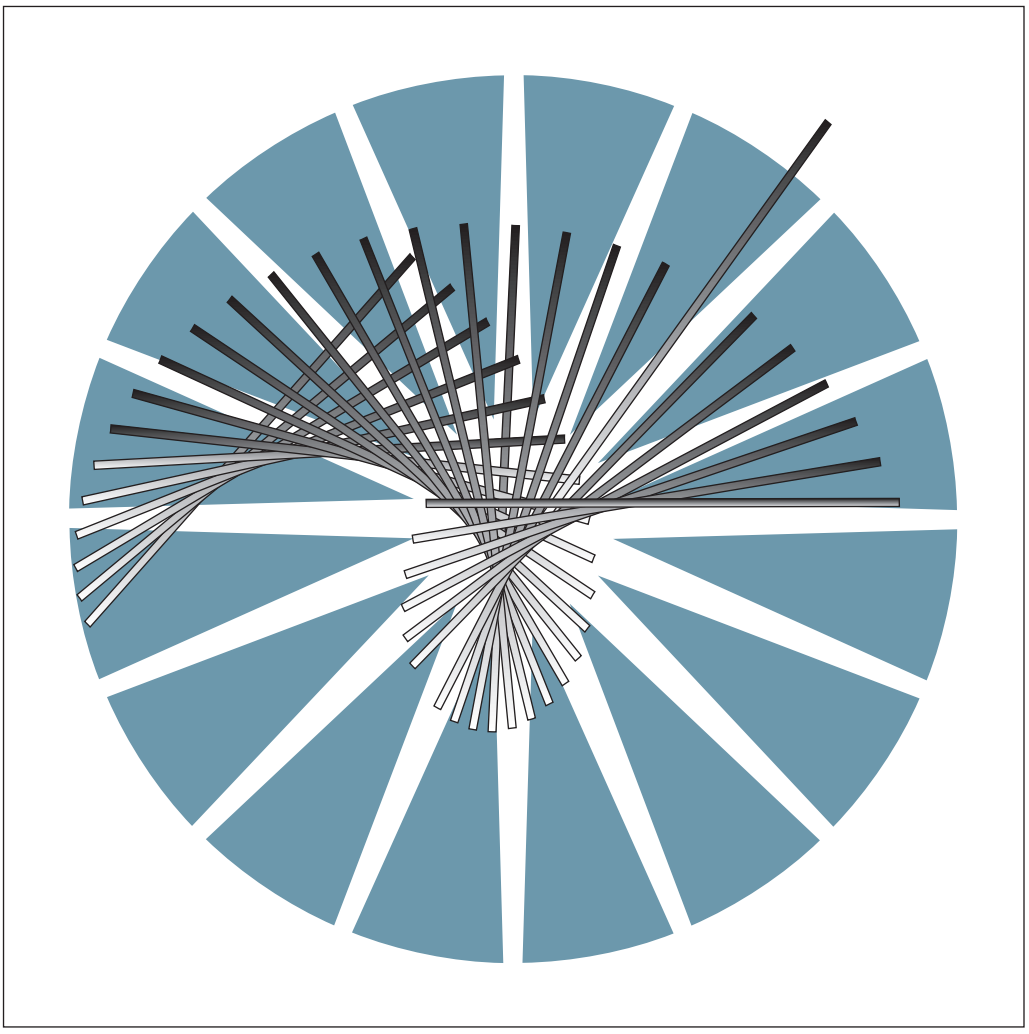
3746 Nways Multiprotocol Controller
Model 900

Service Guide



SY33-2116-02

3746 Nways Multiprotocol Controller
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Service Guide

SY33-2116-02

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page xv.

Third Edition (July 1999)

This edition applies to the 3746 Nways Multiprotocol Controller Model 900.

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Notice to UK Users

The IBM 3746 Model 900 and IBM 3746 Model 950 are manufactured according to the International Safety Standard IEC950 and, as such, are approved in the UK under the General Approval number NS/G/1234/J/100003.

The Active Remote Couplers (ARCs) and the X.21 Interface, housed within the 3746 Model 900 and 3746 Model 950, are approved separately, each having their own independent approval number. These interface adapters, supplied by IBM, do not contain excessive voltages. An excessive voltage is one which exceeds 42.4 V peak ac or 60 V dc. They interface with the 3746 Model 900 or 3746 Model 950, using Safe Extra Low Voltages only.

In order to maintain the independent approval of the IBM adapters, it is essential that other optional cards, not supplied by IBM, do not use mains voltages or any other excessive voltages. Seek advice from a competent engineer before installing other adapters not supplied by IBM.

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This product is Year 2000 ready. When used in accordance with its associated documentation, it is capable of correctly processing, providing, and/or receiving date data within and between the 20th and 21st centuries, provided all other products (for example, software, hardware, and firmware) used with the product properly exchange accurate date data with it.

For more information, refer to:

`http://www.ibm.com/year2000`

The 3745 and 3746 controllers require a certain level of microcode to be Year 2000 ready. For more detailed information, access the URL listed above and click **Product Readiness**.

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This product meets IBM safety standards.

For more information, see the following manual:

3745 Communication Controller All Models
3746 Nways Multiprotocol Controller Models 900 and 950
Safety Information, GA33-0400.

Service Inspection Safety Procedures

Safety and Disposal Instructions For Batteries

When disposing of the batteries, follow procedures in accordance with your national or local regulations for recycling the materials. If no regulation of this kind exists, return the batteries to your equipment seller or to IBM.

Service Inspection Safety Procedures for the 3745, 3746-900, and Controller Expansion

Important

This procedure addresses the 3745 Model 17A, 3745 Models 21A to 61A, 3746-900, and the controller expansion. If the controller expansion is not present, ignore the statement concerning this unit in the following procedure.

Unless otherwise specified the term 3745 means 3745 Model 17A, or 3745 Models 21A to 61A throughout this manual.

Introduction

A safety inspection procedure for the 3745, 3746-900, and controller expansion should be performed:

- When it is inspected for an IBM agreement
- When IBM service is requested and no service has recently been performed by IBM
- When an alterations and attachments review is performed
- When changes have been made to the equipment that might affect its safety.

If the inspection indicates unacceptable safety conditions, the conditions must be corrected before IBM services the machine.

Note: The correction of any unsafe condition is the responsibility of the owner of the equipment.

The 3745, 3746-900, and controller expansion areas and functions checked through these procedures are:

1. External covers
2. Safety labels
3. Safety covers and shields
4. Grounding (earthing)
5. Circuit breaker and protector rating
6. Input power voltage
7. Power control switch
8. Power ON indicator.

Notes:

1. The 3746-900 is powered ON and OFF through the basic 3745 frame, from a host, locally, or from the service processor.
2. For the 3745 Models 21A to 61A, the 3746s are powered ON and OFF through the basic 3745 frame.

Hazardous voltages are still present in some areas of the 3745 and the 3746-900 when power is OFF.

Steps 1 through 6 must be performed after **power OFF** as follows:

- **CB1s** are switched OFF on the 3745 and 3746-900.
- **All equipment installed in the controller expansion (if present) is powered OFF**.

- **Power supplies for the 3745, 3746-900, and controller expansion at customer's premises are switched OFF.**

  Do not remove the power cord and ground strap **A** of the controller expansion in order to maintain the ground protection (see Figure 0-3 on page xxvii, Figure 0-4 on page xxviii, Figure 0-5 on page xxix, or Figure 0-6 on page xxx).

1 External Covers

Check that:

- They are all present on the 3745, 3746s (if present), 3746-900, and controller expansion.
- They are locked with two kinds of locks: flat blade screw for the IBM access area and hex head for the customer access area.
  - Refer to the *IBM 3745 Communication Controller Models 130 to 17A, Parts Catalog*, S135-2012 for 3745 Model 17A.
  - Refer to the *IBM 3745 Communication Controller Models 210 to 61A, Parts Catalog*, S135-2010 for 3745 Models 21A to 61A.
- They can be fully opened.
- Appropriate service clearance and access are provided around the frames with external covers opened.

  Leave all external covers opened to allow further safety inspection steps.

2 Safety Labels

Check that:

- All the safety labels are at the places indicated by the letters. See to the following paragraphs:
  - "Safety Label Locations on the 3745 Models 17A" on page lxxvii.
  - "Safety Label Locations on the 3745 Models 21A to 61A" on page lxxx.
  - "Safety Label Locations on the 3746-900" on page lxxxiv.
- Each label is of the model corresponding to the letter as shown in the following paragraphs:
  - "3745 Model 17A Safety Label Identifications" on page lxxix.
  - "3745 Models 21A to 61A Safety Label Identifications" on page lxxxiii.
  - "3746-900 Safety Label Identifications" on page lxxxv.

3 Safety Covers and Shields

Referring to the FRU location (Chapter 4), check that:

- All the safety covers are present and secured with screws.
- All the voltage terminal boards (TBs) are protected by a plastic shield screwed on top of the TB.

4 Grounding (Earthing)

Note

In this manual, "ground" means that the equipment must be connected to the earth.

a Grounding on the 3745

- For the 3745 Model 17A, refer to page YZ110 for grounding jumper/contact locations.
- For the 3745 Models 21A to 61A, refer to page YZ110 to YZ114 for grounding jumper/contact locations.

Check that:

- **Electrical continuity is assured between the frame ground and the terminals indicated on the ground distribution diagrams.**
- Electrical continuity is assured between the 3745, frame grounds, and to the premises grounding system, through the 3745 power cord.

b Grounding on the 3746-900 and Controller Expansion to the Premises Grounding System

- Electrical continuity is assured between their frame ground and premises grounding system through their power cords.
- The 3746-900 is grounded:
  - To the 3745 Model 17A via the power control cable (see Figure 0-1 on page xxv).
  - To the 3745 Models 21A to 61A via the UEPO cable (see Figure 0-2 on page xxvi).
- For the controller expansion, an additional ground wire **A** is also used (see Figure 0-3 on page xxvii, Figure 0-4 on page xxviii, Figure 0-5 on page xxix, or Figure 0-6 on page xxx).

1 3745 Model 17A/3746-900 Power Control Cable

Check that the power ground cable is correctly connected in the 3745 **D** and in the 3746-900 **C** .

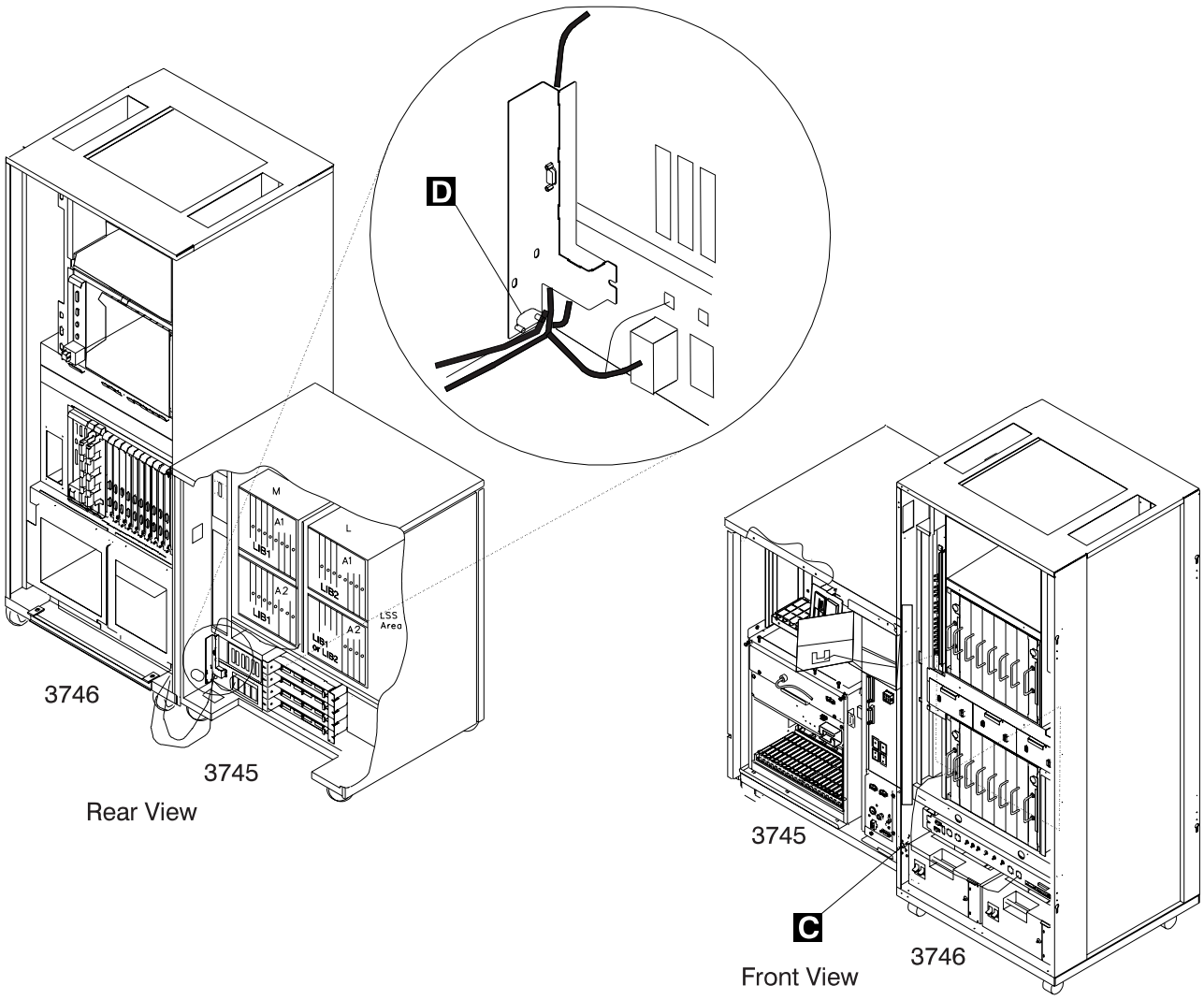


Figure 0-1. 3745 Model 17A/3746-900 Power Control Cable Routing

Notes:

a) D Lock washer (PN 17G5853) and nut (PN 1622404).

b) C Screw (PN 61F4511), star washer (PN 17G5852), and lock washer (PN 1622318).

2 **3745 Models 21A to 61A/3746-900 UEPO Cable**

Check that the UEPO cable is correctly connected in the 3745 D and in the 3746-900 C .

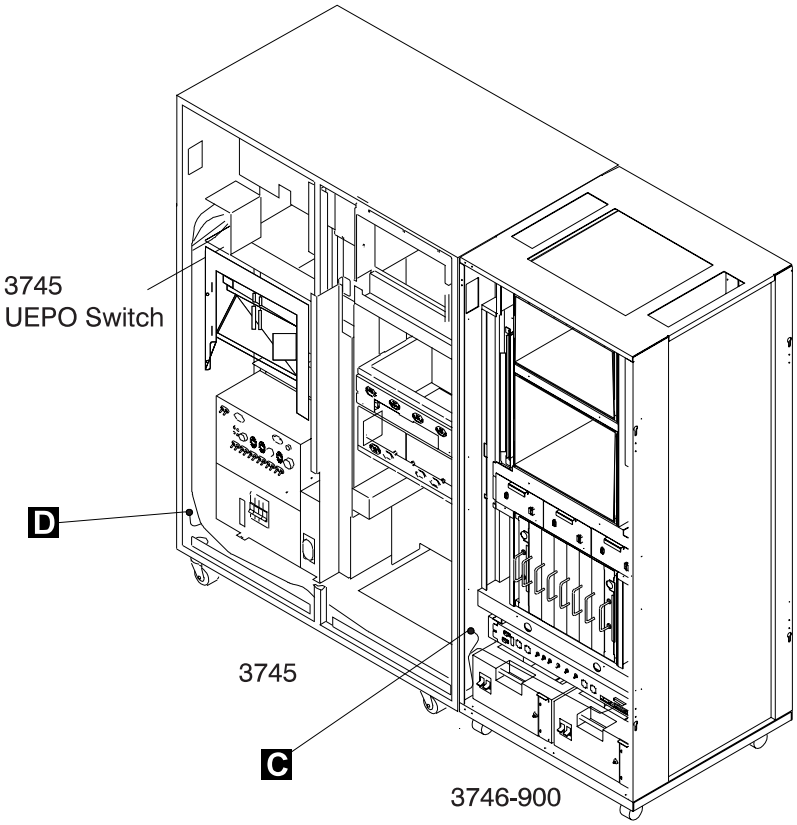


Figure 0-2. 3745 Model 21A to 61A/3746-900 UEPO Cable Routing

Notes:

a) **D** Screw (PN 2665527) and lock washer (PN 1622346).

b) **C** Screw (PN 61F4511), star washer (PN 17G5852), and lock washer (PN 1622318).

3 Controller Expansion Ground Wire Cable

- If you have only one controller expansion installed, check that the ground wire **A** is installed (see Figure 0-3 on page xxvii).
- If you have several controller expansions installed, check that the ground wires **A** are installed according to your configuration (see Figure 0-4 on page xxviii, Figure 0-5 on page xxix, or Figure 0-6 on page xxx).

