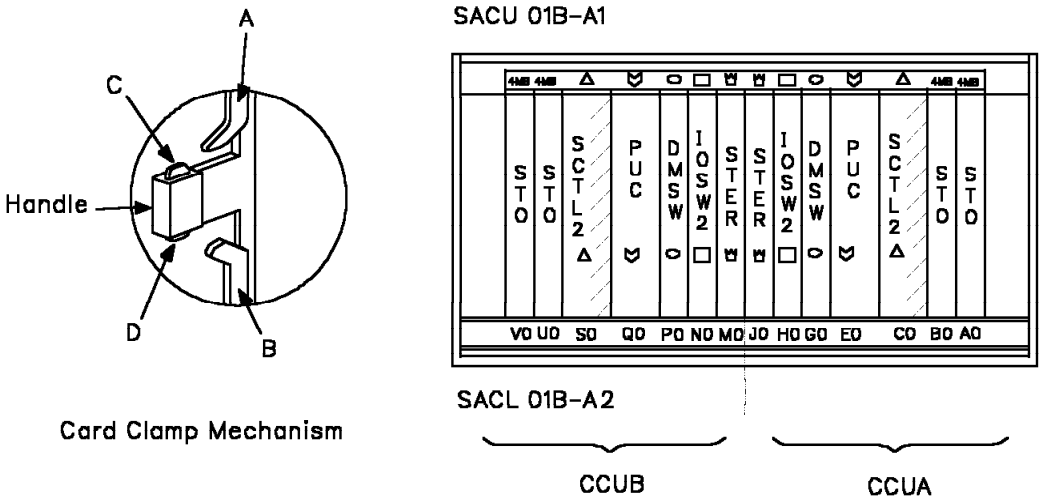


__ 6. Route and connect the internal console cable .5. attached to the console tailgate to the MOSS card 01A-E0 (MOSS LAN attachment card).
Secure the cable in the clamp (see figure on page 9).
__ 7. Re-install the **Power On Operate** cable in connector position J3 of tailgate .4., using the screws 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.

10.4 DMA Bus Card Installation



Card Clamp Mechanism

Check locations 01B-A1G0 for the presence of DMSW cards. If present, skip to Step 10.5, “EPO Switch Exchange” on page 14.
If not present, proceed with the installation of DMSW and DTER cards provided by FFBM 66X0095 (310).

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 310: 01B-G0

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 the slot G0 (Model 31A) and allow it to seat under its own mass, ensuring that it has reached the end of the slot.

d. Press in 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, operate the levers 3 times.

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

10.4.2 DTER Card Installation

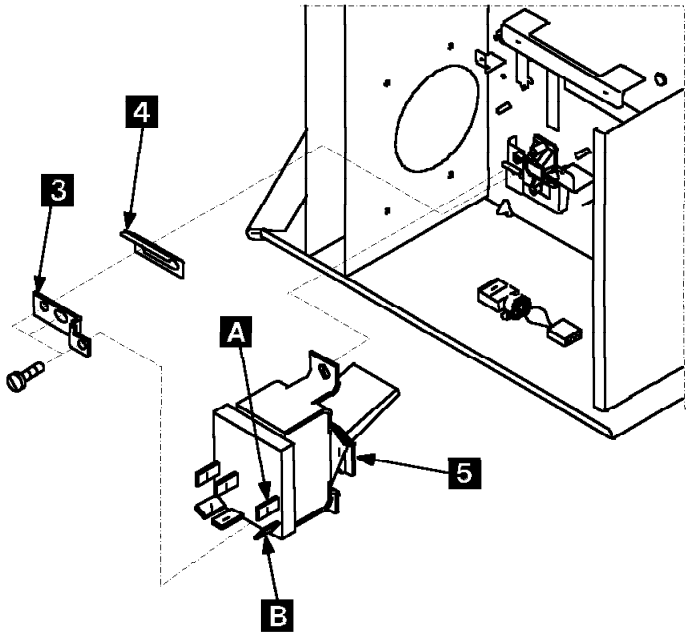
__ 1. Open the right front 3745 cover the internal shield (if present).

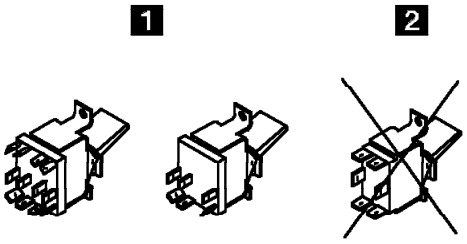
__ 2. Locate the TSS board in 01G-A1 (refer to figure page 8), and remove the dummy card from position 01G-A1W2.

