

Field Feature Bill of Material (FFBM)

PN 66X1355

**REMOVAL of a LIC Enclosure (LIU2) (FC 4901)
from IBM 3745 Models X10/X1A,
or from IBM 3746 Models L13, L14, or L15**

Written by: JP. Aubin
Checked by: B. Bigati
Approved by: F. Charron
Reviewed by: B. Kelly

3745 FFBM	PN 66X1355 1 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	-----------------------	----------------------	----------------------	--------------------------	--	--

Before Removal (Steps 1-8)

1.0 Machines Affected

- 3745 Models 210, 21A, 310, 31A, 410, 41A, 610, and 61A.
- 3746 Models L13, L14, and L15.

2.0 Related BMs and ECs

None.

3.0 BM(s) to be Used

- 66X1355 - Installation instructions

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 verify whether all parts were received.
3. Before the removal of the LIC enclosure, all LICs and MUX cables connected in it, should have been removed via previous MESSs.
4. The LIC enclosure removal can be performed either ONLINE (concurrent mode with NCP running MOSS ONLINE) or OFFLINE (complete machine POWER OFF, MOSS ALONE). Choose your procedure according to the machine availability.
5. With the *HONE configurator sheet* and the following table, determine from which frame you have to remove the LIC enclosure.
 - 3745 base frame (01M)
 - 3746 I13 (04B, 04D, 04E, 04G)

- 3746 L14 (05B, 05D, 05E, 05G)
- 3746 L15 (06B, 06D, 06E, 06G)

Note: The sequence for LIC enclosure removal from line frame is as follows: Top rear(e), top front(b), bottom rear(g), bottom front((d).

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.

6.0 Purpose and Description

6.1 Purpose

To remove a LIC enclosure.

6.2 Description

Remove:

- The line enclosure
- Power
- DMUX cables.

7.0 Removal Time

FFBM	Machine Hours	System Hours
66X1355	1.0	0.0
Test time	0.5	0.0
Total time	1.5	0.0

8.0 Tools/Materials Required

ESD kit (PN 6428316).

3745 FFBM	PN 66X1355 3 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	-----------------------	----------------------	----------------------	--------------------------	--	--

Removal (Steps 9-11)

9.0 Safety

- The LIU2 removal can be performed either online or offline.
- 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

- If you are removing a LIU2 with the machine **POWER ON**, go to Step 10.2, "LIU2 Removal Online (3745 Power ON)" on page 5.
- Otherwise, continue.

10.1 LIU2 Removal Offline (3745 Power OFF)

Before the removal, ask the customer:

- ___ • To set all the lines and channel addresses offline for this controller.
- ___ • To deactivate all resources of the 3746 Model 900, if attached.
- ___ • For the maintenance password.
- ___ • To logoff the console, 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 a LIU2 from a 3745-X1A or from a 3746 line frame connected to a 3745-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 **Enter**.

- Go to Step 10.1.5, "Power OFF the PSTY7" on page 5.

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**.

10.1.4 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**.

10.1.5 Power OFF the PSTY7

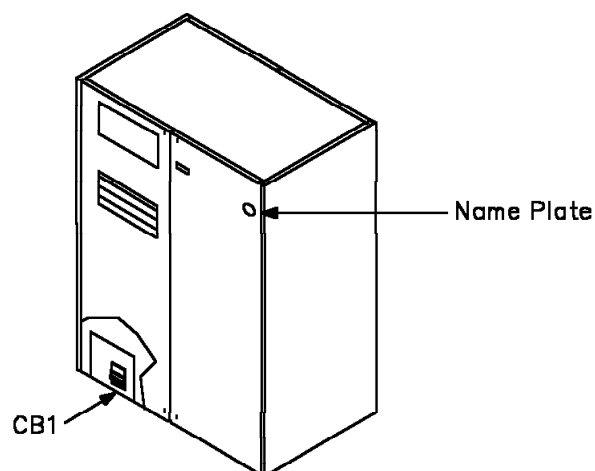
- ___ 1. Enter **POS**, press **Send/Enter**.
- ___ 2. Enter 1, 4, 5, or 6 to display the power status, press **Send/Enter**.
- ___ 3. On the displayed screen, check that the status of the identified PSTY7 is UP. Then, enter DXX (XX being the PSTY7 ID). Press **Send/Enter**.