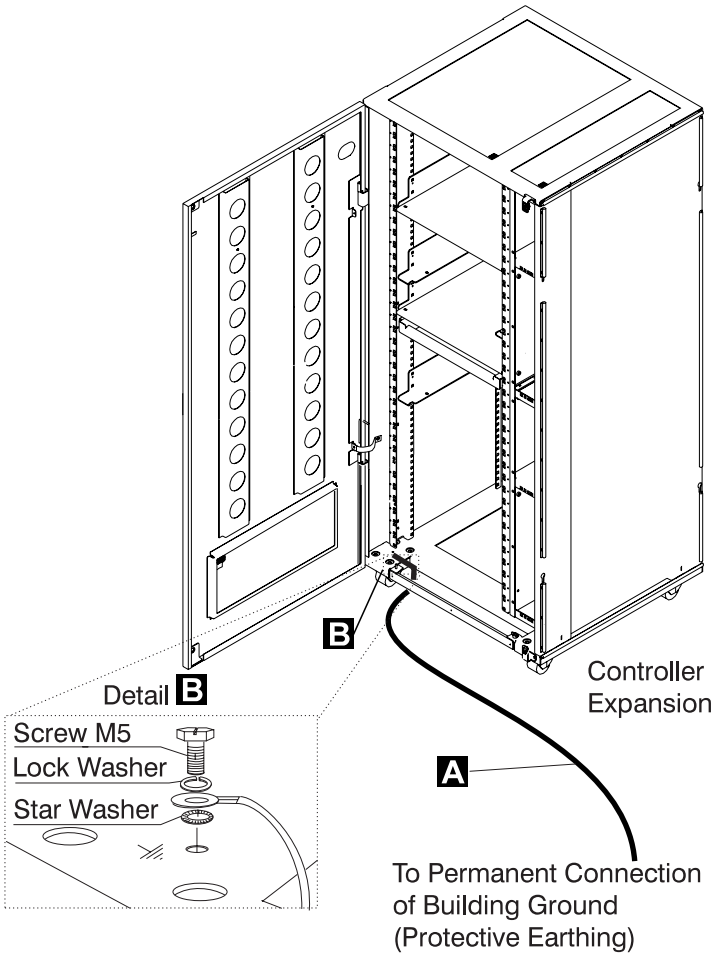


Figure 0-3. Ground Wire Connection On Controller Expansion

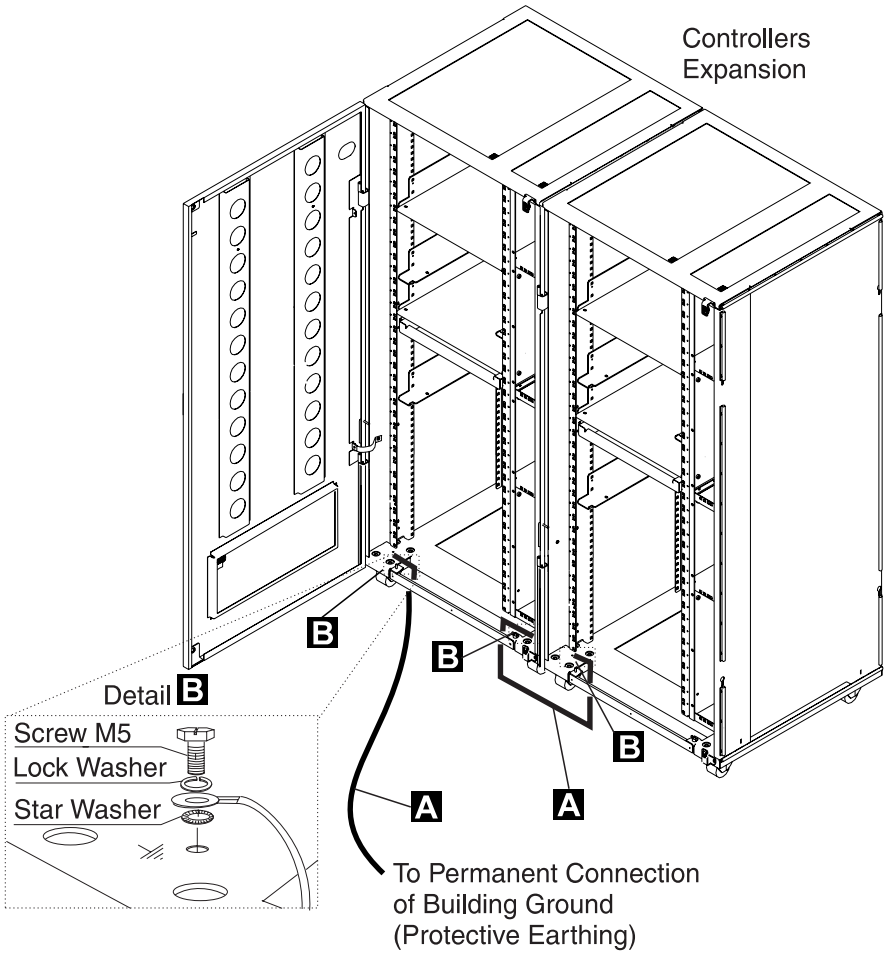


Figure 0-4. Ground Wire Connection Between Attached Controller Expansions

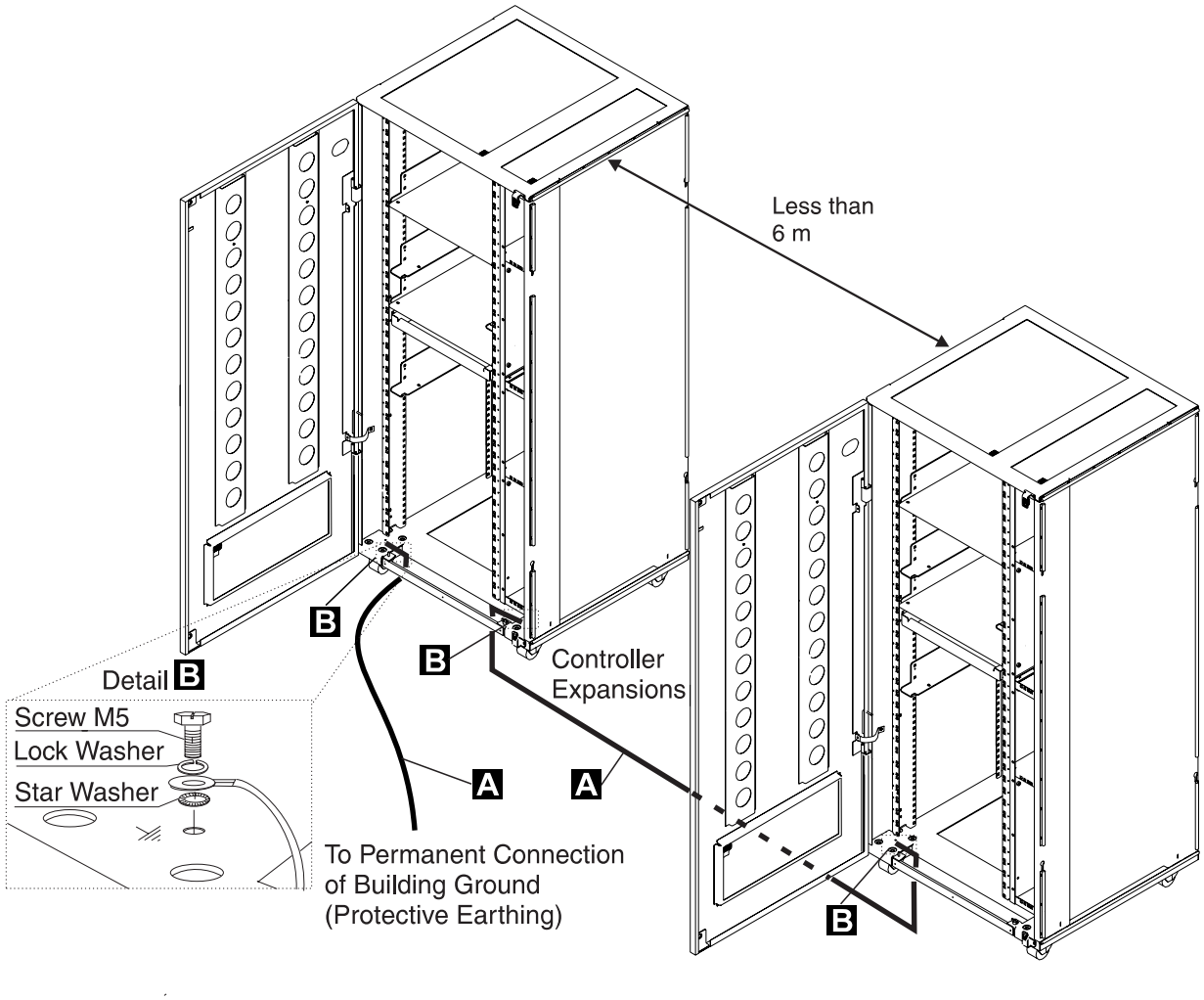


Figure 0-5. Ground Wire Connection Between Controller Expansions at less than Six Meters

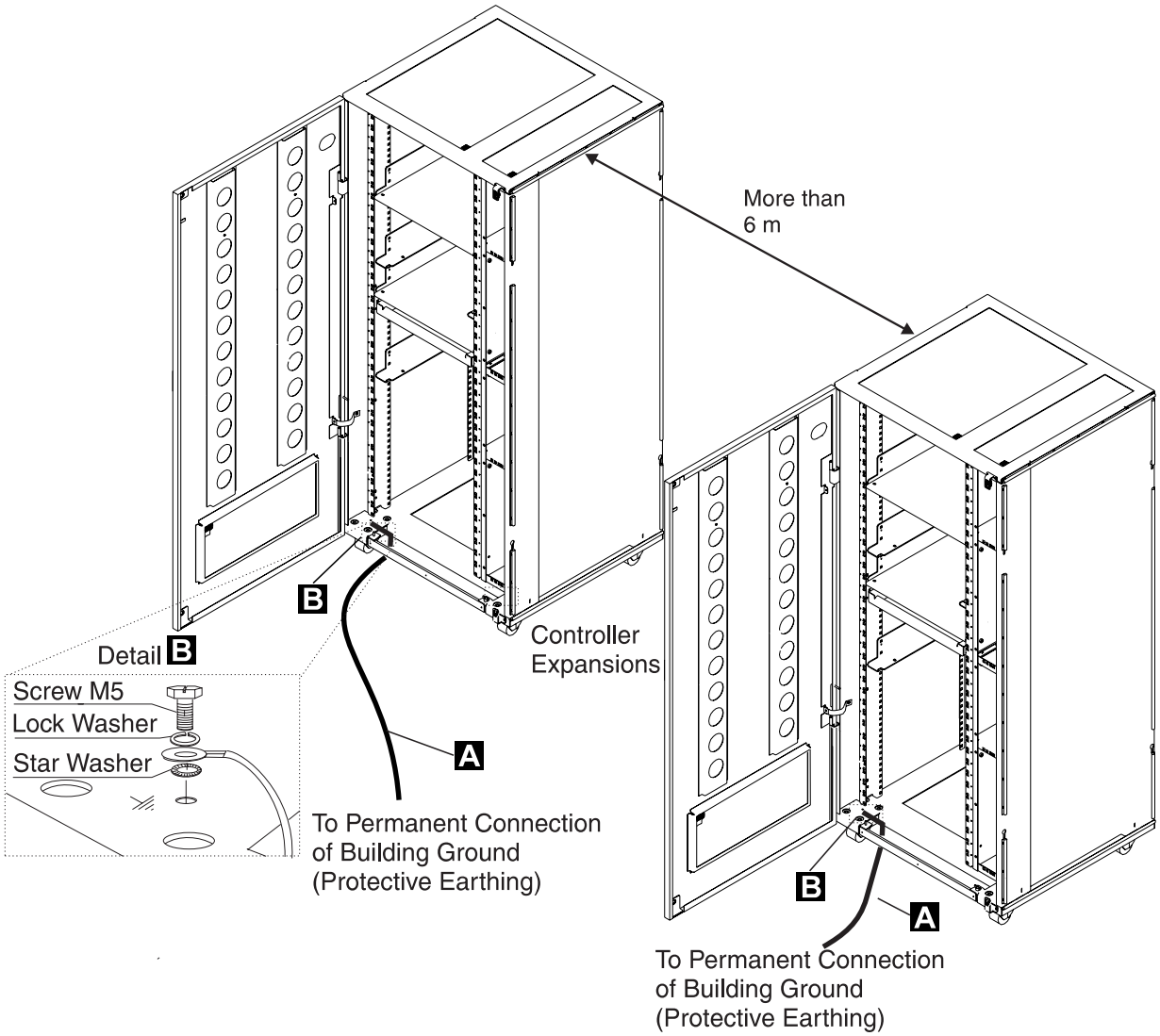


Figure 0-6. Ground Wire Connection Between Controller Expansions at more than Six Meters

Notes:

a) **A** Ground wire (PN 58G5691)

b) **B** Screw (PN 61F4513), star washer (PN 1622347) or (PN 17G5853), and lock washer (PN 1622319).

4 ac/dc Power Cable Ground Wire

- Check the mainline ac/dc power cable for damaged or burned pins and broken insulation.
- Measure the resistance of the disconnected mainline ac/dc power cable from ground pin on one end to the ground pin on the other end.

The measurement should be 0.1 ohm or less.

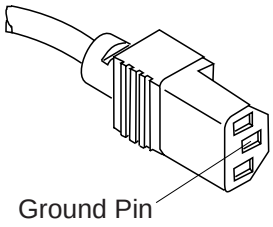


Figure 0-7. Ground Pin on Mainline ac/dc Power Cable

c Internal Grounding in the 3746-900 and Controller Expansion

On the 3746-900

- Check that electrical continuity is assured between the LCB housing and 3746-900 frame, if LCBs are present. This operation must be performed before any network connection.

On the Controller Expansion

- Check that electrical continuity is assured between each machine installed in the controller expansion (service processor, network node processor, modem, optical disk drive, and so on) and the ground pin of the ac outlet distribution box (see Figure 0-8).
- Check that electrical continuity is assured between the ground pin of the ac outlet distribution box and the controller expansion mount frame.

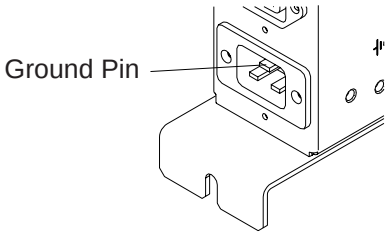


Figure 0-8. Ground Pin of the Controller Expansion ac Outlet Distribution Box

- Check that electrical continuity is assured between the LCB housing and the controller expansion frame, if LCBs are present. This operation must be performed before any network connection (see Figure 0-9 on page xxxii).

  Note: All the previous measurements should indicate 0.1 ohm or less.

d Grounding of Line Connection Boxes (LCBs) not Installed in the 3746-900 or Controller Expansion

Check that electrical continuity is assured between the LCB housing and the premises grounding system.

There are two ways to ensure proper grounding of the LCB depending on where it is installed:

1) Grounding is ensured by the four screws which secure the LCB on the rack if the frame of the rack is connected to the premises ground system.

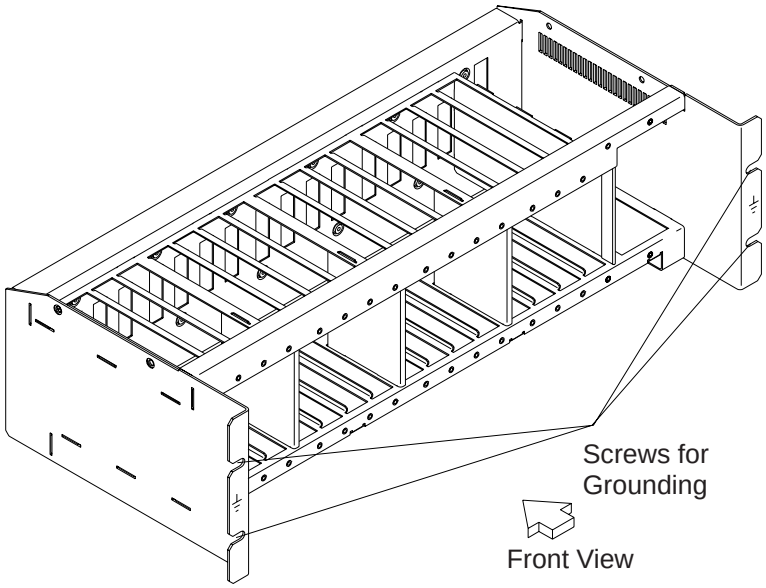


Figure 0-9. LCB Grounding via Screws

2) Grounding is ensured by a wire connected from the LCB to the premises ground system.

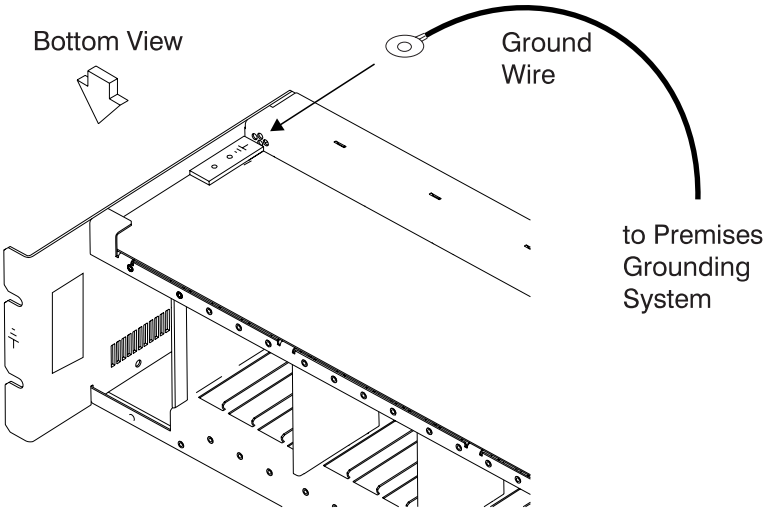


Figure 0-10. LCB Grounding via Ground Wire

IBM does not provide this wire. In order to ensure correct grounding, this ground wire must be made using a wire AWG 12 (minimum 2.5 square millimeters).

Screw: 5 mm in diameter, length from 6 to 10 mm (refer to Figure 0-11 on page xxxiii).

Connection of Ground Wire to LCB

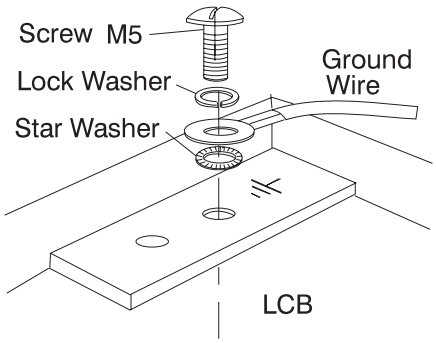


Figure 0-11. Ground Wire Connection

This operation must be performed before any network connection.

Note: All the previous measurements should indicate 0.1 ohm or less.

e Building Grounding

- **Check that there is less than 1V ac between the metal housings of plugs, connectors, receptacles, and so on., and any grounded point in the building. This can be any grounded metal structure, such as the stanchions of a raised floor (if they are electrically connected to the building ground), a metal water pipe, building steel, and so on**.

  Notes:

  1) When probing a painted metal part, ensure that the meter probe tip penetrates the paint.

  2) Also check plugs of incoming cables.

5 Circuit Breaker and Protector Rating

Check that:

- All CBs and CPs in the 3745 and 3746-900 are rated at the indicated value.
  - For the 3745 Model 17A, refer to Table 0-4 on page xxxvii for CB and CP locations.
  - For the 3745 Models 21A to 61A refer to Table 0-5 on page xxxviii for CB and CP locations.

  If the rating is not indicated, check the part number in one of the following:

  - *IBM 3745 Communication Controller Models 130 to 17A, Parts Catalog*, S135-2012
  - *IBM 3746 Expansion Unit Model 900, Parts Catalog*, S135-2013
  - *IBM 3746 Expansion Unit Model 900*, *IBM 3746 Nways Multiprotocol Controller Model 950, Parts Catalog*, S135-2015.
- The fuses in the controller expansion ac outlet distribution box must be 7 A, 250 V slow (PN 58G5782).

6 Input Power Voltage

The power rating plate indicates the voltage range available:

- 200/220/240 on the 3745 Model 17A.
- 200/220/240 or 346/380/415 on the 3745 Models 21A to 61A.
- 200/220/240 on the 3746-900.

3745 Model 17A Input Power Voltage

The voltage label (label **J**) indicates the input voltage for which the 3745 is wired. This information must be in accordance with Switch 1 on Power Supply 2 (PS2).

Performing a Power Conversion Inspection:

- A power conversion inspection must be performed on any 3745 Communication Controller that has been converted from 50 Hz to 60 Hz, or from 60 Hz to 50 Hz.
- The following is used only for the primary power box. Refer to chapter 4 of the *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for the location.
- Check Table 0-1 for the correct part numbers for the specified 50 Hz or 60 Hz use. In case of discrepancy, contact your support center.

Table 0-1. Part Numbers

Frequencies	**Part Numbers**
50 Hz	PN 03F4745
60 Hz	PN 03F4569

Refer to “Safety Label Locations on the 3745 Models 17A” on page lxxvii for voltage label and power rating plate location, and to page YZ060, sheet 1, for the PS2 box voltage adjustment by SW1.

Check that:

- The power rating plate and the voltage label of the 3745 are consistent with the frequency and the voltage measured at the customer's power supply. If not, inform your support center.

3745 Models 21A to 61A Input Power Voltage

The voltage label (label E) indicates the input voltage for which the 3745 is wired.

Performing a Power Conversion Inspection:

- A power conversion inspection must be performed on any 3745 Communication Controller that has been converted from 50 Hz to 60 Hz, from 60 Hz to 50 Hz, from 220 V to 380 V, or from 380 V to 220 V.
- The following procedure is only used for frame 01 (base frame) which contains the Primary Power Box (PPB). Each component must be inspected as described.
  Refer to chapter of the *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 to locate the frame 01 and the PPB.
- Inspection
  - Check Table 0-6 on page xxxix for the correct primary power part numbers for the specified 50 Hz or 60 Hz used.
  - Check for the correct PS Type 8 :

    50 Hz (PN 6495884): This may be verified with the part number (PN 6495880) on the top of the transformer.

    60 Hz (PN 6495898): This may be verified with the part number (PN 6495881) on the top of the transformer.

    In case of discrepancy, contact your support center.

  Refer to “Safety Label Locations on the 3745 Models 21A to 61A” on page lxxx for power rating plate locations and voltage labels, and:

  - Page YZ561 for the primary power box voltage adjustment

– Page YZ576 for the power box PS Type 6 voltage adjustment

– Page YZ578 for the power supply PS Type 8 voltage adjustment.

Check that:

– The power rating plate of the 3745 is consistent with the voltage level measured at the customer's power supply. If not, inform your branch office.

3746-900 Input Power Voltage

The power rating plate indicates the voltage range available and the frequency (50/60 Hz).

The 3746-900 voltage range is 200/220/240.

Check that:

- The power rating plate of the 3746-900 is consistent with the frequency and the voltage measured at the customer's power supply. If not, inform your branch office. Refer to “3746-900 Safety Label Identifications” on page lxxxv for power rating plate location.

  dc Input Voltage

  For dc input, the customer's voltage must be within -40.0 V to -60.0 V. There is **no adjustment** for the optional dc input.

  ac Input Voltage

  For ac input, the customer's voltage must be within 180 V to 260 V.

  Adjustment of the input voltage can be done according to the customer voltage on TB1 of the transformers located at the rear of the 3746-900.

Table 0-2. ac Input Adjustment

Voltage Measured	Wire Position	Nominal Voltage
From 180 to 210 Volts	TB1-2	200/208 Volts
From 210 to 230 Volts	TB1-3	220 Volts
From 230 to 260 Volts	TB1-4	240 Volts

Important Note:

Since the 3745 can be remotely powered ON, all the following procedures must be performed with the power control function on the 3745 and the 3746-900 control panel set to **Local mode.**

Controller Expansion Input Power Voltage

The power rating plate indicates the voltage range available (200/240) and the frequency (50/60 Hz).

Check that the power rating plate of the controller expansion is consistent with the frequency and the voltage measured at the customer's power supply. If not, inform your branch office. Refer to “Controller Expansion Label Locations” on page lxxxvi for power rating plate location.

7 Test of the Emergency Power OFF

a. Ask the customer to connect the power cord to the customer's mains supply.

b. Put CB1 ON.

c. Power ON the 3745 and the 3746-900 (power control function to Local on the control panel).

d. Operate the EMERGENCY switch to POWER OFF (**O**) and check that:

1) The 3745 and the 3746-900 are powered OFF.

> **Note**
>
> In the 3746-900, the primary powers (ACDC) or filters section (DCDC) stay energized.
>
> For total disconnection:
>
> 1. Turn the CBs OFF
> 2. Remove all the power plugs from supply outlets or shutdown the installation.

2) The diskette and disk drives are stopped.

3) All the fans are stopped (except the MOSS on the 3745 Models 21A to 61A which is supplied by the PS6 24 V).

4) The convenience outlets on the 3745 are not supplied with ac power.

e. Relatch the EMERGENCY switch, then power ON the controller.

8 Power ON Indicator

Once the controller is powered ON, check that:

a. The Power ON indicator on the 3745 control panel is lit.

b. The Ready LED and the Standby LED (on the 3746-900 control panel) are lit according to the table shown in “Control Panel LED Status Versus 3746-900 States.”