__ 3. Plug the DTER card in 01G-A1W2.

__ 4. Close the internal shield (if present), and the cover.

10.5 EPO Switch Exchange





__ 1. Open the 3745 control panel gate.

__ 2. From the rear of the gate, locate the EPO switch, and compare with the above figure:

__ a. If it looks like switches .1., switch replacement is not required. Skip to the Information Box below.

__ b. If it looks like switch .2., you must install the switch (PN 8492368) with the bracket (PN 43G3154) provided by the FFB/M as follows:

__ c. Remove the bracket .3. by removing three screws. Save screws and spring .4..

__ d. Remove the switch .5. by removing the upper screw. Save the screw.

__ e. Install the new EPO switch using the screw saved in previous step.

__ f. Install the new bracket .3. and the spring .4. using the three screws saved earlier.

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

__ g. Disconnect the wires from the old switch and reconnect one wire (1) on contact .A. and second wire (2) on contact .B..

__ h. Close the control panel gate.

Information

At this point, you have the option of staging the installation.

If you want to test before installing the second CCU, go to Step 10.11, "Power ON" on page 21, complete Steps 10.9 through 11.1.5, and then return to Step 10.6, "Second CCU Installation" on page 15.

If you do not want to test before the installation is complete, continue with Step 10.6, "Second CCU Installation" on page 15.

10.6 Second CCU Installation

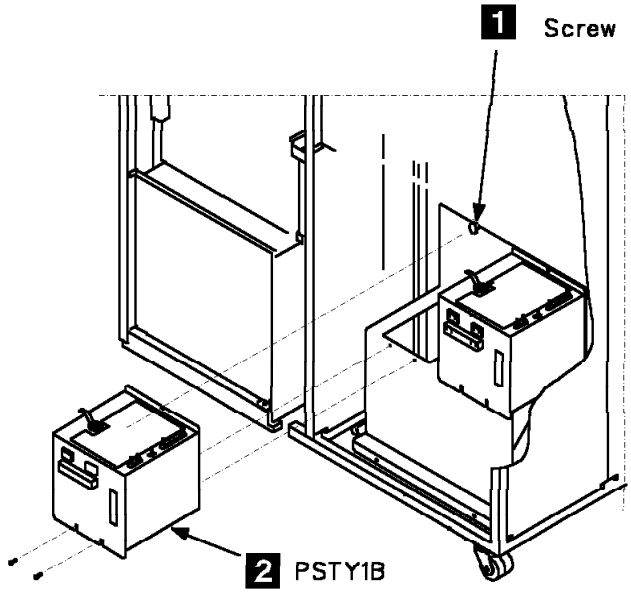
Note

If you perform the 2nd CCU installation as a 2nd stage of a two-stage installation, and if the 3475 was returned to customer as a Model 31A, perform Steps 10.0 through 10.1.3 and 10.1.6 through 10.1.7.

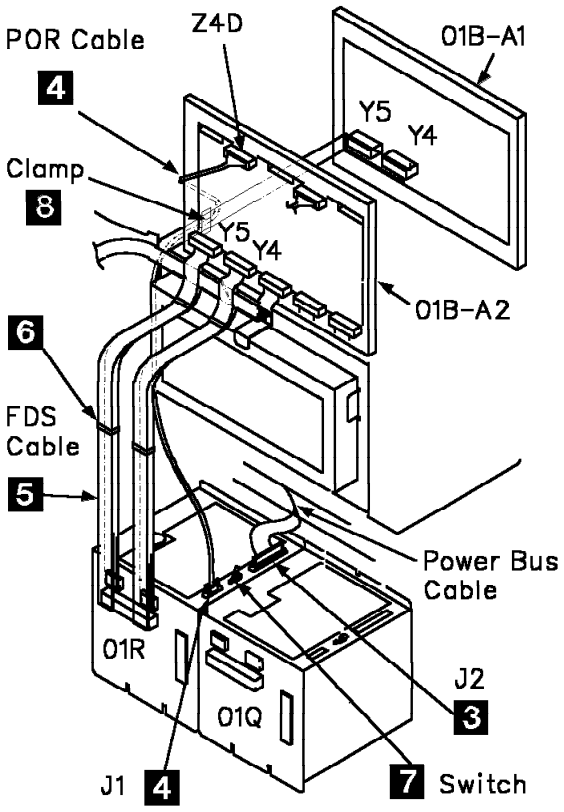
10.6.1 PSTY1B Installation

__ 1. Remove the top left screw securing the PSTY1B bracket. .1.

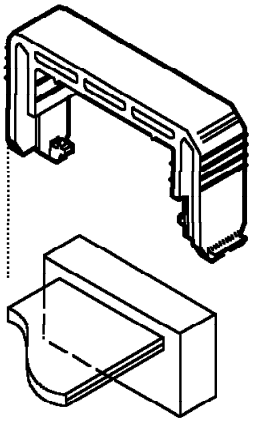
__ 2. Install the PSTY1B (PN 26F1733) .2. in 01R with three screws (PN 2665528), (two are provided by FFBM and one from the previous Step).



