Field Bill of Material (FBM)

PN 76F9040

EXCHANGE the CADR Card
in IBM 3745 Models 210/310/410/610
and IBM 3746 Model A11

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3745	PN 76F9040	EC A98181B	EC C38405	EC H10030E		
FBM	1 of 14	05JUN91	06APR93	06FEB04		

Before Installation (Steps 1-8)

1.0 Machines Affected

3745 Models 210/310/410/610/ and 3746 Model A11 with channel adapter(s) and without EC A98181B. Checkpoint: CADR card(s) PN 76F8487 installed.

2.0 Related BMs and ECs

None.

3.0 BM(s) to be Installed

3.1 Install the following BMs

DESCRIPTION	FEATURE B/M	FBM TO BE INSTALLED
Installation Instructions		76F9040
Channel Adapter not UK	6495645	76F9038
Channel Adapter/TPS not UK	65X8903	76F9038 x 2
Channel Adapter/BCCA not UK	34F1339	76F9038
Chan Adap/BCCA/TPS not UK	34F1345	76F9038 x 2

4.0 Preparation

__ 1. Familiarize yourself with the purpose and details of these installation instructions.

__ 2. Check all items and count parts listed on the B/M(s) to be installed to determine whether all parts were received.

__ 3. With the following tables determine:

- The CADR card position(s) of the feature to be modified, in 01L-A1 (3745) and in 02E-A1 (3746 A11) board.

- Identify the associated power supply (PSTY3) to be powered OFF.

> **Warning**
>
> The installation of this EC could bring the channels down. Please, refer to TDR H063583 prior to this installation.

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1). Board populated with CA(s) only

C.A. Number		1/9	2/10	3/11	4/12	5/13	6/14	7/15	8/16
CARDS position	CAL	B2	E2	G2	K2	N2	R2	T2	W2
	CADR	A2	D2	F2	J2	M2	Q2	S2	V2
PSID in 3745 (PSTY3)		04 01K-A1		05 01K-B1		06 01K-C1		07 01K-D1	
PSID in 3746 (PSTY3)		14 02D-A1		15 02D-B1		16 02D-C1		17 02D-D1	
CA TAILGATE		1	2	3	4	5	6	7	8

2). Board populated with CA(s) + TPS only

C.A. Number		1/9		3/11		5/13		7/15	
CARDS	CAL	B2		G2		N2		T2	
	CADR-A	A2		F2		M2		S2	
	CADR-B	C2		H2		P2		U2	
PSID in 3745 (PSTY3)		04 01K-A1		05 01K-B1		06 01K-C1		07 01K-D1	
PSID in 3746 (PSTY3)		14 02D-A1		15 02D-B1		16 02D-C1		17 02D-D1	
CA TAILGATE		1	2	3	4	5	6	7	8

5.0 Programming

None.

6.0 Purpose and Description

6.1 Purpose

Solve a potential interface control check on Channel.

6.2 Description

Replace CADR card(s).

7.0 Installation Time

FBM	Machine Hrs.	System Hrs.
76F9040 (for one CA)	0.5	00.0
Test Time	0.3	00.0
Total Time	0.8	

8.0 Tools/Materials Required

ESD kit (PN 6428316).

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Installation (Steps 9-11)

9.0 Safety

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

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

10.0 Details of the Installation

- If the NCP running in the 3745 is at V5R2 level or later (APAR IR90576 required for V5R3), the unplugging/plugging of the CA cards can be performed with machine power on, concurrently with customer operation (ONLINE).

- If this EC is installed in ONLINE mode proceed with 10.1, "EC Installation ON LINE (3745 running)."

- If the NCP is at an earlier level, the 3745 must be powered OFF (OFFLINE) before unplugging the CA card(s).
  To install this EC with power off skip to 10.2, " EC Installation OFFLINE (3745 powered down)" on page 6.

10.1 EC Installation ON LINE (3745 running)

Before the installation, ask the customer:

__ • The **maintenance password.**

__ • To logoff the console, if not already done.

__ • To de-activate (VARY OFF-LINE) the identified channel adapter.

__ • To de-activate (VARY OFF-LINE) the adjacent (ODD or EVEN) channel adapter fed by the same power supply (PSTY3) as the identified CA (Refer to tables in section 4.0).

10.1.1 Disable Channel Adapters

From the local console:

__ 1. When the **CA INTERFACE DISPLAY** screen is displayed, disable identified channel adapter and the ODD or EVEN adjacent CA if present.