Control Panel LED Status Versus 3746-900 States

Table 0-3. LED Status Versus 3746-900 States

Standby LED	Ready LED	3746-900 State	Comment
Blinking	OFF	AC ON	Initialization of the CBSP hardware, and the 3746-900 waits for first recognition by the MOSS-E on LAN connection.
ON	OFF	Standby	The 3746-900, initially recognized by the MOSS-E, waits for a power ON condition (only the CBSP EEPROM code is running).
OFF	Blinking	Power ON	IML loading in all 3746-900 processors.
OFF	ON	Ready	The 3746-900 is now available.

3745 Model 17A/3746-900 Power Supply CP/CB and Fuse Reference

Table 0-4. 3745 Model 17A/3746-900 Power Supply CP/CB and Fuse Reference

Frame	CB/CP/F	Location	Rating	Power Supply
Frame 1	CB1	01H-A1	10 A	All
	CP2	01H-A1	1,5 A	PS2
	CP3	01H-B1	2 A	Fans
	F1	01H-B1	0.2 A	PS2
Frame 7: 3746-900	CB1 AC	07K-A1/07J-A1	15 A/220 V	ac Power
	CB1 DC	07J-A1	50 A	dc Power
	CP1	07K-A1/07J-A1	5 A	dc Power
	CP2	07H-A1	12 A	dc Power
	CP3	07H-A1	12 A	dc Power
	CP4	07H-A1	12 A	dc Power
	CP5	07H-A1	12 A	dc Power

3745 Models 21A to 61A Power Supply CP/CB Reference

Table 0-5. 3745 Models 21A to 61A/3746-900 Power Supply CP/CB Reference

Frame	CB/CP	Location	Rating	Power Supply
Frame 1	CB1	01E	40 A/220 V	
	CB1	01E	25 A/380 V	
	CP1	01E	3 A	PSTY8
	CP1	01F	1.5 A	PSTY6
	CP2	01F	1.5 A	PSTY6
	CP3	01F	1.5 A	PSTY6
	CP3	01E	6 A	PSTY1-A
	CP4	01E	3 A	PSTY5/7
	CP5	01E	3 A	PSTY3
	CP6	01E	3 A	PSTY2
	CP7	01E	6 A	PSTY4
	CP8	01E	6 A	PSTY1-B
	CP9	01E	3 A	Outlet
Frame 2	CP1	02J-A0	6 A	PSTY4
	CP2	02J-A0	3 A	PSTY3
	CP3	02J-A0	6 A	PSTY4
Frame 3	CP	03J-A0	6 A	PSTY4
Frame 4	CP1	04A-A0	6 A	PSTY5/7
	CP2	04A-A0	6 A	PSTY5/7
Frame 5	CP1	05A-A0	6 A	PSTY5/7
	CP2	05A-A0	6 A	PSTY5/7
Frame 6	CP1	06A-A0	6 A	PSTY7
	CP2	06A-A0	6 A	PSTY7
Frame 7: 3746-900	CB1 AC	07K-A1 / 07J-A1	15 A/220 V	ac Power
	CB1 DC	07J-A1	50 A	dc Power
	CP1	07K-A1 / 07J-A1	5 A	dc Power
	CP2	07H-A1	12 A	dc Power
	CP3	07H-A1	12 A	dc Power
	CP4	07H-A1	12 A	dc Power
	CP5	07H-A1	12 A	dc Power

Controller Expansion Fuse Reference

The ac outlet distribution box of the controller expansion contains two fuses: 7 A 250 V slow.

3745 Models 21A to 61A Primary Power Part Number

Table 0-6. Part Numbers

Primary Power Assembly	Power Cord	Convenience Outlet Voltage
PN 6496105 U.S.A. and Canada 208, 220, 240V 60 Hz	PN 6495844	117 V Outlet PN 357995 Transformer PN 826102 or 1859339
PN 6496106 Japan 200, 220 50 Hz	PN 6495845	100 V Outlet PN 357995 Transformer PN 1859339
PN 65X8688 Japan 200, 208, 240 60 Hz	PN 6495845	100 V Outlet PN 357995 Transformer PN 1859339
PN 6496107 All countries 200, 220 50 Hz	PN 6495845	200 V Outlet PN 418835
PN 65X8689 All countries 200, 208, 220, 240 60 Hz	PN 6495845	220 V Outlet PN 418835
PN 6495688 All countries 380, 400, 415 50 Hz	PN 6495846	220 V Outlet PN 418835
PN 65X8690 All countries 380 60 Hz	PN 6495846	220 V Outlet PN 418835

3746-900 Primary Power Part Number

Table 0-7. Part Numbers

Primary Power Assembly	Power Cord	Convenience Outlet Voltage
PN 03F7609 3746-900 ac box 60 Hz	Country dependent	
PN 03F7610 3746-900 ac box 50 Hz	Country dependent	
PN 03F7620 3746-900 dc box	PN 34F1416	

Sicherheitsüberprüfungen für IBM 3745, 3746-900 und die Erweiterung der Steuereinheit

Wichtige Informationen

Dieses Verfahren bezieht sich auf IBM 3745 Modell 17A, IBM 3745 Modelle 21A bis 61A, IBM 3746-900 und die Erweiterung der Steuereinheit. Sollte die Erweiterung der Steuereinheit nicht vorhanden sein, die diesbezügliche Anweisung im folgenden Verfahren ignorieren.

Falls nichts anderes angegeben ist, bezieht sich die Bezeichnung 3745 in diesem Handbuch auf das Modell 17A oder die Modelle 21A bis 61A der 3745.

Einführung

Sicherheitsüberprüfungen für 3745, 3746-900 und die Erweiterung der Steuereinheit sind in folgenden Fällen erforderlich:

- Bei einer Prüfung nach Absprache mit IBM
- Wenn eine IBM Wartungsleistung angefordert wird und in der letzten Zeit keine Wartung durch IBM durchgeführt worden war.
- Wenn Änderungen am Gerät oder Anschlüsse überprüft werden.
- Wenn Änderungen am Gerät vorgenommen worden sind, die möglicherweise die Sicherheit beeinträchtigen.

Wenn bei der Überprüfung ein unzureichender Sicherheitszustand festgestellt wird, müssen die Mängel behoben werden, bevor IBM das Gerät wartet.

Anmerkung: Für die Behebung von Sicherheitsmängeln ist der Besitzer des Geräts verantwortlich.

Folgende Bereiche und Funktionen der 3745, 3746-900 und der Erweiterung der Steuereinheit werden geprüft:

1. Äußere Abdeckungen
2. Sicherheitsaufkleber
3. Sicherheitsabdeckungen
4. Erdung
5. Sicherungsautomat und Überstromschutzschalter
6. Netzeingangsspannung
7. Netzkontrollschalter
8. Betriebsanzeige

Anmerkungen:

1. Die IBM 3746-900 wird über den Grundrahmen der IBM 3745 von einem Host, lokal oder vom Serviceprozessor aus ein- und ausgeschaltet.
2. Bei den Modellen 21A bis 61A der 3745 werden die Geräte der Reihe 3746 über den Grundrahmen der 3745 ein- und ausgeschaltet.

Auch nach dem Ausschalten liegt in einigen Bereichen der 3745 und 3746-900 eine gefährliche Spannung an.

Vor der Ausführung der Schritte 1-6 muß die Stromzufuhr wie folgt **unterbrochen** werden:

- Die **Sicherungsautomaten (CB1)** der 3745 und 3746-900 ausschalten (Stellung: OFF).

- **Alle Geräte in der Erweiterung der Steuereinheit (wenn vorhanden) ausschalten**.
- **Stromversorgungen der 3745, 3746-900 und der controller expansion beim Kunden ausschalten**.

  Netzkabel und Schutzleiter **A** der Erweiterung der Steuereinheit nicht entfernen, damit die Erdung gewährleistet ist (siehe Abbildungen 1-3, 1-4, 1-5 bzw. 1-6).

1 Äußere Abdeckungen

Prüfen, ob

- alle äußeren Abdeckungen an der 3745, den Geräten der Reihe 3746 (falls vorhanden), der 3746-900 und der Erweiterung der Steuereinheit angebracht sind.
- die äußeren Abdeckungen auf zwei Arten verschlossen sind: mit Schlitzschrauben im IBM Zugriffsbereich und mit Sechskantschrauben im Zugriffsbereich des Kunden.
  - Modell 17A der 3745 siehe *IBM 3745 Communication Controller Models 130 to 17A, Parts Catalog*, S135-2012.
  - Modelle 21A bis 61A der 3745 siehe *IBM 3745 Communication Controller Models 210 to 61A, Parts Catalog*, S135-2010.
- die Abdeckungen vollständig geöffnet werden können.
- um die Rahmen genügend Raum und Zugänge für Wartungsarbeiten sind, wenn die äußeren Abdeckungen geöffnet sind.

  Alle äußeren Abdeckungen für weitere Überprüfungen offen lassen.

2 Sicherheitsaufkleber

Prüfen, ob

- sich alle Sicherheitsaufkleber an den mit Buchstaben gekennzeichneten Stellen befinden. Siehe folgende Abschnitte:
  - “Safety Label Locations on the 3745 Models 17A” on page lxxvii.
  - “Safety Label Locations on the 3745 Models 21A to 61A” on page lxxx.
  - “Safety Label Locations on the 3746-900” on page lxxxiv.
- die Aufkleber dem jeweiligen Buchstaben gemäß folgender Abschnitte entsprechen:
  - “3745 Model 17A Safety Label Identifications” on page lxxix.
  - “3745 Models 21A to 61A Safety Label Identifications” on page lxxxiii.
  - “3746-900 Safety Label Identifications” on page lxxxv.

3 Sicherheitsabdeckungen

Bezüglich des Standorts der durch den Kundendienst austauschbaren Funktionseinheit (Kapitel 4) prüfen, ob

- alle Sicherheitsabdeckungen vorhanden und mit Schrauben gesichert sind.
- alle Spannungsklemmleisten durch eine Plastikabdeckung an der Oberseite der Klemmleiste geschützt sind.

4 Erdung

Hinweis

Im vorliegenden Handbuch bedeutet "erden", daß das Gerät mit der Schutzerdung verbunden werden muß.

a Erdung der 3745

- Die Positionen der Erdungsbrücken/Kontakte der 3745 Modell 17A sind Seite YZ110 zu entnehmen.
- Die Positionen der Erdungsbrücken/Kontakte der Modelle 21A bis 61A der 3745 sind Seite YZ110 bis YZ114 zu entnehmen.

Prüfen, ob

- **der elektrische Durchgang zwischen der Rahmenerdung und den Anschlüssen, die auf den Schemazeichnungen für Erdung eingezeichnet sind, sichergestellt ist**.
- der elektrische Durchgang zwischen der 3745, den Rahmenerdungen und dem Erdungssystem des Gebäudes durch das Netzkabel der 3745 sichergestellt wird.

b Schutzleiterverbindung der 3746-900 und der Erweiterung der Steuereinheit an das Erdungssystem des Gebäudes

- Der elektrische Durchgang zwischen der Rahmenerdung und dem Erdungssystem des Gebäudes wird über die Netzkabel sichergestellt.
- Die 3746-900 ist folgendermaßen geerdet:
  - an der 3745 Modell 17A über das Stromversorungskabel (siehe Abbildung 1-1).
  - an den Modellen 21A bis 61A der 3745 über das UEPO-Kabel (siehe Abbildung 1-2).
- Bei der Erweiterung der Steuereinheit wird zusätzlich ein Schutzleiter **A** verwendet (siehe Abbildungen 1-3, 1-4, 1-5 bzw. 1-6).

1 Stromversorgungskabel der 3745 Modell 17A/3746-900

Prüfen, ob der Schutzleiter des Stromversorgungskabels ordnungsgemäß an die 3745 (**D**) und die 3746-900 (**C**) angeschlossen ist.

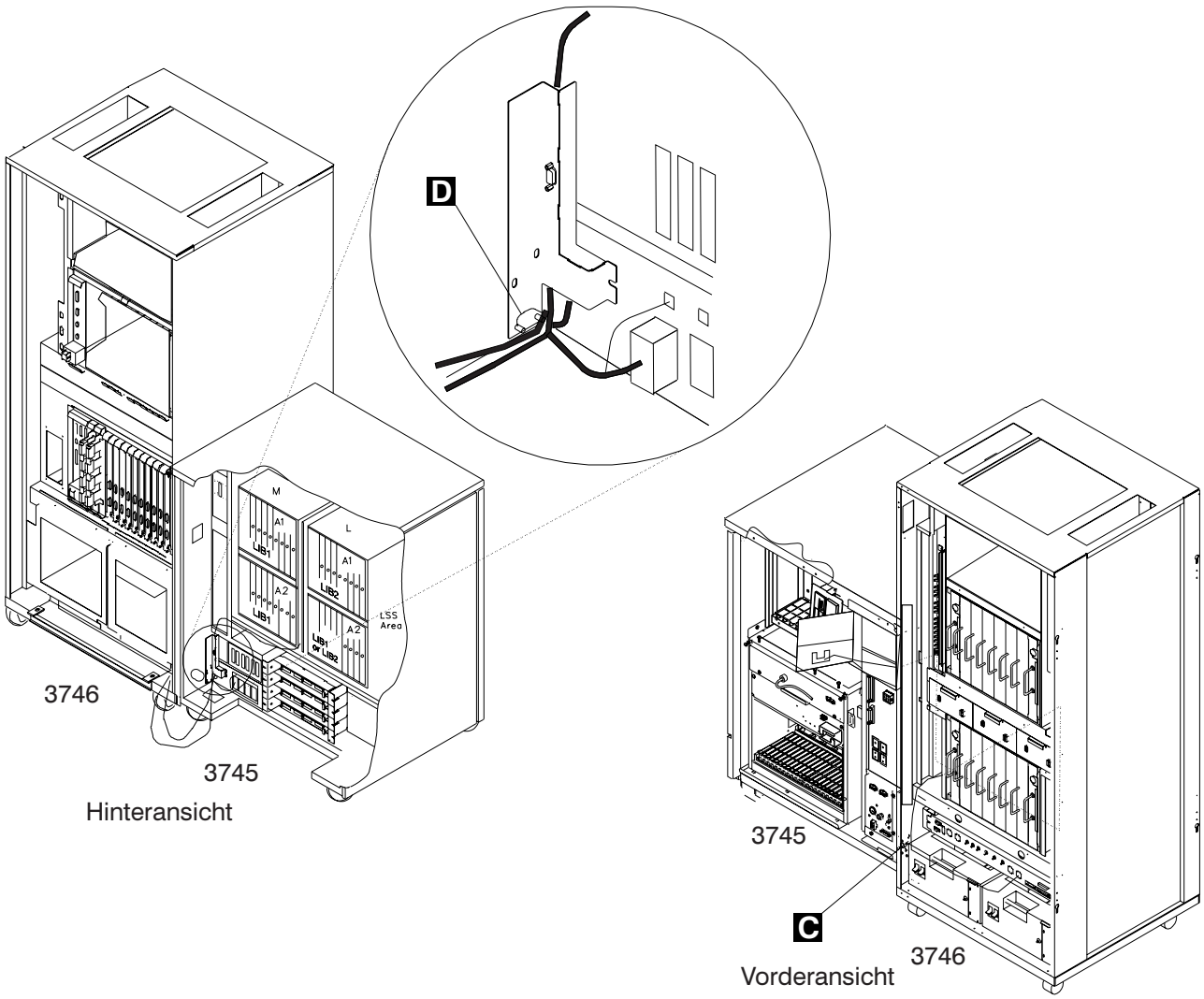


Figure 0-12. Führung des Stromversorgungskabels bei der 3745 Modell 17A/3746-900

Anmerkungen:

a) D Sicherungsring (Teilenummer 17G5853) und Mutter (Teilenummer 1622404).
b) C Schraube (Teilenummer 61F4511), Zahnscheibe (Teilenummer 17G5852) und Sicherungsring (Teilenummer 1622318).

2 **UEPO-Kabel der 3745, Modelle 21A bis 61A/3746-900**

Prüfen, ob das UEPO-Kabel ordnungsgemäß an die 3745 (D) und die 3746-900 (C) angeschlossen ist.

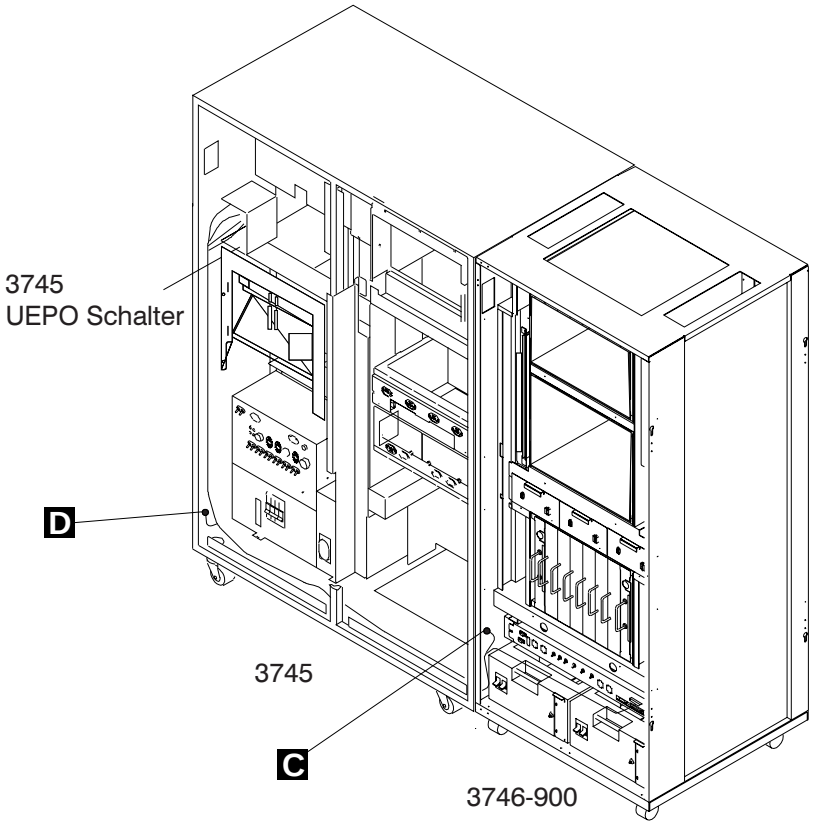


Figure 0-13. UEPO-Kabelführung bei der 3745, Modelle 21A bis 61A/3746-900

Anmerkungen:

a) **D** Schraube (Teilenummer 2665527) und Sicherungsring (Teilenummer 1622346).
b) **C** Schraube (Teilenummer 61F4511), Zahnscheibe (Teilenummer 17G5852) und Sicherungsring (Teilenummer 1622318).

3 Schutzleiter für die Erweiterung der Steuereinheit

- Wenn nur eine Erweiterung der Steuereinheit installiert ist, prüfen, ob der Schutzleiter **A** angeschlossen ist (siehe Abbildung 1-3).
- Wenn mehrere Erweiterungen der Steuereinheit installiert sind, prüfen, ob die Schutzleiter **A** gemäß Konfiguration angebracht wurden (siehe Abbildungen 1-4, 1-5 bzw. 1-6).