__ 3. Locate the power control bus cable tied on the raceway (at the top of the PSTY1), and plug it in the power connector J2 .3..



__ 4. Attach the retainers (PN 62X4516) to the FDS connectors as shown.



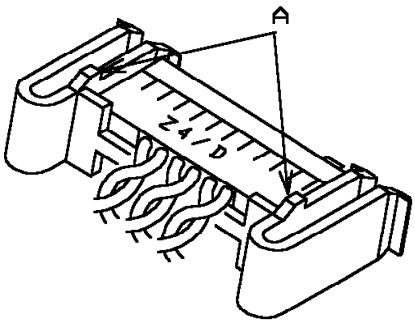
__ 5. Route and connect the FDS cables .5. from the PSTY1B to the SACU board as follows:

PN	From	To
61F4453	01B-A1-Y5	01R-TB1/3
61F4455	01B-A1-Y4	01R-TB2/4
61F4454	01B-A2-Y5	01R-TB1/3
61F4456	01B-A2-Y4	01R-TB2/4

Note: Screws (PN 61F4511) are provided in a bag attached to the power.

__ 6. Tie the FDS cables together with tie wrap (PN 6846576) .6..

__ 7. Mount the retainer (PN 05F0061) on the **Power On Reset** cable (PN 61F4448) as shown in figure.
Note the positions of tabs .A..



__ 8. Route and connect the cable from PSTY1B 01R-J1 to the SACL board 01B-A2Z4-D .4..
Secure the cable in the clamp on the left side of the enclosure as shown in the figure.

__ 9. On the PSTY1B in 01R, set the switch 1 to position B (CCUB) .7..

__ 10. Route the PSTY1B power cord to the front of the machine.

10.6.2 I/O Cables

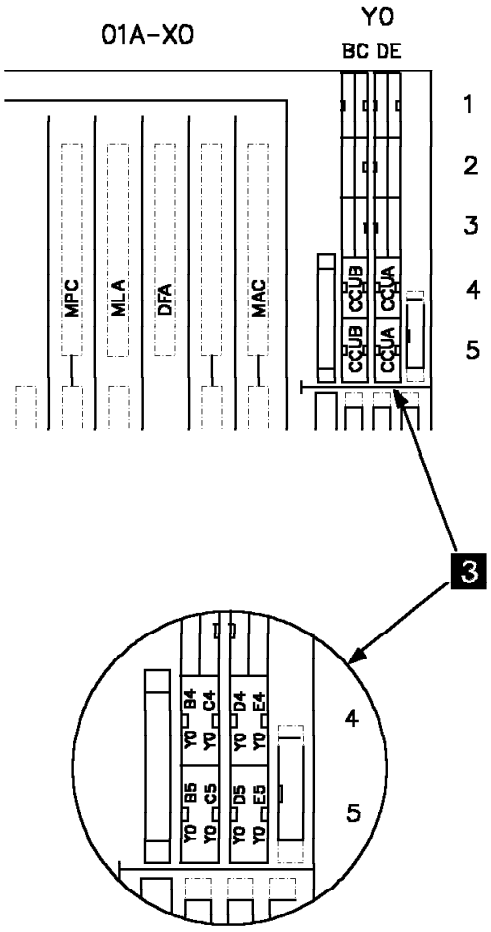
__ 1. From the rear of 3745, locate the MOSS board in 01A.

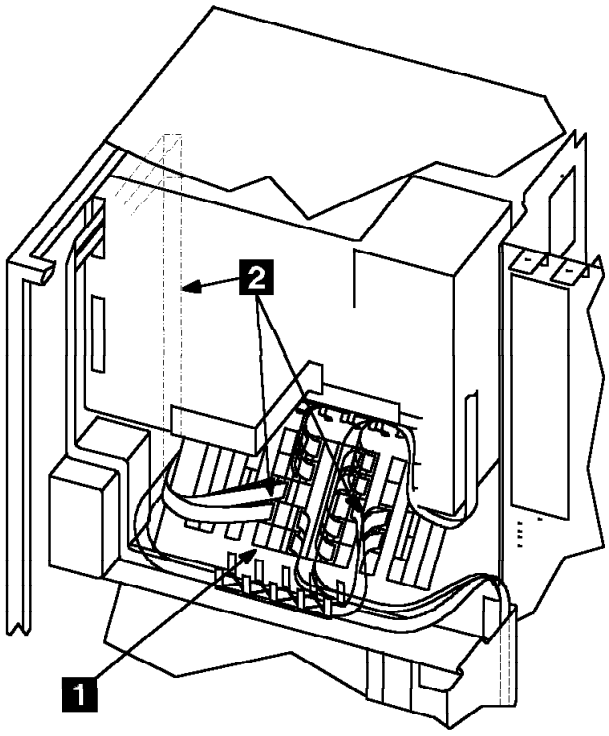
__ 2. Install and route the flat cable group (PN 76F8592).
Secure the cables in the existing clamps.