PSTY7 ID	LIC Unit
13	01M
30	04D
31	04G
32	04B
33	04E
34	05D
35	05G
36	05B
37	05E
38	06D
39	06G
40	06B
41	06E

- ___ 4. Enter **Y** (to confirm), press **Send/Enter**. Verify that the power supply goes to the **DOWN** state.

10.1.6 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.



- Go to Step 10.3, "Hardware Removal" on page 7.

10.2 LIU2 Removal Online (3745 Power ON)

Before the removal, ask the customer:

- ___ 1. For the maintenance password.
- ___ 2. To logoff the console, if not already done.

10.2.1 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 a LIU2 from a 3745-X1A or from a 3746 line frame connected to a 3745-X1A, go to Step 10.2.3, "Log the Service Processor on" on page 6.
- Otherwise, continue.

10.2.2 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 **Enter**.

- Go to Step 10.2.5, "Power OFF the PSTY7."

10.2.3 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**.

10.2.4 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**.

10.2.5 Power OFF the PSTY7

- ___ 1. Enter **POS**, press **Send/Enter**.
- ___ 2. Enter 1, 4, 5, or 6 to display the power status, press **Send/Enter**.
- ___ 3. On the displayed screen, check that the status of the identified PSTY7 is **UP**. Then, enter **DXX** (XX being the PSTY7 ID). Press **Send/Enter**.

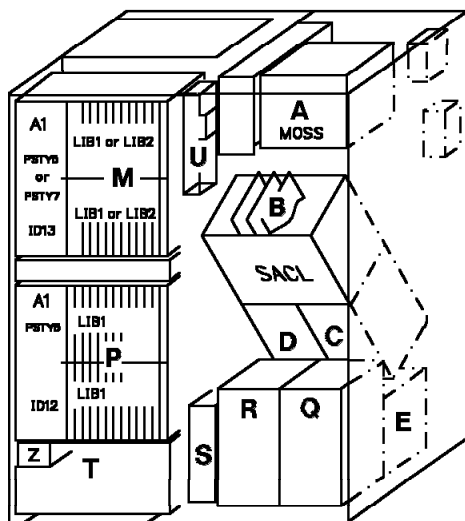
PSTY7 ID	LIC Unit
13	01M
30	04D
31	04G
32	04B
33	04E
34	05D
35	05G
36	05B
37	05E
38	06D
39	06G
40	06B
41	06E

- ___ 4. Enter **Y** (to confirm), press **Send/Enter**. Verify that the power supply goes to the **DOWN** state.

10.3 Hardware Removal

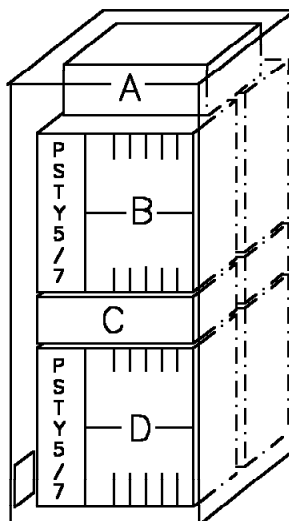
Locate the LIC unit position in the following figure:

3745 Frame 01

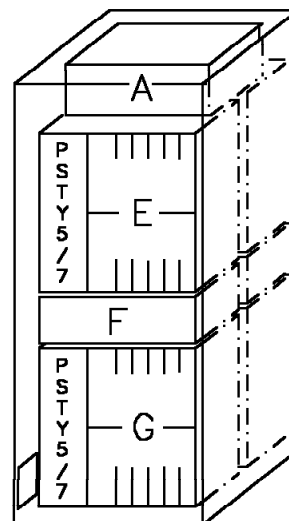


Rear View

3746 L13, L14, or L15



Front View



Rear View

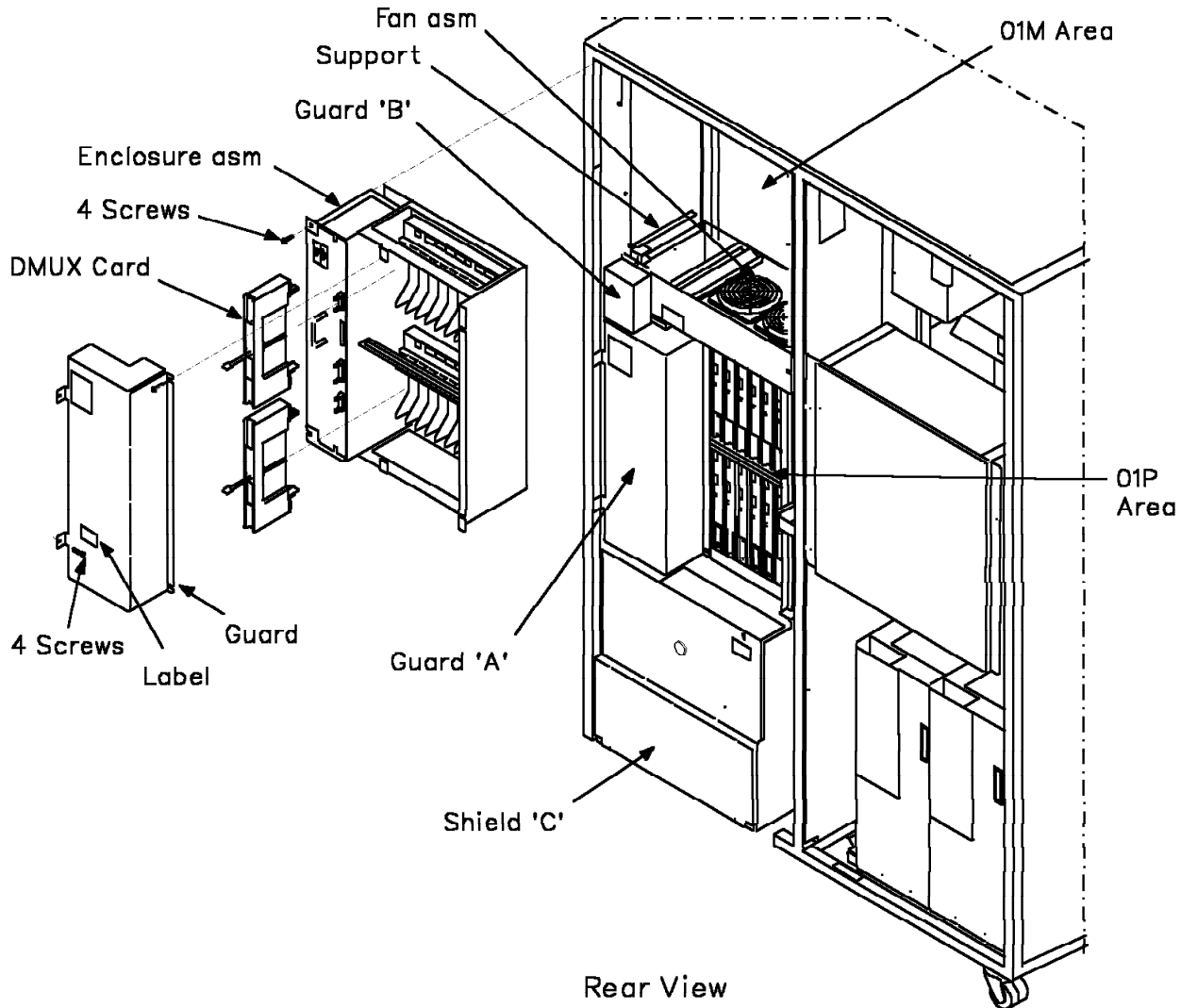
L13 - frame 04, L14 - frame 05, L15 - frame 06.

3745 FFBM	PN 66X1355 7 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	-----------------------	----------------------	----------------------	--------------------------	--	--

- If you are removing a LIC enclosure from a 3746 line frame, go to Step 10.3.2, "LIC Enclosure Removal from 3746 Line Frame" on page 11.
- Otherwise, continue.