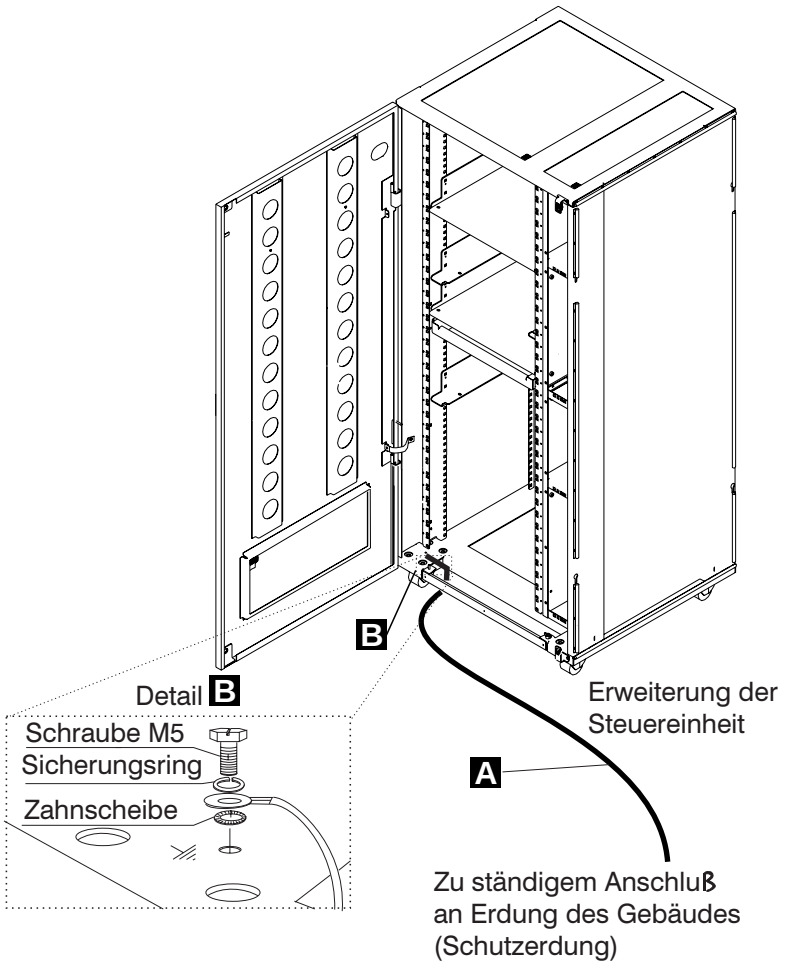


Figure 0-14. Schutzleiteranschluß an der Erweiterung der Steuereinheit

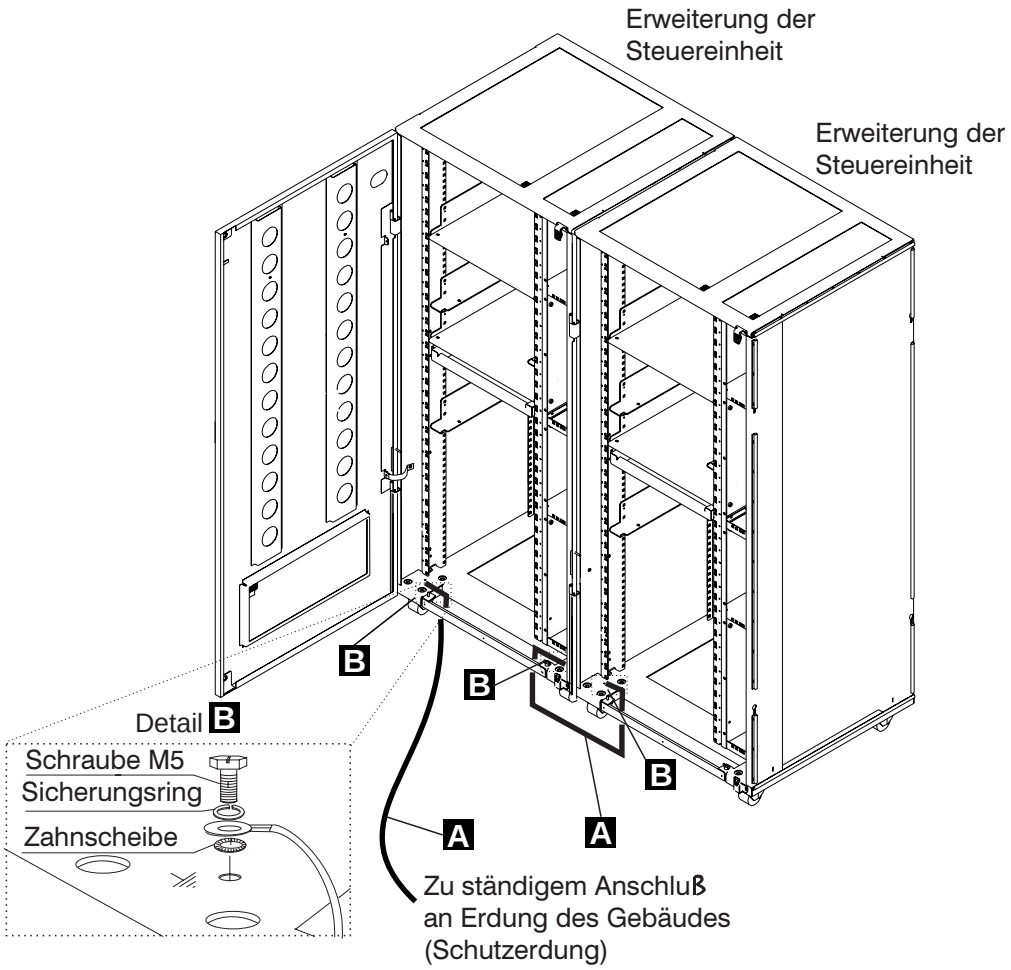


Figure 0-15. Schutzleiteranschluß zwischen angeschlossenen Erweiterungen der Steuereinheit.

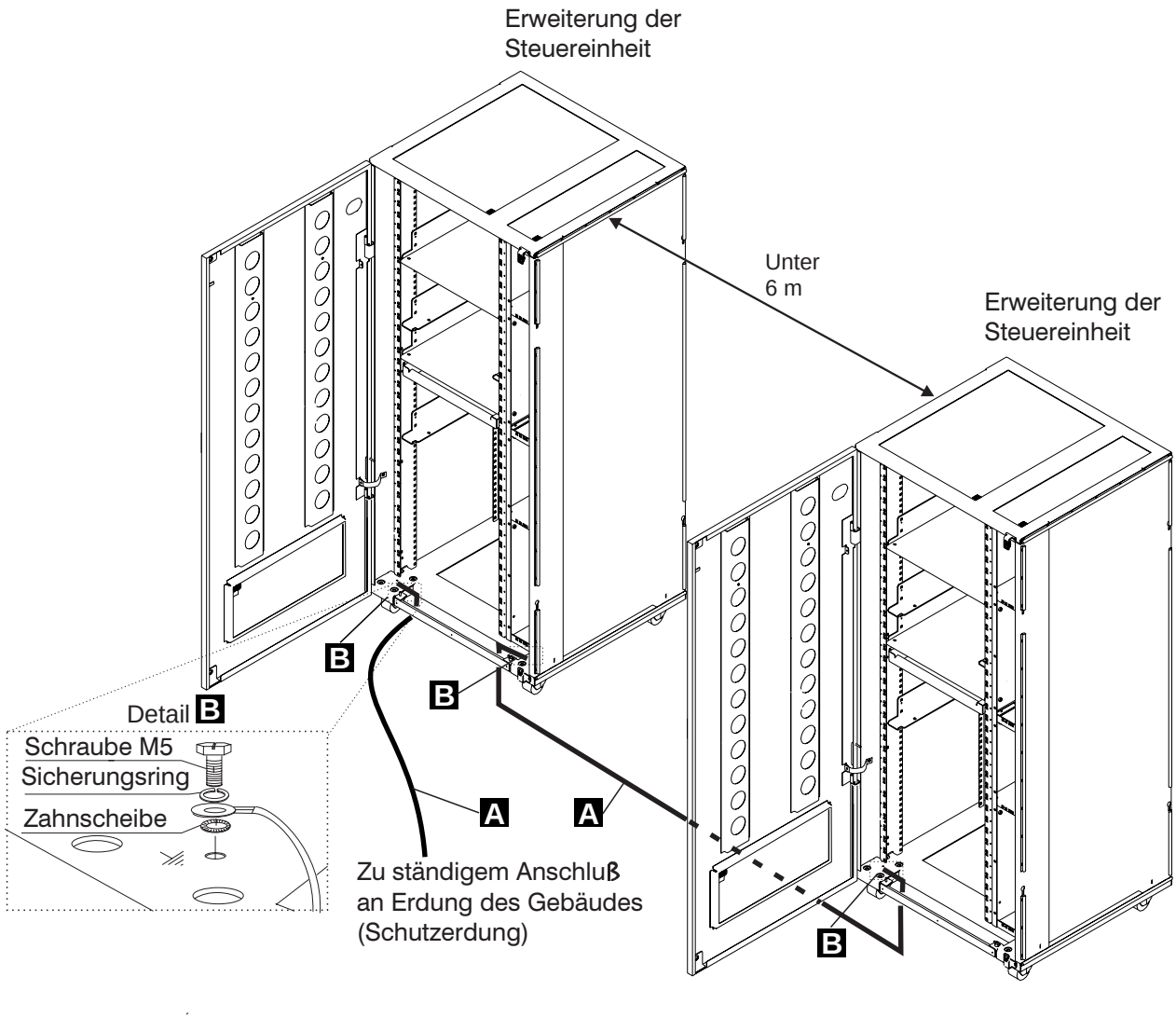


Figure 0-16. Schutzleiteranschluß bei einem Abstand von weniger als 6 Metern zwischen den Erweiterungen der Steuereinheit

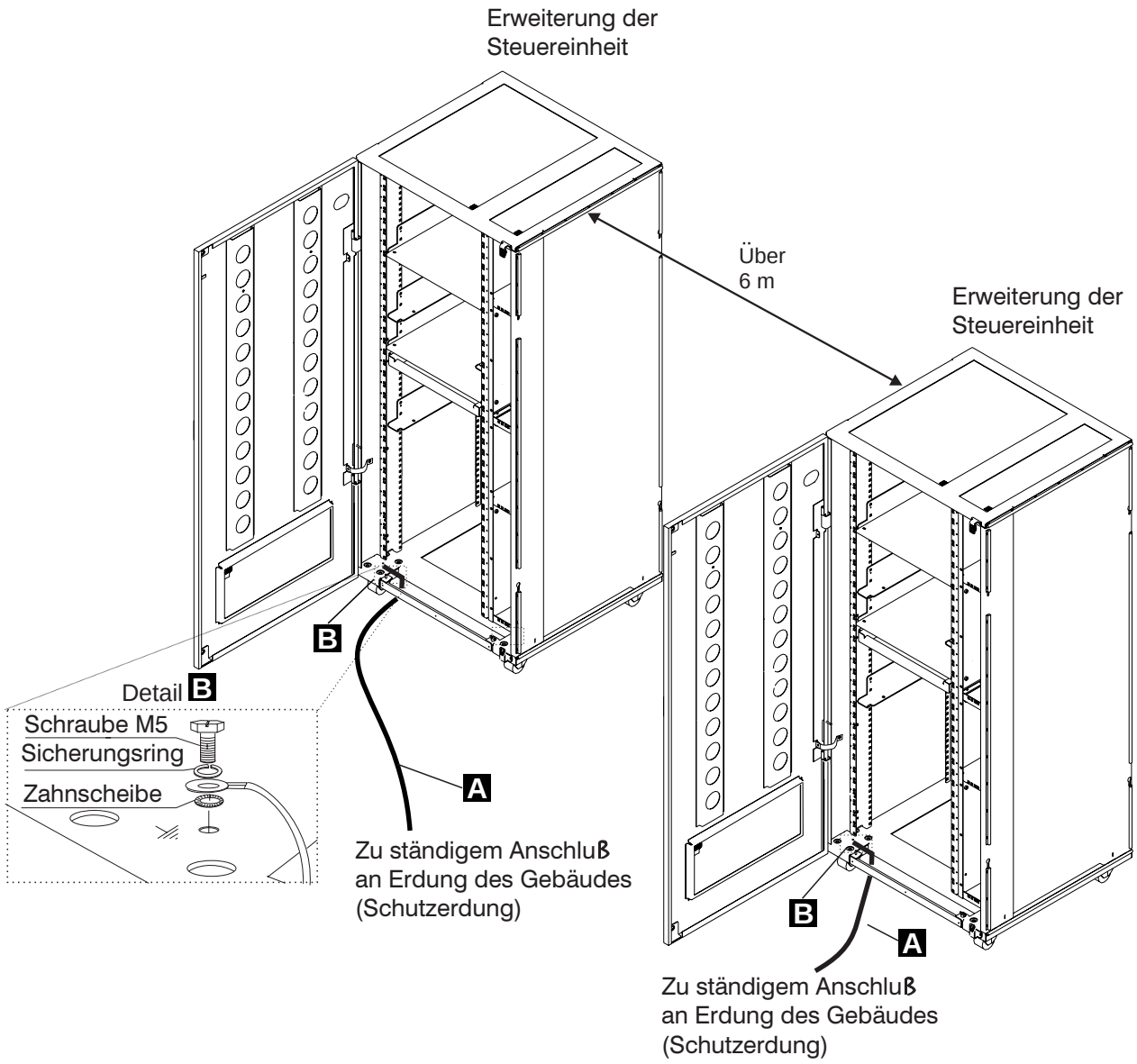


Figure 0-17. Schutzleiteranschluß bei einem Abstand über 6 Meter zwischen den Erweiterungen der Steuereinheit

Anmerkungen:

a) **A** Schutzleiter (Teilenummer 58G5691)
b) **B** Schraube (Teilenummer 61F4513), Zahnscheibe (Teilenummer 1622347) oder (Teilenummer 17G5853) und Sicherungsring (Teilenummer 1622319).

4 Schutzleiter des AC/DC Stromversorgungskabels

- Hauptstromversorgungskabel auf beschädigte oder verbrannte Kontakte und beschädigte Isolierung prüfen.
- Den Widerstand des nicht angeschlossenen Hauptstromversorgungskabels zwischen dem Schutzleiterkontakt am einen und dem Schutzleiterkontakt am anderen Ende messen.

Der Widerstand darf maximal 0,1 Ohm betragen.

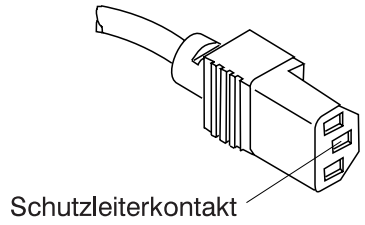


Figure 0-18. Schutzleiterkontakt am Hauptstromversorgungskabel

c Interne Erdung in der 3746-900 und der Erweiterung der Steuereinheit

An der 3746-900

- Prüfen, ob der elektrische Durchgang zwischen dem Gehäuse des Verteilerkastens und dem Rahmen der 3746-900 gewährleistet ist, sofern Verteilerkästen vorhanden sind. Dieser Schritt muß vor dem Anschluß von Signalkabeln erfolgen.

An der Erweiterung der Steuereinheit

- Prüfen, ob der elektrische Durchgang zwischen allen in der Erweiterung der Steuereinheit installierten Einheiten (Serviceprozessor, Netzknotenprozessor, Modem, optisches Plattenlaufwerk usw.) und dem Schutzleiterkontakt des Wechselstromverteilerkastens gewährleistet ist (siehe Abbildung 1-8).
- Prüfen, ob der elektrische Durchgang zwischen dem Schutzleiterkontakt des Wechselstromverteilerkastens und dem Montagerahmen der Erweiterung der Steuereinheit gewährleistet ist.

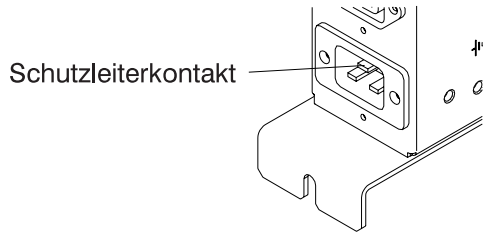


Figure 0-19. Schutzleiterkontakt des Wechselstromverteilerkastens der Erweiterung der Steuereinheit

- Prüfen, ob der elektrische Durchgang zwischen dem Gehäuse des Verteilerkastens und dem Rahmen der Erweiterung der Steuereinheit gewährleistet ist, sofern Verteilerkästen vorhanden sind. Dieser Schritt muß vor dem Anschluß von Signalkabeln erfolgen (siehe Abbildung 1-9).

  Anmerkung: Bei allen vorherigen Prüfungen sollten maximal 0,1 Ohm gemessen werden.

d Erdung der nicht in der 3746-900 oder in der Erweiterung der Steuereinheit installierten Verteilerkästen

Prüfen, ob der elektrische Durchgang zwischen dem Gehäuse des Verteilerkastens und dem Erdungssystem des Gebäudes gewährleistet ist.

Je nach Installationsort kann der Verteilerkasten auf zweierlei Arten geerdet werden:

1) Erdung über die vier Schrauben, mit denen der Verteilerkasten am Gehäuse befestigt ist, falls der Gehäuserahmen mit dem Erdungssystem des Gebäudes verbunden ist.

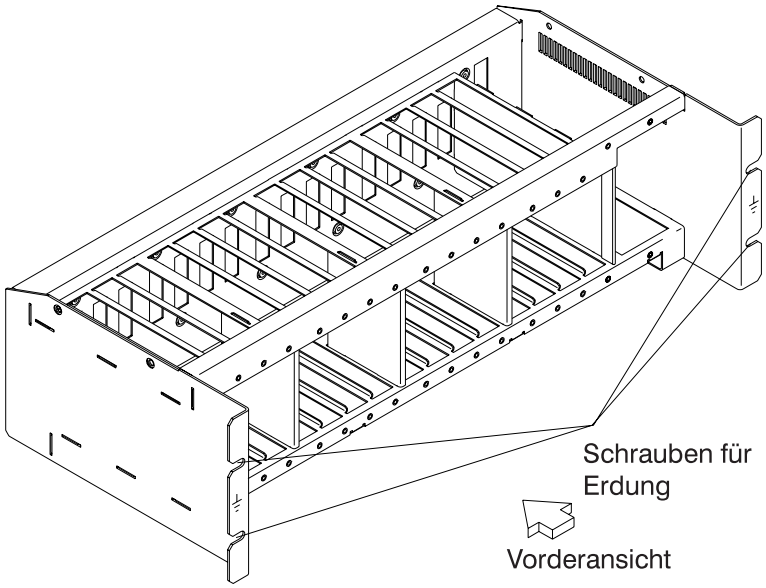


Figure 0-20. Erdung des Verteilerkastens über Schrauben

2) Erdung über einen Schutzleiter, der den Verteilerkasten mit dem Erdungssystem des Gebäudes verbindet.

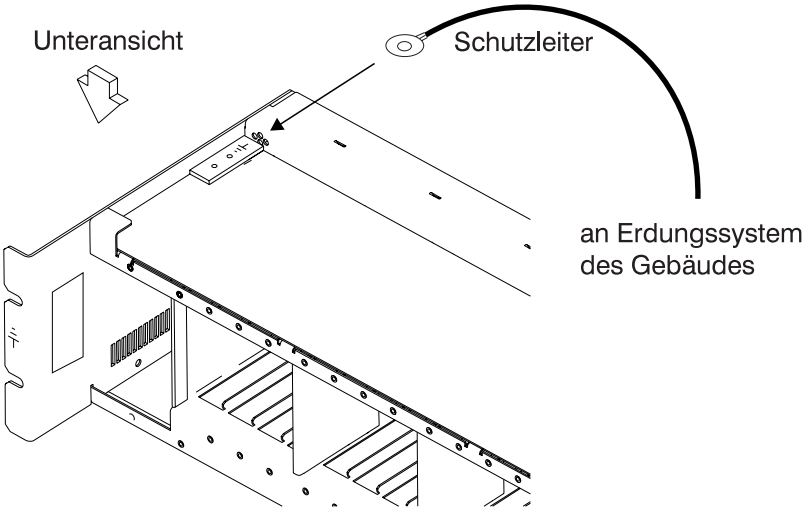


Figure 0-21. Erdung des Verteilerkastens über Schutzleiter

IBM liefert diesen Schutzleiter nicht mit. Der Schutzleiter muß aus einem AWG12-Leiter (mind. 2,5 mm2) bestehen, damit eine korrekte Erdung gewährleistet ist.

Schraube: 5 mm Durchmesser, Länge 6 bis 10 mm (siehe Abbildung 1-11).

Verbindung des Schutzleiters mit dem Verteilerkasten

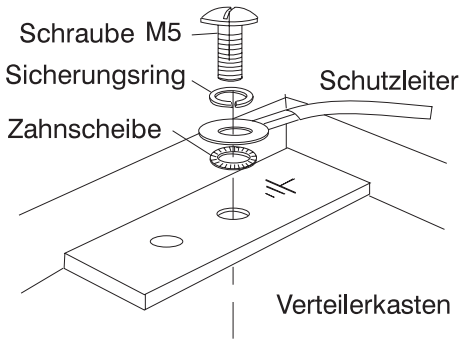


Figure 0-22. Schutzleiteranschluß

Dieser Schritt muß vor dem Anschluß von Signalkabeln erfolgen.

Anmerkung: Bei allen vorherigen Prüfungen sollten maximal 0,1 Ohm gemessen werden.

e Gebäudeerdung

- **Sicherstellen, daß zwischen den Metallgehäusen von Steckern, Buchsen usw. und jeder geerdeten Stelle im Gebäude eine Wechselspannung von weniger als 1 V anliegt. Dies kann jedes geerdete Metallteil sein, wie z. B. die Stützen eines Doppelbodens (wenn sie mit dem Gebäudeerder verbunden sind), ein metallisches Wasserrohr, Baustahl usw..**

  Anmerkungen:

  1) Beim Prüfen an einem lackierten Metallteil sicherstellen, daß die Prüfspitze die Farbe durchbohrt.
  2) Stecker der anzuschließenden Kabel ebenfalls prüfen.

5 Sicherungsautomat und Überstromschutzschalter

Prüfen, ob

- alle Sicherungsautomaten und Überstromschutzschalter in der 3745 und 3746-900 die angegebene Leistung haben.
  - Positionen der Sicherungsautomaten (CB) und Überstromschutzschalter (CP) der 3745 Modell 17A siehe Table 0-11 on page lv.
  - Positionen der Sicherungsautomaten (CB) und Überstromschutzschalter (CP) der Modelle 21A bis 61A der 3745 siehe Table 0-12 on page lvi.

  Wenn die Leistung nicht aufgeführt ist, die Teilenummer in einem der folgenden Kataloge prüfen:

  - *IBM 3745 Communication Controller Models 130 to 17A, Parts Catalog*, S135-2012
  - *IBM 3746 Expansion Unit Model 900, Parts Catalog*, S135-2013
  - *IBM 3746 Expansion Unit Model 900*, *IBM 3746 Nways Multiprotocol Controller Model 950, Parts Catalog*, S135-2015.
- Bei den Sicherungen im Wechselstromverteilerkasten der Erweiterung der Steuereinheit muß es sich um träge Sicherungen mit 7 A, 250 V handeln (Teilenummer 58G5782).

6 Eingangsspannung

Der zulässige Spannungsbereich ist dem Typenschild zu entnehmen:

- 200/220/240 V bei 3745 Modell 17A.
- 200/220/240 V oder 346/380/415 V bei den Modellen 21A bis 61A der 3745.
- 200/220/240 V bei 3746-900.

Eingangsspannung bei Modell 17A der 3745

Der Aufkleber für die Versorgungsspannungen (Aufkleber **J**) gibt die Eingangsspannung für die 3745 an. Die Angaben müssen Schalter 1 an Netzteil 2 (PS2) entsprechen.