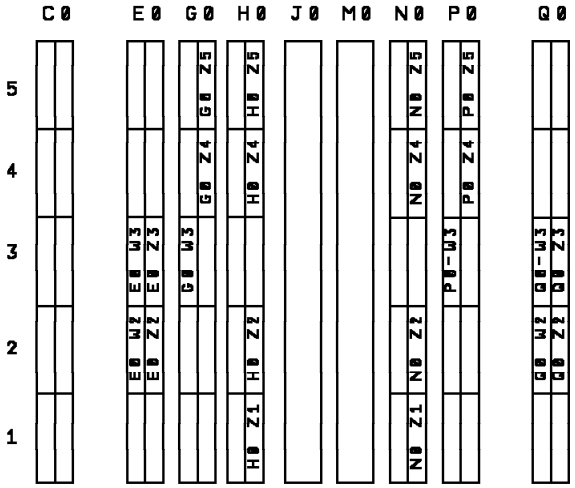
__ 3. Plug the flat cables, one at a time, on the MOSS in the following sequence: .3.

- 01A-Y0C4, Y0B4, Y0C5, Y0B5.

__ 4. Route the cables through the machine to the SACU, and connect them according to their labels .1. .2..







Flat cables connection on SACU board.

10.6.3 FAN Installation, Power Cords

From the front of the machine:

__ 1. Remove the CCU air filter .1..

__ 2. Remove 5 screws then remove the bottom bracket from the enclosure .2..

__ 3. Remove 4 nuts then remove the plate .3. and the pad .4..
Save nuts and pad for the re-installation.

__ 4. Install the blower (PN 61F4494) .5. and the pad .4., saved in the previous Step, as shown on figure.
Secure the fan with the nuts (PN 1622241) saved in previous Step.

__ 5. Connect the ground wire .6. on the enclosure with a lockwasher (PN 1622348) and a nut (PN 1622419).

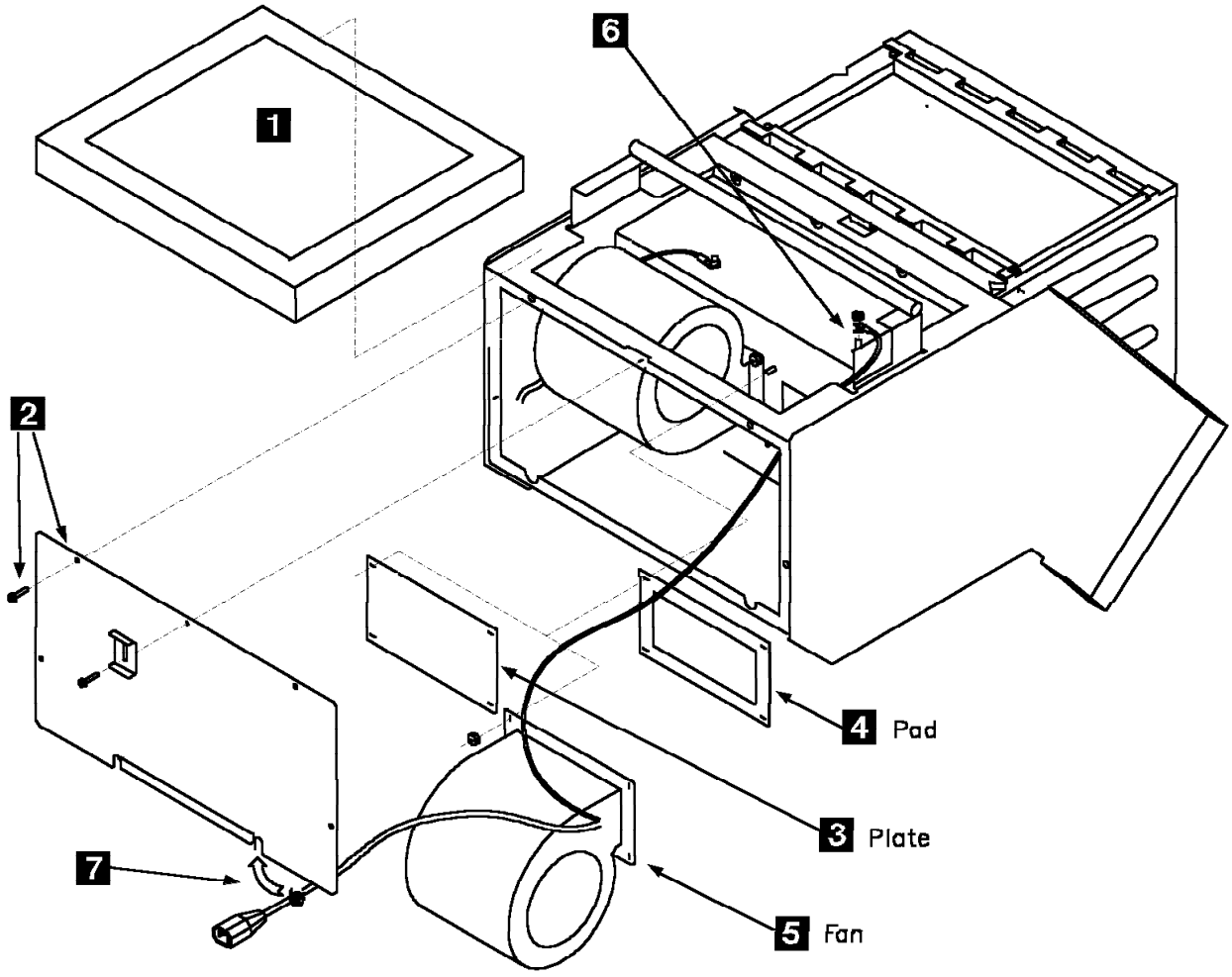
__ 6. Connect the fan power cord .7. as shown, and re-install the bottom bracket of the enclosure.