__ 2. Wait for **Interface Status Disabled**, press **F4**.

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

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10.1.2 Display the CDF

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

__ 2. Select **CA**, enter **6**, press **Send**.
    Check for the presence of 'Y' below the front of identified CA number(s).

__ 3. Press **F1**.

10.1.3 Channel Services

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

__ 2. Enter **4** for Concurrent Mode commands, press **Send**.

__ 3. Enter the **CA number** in **CA** field, press **Send**.

__ 4. Enter **SHT** (shutdown), press **Send**.
    When **Stop Traffic** is displayed, press **Send**.
    When the message **Command completed** is displayed, press **F6** twice, and repeat the two last
    steps for the associated channel adapter if required.
    When the message **Command completed** is displayed, press **F1**.

10.1.4 Run the Concurrent Diagnostics

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

__ 2. Select **CA**, enter **4** in the **DIAG** field, enter the CA number, press **Send**.

• When **NO ERROR FOUND** is displayed, press **F1**

• If an error is reported, see the *MIP*, Chapter 1, and follow the appropriate procedure.

10.1.5 Power Services (for PSTY3)

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

__ 2. Select the frame where the CAL is to be replaced, enter **1 or 2**, press **Send**.

__ 3. On displayed information screen, check the status of identified Power Supply (see section 4).
    If UP, enter **DXX**, press **Send** (XX=PSID).
    Power Supply goes to 'DOWN' state.

__ 4. Go to 10.3, "Hardware Installation" on page 9

10.2 EC Installation OFFLINE (3745 powered down)

__ 1. Check that the **Power Control** indicator displays **3**.
    If it does not, record the value: __ , then Press the **Power Control** key until **3** is displayed
    Press the **Validate** key.

__ 2. Ask customer for maintenance password.

__ 3. Ask customer to LOGOFF the console if not already done.

__ 4. Ask customer to deactivate all resources connected to the controller.

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10.2.1 Disable Channel Adapters/Reset CCU(s)

From the local console:

___ 1. From Interface Display Screen, record enabled CHANNEL ADAPTERS then, disable all CHANNEL ADAPTERS.

___ 2. Wait for interface status 'DISABLED' for all CA's.
Press **F4**.

___ 3. Enter the maintenance password, press **Send**.

___ 4. Enter **RST** to reset CCU(s).

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

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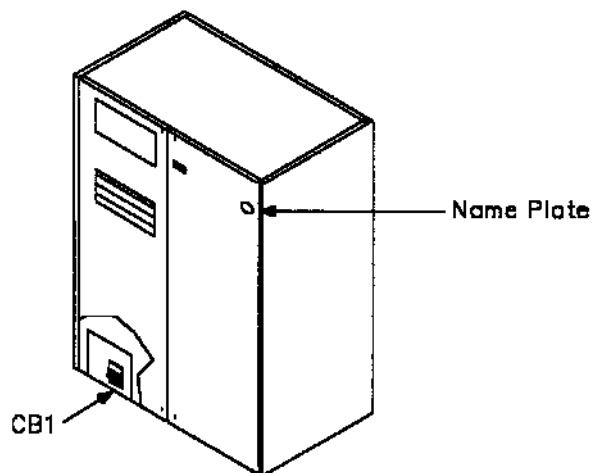
10.2.2 Display the CDF

___ 1. Enter **CDF**, press **Send**.

___ 2. Select **DISPLAY/UPDATE**, enter **1**, press **Send**.

___ 3. Select **CA**, enter **6**, press **Send**.

___ 4. Check in 'PRESENCE' column the 'Y' for the identified CA number.

___ 5. Press **F1**.

10.2.3 Run the Diagnostics

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

___ 2. Select **CA**, enter **4** in DIAG field
Enter the identified CA number in 'ADP' field, press **Send**

___ 3. If CADR cards are to be exchanged on multiple CAs, run diagnostics on each CA.

   • When **NO ERROR FOUND** is displayed, press **F1**

   • If an error is reported, see the *MIP*, Chapter 1, and follow the appropriate procedure.