Stromumwandlung prüfen

- Die Stromumwandlung muß bei jeder DFV-Steuereinheit IBM 3745 geprüft werden, die von 50 Hz auf 60 Hz oder von 60 Hz auf 50 Hz umgerichtet wurde.
- Folgendes bezieht sich ausschließlich auf das Netzteil. Die Position ist Kapitel 4 in *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 zu entnehmen.
- Die entsprechenden Teilenummern für die Verwendung bei 50 oder 60 Hz sind Table 0-8 zu entnehmen. Bei Unstimmigkeiten zuständige Unterstützungsfunktion benachrichtigen.

Table 0-8. Teilenummern

Frequenzen	**Teilenummern**
50 Hz	03F4745
60 Hz	03F4569

Die Positionen des Aufklebers für die Versorgungsspannungen und des Typenschildes sind “Safety Label Locations on the 3745 Models 17A” on page lxxvii zu entnehmen. Informationen zur Spannung?? im Netzteil PS-2 durch SW1 siehe Seite YZ060, Blatt 1.

Prüfen, ob

- die Angaben auf dem Typenschild und dem Spannungsaufkleber der 3745 mit der an der Netzstromversorgung des Kunden gemessenen Frequenz und Spannung übereinstimmen. Wenn dies nicht der Fall ist, zuständige Unterstützungsfunktion informieren.

Eingangsspannung bei den Modellen 21A bis 61A der 3745

Der Aufkleber für die Versorgungsspannungen (Aufkleber E) gibt die Eingangsspannung für die 3745 an.

Stromumwandlung prüfen

- Die Stromumwandlung muß bei jeder DFV-Steuereinheit IBM 3745 geprüft werden, die von 50 Hz auf 60 Hz, von 60 Hz auf 50 Hz, von 220 V auf 380 V oder von 380 V auf 220 V umgerichtet wurde.
- Das folgende Verfahren wird nur bei Rahmen 01 (Grundrahmen), der das Netzteil enthält, angewandt. Jede Komponente muß wie beschrieben geprüft werden.
  Die Position des Rahmens 01 und des Netzteils ist *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 zu entnehmen.
- Prüfung
  - Teilenummern für das entsprechende Netzteil für die Verwendung bei 50 oder 60 Hz sind Table 0-13 on page lvii zu entnehmen.
  - Prüfen, ob das richtige Netzteil PS Typ 8 vorhanden ist:

    50 Hz (Teilenummer 6495884): Kann anhand der Teilenummer (6495880) an der Oberseite des Transformators überprüft werden.

    60 Hz (Teilenummer 6495898): Kann anhand der Teilenummer (6495881) an der Oberseite des Transformators überprüft werden.

    Bei Unstimmigkeiten zuständige Unterstützungsfunktion benachrichtigen.

Die Positionen der Typenschilder und der Aufkleber für die Versorgungsspannungen sind “Safety Label Locations on the 3745 Models 21A to 61A” on page lxxx zu entnehmen. Weitere Informationen zur

– Anpassung der Spannung im Netzteil siehe Seite YZ561.

– Anpassung der Spannung im Netzteil PS Typ 6 siehe Seite YZ576

– Anpassung der Spannung im Netzteil PS Typ 8 siehe Seite YZ578.

Prüfen, ob

– die Angaben auf dem Typenschild der 3745 mit der an der Netzstromversorgung des Kunden gemessenen Spannungshöhe übereinstimmen. Wenn dies nicht der Fall ist, zuständige Geschäftsstelle informieren.

Eingangsspannung an der 3746-900

Der zulässige Spannungsbereich und die Frequenz (50/60 Hz) sind dem Typenschild zu entnehmen.

Der Spannungsbereich für die 3746-900 liegt bei 200/220/240V.

Prüfen, ob

- die Angaben auf dem Typenschild an der 3746-900 mit der am Netzstromversorgung des Kunden gemessenen Spannung und Frequenz übereinstimmen. Wenn dies nicht der Fall ist, zuständige Geschäftsstelle informieren. Die Position des Typenschildes ist “3746-900 Safety Label Identifications” on page lxxxv zu entnehmen.

  Spannung am Gleichstromeingang

  Am Gleichstromeingang muß die Spannung beim Kunden zwischen -40,0 V und -60,0 V liegen. Der optionale Gleichstromeingang **kann nicht eingestellt werden**.

  Spannung am Wechselstromeingang

  Am Wechselstromeingang muß die Spannung beim Kunden zwischen 180 V und 260 V liegen.

  Die Einstellung der Eingangsspannung gemäß der Spannung beim Kunden kann an der Klemmleiste 1 der Transformatoren an der Rückseite der 3746-900 erfolgen.

Table 0-9. Einstellung der Spannung des Wechselstromeingangs

Gemessene Spannung	**Position des Leiters**	**Nenn-spannung**
180 bis 210 Volt	Klemmleiste TB 1-2	200/208 Volt
210 bis 230 Volt	Klemmleiste TB 1-3	220 Volt
230 bis 260 Volt	Klemmleiste TB 1-4	240 Volt

Wichtiger Hinweis:

Die 3745 kann über Fernsteuerung eingeschaltet werden. Deshalb muß bei Ausführung der folgenden Verfahren die Stromsteuerfunktion am Bedienungsfeld der 3745 und 3746-900 auf **Lokal** eingestellt sein.

Eingangsspannung der Erweiterung der Steuereinheit

Der zulässige Spannungsbereich (200/240 V) und die Frequenz (50/60 Hz) sind dem Typenschild zu entnehmen.

Prüfen, ob die Angaben auf dem Typenschild an der Erweiterung der Steuereinheit mit der an der Netzstromversorgung des Kunden gemessenen Spannung und Frequenz übereinstimmen. Wenn dies nicht der Fall ist, zuständige Geschäftsstelle informieren. Die Position des Typenschildes ist “Controller Expansion Label Locations” on page lxxxvi zu entnehmen.

7 Prüfung des Notaus-Schalters

a. Den Kunden bitten, das Netzkabel an die Netzstromversorgung anzuschließen.

b. Sicherungsautomat (CB1) einschalten.

c. Die 3745 und 3746-900 einschalten (Stromsteuerfunktion am Bedienungsfeld muß auf **Lokal** eingestellt sein).

d. Den NOTSCHALTER ausschalten (**O**) und prüfen, daß:

1) die 3745 und die 3746-900 ausgeschaltet sind.

Hinweis

In der 3746-900 stehen die primären Versorgungs- (ACDC) oder die Filterbereiche (DCDC) weiterhin unter Spannung.

Komplettes Abschalten:

1. Die Sicherungsautomaten (CBs) ausschalten.
2. Alle Netzstecker aus den Steckdosen ziehen oder die Netzstromversorgung abschalten.

2) die Disketten- und Plattenlaufwerke angehalten sind.

3) alle Ventilatoren gestoppt sind (bis auf den MOSS bei den Modellen 21A bis 61A der 3745, der von PS6 24 V versorgt wird).

4) die Servicesteckdosen an der 3745 nicht mit Wechselstrom versorgt werden.

e. Notschalter entriegeln und Steuereinheit einschalten.

8 Betriebsanzeige

Nach Einschalten der Steuereinheit prüfen, ob

a. die Betriebsanzeige am Bedienungsfeld der 3745 leuchtet.

b. die Betriebs-LED und die Bereitschafts-LED (am Bedienungsfeld der 3746-900) gemäß den Angaben der Tabelle “Bedeutung der LEDs am Bedienungsfeld der 3746-900” leuchten.

Bedeutung der LEDs am Bedienungsfeld der 3746-900

Table 0-10. Bedeutung der LEDs am Bedienungsfeld der 3746-900

LED Bereitschaft	LED Betrieb	Status 3746-900	Kommentar
Blinken	AUS	Wechselstrom EIN	Initialisierung der CBSP-Hardware. Die 3746-900 wartet auf erste Erkennung durch den MOSS-E beim LAN-Anschluß.
EIN	AUS	Bereitschaft	Die eingangs vom MOSS-E erkannte 3746-900 wartet auf das Einschalten (nur das CBSP EEPROM-Programm ist aktiv).
AUS	Blinken	Einschalten	Alle 3746-900-Prozessoren werden hochgefahren (IML).
AUS	EIN	Betrieb	Die 3746-900 ist nun betriebsbereit.

Stromversorgung, Sicherungsautomaten (CB), Überstromschutzschalter (CP) und Sicherungen (F) der 3745, Modell 17A/3746-900

Table 0-11. Stromversorgung, Sicherungsautomaten (CB), Überstromschutzschalter (CP) und Sicherungen (F) der 3745, Modell 17A/3746-900

Rahmen	CB/CP/F	Position	Nennwerte	(PS) Stromversorgung
Rahmen 1	CB1	01H-A1	10 A	Alle
	CP2	01H-A1	1,5 A	PS2
	CP3	01H-B1	2 A	Ventilatoren
	F1	01H-B1	0,2 A	PS2
Rahmen 7: 3746-900	CB1 AC	07K-A1/07J-A1	15 A/220 V	Wechselstrom
	CB1 DC	07J-A1	50 A	Gleichstrom
	CP1	07K-A1/07J-A1	5 A	Gleichstrom
	CP2	07H-A1	12 A	Gleichstrom
	CP3	07H-A1	12 A	Gleichstrom
	CP4	07H-A1	12 A	Gleichstrom
	CP5	07H-A1	12 A	Gleichstrom

Stromversorgung, Sicherungsautomaten (CB) und Überstromschutzschalter (CP) der Modelle 21A bis 61A der 3745

Table 0-12. Stromversorgung, Sicherungsautomaten (CB) und Überstromschutzschalter (CP) der 3745, Modelle 21A bis 61A/3746-900

Rahmen	CB/CP	Position	Nennwerte	(PS) Stromversorgung
Rahmen 1	CB1	01E	40 A/220 V	
	CB1	01E	25 A/380 V	
	CP1	01E	3 A	PSTY8
	CP1	01F	1,5 A	PSTY6
	CP2	01F	1,5 A	PSTY6
	CP3	01F	1,5 A	PSTY6
	CP3	01E	6 A	PSTY1-A
	CP4	01E	3 A	PSTY5/7
	CP5	01E	3 A	PSTY3
	CP6	01E	3 A	PSTY2
	CP7	01E	6 A	PSTY4
	CP8	01E	6 A	PSTY1-B
	CP9	01E	3 A	Steckdose
Rahmen 2	CP1	02J-A0	6 A	PSTY4
	CP2	02J-A0	3 A	PSTY3
	CP3	02J-A0	6 A	PSTY4
Rahmen 3	CP	03J-A0	6 A	PSTY4
Rahmen 4	CP1	04A-A0	6 A	PSTY5/7
	CP2	04A-A0	6 A	PSTY5/7
Rahmen 5	CP1	05A-A0	6 A	PSTY5/7
	CP2	05A-A0	6 A	PSTY5/7
Rahmen 6	CP1	06A-A0	6 A	PSTY7
	CP2	06A-A0	6 A	PSTY7
Rahmen 7: 3746-900	CB1 AC	07K-A1/07J-A1	15 A/220 V	Wechselstrom
	CB1 DC	07J-A1	50 A	Gleichstrom
	CP1	07K-A1/07J-A1	5 A	Gleichstrom
	CP2	07H-A1	12 A	Gleichstrom
	CP3	07H-A1	12 A	Gleichstrom
	CP4	07H-A1	12 A	Gleichstrom
	CP5	07H-A1	12 A	Gleichstrom

Sicherungen der Erweiterung der Steuereinheit

Der Wechselstromverteilerkasten der Erweiterung der Steuereinheit enthält zwei Sicherungen: 7 A 250 V träge.

Teilenummern der Netzteile der Modelle 21A bis 61A der 3745

Table 0-13. Teilenummern

Netz-teil	**Netz-kabel**	**Spannung Servicesteckdose**
6496105 USA und Kanada 208, 220, 240V 60 Hz	6495844	117 V Steckdose 357995 Transformator 826102 oder 1859339
6496106 Japan 200, 220 50 Hz	6495845	100 V Steckdose 357995 Transformator 1859339
65X8688 Japan 200, 208, 240 60 Hz	6495845	100 V Steckdose 357995 Transformator 1859339
6496107 Alle Länder 200, 220 50 Hz	6495845	200 V Steckdose 418835
65X8689 Alle Länder 200, 208, 220, 240 60 Hz	6495845	220 V Steckdose 418835
6495688 Alle Länder 380, 400, 415 50 Hz	6495846	220 V Steckdose 418835
65X8690 Alle Länder 380 60 Hz	6495846	220 V Steckdose 418835

Teilenummern der Netzteile der 3746-900

Table 0-14. Teilenummern

Netz-teil	**Netz-kabel**	**Spannung Servicesteckdose**
03F7609 Netz-teil (Wechselstrom) 3746-900 60 Hz	länderspezifisch	
03F7610 Netz-teil (Wechselstrom) 3746-900 50 Hz	länderspezifisch	
03F7620 Netz-teil (Gleichstrom) 3746-900	34F1416	

3745，3746-900 和控制器扩展的安全检测服务程序

重要

这个程序是针对3745型号17A，3745型号21A到61A，3746-900和控制器扩展的。如果控制器扩展不存在，请忽略下列程序中有关这个装置的叙述。除非在这个手册中把3745特定为3745型号17A，或3745型号21A到61A。

介绍

在下列条件下有关3745，3746-900 和控制器扩展的安全检测程序应该被执行：

- 当进行IBM协议检测时
- 当请求IBM服务并且最近没有进行IBM服务时
- 当执行设备或附件改变时
- 当对设备进行改变时可能会影响安全性时。

如果检测出不可接受的不安全性因素时，在IBM为机器服务前必须被改正。

注： 设备的主人必须负责改正不安全因素。

3745，3746-900 和控制器扩展范围和功能通过这些程序检查：

1. 外壳
2. 安全标记
3. 安全遮盖和屏蔽
4. 接地
5. 电路冲击和保险丝额定值
6. 输入电压
7. 电源控制开关
8. 电源打开指示器。

重要指示：

1. 3746-900的打开和关闭是通过基本的3745机柜，或者是一个本地的主机，或者是服务处理器。
2. 对3745型号21A到61A，3746的打开和关闭是通过基本的3745机柜。

在某些地方当3745和3746-900电源关闭时也会有危险的电压。

在电源关闭后必须做如下第一步到第六步：

- 在3745和3746-900之上CB1s已关闭。
- 所有安装在控制器扩展上的设备（如果存在的话）都已关闭。
- 对3745，3746-900和控制器扩展在用户条件下的电源供应被关闭。

  为了保持接地保护，不要移动控制器扩展中的电源线和接地线 A（参照第5页的图3，第6页的图4，第7页的图5，或第8页的图6）。

1 外壳

检查：

- 它们在3745，3746（如果存在），3746-900和控制器扩展上都存在。
- 它们被两种锁锁定：在IBM进入处是遍平带刃的螺丝而在用户进入处是六角形的头。
  - 参考IBM 3745 Communication Controller Models 130 to 17A,Parts Catalog, S135-2012 中的3745型号17A。
  - 参考IBM 3745 Communication Controller Models 210 to 61A,Parts Catalog, S135-2010 中的3745型号21A到61A。
- 它们能被彻底地打开。
- 在外壳打开时对机柜提供适当的服务界面。
  让所有的外壳打开以允许进一步的安全检测。

2 安全标签

检查：

- 在所有标有如下文字的地方都有安全标签：
  - "Safety Label Locations on the 3745 Models 17A".
  - "Safety Label Locations on the 3745 Models 21A to 61A".
  - "Safety Label Locations on the 3746-900".
- 每个标签的型号都和如下所显示的一致：
  - "3745 Model 17A Safety Label Identifications".
  - "3745 Models 21A to 61A Safety Label Identifications".
  - "3746-900 Safety Label Identifications".

3 安全遮盖和屏蔽

参考FRU（第四章）的位置检查：

- 所有的安全遮盖都完好并被螺丝加固。
- 所有的终端板上的电压处都有塑料的遮盖并用螺丝固定。

4 接地

> **指示**
> 在这本书中，“接地”指的是设备必须连接到地上。

a 在3745上接地

- 对3745型号17A，参考页YZ110中的接地跳线位置。
- 对3745型号21A到61A，参考页YZ110到YZ114中的接地跳线位置。

检查：

- 各机柜间，各机柜的接地和分布图所指的终端间保证电路连通。
- 通过3745的电源线，3745，机柜接地和前导接地系统间的电路保证连通。

b 在3746-900和控制器扩展的接地到前导接地系统

- 通过电源线机柜地到前导接地系统的电路保证连通。
- 3746-900接地：
  - 3745型号17A通过电源控制线接地（参照第3页的图1）。
  - 3745型号21A到61A通过UEPO线接地（参照第4页的图2）。
- 对控制器扩展，附加的接地线 A 也被采用（参照第5页的图3，第6页的图4，第7页的图5，或第8页的图6）。

1 3745型号17A/3746-900电源控制线

检查电源地线在3745上 D 和在3746-900上 C 正确地连接。

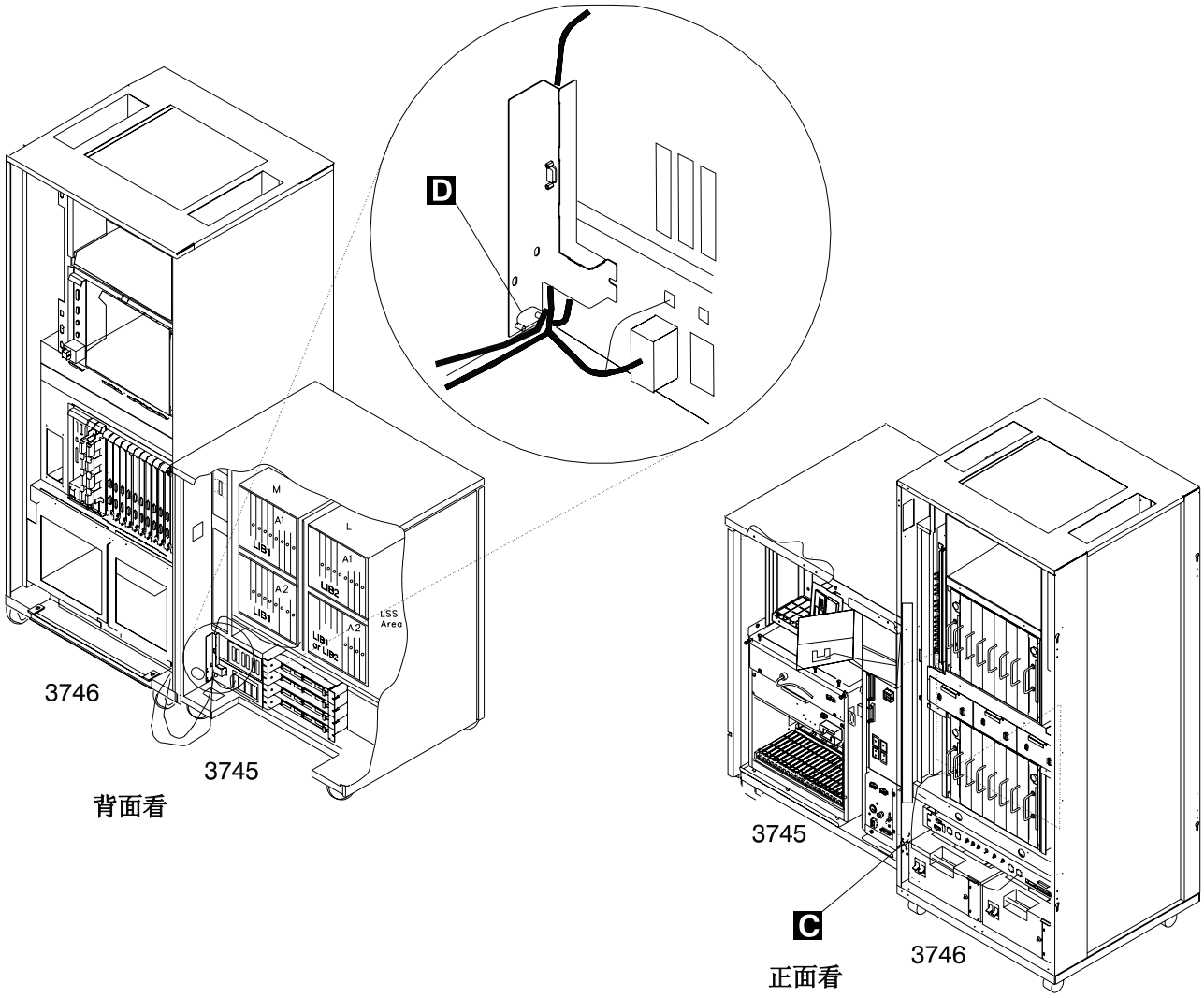


图 1. 3745型号17A/3746-900 电源控制线路由

注：

a） D 螺丝（PN 2665527）和锁定垫圈（PN 1622346）。

b） C 螺丝（PN 61F4511），星型垫圈（PN 17G5852），和锁定垫圈（PN 1622318）。

2 3745型号21A到61A/3746-900 UEPO线

检查 UEPO 线在3745上 D 和在3746-900上 C 正确地连接。

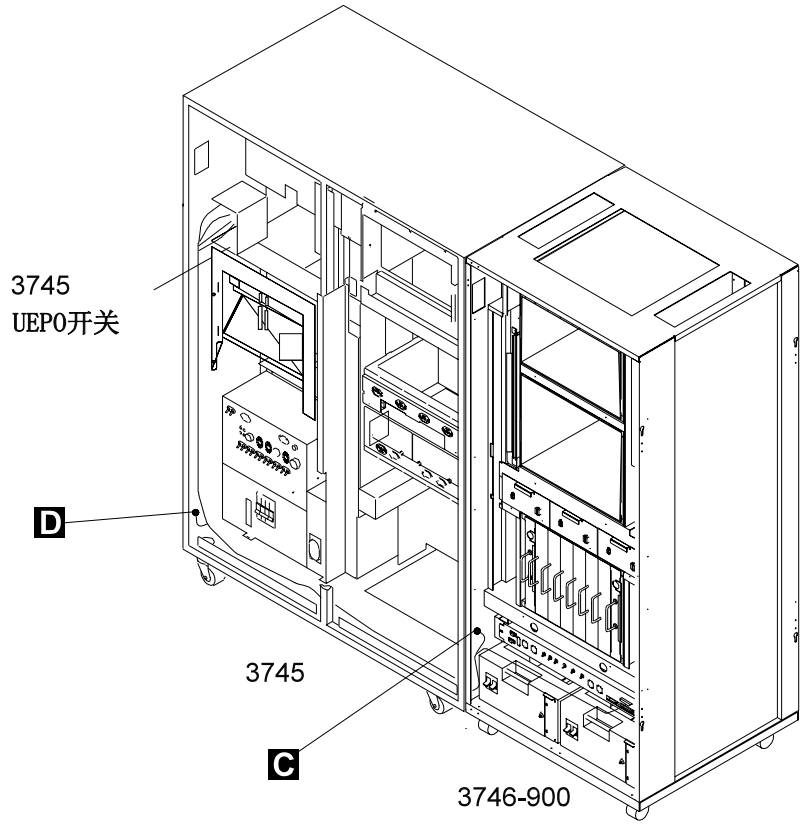


图 2. 3745型号21A到61A/3746-900 UEPO 线路由

注：

a） D 螺丝（PN 2665527）和锁定垫圈（PN 1622346）。

b） C 螺丝（PN 61F4511），星型垫圈（PN 17G5852），和锁定垫圈（PN 1622318）。

3 控制器扩展接地

- 如果你只安装了一个控制器扩展的话，检查地线 A 是否被安装了（参照第5页的图3）。
- 如果你安装了一些控制器扩展的话，检查地线 A 是不是根据你的配置安装的（参照第6页的图4，第7页的图5，或第8页的图6）。