__ 7. Re-install the filter on the cage and secure it.

__ 8. Plug the power cords in the primary power box as follows:

a. PSTY1 01R to connector J9.
b. Fan CCUB to connector J2.

Note: Ensure that all CPs are ON.



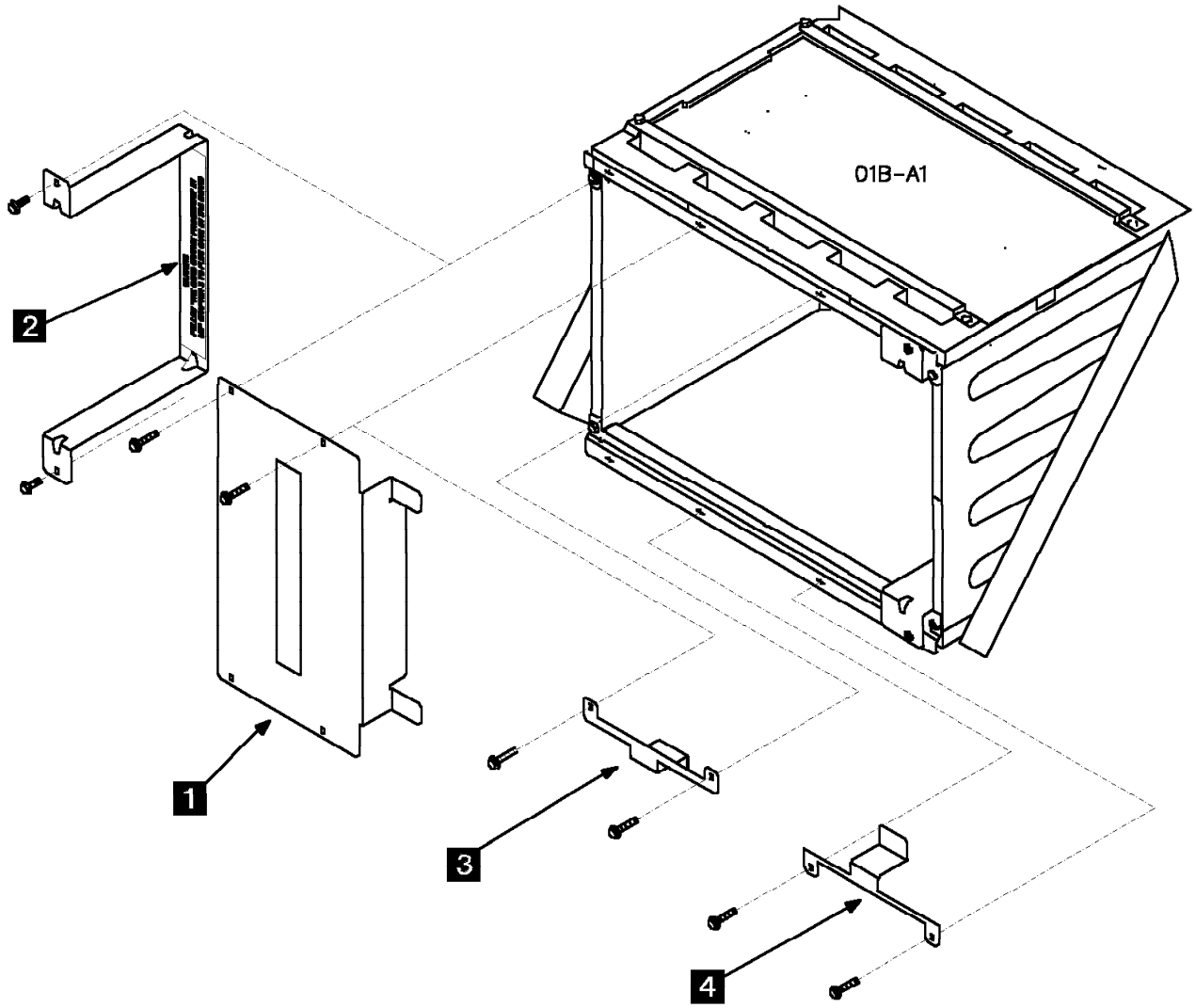
10.7 Mechanical

__ 1. From the rear of the CCU cage, remove the bracket .1. (four screws).

__ 2. Affix the label (PN 34F1289) to bracket (PN 34F1363), and install the bracket (PN 34F1363) on the left side of the enclosure. (Re-use the two screws removed in Step 1) .2..

__ 3. Install the bracket (PN 61F4485) .3. (two screws PN 61F4511) at the top of the CCU cage to secure the STER cards.

__ 4. Install the bracket (PN 61F4486) .4. (two screws PN 61F4511) at the bottom of the CCU cage to secure the STER cards.



10.8 Card Installation