10.3.1 LIC Enclosure Removal from a 3745

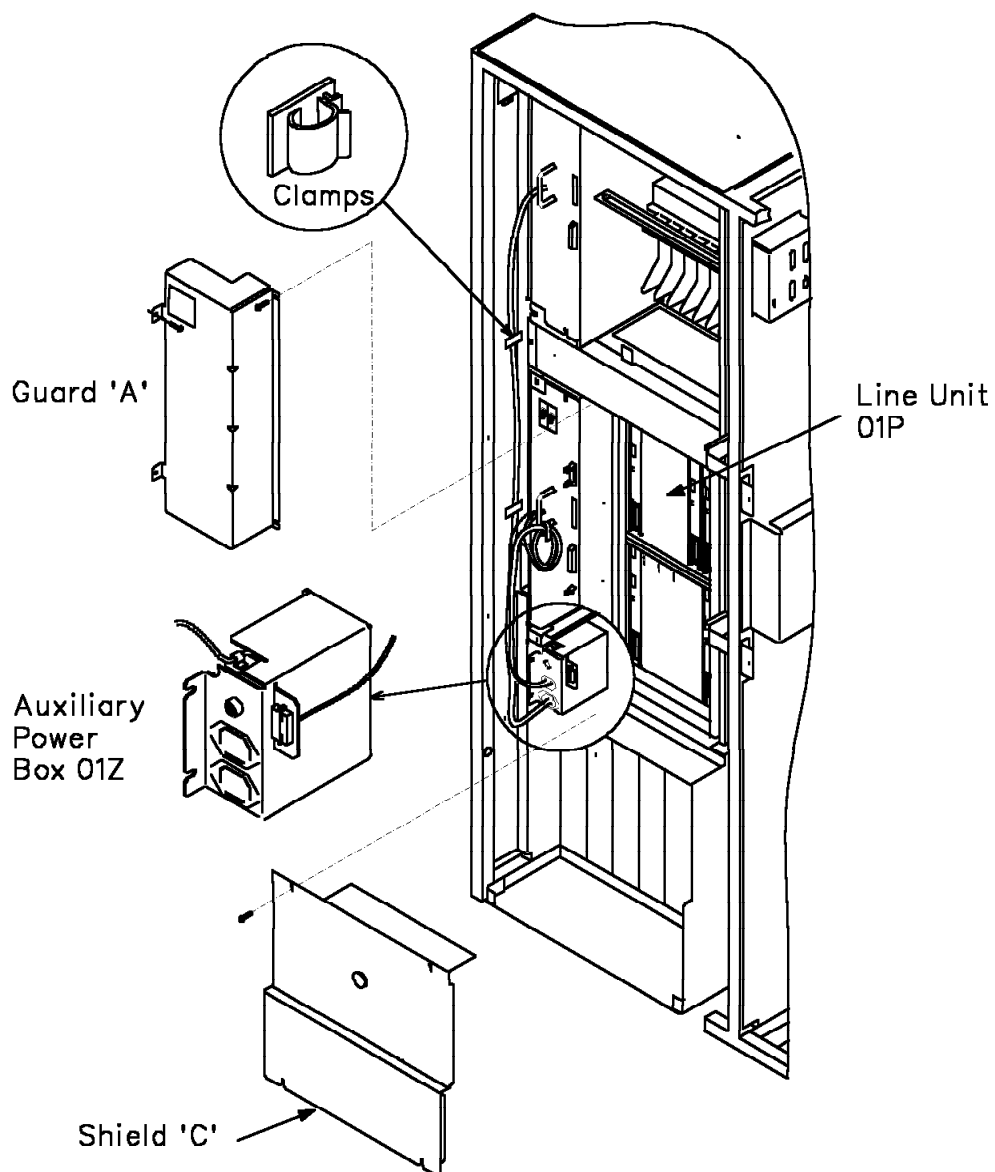
From the rear of 3745, locate the 01M and 01P LIC enclosures.