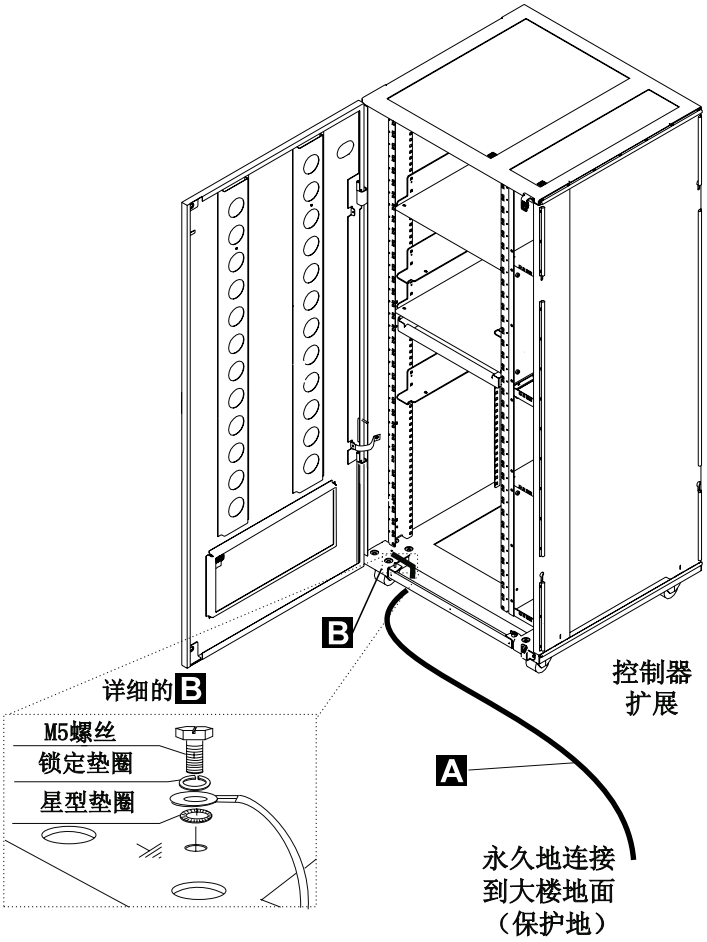


图 3. 在控制器扩展上的地线连接

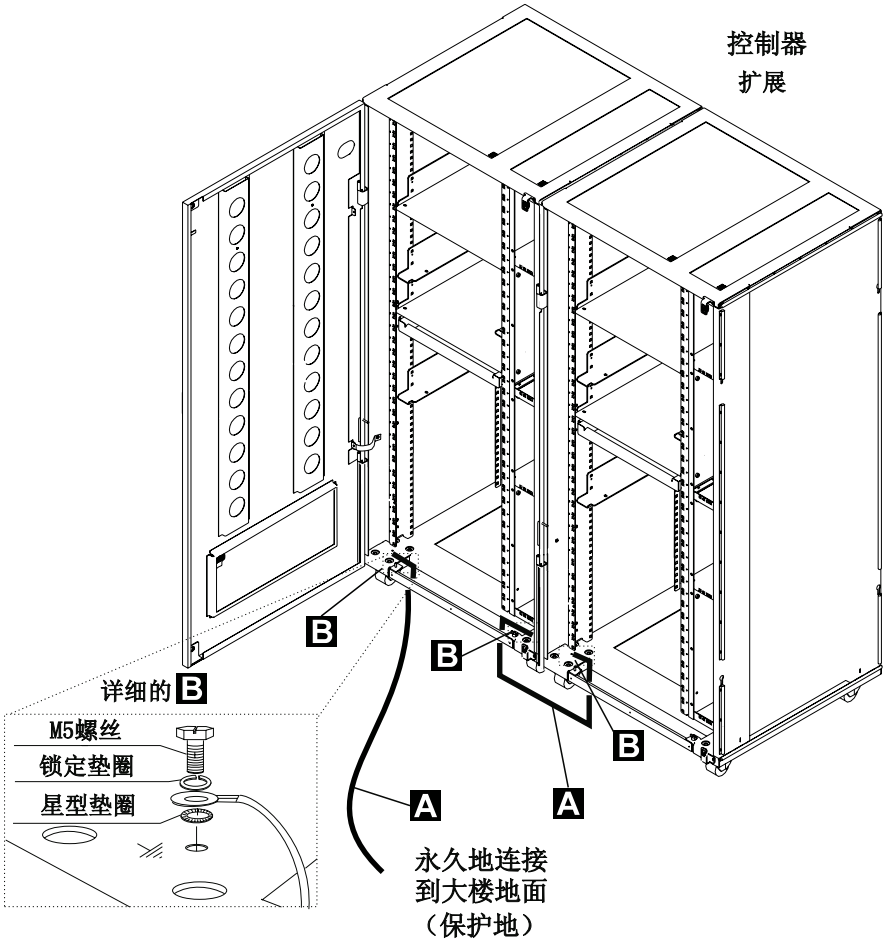


图 4. 在附加控制器扩展间的地线连接

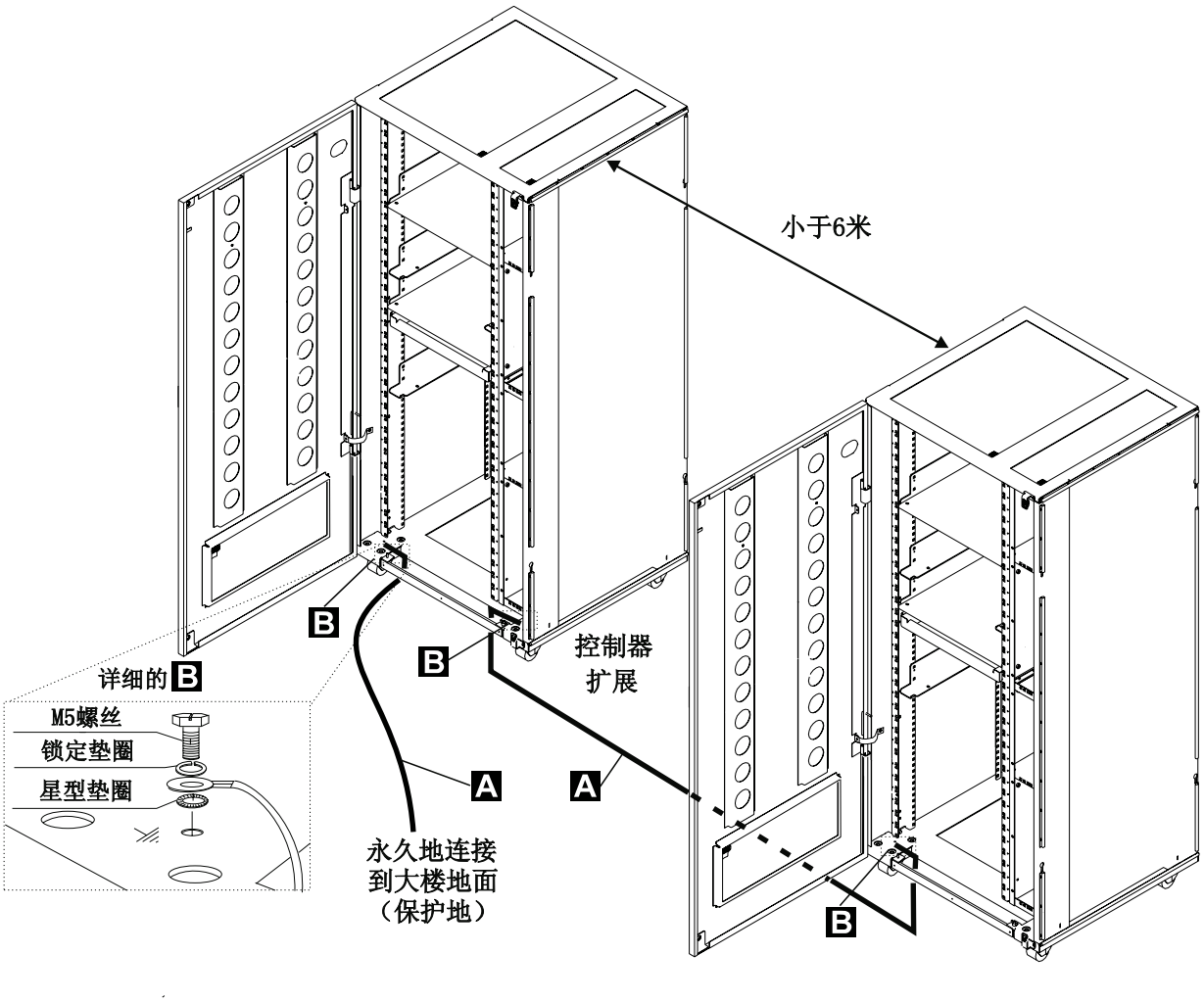


图 5. 小于6米的控制器扩展之间的地线连接

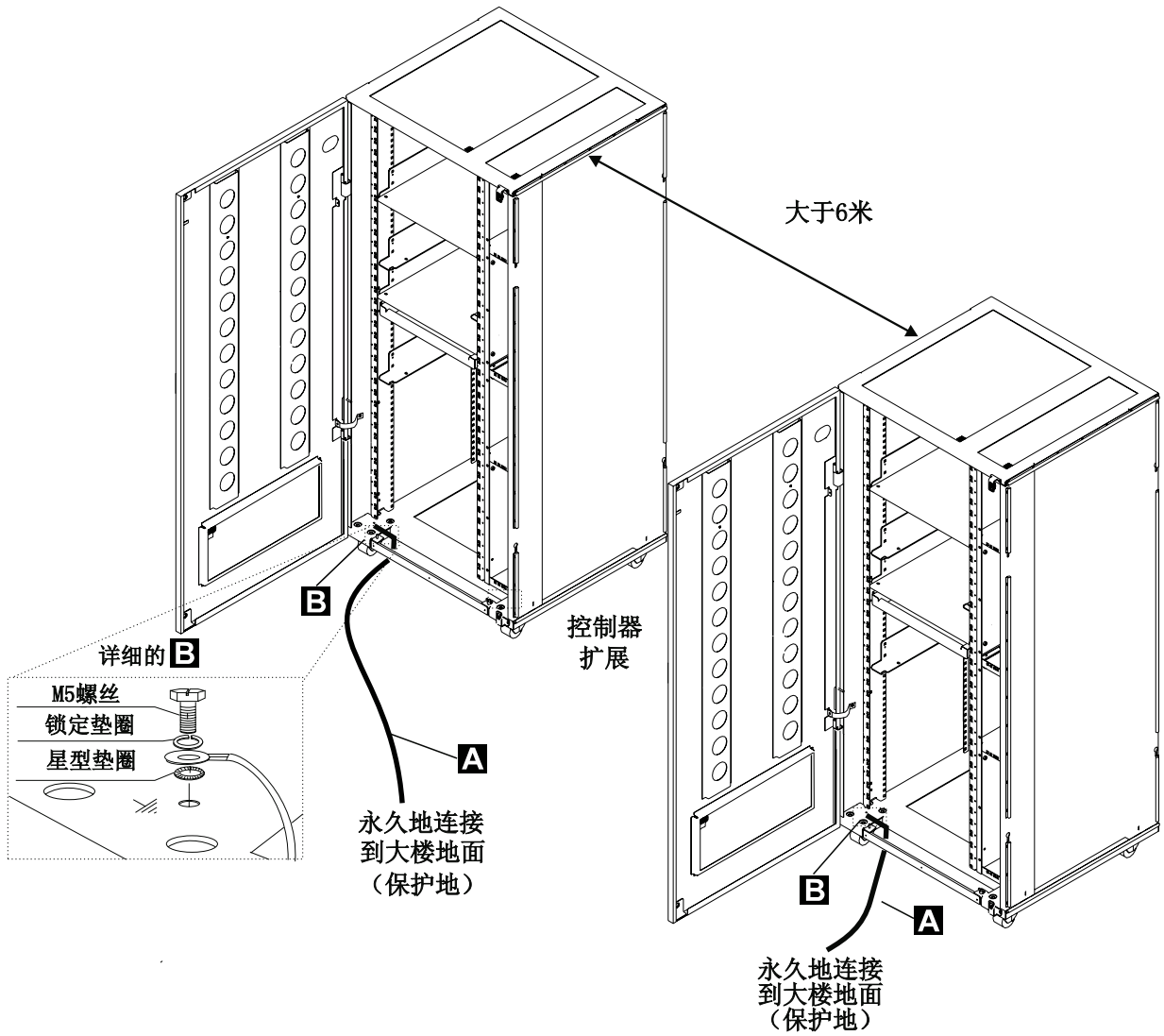


图 6. 大于6米的控制器扩展之间的地线连接

注：

a） A 地线（PN 58G5691）

b） B 螺丝（PN 61F4513），星型垫圈（PN 1622347）或（PN 17G5853），和锁定垫圈（PN 1622319）。

4 ac/dc 电源线接地

- 检查主导ac/dc电源线是否损坏或烧坏引脚和损坏绝缘。
- 测量挂断主导ac/dc电源线从一个接地端到另一个接地端的电阻。

测量值必须小于或等于 0.1欧姆。

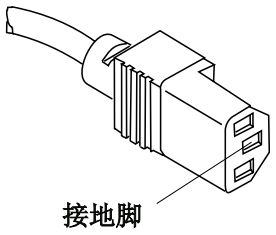


图 7. 在主导ac/dc电源线上的接地脚

c 在3746-900和控制器扩展的内部接地

在3746-900上

- 如果有LCB的话，检查LCB外壳和3746-900机柜间保证电路连通。这个操作必须在网络连接之前做。

在控制器扩展上

- 检查在控制器扩展上安装的机器保证电路连通（服务处理器，网络节点处理器，调制解调器，驱动器等等）以及ac引线分配盒的接地脚（参照图8）。
- 检查在引线分配盒的接地脚和控制器扩展的支持机柜间的电路保证连通。

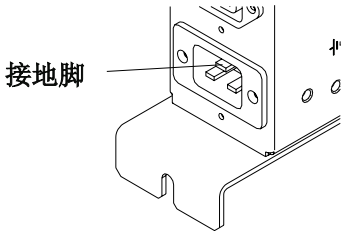


图 8. 控制器扩展ac引线分配盒的接地脚

- 如果有LCB的话，检查LCB外壳和控制器扩展机柜之间的电路保证连通。这个操作必须在网络连接之前做（参照第10页的图9）。

注： 所有前面的操作应该显示小于或等于0.1欧姆。

d 没有安装在3746-900或控制器扩展上的线路连接盒（LCBs）的接地

检查LCB外壳和前导接地系统间的电路保证连通。

依据LCB安装在哪里有两种方法确保适当的接地：

1）如果机柜支架连接到前导接地系统上，由四颗螺丝把LCB固定在支架上，接地是确保的。

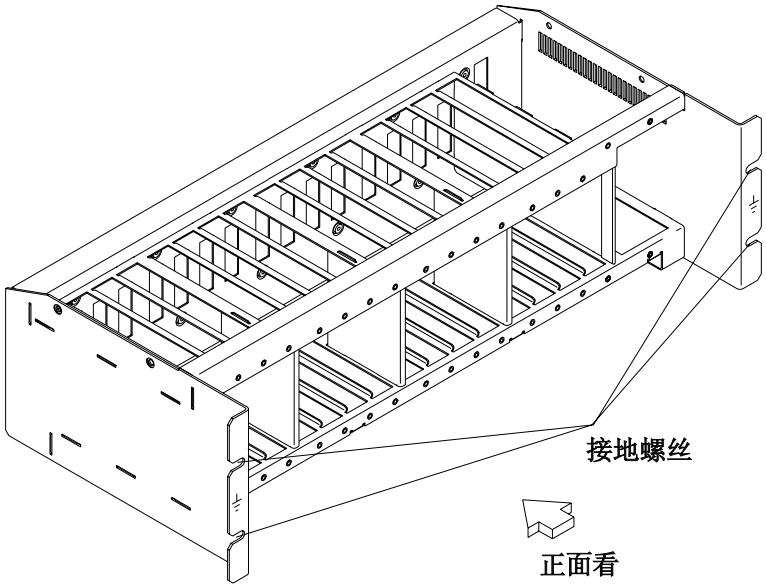


图 9. LCB 接地通过螺丝

2）用一根线连接LCB和前导接地系统可确保接地。

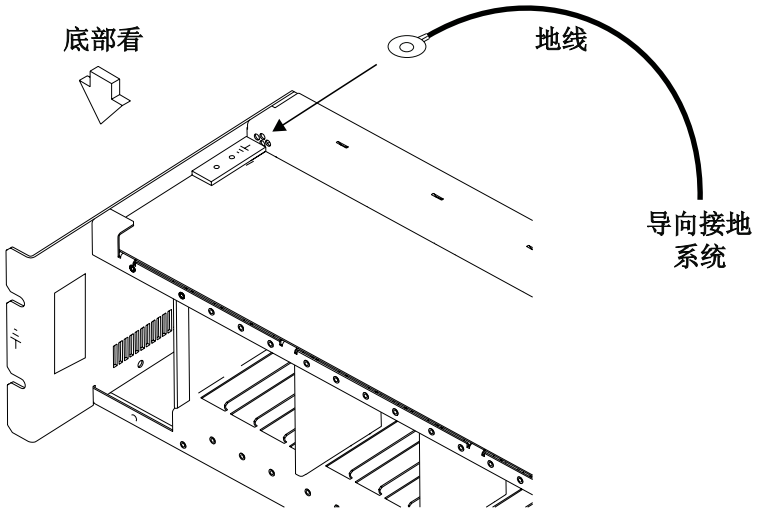


图 10. LCB 接地通过地线

IBM不提供这根电线。为了确保正确接地，这种地线必须用线AWG 12（最小2.5平方毫米）制作。

螺丝：直径 5mm，长6到 10mm（参考第11页的图11）。

地线连接到LCB

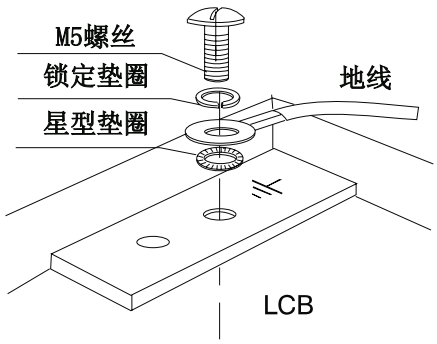


图 11. 地线连接

这个操作必须在网络连接之前做。

注： 所有前面的测量应该显示小于或等于0.1欧姆。

e 大楼接地

检查大楼内金属壳插头，连接头，插座等和接地点之间的电压小于1V ac。接地点可以是任何金属接地结构，如地板支柱（如果能接大楼地），金属水管，大楼钢筋等。

注：

1）如果检测到有漆的部分，应确保检测表头穿过漆层接触到金属。

2）也检测一下输入线插头。

5 电路冲击和保险丝额定值

检查：

- 在3745和3746-900中所有的CBs和CPs都有指定的额定值
  - 对3745型号17A，参考第15页表4的CB和CP的位置。
  - 对3745型号21A到61A，参考第16页表5的CB和CP的位置。