Install carefully the cards provided by FFBM as follows:

__ 1. On card positions N0, P0, Q0, S0, U0, move levers A and B outwards, and carefully, remove the dummy cards.

__ 2. Insert the cards into their slots and allow them to seat under their own weight ensuring that they have reached the end of their slots.

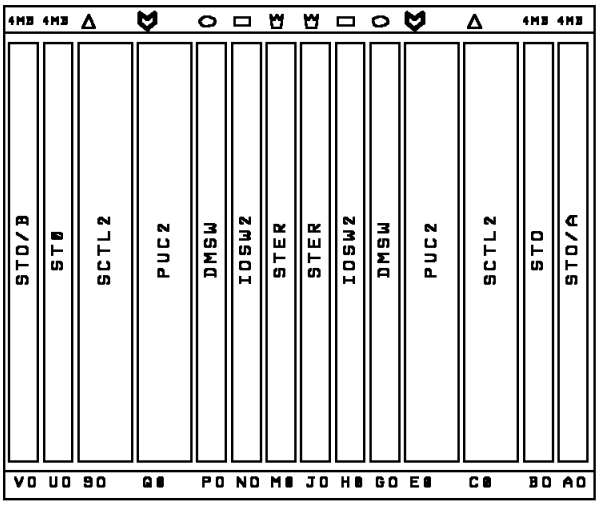
- IOSW2 card, in position N0.
- PUC card, in position Q0.
- DMSW card, in position P0.
- SCTL2 or SCTL3 card, in position S0.
- STO card, in position U0.

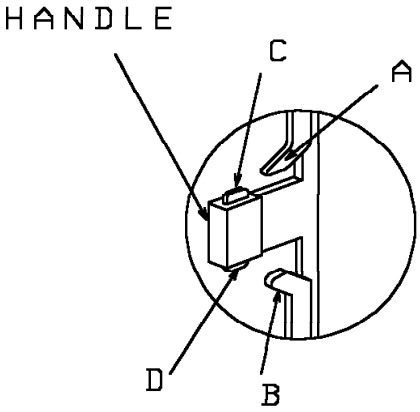
Note: No STO card provided if SCTL3 (16MB).

__ 3. Lock the cards in place by pushing gently on buttons C and D.

__ 4. Using both hands, move levers A and B inwards simultaneously.

Note: To improve contact, operate the levers 3 times.