10.2.4 Power OFF

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

__ 2. Open system cover 'C' then switch OFF CB1.

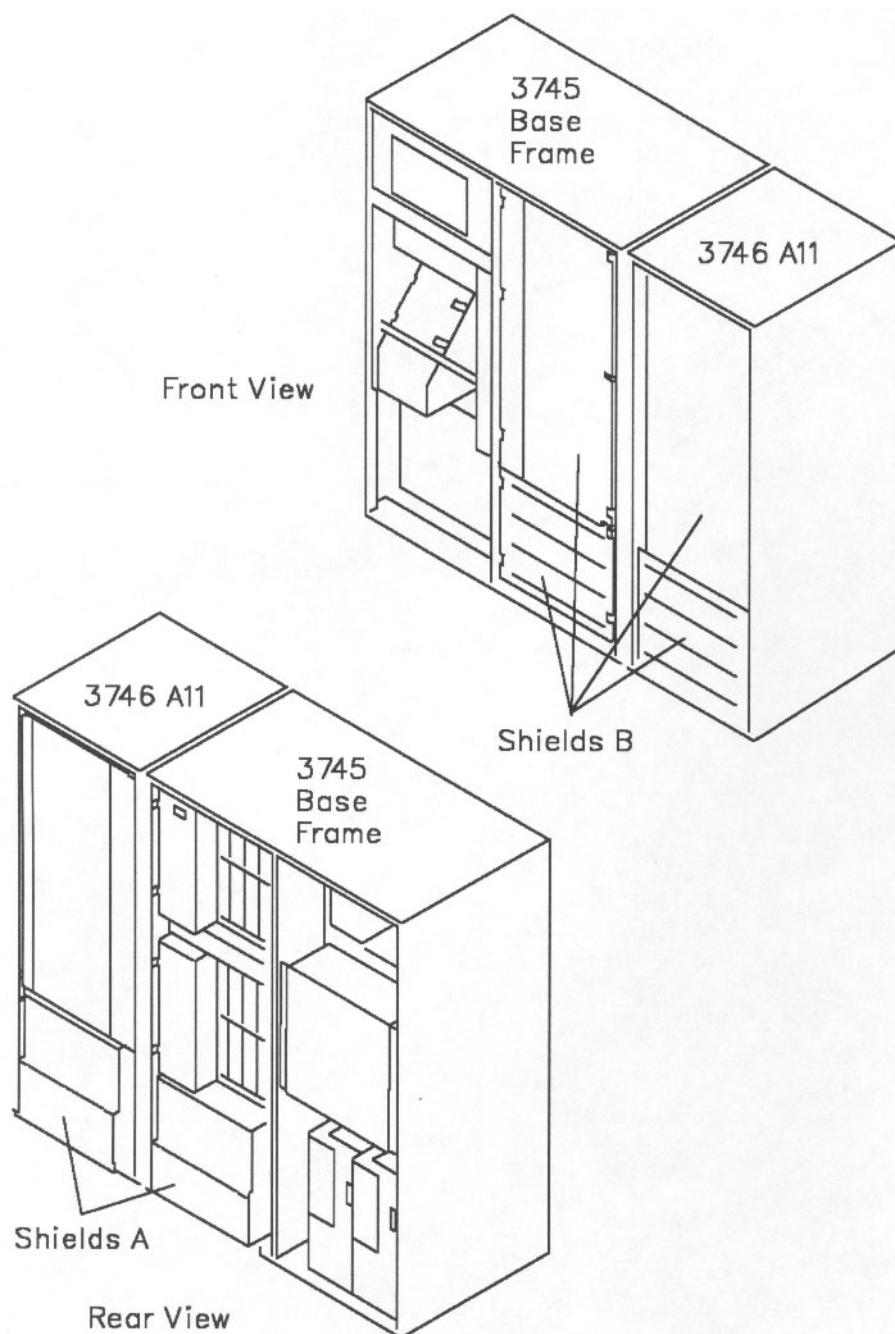| 3745	PN 76F9040	EC A98181B	EC C38405	EC H10030E		
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10.3 Hardware Installation