  如果额定值未指定，检查以下的部件号：
  - IBM 3745 Communication Controller Models 130 to 17A,Parts Catalog,S135-2012
  - IBM 3746 Expansion Unit Model 900,Parts Catalog,S135-2013
  - IBM 3746 Expansion Unit Model 900,IBM 3746 Nways Multiprotocol Controller Model 950, Parts Catalog,S135-2015.
- 在控制器扩展ac引线分配盒中的保险丝必须为 7A，250V（PN 58G5782）慢速。

6 输入电源电压

电源额定牌指出可供电压范围：

- 3745型号17A为200/220/240。
- 3745型号21A到61A为200/220/240或346/380/415。
- 3746-900上为200/220/240。

3745型号17A输入电源电压

电压标记（标记J）指出3745连接的输入电压。这个信息必须与PS2上的开关1一致。

进行电源转换检测：

- 当任何3745通讯控制器被转换成从50Hz到60Hz，或从60Hz到50Hz时，电源转换检测必须执行。
- 以下只对主电源盒使用。参考“Chapter 4”中3745 Communication Controller Models 130 to 17A Maintenance Information Procedures,SY33-2070 中的位置。

- 检查第12页的表1中50Hz或60Hz主电源使用的部件号。如有不符合，
  请与你的服务支持部门联系。

表 1. 部件号	
频率	部件号
50Hz	PN 03F4745
60Hz	PN 03F4569

参考“Safety Label Locations on the 3745 Models 17A”中电压标签和电源额定牌的位置，
以及页YZ060表1中的用SW1调整PS-2盒的电压。

检查：

- 3745的电源额定牌和电压标签是否和用户电源供应的频率和电压测量值一致。
  如果不是的话，通知你的分支机构。

3745型号21A到61A的输入电源电压

电压标记（标记E）指出3745连接的输入电压。
进行电源转换检测：

- 当任何3745通讯控制器被转换成从50Hz到60Hz，从60Hz到50Hz,
  从220V到380V，或从380V到220V时，电源转换检测必须执行。
- 以下程序只有包含主电源盒（PPB）的01结构（基本结构）使用。每个部件
  必须符合描述标准。

  参考 3745 Communication Controller Models 210 to 61A Maintenance Information Procedures,SY33-2054 来查找01结构和PPB。
- 检验
  - 检查第18页的表6中50Hz或60Hz主电源使用的部件号。
  - 检查PS类型8：
    50Hz（PN 6495884）。验证变压器顶端的部件号（PN 6495880）。
    60Hz（PN 6495898）。验证变压器顶端的部件号（PN 6495881）。
    如有不符合，请与你的服务支持部门联系。

  参照“Safety Label Locations on the 3745 Models 21A to 61A”找电源额定牌
  的位置和电压标记和：
  - 页YZ561为主电源盒的电压调整
  - 页YZ576为主电源盒PS类型6的电压调整
  - 页YZ578为供电PS类型8的电压调整。

  检查：
  - 3745的电源额定牌应与用户电源供应的电压标记一致。如果不是的
    话，通知你的分支机构。

  3746-900输入电源电压

  电源额定牌指出可供电压范围（200/220/240V）和频率（50/60Hz）。
  3746-900电压范围为200/220/240V。

  检查：
  - 3746-900的电源额定牌应与用户电源供应的频率和电压一致。如果不是的话，
    通知你的分支机构。参考“3746-900 Safety Label Identifications”
    中的电源额定牌的位置。

    dc输入电压
    对dc输入来说，用户电压必须在-40.0V到-60.0V之间。就是说没有调
    整可选dc输入。
    ac输入电压
    对ac输入来说，用户电压必须在180V到260V之间。
    根据3746-900的背面变压器TB1上的用户电压可调整输入电压。

表 2. ac 输入调整

电压 测量	电线 位置	名义上的 电压
从 180 到 210 伏	TB1-2	200/208 伏
从 210 到 230 伏	TB1-3	220 伏
从 230 到 260 伏	TB1-4	240 伏

重要的提示：

因为3745能被远程打开，所有以下有关3745和3746-900控制板的电源控制功能的程序必须设置为本地模式（Local mode）。

控制器扩展输入电源电压

电源额定牌指明可供电压范围（200/240V）频率（50/60Hz）。

检查控制器扩展的电源额定牌应与用户电源供应的频率和电压一致。如果不是的话，通知你的分支机构。参考“Controller Expansion Label Location”可见电源额定牌的位置。

7 测试紧急电源关闭

a. 要求用户把电源线接到用户主供应电源上。

b. 打开CB1。

c. 打开3745和3746-900（控制板上电源控制功能为本地 Local）。

d. 把紧急开关关闭（0）并检查：

1）3745和3746-900已被关闭。

> 指示
>
> 在3746-900里，主电源（ACDC）或过滤部分（DCDC）保持正常。
> 全部断连：
> 1. 关闭CBs
> 2. 拔下所有插座上的插头或关闭设备。

2）磁盘和磁盘驱动器停止工作。

3）除在3745型号21A到61A上PS6 24V供电的MOSS之外，所有的风扇停止工作。

4）3745上的插座不由ac电源供电。

e. 打开紧急开关，打开控制器。

8 打开指示器

一旦控制器打开后，检查：

a. 3745控制板上打开（Power ON）指示器点亮。

b. 3746-900控制板上的工作LED和备用LED是否根据第14页的“控制板LED状态比较3746-900状态”的表上显示点亮。

控制板LED状态比较3746-900状态

表 3. LED 状态比较3746-900状态

备用LED	工作LED	3746-900状态	注解
闪烁	关闭	AC 打开	初始化CBSP硬件，3746-900等待LAN连接上的MOSS-E的第一次识别。
打开	关闭	备用	3746-900在初始化被MOSS-E识别后，等待电源打开（只运行CBSP EEPROM代码）。
关闭	闪烁	电源打开	在所有的3746-900处理器中加载IML。
关闭	打开	准备好了	现在3746-900已可用了。

3745型号17A/3746-900 电源供应 CP/CB 和保险丝参考

表 4. 3745型号17A/3746-900 电源供应 CP/CB 和保险丝参考

结构	CB/CP/F	位置	额定值	电源供应
结构 1	CB1	01H-A1	10A	所有
	CP2	01H-A1	1.5A	PS2
	CP3	01H-B1	2A	风扇
	F1	01H-B1	0.2A	PS2
结构 7： 3746-900	CB1 AC	07K-A1/07J-A1	15A/220V	ac 电源
	CB1 DC	07J-A1	50A	dc 电源
	CP1	07K-A1/07J-A1	5A	dc 电源
	CP2	07H-A1	12A	dc 电源
	CP3	07H-A1	12A	dc 电源
	CP4	07H-A1	12A	dc 电源
	CP5	07H-A1	12A	dc 电源

3745型号21A到61A 电源供应 CP/CB 参考

表 5(1/2). 3745型号21A到61A/3746-900电源供应CP/CB参考

结构	CB/CP	位置	额定值	电源供应
结构 1	CB1	01E	40A/220V	
	CB1	01E	25A/380V	
	CP1	01E	3A	PSTY8
	CP1	01F	1.5A	PSTY6
	CP2	01F	1.5A	PSTY6
	CP3	01F	1.5A	PSTY6
	CP3	01E	6A	PSTY1-A
	CP4	01E	3A	PSTY5/7
	CP5	01E	3A	PSTY3
	CP6	01E	3A	PSTY2
	CP7	01E	6A	PSTY4
	CP8	01E	6A	PSTY1-B
	CP9	01E	3A	输出
结构 2	CP1	02J-A0	6A	PSTY4
	CP2	02J-A0	3A	PSTY3
	CP3	02J-A0	6A	PSTY4
结构 3	CP	03J-A0	6A	PSTY4
结构 4	CP1	04A-A0	6A	PSTY5/7
	CP2	04A-A0	6A	PSTY5/7
结构 5	CP1	05A-A0	6A	PSTY5/7
	CP2	05A-A0	6A	PSTY5/7
结构 6	CP1	06A-A0	6A	PSTY7
	CP2	06A-A0	6A	PSTY7

表 5(2/2). 3745型号21A到61A/3746-900电源供应CP/CB参考				
结构	CB/CP	位置	额定值	电源供应
结构 7：3746-900	CB1 ac	07K-A1/07J-A1	15A/220V	ac 电源
	CB1 dc	07J-A1	50A	dc 电源
	CP1	07K-A1/07J-A1	5A	dc 电源
	CP2	07H-A1	12A	dc 电源
	CP3	07H-A1	12A	dc 电源
	CP4	07H-A1	12A	dc 电源
	CP5	07H-A1	12A	dc 电源

控制器扩展保险丝参考

控制器扩展的ac输出分配盒包括两个保险丝：7A 250V 慢速。

3745型号21A到61A主电源部件号

表 6. 部件号

主电源 装置	电源 线	合适的输出 电压
PN 6496105 美国和加拿大 208，220，240V 60Hz	PN 6495844	117V 输出 PN 357995 变压器 PN 826102 或 1859339
PN 6496106 日本 200，220V 50Hz	PN 6495845	100V 输出 PN 357995 变压器 PN 1859339
PN 65X8688 日本 200，208，240V 60Hz	PN 6495845	100V 输出 PN 357995 变压器 PN 1859339
PN 6496107 所有的国家 200，220V 50Hz	PN 6495845	200V 输出 PN 418835
PN 65X8689 所有的国家 200，208，220，240V 60Hz	PN 6495845	200V 输出 PN 418835
PN 6495688 所有的国家 380，400，415V 50Hz	PN 6495846	200V 输出 PN 418835
PN 65X8690 所有的国家 380V 60Hz	PN 6495846	200V 输出 PN 418835

3746-900 主电源部件号

表 7. 部件号

主电源 装置	电源 线	合适的输出 电压
PN 03F7609 3746-900 ac盒 60Hz	依赖于国家	
PN 03F7610 3746-900 ac盒 50Hz	依赖于国家	
PN 03F7620 3746-900 dc盒	PN 34F1416	

Safety Label Locations

Safety Label Locations on the 3745 Models 17A

In the following figures, labels are designated by letters. A particular wording corresponds to each letter (see “3745 Model 17A Safety Label Identifications” on page lxxix).

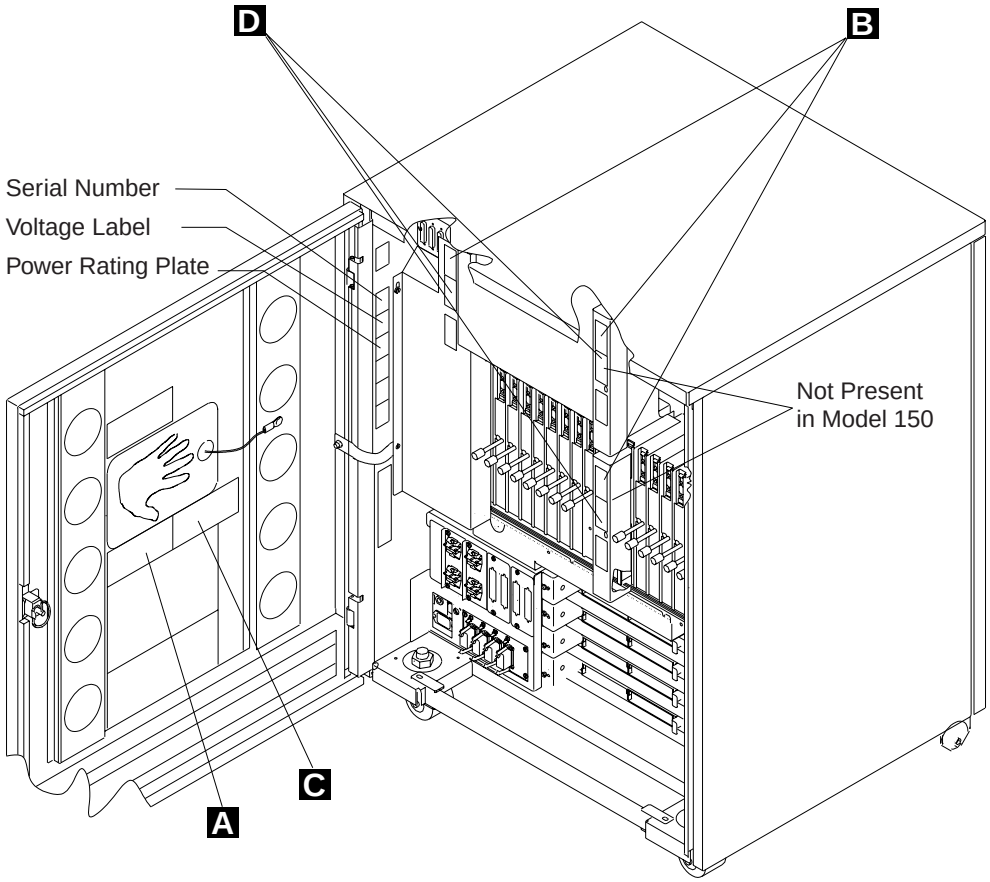


Figure 0-23. 3745 Label and Power Rating Plate Locations (Back)

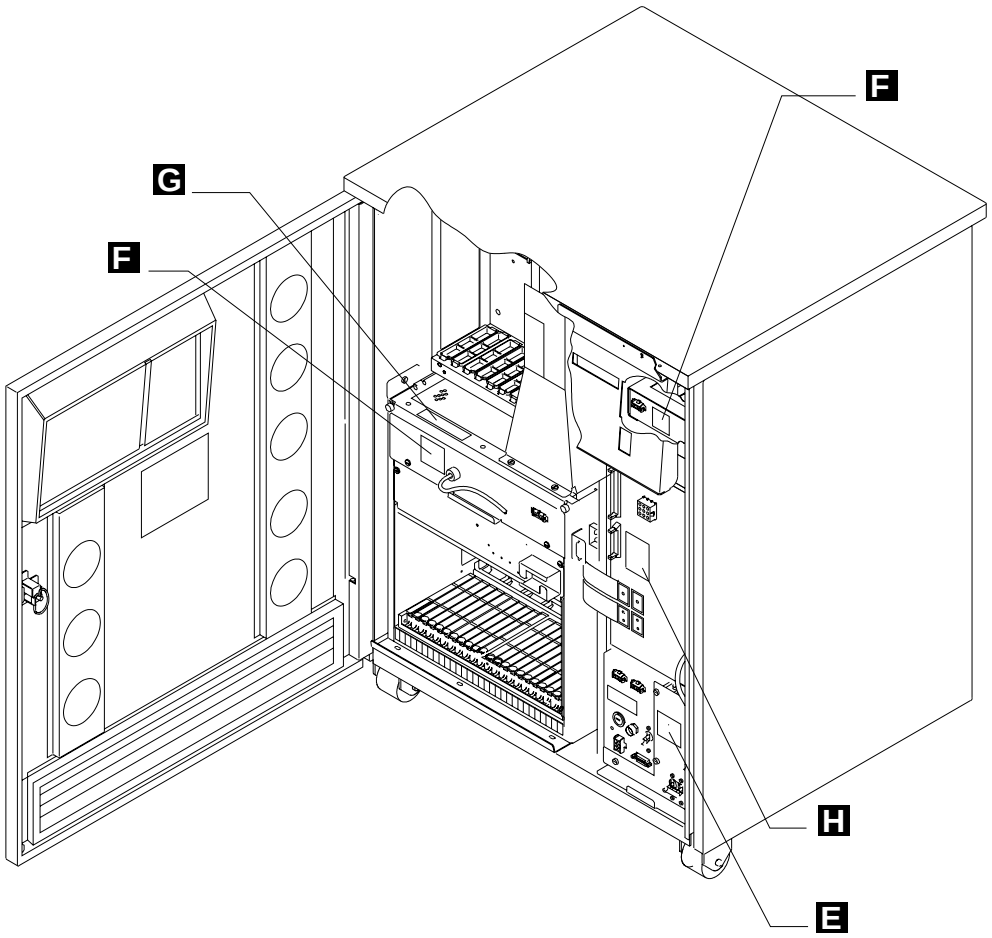
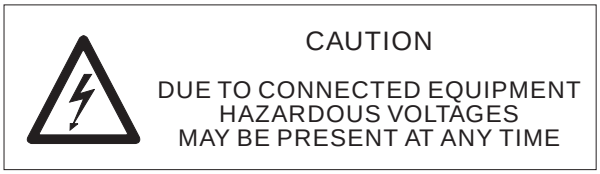


Figure 0-24. 3745 Label and Power Rating Plate Locations (Front)

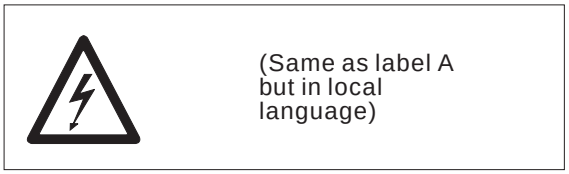
3745 Model 17A Safety Label Identifications

The safety labels shown in Figure 0-25 are in the English language. They are also available in other languages. See “3745 Model 17A Safety Label Part Numbers by Country” on page lxxxvii for ordering.

LABEL A

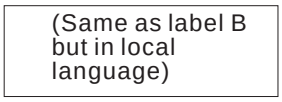


LABEL C

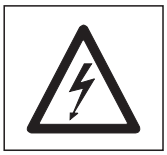


LABEL B

LABEL D

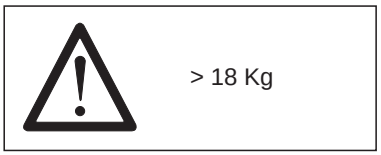


LABEL E



LABEL F

LABEL G



LABEL H

Figure 0-25. 3745 Model 17A Safety Labels

Safety Label Locations on the 3745 Models 21A to 61A

In the following figures, labels are designated by letters. A particular wording corresponds to each letter (see “3745 Models 21A to 61A Safety Label Identifications” on page lxxxiii).

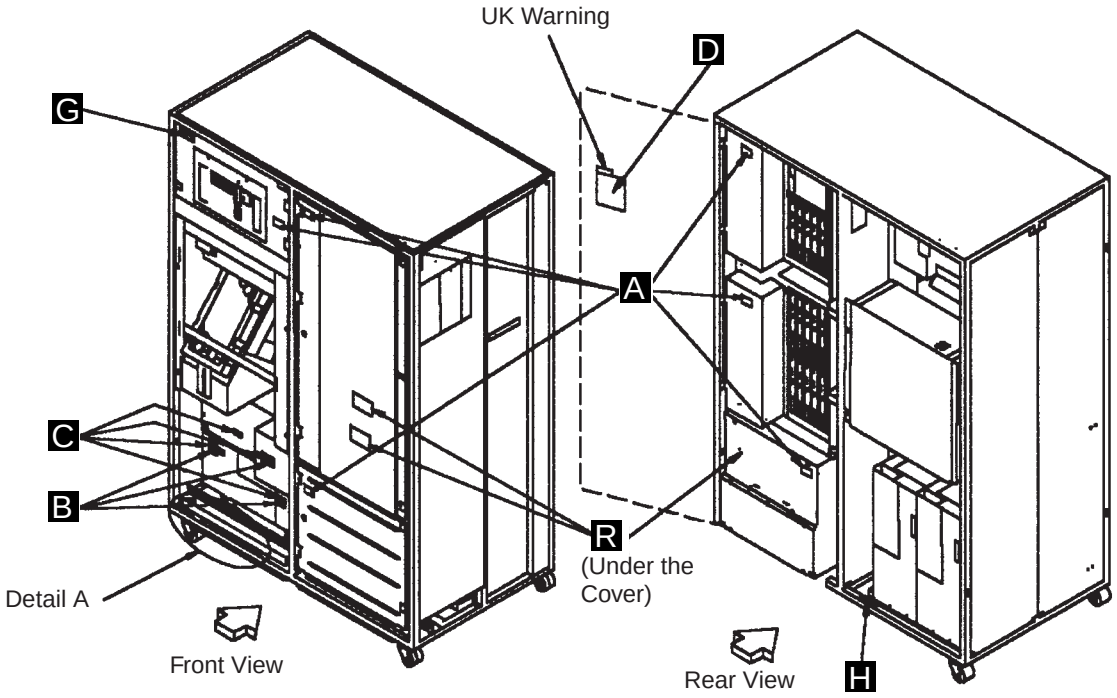


Figure 0-26. 3745 (Basic Frame 01) Label and Power Rating Plate Locations

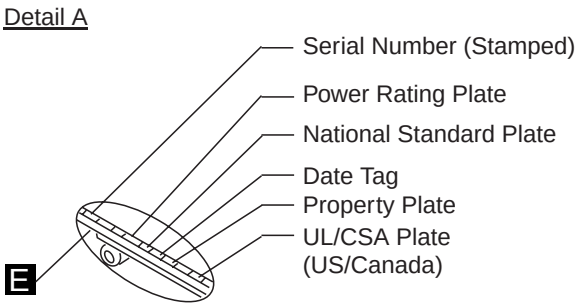


Figure 0-27. 3745 (Basic Frame 01) Label and Power Rating Plate Locations (Detail)