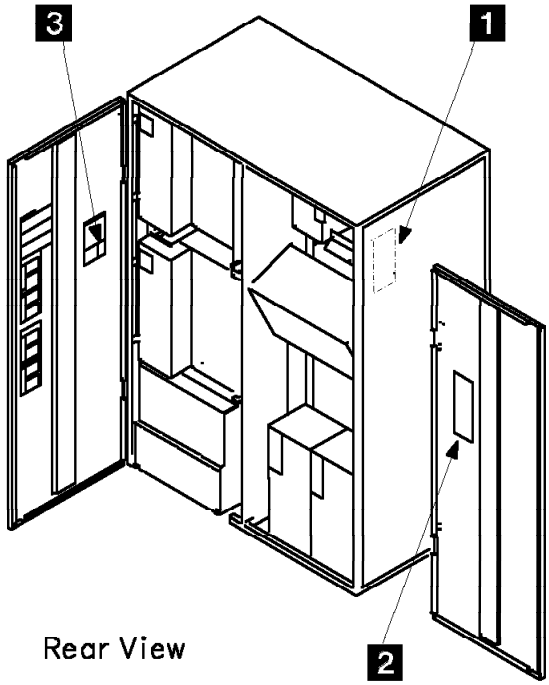


10.9 Labels, Name Plate

__ 1. Affix label (PN 17G5564) .1. on the right side of the frame, close to the MOSS board, over the existing label.

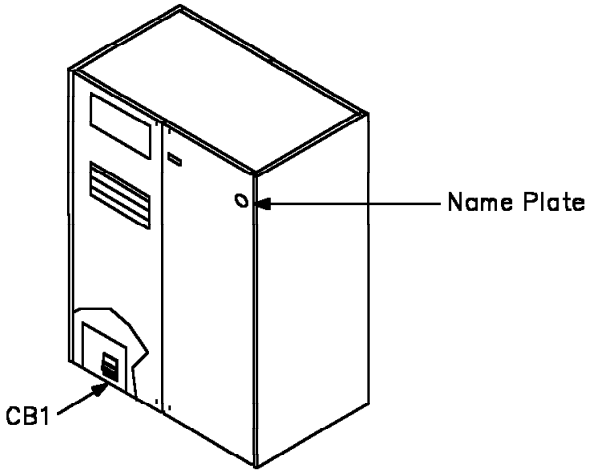
__ 2. Inside the right rear cover, affix label (PN 71F9997) .2., over existing label.

__ 3. Inside the rear left cover, affix label (PN 43G3202) .3. over the existing label (console tailgate label).

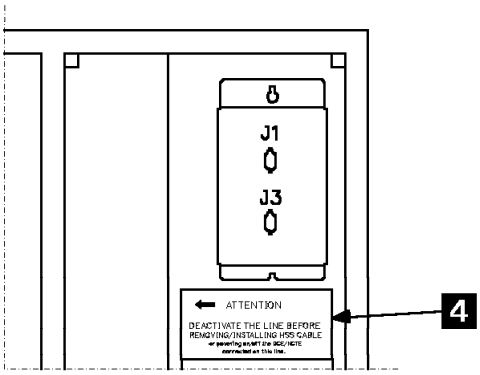


__ 4. Remove the name plate from the front system cover, and clean any adhesive residue from the recessed area with Isopropyl alcohol.
Remove the paper from the back of new name plate (PN 17G5604) and affix it.

__ 5. Strike out the model number on the S/N label, only the nameplate will identify the model type from now on.

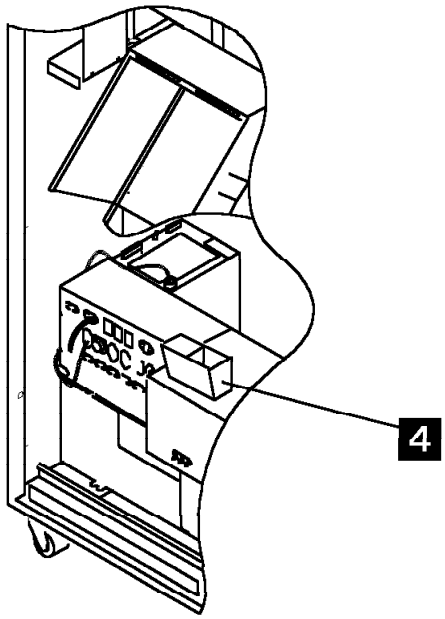


__ 6. If there is no HSS/ELA installed in your 3745 DMSW and DTER cards have been installed (FFBM 66X0085).
According to your language, attach label (PN 11F6521) provided with the FFBM under the console tailgate .4..



10.10 Diskette Storage Box

__ 1. Install the diskette storage box .4. on the top of the PS6



10.11 Power ON

__ 1. From the primary power box, switch CB1 ON.

__ 2. Close the system cover(s).

__ 3. If you have completed the MOSS installation and second CCU installation in one stage, without a checkpoint after the MOSS installation, go to Step 10.12, “MOSS/MOSS-E Connection” on page 22.

__ 4. If you have completed the MOSS installation as the first stage of a two-stage installation, go to Step 10.12, “MOSS/MOSS-E Connection” on page 22.

__ 5. If you have completed the second CCU installation as the second stage of a two-stage installation and completed Steps 10.10 through 11.1.6, proceed.
From the 3745 control panel:

__ a. Set the **Function** indicator to **1**. Press the **Validate** key.

__ b. Press the **Power On Reset** key.

The MOSS IML starts.