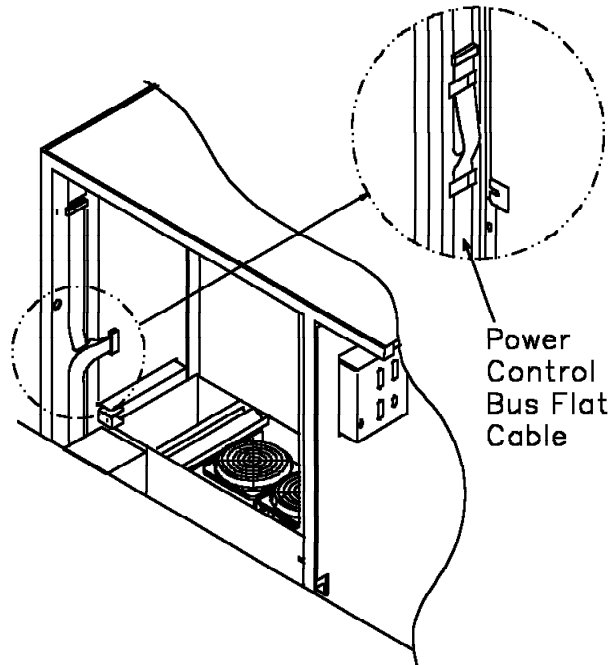
1. Remove the guard 'A' covering the PSTY7 and the DMUX cards in 01P and 01M enclosures by loosening their screws (4).
2. Unfasten 4 screws and remove the shield 'C' over CA tailgates.
3. Remove the guard 'B' (two screws). Save for reinstallation.
4. From 01M-B1B0 and 01M-B2B0, remove the DMUX cards by loosening their thumbscrews.

Note: LICs and MUX cables have been removed with previous MESs.

3745 FFBM	PN 66X1355 8 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	-----------------------	----------------------	----------------------	--------------------------	--	--



- ___ 5. Locate the auxiliary power box 01Z and unplug the PSTY7 power plug from 01Z-J2. Remove the power cord from clamps.
- ___ 6. Unplug the flat cable from A1-J2 position in PSTY7 and, and fold it back along the left frame member.



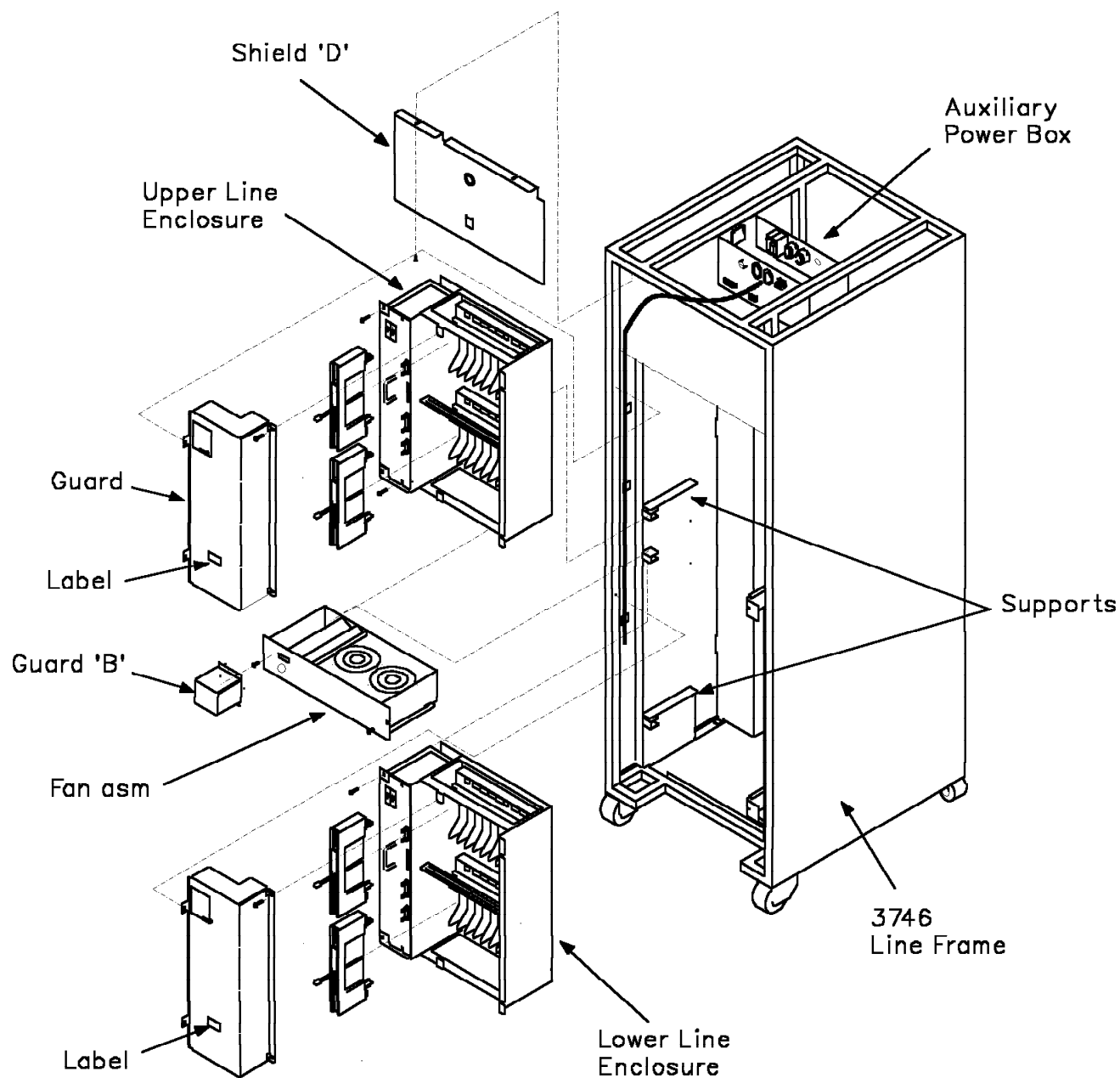
- ___ 7. Remove the LIC enclosure by removing 5 mounting screws.