10.3.1 CADR Card Replacement

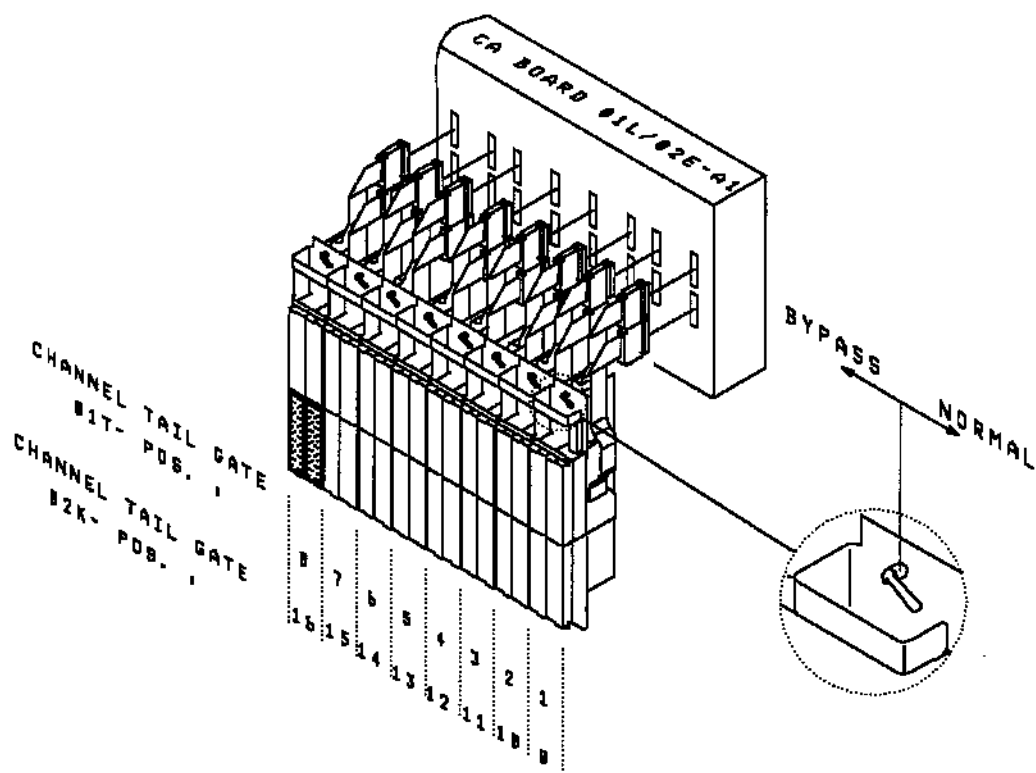**Warning:** Follow the existing ESD procedures when handling logic parts.
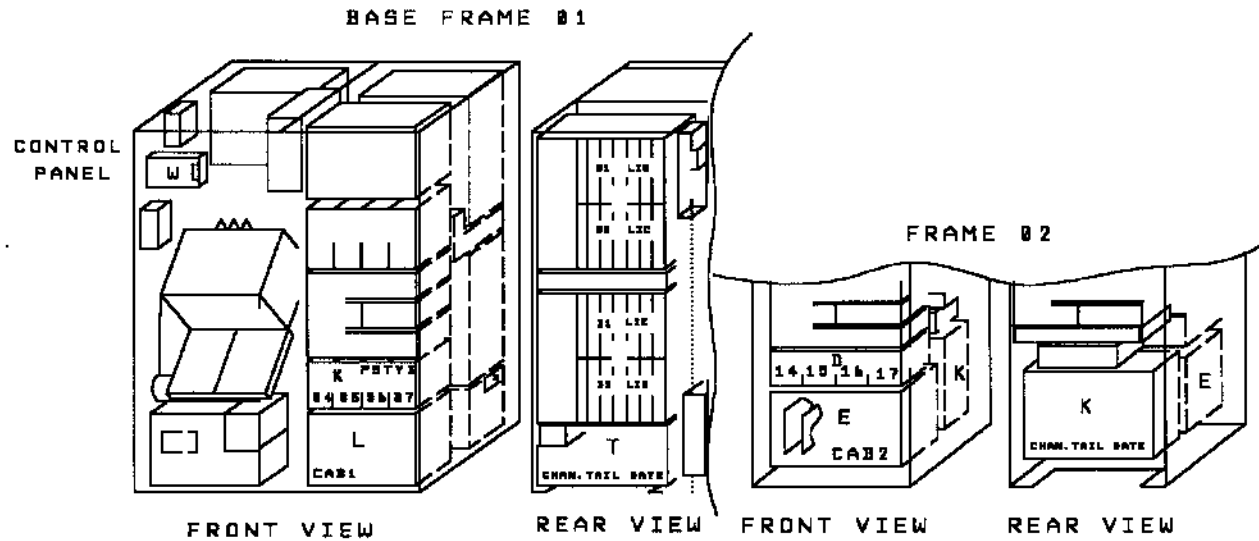
___ 1. Open the front system covers of the 3745 and 3746.

___ 2. Open the internal shields B.

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___ 3. Locate the channel tailgate in 01T or 02K and remove the shield A.

___ 4. Locate the channel tailgate position(s) for which the CADR card(s) are being changed. Place the 'Select out Bypass' switch to bypass position for the channels.

___ 5. If this EC is being installed on a CA with TPS, place both interface switches to 'BYPASS' position. Interface A and B.