__ c. Wait until 3745 Icon is purple, then on **3745 Menu**, double click on **MOSS Console.**

Wait for **Function Selection Rules** screen. Go to Step 11.1.2, "Power Configuration Table" on page 24.

10.12 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.

10.12.1 IML From Diskette

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

Note: There are six diskettes in a set.

__ 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.

10.12.2 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-XXXXX** (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 succesfully 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.

10.12.3 Microcode EC Installation

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.

Notes:

a. Use only one set of diskettes (NORMAL) for this installation. The same set must be used for the checking pass and for the pass which installs on the hard disk. Use of different set can lead to lost CDF data.

b. You will get the following messages during reading the PRIMARY diskette:
- **Increasing in disk size (Up to 80MB)**
- **Please wait several minutes.**
- **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. Follows 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** is displayed, remove the sixth diskette from the diskette drive.

10.12.4 MOSS IML

From the control panel:

__ 1. Press the **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 performed.

- A successful completion will result with a code **F0E**.
- If another code is displayed, see the *MIP*, Chapter 2, and follow the appropriate procedure.

10.13 3745 MCLs

- If the diskette *3745 MCL Backup* received with this microcode contains MCLs continue with the following procedure.
- Otherwise, go to Step 10.14, “Access to MOSS 3745” on page 24.

10.13.1 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**.

__ 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.

10.13.2 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**.

10.13.3 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.

10.14 Access to MOSS 3745

__ 1. On the **MOSS-E View** window, 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 Update Scheduled Power ON

__ 1. Enter **TIM**, press **Enter**.

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

__ 3. Update the screen according to the data recorded in Step 10.1.5, “Record Scheduled Power ON” on page 8.
Press **Enter**.

__ 4. Press **F1**.

11.1.2 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 10.1.6, “Power Configuration Table” on page 8.

Notes:

a. After MOSS replacement only: the data should be the same. Enter **Y** to confirm and press **Enter**.

b. After installing 2nd CCU, the PSID3 must be displayed. Enter **Y** to confirm and press **Enter.**
Enter **1** (3745 base frame), press **Enter**.
Enter **U03** to set the power supply UP and press **Enter**.

c. If there is a discrepancy, check the **Power bus** cable connection on MOSS Board, retry, and if there is still a discrepancy see the *MIP*, Chapter 2, and follow the appropriate procedure.

__ 4. Press **F6**.
__ 5. Enter **A**, press **Enter**.
__ 6. Enter **B** (acknowledge battery change), press **Enter**.
__ 7. Enter **Y** to confirm battery change, press **Enter**.
__ 8. Press **F1**.

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 installed.
To update the **CDF data** with the machine values, enter **2**, press **Enter**.
When **CDF VERIFY COMPLETED** is displayed, press **F1**.

11.1.4 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.

11.1.5 Run the Diagnostics

Notes:

1. After the MOSS board replacement only, run IOCB diags.
2. After the MOSS AND second CCU installation, run CCU and IOCB diags.
3. After the second CCU installation, run CCU and IOCB diags.

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

__ 2. Enter **2** (CCU) in diag field, and **B** in ADP field, press **Enter**.

- If **NO ERROR FOUND** is displayed, press **F1**.
- Otherwise, see the *MIP*, Chapter 1.

__ 3. Enter **3** (IOCB), press **Enter**.

- If **NO ERROR FOUND** is displayed, press **F1**.
- Otherwise, see the *MIP*, Chapter 1.

Information

- If you have stopped installation before installing CCU B and have successfully performed all test procedures, the 3745 may be returned to the customer as a Model 31A. Go to Step 11.1.7, “Install Latest MLCs” on page 26 and complete remaining Steps.
- If you are continuing with the second CCU installation, go to Step 10.6, “Second CCU Installation” on page 15.

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 dowloaded. 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.”

__ 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.”

__ 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, “Close MOSS/MOSS-E Session.”

11.1.8 Close MOSS/MOSS-E Session

__ 1. Enter **CID**, press **Enter**.

__ 2. Re-enable the channel adapters disabled in Step 10.1.3, “Disable CA(s)” on page 7.

__ 3. When all CAs are enable, press **F1**.

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

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

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

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, “MOSS IML” on page 7.

__ 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 fails 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:

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

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 OFF LINE**, 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 the prompts on console.

__ 6. When the function is completed, 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

Follow the re-packing instructions to send parts back to IBM.

11.6.1 3745 Local Console

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

11.6.2 RSF Modem

__ 1. If a service processor and a new RSF modem have been provided with the MES, disconnect the previous 3745 RSF modem, remove the RSF cable and put them in the MES packing.

__ 2. 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 and Canada, the modem is integrated in the Service Processor.

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.