Note: You can reduce the weight of the LIC enclosure, by first removing the PSTY7 as follows:

 - a. Unplug cables from connectors J3 and J4 on PSTY7.
 - b. Remove 2 mounting screws and slide the PSTY7 out the LIC enclosure.
 - c. When the enclosure is on the floor re-install the PSTY7.
- ___ 8. Reinstall the guard 'A' over the PSTY7 and DMUX cards in 01P.
- ___ 9. Reinstall the guard 'B' over the fan asm connectors.
- ___ 10. Reinstall the shield 'C' over the CA tailgate area.
 - Go to Step 11.0, "Test Procedures" on page 13.

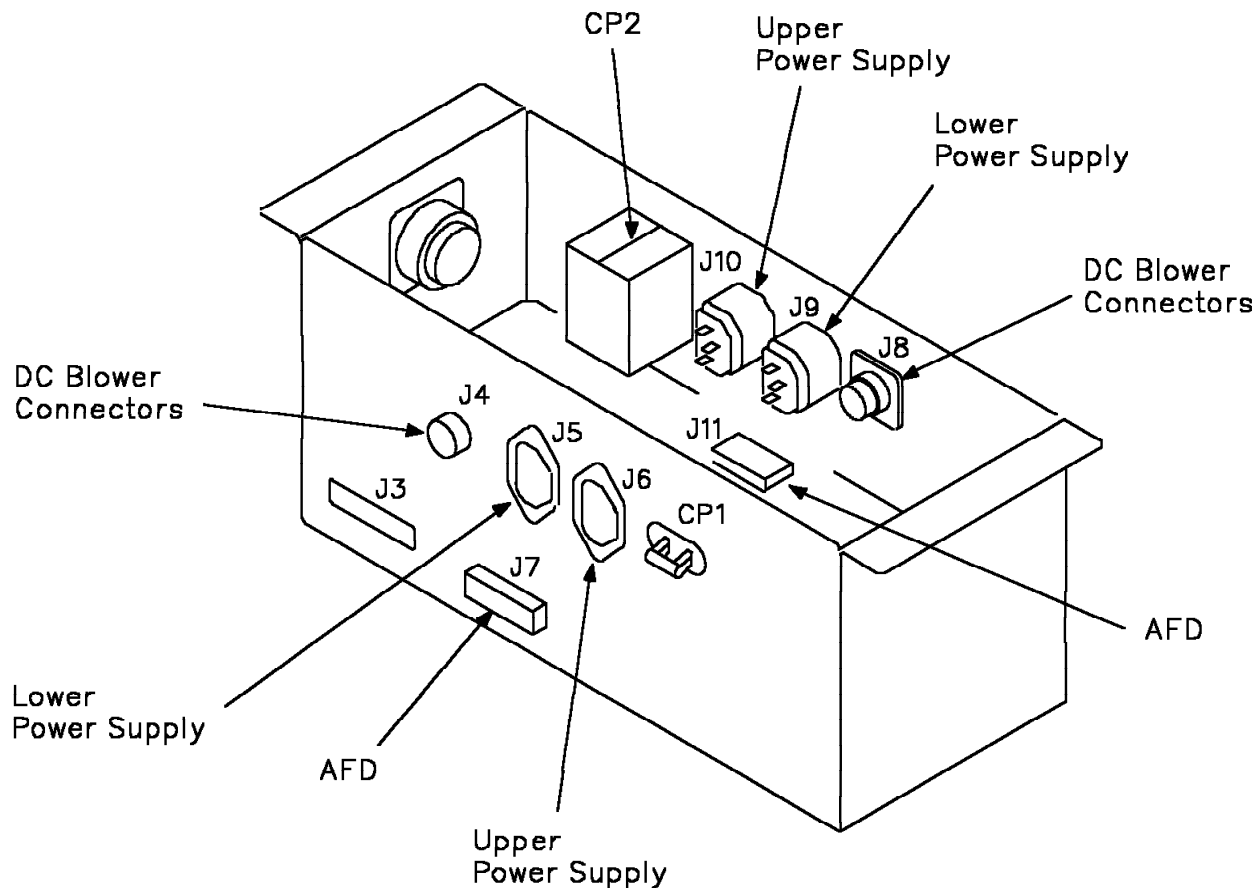
10.3.2 LIC Enclosure Removal from 3746 Line Frame

With the *HONE configurator sheet* and table in Step 4.0, "Preparation" on page 3, locate the LIC enclosure you have to remove.



- ___ 1. Remove the guard 'A' over the DMUX cards and PSTY7.
- ___ 2. If you remove a LIC enclosure from bottom position, remove the guard 'B' over the fan asm connectors.
- ___ 3. Remove the shield 'D' at the top of frame and locate the auxiliary power box (locations 04A, 05A, OR 06A).
- ___ 4. Unplug the PSTY7 power cord from auxiliary power box (from sockets J5 or j6 or j9 or j10).

3745 FFBM	PN 66X1355 11 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	------------------------	----------------------	----------------------	--------------------------	--	--



Auxiliary Power Box in A area, Front View