___ 6. Locate the Channel Adapter board in L area (3745) or in E area (3746).

___ 7. Open the shield B.

___ 8. Identify the CADR card(s) position according to the CA number you have selected (see tables in section 4).

___ 9. Remove crossovers from the top of CA cards and unplug the CADR card(s).

___ 10. If the CA has TPS, remove 4 crossovers.

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BASE FRAME 01

CONTROL PANEL

FRAME 02

FRONT VIEW   REAR VIEW   FRONT VIEW   REAR VIEW

___ 11. Verify the card holder is installed on the new CADR card(s) PN 76F8487 and install the new CADR card(s) in board.

___ 12. Re-plug the crossovers on top card connectors.

___ 13. From rear of the 3745, place the SELECT-OUT BYPASS switch to the NORMAL position.

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11.0 Test Procedures

___ 1. If the 3745 was powered off for EC installation, skip to step 11.2, "Test Procedure after OFFLINE Installation."

___ 2. If the EC was installed concurrently with system operation, continue.

___ 3. Close shields and covers opened in previous steps.

11.1 Test Procedure after ONLINE Installation

___ 1. Set the Power Supply type 3 **ON** as follows:
Status of identified PSTY3 is **DOWN**.

___ 2. Enter **UXX** (XX being the PSTY3 ID). Power XX goes in **UP** state

___ 3. Press **F1**

11.1.1 Run the Concurrent Diagnostics

___ 1. Enter **CDG**, press **Send**.

___ 2. Select **CA**, enter **4** in the DIAG field, enter the CA number, press **Send**

- When **NO ERROR FOUND** is displayed, press **F1**

- If an error is reported, see the *MIP*, Chapter 1, and follow the appropriate procedure.

11.1.2 Channel Services

___ 1. Enter **CAS**, press **Send**,

___ 2. Enter **4** for Concurrent Mode commands, press **Send**.

___ 3. Enter the **CA number** in **CA** field, press **Send**.

___ 4. Enter **RES** (Restore), press **Send**.

When **Command completed** is displayed, press **F6** twice, and repeat the two last steps for the associated channel adapter if required.
When **Command completed** is displayed, press **F1**.

11.1.3 Logoff Local Console

___ 1. Re-enable identified Channel Adapter(s) disabled in step 10.2.

___ 2. Ask the customer to reactivate resources connected on CA(s).

___ 3. Go to Step 12.0, "Field Updating" on page 14

11.2 Test Procedure after OFFLINE Installation

___ 1. Switch CB1 'ON', then press the **Power ON Reset** key on the control panel.

___ 2. Close shields and covers opened in previous steps.

___ 3. Set the **Function** indicator to **1**
Press the **Validate** key.

___ 4. Set the **Service Mode** indicator to **0**. Press the **Validate** key.

___ 5. Press the **Power on Reset** key.

11.2.1 On Local Console

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

___ 2. Enter the **password**.

11.2.2 Display the CDF

___ 1. Enter **CDF**, press **Send**.

___ 2. Select **CA**, enter **6**, press **Send**. Check for the presence of 'Y' below the front of identified CA number(s).

___ 3. Press **F1**.

11.2.3 Run the Diagnostics

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

___ 2. Select **CA**, enter **4** in the DIAG field,
       enter the CA number, press **Send**

   - When **NO ERROR FOUND** is dis-
     played, press **F1**

   - If an error is reported, see the *MIP*,
     Chapter 1, and follow the appropriate
     procedure.

11.2.4 Logoff Local Console

Re-enable all channel adapter(s) disabled in step
10.4.

11.2.5 General IPL

From the control panel:

___ 1. Set the **Power Control** indicator to its ori-
       ginal value.

___ 2. Set the **Function** indicator value to '0'
       (General IPL)
       Press the **Validate** key.

The general IPL starts.

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

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

After Installation (12-15)

12.0 Field Updating

None.

13.0 Publications Update

None.

14.0 Parts Disposition

14.1 Purchased Machines

- For U.S., return parts according to your local return procedures.

- For AFE and EMEA areas, refer to *Hardware and General Service Code Description* to determine the correct owner of removed/unused parts.

All parts determined to be the property of IBM should be processed as stated in the rental machine directions as follows.

14.2 Rental Machines

Return all parts to the IBM BRANCH OFFICE for potential return in accordance with existing return, recovery and reclamation programs.

14.3 Modules return

Modules will be sent back to B/O in the package received with the new ones for potential return to plant.

15.0 Machine Records

- Update Machine History to reflect EC A98181B:

on	B/M 6495645	CA not UK
or on	B/M 65X8903	CA/TPS not UK
on	B/M 34F1339	CA/BCCA not UK
or on	B/M 34F1345	CA/BCCA/TPS not UK

  as installed according to existing procedures.

- Report installation and quality according to existing procedures

End of instructions

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