- ___ 5. Remove the cable from clamps stuck on frame.
- ___ 6. Unplug the flat cable from connector J2 on PSTY7, and fold it back along the frame.
- ___ 7. Remove the DMUX cards from position B0 of each LIC board by loosening their front thumbscrew (LICs and MUX cables have been removed via previous MES).
- ___ 8. Remove the LIC enclosure asm by removing 5 mounting screws.

Note: You can reduce the weight of the LIC enclosure, by first removing the PSTY7 as follows:

- a. Unplug cables from connectors J3 and J4 on PSTY7.
- b. Remove 2 mounting screws and slide the PSTY7 out the LIC enclosure.
- c. When the enclosure is on the floor re-install the PSTY7.

10.3.3 Fan Assembly

- If you have removed a LIC enclosure from a bottom position, you must remove the fan asm. 11.2.2, "Open MOSS/MOSS-E Session."
- Otherwise, go to step 10.3.4, "Covers."

1. Unplug the fan power cable (PN 65X8465) and the air flow detector cable from the fan asm.
2. Remove the fan asm (two screws).
3. Reinstall the guard 'B' on fan asm.

10.3.4 Covers

1. Reinstall the shield 'D' at the top of frame.
2. Close all system covers.

11.0 Test Procedures

Note: During the following procedures some Alarm messages may be displayed on the screen, these can be removed by clicking on **OK**.

- After a LIU2 removal with 3745 POWER ON, go to Step 11.3, "Test Procedure after a LIU2 Removal Power ON" on page 14.
- Otherwise, continue.

11.1 Power ON

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

1. Set the **Function** indicator to 1.
Press the **Validate** key.
2. Press the **Power ON Reset** key.

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

11.2 Test Procedures after Complete POWER OFF

- If you have removed a LIU2 from a 3745-X1A or from a 3746 line frame connected to a 3745-X1A, go to Step 11.2.2, "Open MOSS/MOSS-E Session."
- Otherwise, continue.

11.2.1 From the 3745-X10 Console

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

- Go to Step 11.2.3, "Create the Power Configuration Table."

11.2.2 Open MOSS/MOSS-E Session

From the Service Processor:

1. Wait until the 3745 icon becomes **PURPLE**.
2. When the **3745 Menu** window is displayed, double click on **MOSS console**.

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

11.2.3 Create the Power Configuration Table

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

1. Enter **POS**, press **Send/Enter**.
2. Enter **C** (RE-CREATE), press **Send/Enter**.
Verify that the ID of the PSTY7 you have removed is blanked (-).
3. Enter a **Y** to confirm, press **Send/Enter**.
Press **F1**.

11.2.4 Run the Diagnostics

None.

3745 FFBM	PN 66X1355 13 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	------------------------	----------------------	----------------------	--------------------------	--	--

11.2.5 Save Hard Disk Contents Onto the Backup set of Diskettes

- ___ 1. Select **DIF**, press **Send/Enter**.
- ___ 2. Select **2**. Enter the date and save-ID, press **Send/Enter**.
Follow the prompts on the console.
- ___ 3. When function is completed, press **F1**.

- If you have removed a LIU2 from a 3745-X1A or from a 3746 line frame connected to a 3745-X1A, go to Step 11.2.7, "Logoff MOSS-E."
- Otherwise, continue.

11.2.6 Logoff the 3745-X10 Console

Re-enable the channel adapters disabled in Step 10.1.2, "Log the 3745-X10 Console on" on page 4.

- Go to Step 11.2.8, "General IPL."

11.2.7 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 4.
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**.

11.2.8 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 4.
- ___ 2. Set the **Function** indicator value to **0** (general IPL).
- ___ 3. 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.

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

11.3 Test Procedure after a LIU2 Removal Power ON

11.3.1 Create the Power Configuration Table

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

1. Enter **POS**, press **Send/Enter**.
2. Enter **C** (RE-CREATE), press **Send/Enter**.
Verify that the ID of the PS you have removed is blanked (-).
3. Enter a **Y** to confirm, press **Send/Enter**.
Press **F1**.

11.3.2 Run the Diagnostics

None.

11.3.3 Set the MOSS Offline

Note: If the 3745 is a Model 410/41A/610/61A, the CCU must be selected with the **CSR** function before performing the **MOF** function. Perform **CSR/MOF** sequence for each CCU.

- ___ 1. Enter **MOF**, press **Send/Enter**.
- ___ 2. Press **F1**.

11.3.4 Save Hard Disk Contents onto the Backup set of Diskettes

- ___ 1. Enter **DIF**, press **Send/Enter**.
- ___ 2. Enter **2**.
Enter the date and save-ID and press **Send/Enter**.
Follow the prompts on the console.
- ___ 3. When the function is completed, press **F1**.

- If you have removed a LIU2 from a 3745-X1A or from a 3746 line frame connected to a 3745-X1A, go to Step 11.3.6, "Log the Service Processor off."
- Otherwise, continue.

11.3.5 Log the 3745-X10 Console off

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

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

11.3.6 Log the Service Processor off

- ___ 1. Enter **MON**, press **Enter**.
- ___ 2. Enter **OFF**, press **Enter**.
- ___ 3. On the **MOSS-E View** window, click on **Program**.
- ___ 4. Click on **LOG OFF MOSS-E**.

11.3.7 Power Control

Set the Power Control indicator to its original value recorded in step 10.2.1, "From the 3745 Control Panel" on page 5.

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 66X1355 16 of 16	EC A73200 20JAN89	EC C38411 18JUN93	EC F70086 09 JUN 1999		
--------------	------------------------	----------------------	----------------------	--------------------------	--	--