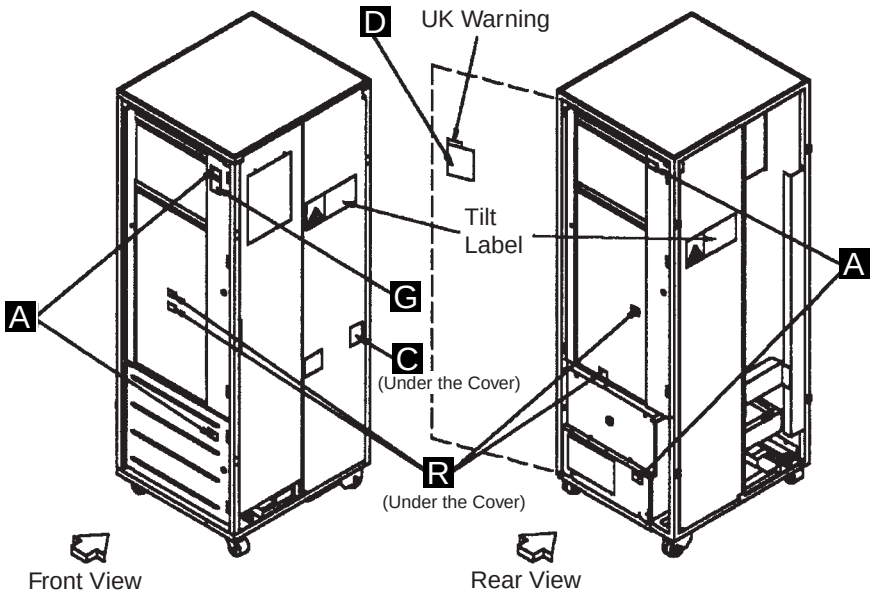


Figure 0-28. 3746-A11 (Frame 02) or 3746-A12 (Frame 03) Label Locations

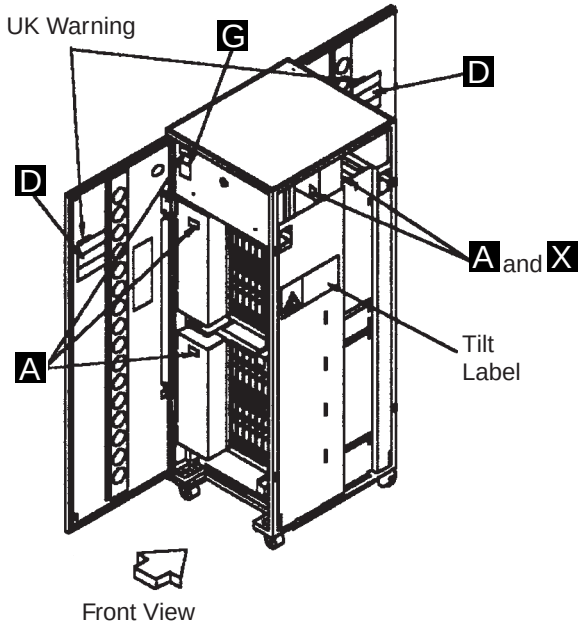


Figure 0-29 (Part 1 of 2). 3746-L13 (Frame 04), 3746-L14 (Frame 05), 3746-L15 (Frame 06) Label Locations

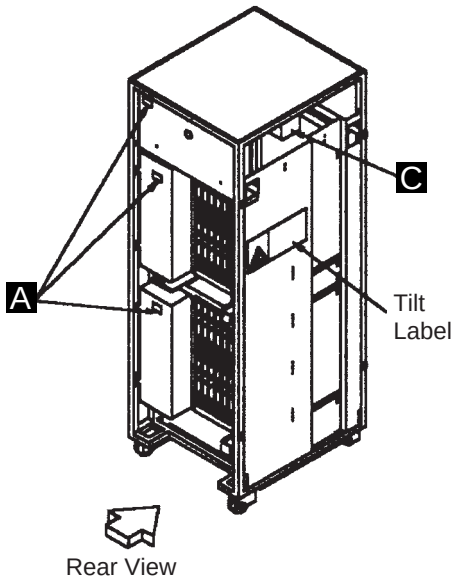


Figure 0-29 (Part 2 of 2). 3746-L13 (Frame 04), 3746-L14 (Frame 05), 3746-L15 (Frame 06) Label Locations

3745 Models 21A to 61A Safety Label Identifications

The safety labels shown in Figure 0-30 are in English. They are also available in other languages. See “3745 Models 21A to 61A Safety Label Part Numbers by Country” on page lxxxviii for ordering.

LABEL A

HAZARDOUS AREA
TRAINED SERVICE
PERSONNEL ONLY

LABEL B

LINE VOLTAGE
PRESENT WITH
MACHINE POWER
OFF

LABEL C

TURN MAIN
LINE SWITCH
"OFF" BEFORE
REMOVING

LABEL E

THIS MACHINE IS
WIRED FOR V

See logic drawings for
alternate voltage insn

LABEL R

CAUTION

REMOVE PRIMARY POWER
BEFORE REMOVING COVER

LABEL D

CAUTION

DUE TO CONNECTED EQUIPMENT
HAZARDOUS VOLTAGES
MAY BE PRESENT AT ANY TIME

LABEL G

This aquipment has been tested with a class a computing device and has been found to comply with part 15 FFC rules. See instruction manual. Operation in a residential area may cause unacceptable interference to radio and tv reception requiring the operator to take whatever steps are necessary to correct the interference

LABEL H

WARNING
High grounding conductor current. Grounding circuit continuity is vital for safe operation of machine. Never operate machine with grounding conductor disconnected

TILT LABEL

CAUTION

USE CARE WHEN MOVING
ON ROUGH SURFACES.

DO NOT TIP MORE THAN
10 DEGREES.

DO NOT REMOVE THIS LABEL

UK WRANING

WARNING

CONNECT ONLY APPARATUS COMPLYING
WITH BS 6301 TO THESE PORTS

LABEL X

TO DISCONNECT THIS
UNIT COMPLETELY,
CB1 ON MAINFRAME
MUST BE IN
THE "OFF" POSITION

Figure 0-30. 3745 Models 21A to 61A Safety Labels

Safety Label Locations on the 3746-900

In the following figure, labels are designated by letters. A particular wording corresponds to each letter (see “3746-900 Safety Label Identifications” on page lxxxv).

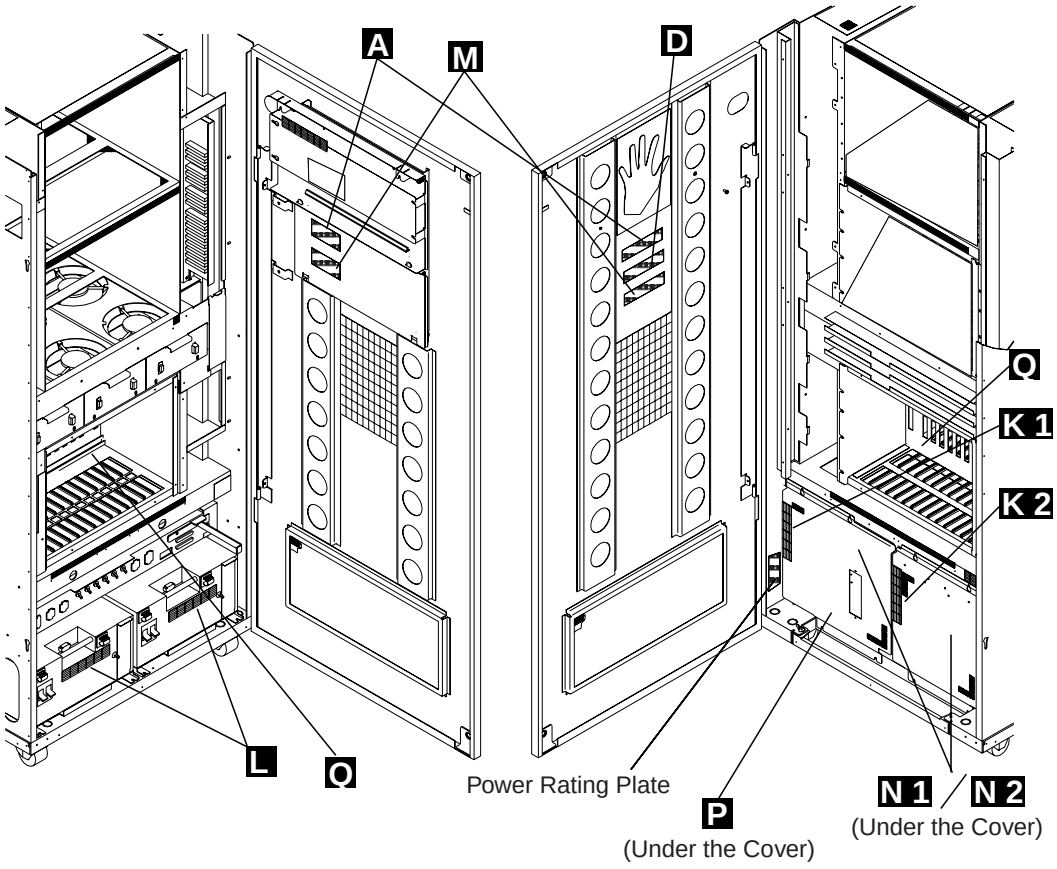


Figure 0-31. 3746-900 (Frame 7) Safety Label Location

Safety Label Location on the LCB

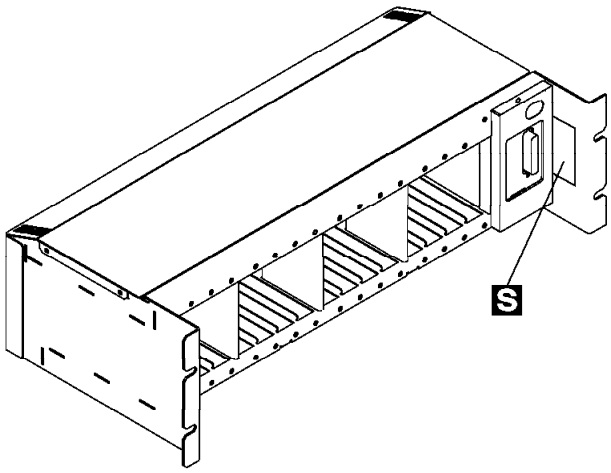


Figure 0-32. LCB Safety Label Location

3746-900 Safety Label Identifications

The safety labels shown in Figure 0-33 are in English. They are also available in other languages. See “3746-900 Safety Label Part Numbers by Country” on page lxxxix for ordering.

LABEL K1

HAZARDOUS AREA
TRAINED SERVICE
PERSONNEL ONLY

SWITCH "OO" CB1
AT 07K-A1 FOR THIS
SIDE TRANSFORMER
BEFORE REMOVING THE COVER

LABEL K2

HAZARDOUS AREA
TRAINED SERVICE
PERSONNEL ONLY

SWITCH "OO" CB1
AT 07J-A1 FOR THIS
SIDE TRANSFORMER
BEFORE REMOVING THE COVER

LABEL L

LINE VOLTAGE
PRESENT WITH
MACHINE POWER OFF

CAUTION

REMOVE PRIMARY
POWER CORD BEFORE
REMOVING COVER

LABEL A

HAZARDOUS AREA
TRAINED SERVICE
PERSONNEL ONLY

LABEL M

CAUTION

HAZARDOUS ENERGY
IS PRESENT WHERE
THE CASSETE IS
PLUGGED IN

LABEL D

CAUTION

DUE TO CONNECTED EQUIPMENT
HAZARDOUS VOLTAGES
MAY BE PRESENT AT ANY TIME

LABEL N1

> 18 Kg

LABEL N2

> 32 Kg

LABEL P

CAUTION

1 - SWITCH OFF THE DC BOX CB1
2 - SWITCH OFF THE CUSTOMER CIRCUIT BREAKER
3 - ATTACH A WARNING LABEL DIRECTLY TO THE CIRCUIT BREAKER INDICATING THAT "POWER MUST NOT BE APPLIED"
4 - DISCONNECT THE SUPPLY CABLE FROM THE CUSTOMER JUNCTION BOX
5 - LAST, DISCONNECT SUPPLY CABLE FROM THE DC POWER BOX

LABEL Q

< 60 VDC
> 240 VA

Figure 0-33. 3745-900 (Frame 07) Safety Labels

LCB Safety Label

LABEL S

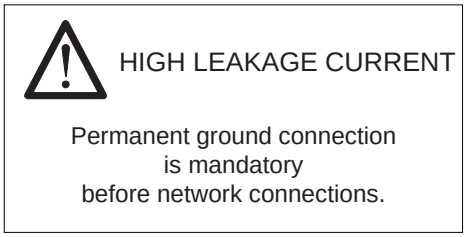


Figure 0-34. LCB Safety Label(PN 80G3928)

Controller Expansion Label Locations

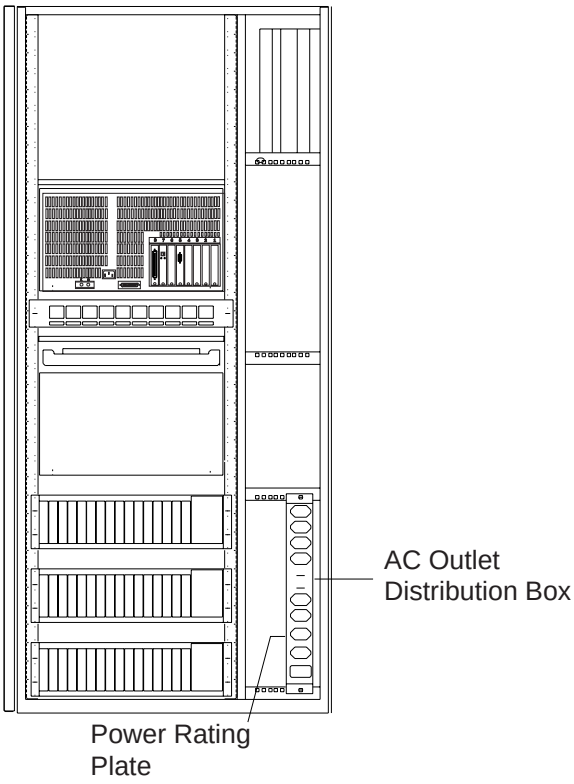


Figure 0-35. Controller Expansion Label Locations

3745 Model 17A Safety Label Part Numbers by Country

The following table gives the label group part number according to the languages of the country in which the 3745 is installed.

Table 0-15. Safety Label Numbers by Country

Language	**3745 Model 130 to 17A Part Number**
Canadian French	03F4861
Danish	03F4869
Dutch	03F4872
English	03F4860
Finnish	03F4870
French	03F4862
French/Dutch	03F4871
German	03F4863
Italian	03F4864
Japanese	03F4867
Norwegian	03F4868
Portuguese	03F4865
Spanish	03F4866
Swedish	03F4873

3745 Models 21A to 61A Safety Label Part Numbers by Country

The following table gives the label group part number for each frame according to the languages of the country in which the 3745 is installed.

Table 0-16. Safety Label Numbers by Country for 3745 Models 21A to 61A

Language	Frame 01 (Part Number)	Frame 02 or 03 (Part Number)	Frame 04 or 05 (Part Number)	Tilt Label (Part Number)
Canadian French	03F4303	03F4323	03F4338	03F4451
Danish	03F4314	03F4334	03F4349	03F4462
Dutch	03F4316	03F4336	03F4351	03F4464
English	03F4302	03F4322	03F4337	03F4417
English (U.K. only)	03F7770	03F7770	03F7770	
Finnish	03F4305	03F4325	03F4340	03F4453
French	03F4304	03F4324	03F4339	03F4452
French/Dutch	03F4306	03F4326	03F4341	03F4454
French/German/Italian	03F4315	03F4335	03F4350	03F4463
German	03F4307	03F4327	03F4342	03F4455
Italian	03F4308	03F4328	03F4343	03F4456
Japanese	03F4313	03F4333	03F4348	03F4461
Norwegian	03F4309	03F4329	03F4344	03F4457
Portuguese	03F4310	03F4330	03F4345	03F4458
Spanish	03F4311	03F4331	03F4346	03F4459
Swedish	03F4312	03F4332	03F4347	03F4460

3746-900 Safety Label Part Numbers by Country

The following table gives the label group part number for each frame according to the language(s) of the country in which the 3746-900 is installed.

Table 0-17. 3746-900 Safety Label Numbers by Country

Language	3746-900 (Part Number)	3746-900 Label Q	LCB Label S
Belgium	72F0675	17G5876	80G3928
Brazilian	72F0678	17G5876	80G3928
Danish	72F0673	17G5876	80G3928
Dutch	72F0676	17G5876	80G3928
English	72F0664	17G5876	80G3928
Finnish	72F0674	17G5876	80G3928
French	72F0665	17G5876	80G3928
French/Dutch		17G5876	80G3928
French/German/Italian	72F0672	17G5876	80G3928
Canadian French		17G5876	80G3928
German	72F0666	17G5876	80G3928
Italian	72F0667	17G5876	80G3928
Japanese	72F0670	17G5876	80G3928
Norwegian	72F0671	17G5876	80G3928
Portuguese	72F0668	17G5876	80G3928
Spanish	72F0669	17G5876	80G3928
Swedish	72F0677	17G5876	80G3928
English/French/Spanish (U.S.A. only)	72F0663	17G5876	80G3928

About This Manual

Aim of this manual

The service guide gives the service representative the information needed to:

- Analyze the problem or symptoms reported by the system user for the service processor and its attached modem.
- Restore the normal 3746-900 operation.
- Exchange all the FRUs of 3746-900.
- Run diagnostics on the 3746-900.

It is expected that the customer has used the *Problem Analysis Guide* (online document) prior calling IBM for service.

Who should read this manual

The person using this manual should be:

- Trained to service 3746-900.
- Familiar with the configuration and operation of the 3746-900.

The intended audience for this manual are Product-Trained Customer Engineers (PT-CE). The Product-Support Customer Engineer (PST-CE) is also expected to refer to the manual when he is required to perform the same tasks as the PT CE.

How this manual is organized

This manual is organized as follows:

- Safety information is at the start of this manual.

  Chapter 1 Gives the start page which points on the service or troubleshooting procedures.

  Chapter 2 Gives MAPs for FRU isolation.

  Chapter 3 Gives information on diagnostics and how to run them.

  Chapter 4 Gives the procedure to exchange the FRU on the 3746-900.

- At the back of the manual are appendixes:
  - Maintenance Aids
  - Bibliography and related signal converter product information
  - Glossary
  - Index.

Chapter 1. START

START - How to Begin Troubleshooting

IMPORTANT

- Your safety is part of every maintenance call and can never be over-emphasized. Specific information can be found in “General and Product Safety Information” on page xxi and “Safety Label Locations” on page lxxvii.

Start here when you use this manual to repair a 3746-900 hardware failure.

- **Remember that the 3746-900 is machine which is designed to be repaired while the customer is still using the operational areas, this is called Concurrent Maintenance. Before changing FRUs, you will be directed to ensure that you have the correct area of the machine ready for maintenance.**
- **During a call for service, it will normally be necessary to use the service processor. To log on at service processor console, proceed as directed in “Console Use for maintenance.”**

Console Use for maintenance

001

Is the 3746 a Model 900?
Yes No

002

Use one of the following manual according to your machine type:

- For 3746 model 950 use *IBM 3746 Nways Multiprotocol Controller Model 950, Service Guide*, SY33-2108
- For 3745 model 17A use *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070
- For 3745 models 21A to 61A use *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054.

003

Is the service processor operational?
Yes No

004

Continue with “Finding a Service Procedure” on page 1-3

005

You will have to get the service processor maintenance password from the customer so that you can logon at the service processor console.

To log on:

- On the "MOSS-E View" window, click on "Program" (in the action bar).
- Click on "MOSS-E View Logon".
- Enter the password.

Are you here to investigate a RSF problem? If you don't know continue with Step 006.
Yes No

006

- On the "MOSS-E View" window, double click on the service processor icon.
- The "Service Processor Menu" window is displayed.
- Click on the "Configuration Management" option.

(Step **006** continues)

006 (continued)
- Double click on the "Manage Remote Operations" option.
- On the "Remote Operation Management" window, select the "Remote operations authorization" option and click on "OK".
- On the "Remote Support Facility" window, select the two following options:
  – "Disable Remote Support Facility"
  – "Do not generate alerts"

  and click on "OK".
- Continue with Step 007.

007

Look on “3745/3746-900/Service Processor Windows Overview” on page 1-7 to see the main panels used to perform the procedures documented in this manual.

Now continue with “Finding a Service Procedure” on page 1-3 .

Finding a Service Procedure

Select the first entry point which fits your situation.

IF YOU HAVE	THEN	GO TO
3746-900 CONTROL PANEL CODE	3746-900 Control panel code reported	"3746-900 Control Panel Codes" on page 1-15.
GENERAL SYMPTOMS	General Verbal Symptoms	"General Verbal Symptoms" on page 1-13.
	Color symptom for icons on "MOSS-E View" window.	"MAP 2600: 3746-900/Service Processor/Network Node Processor/ Multiaccess Enclosure Link Icons Color Symptom" on page 2-25
	Problem during installation	"Problems During Machine, EC or MES Installation" on page 1-12.
	Problem while installing an EC or MES	"Problems During Machine, EC or MES Installation" on page 1-12.
	3746-900 any Power Problem	"MAP 5100: 3746 Model 900 Power Control Subsystem Problems" on page 2-4
	3746-900 Control Panel Symptom	"3746-900 Control Panel Symptoms" on page 1-14.
	Service processor/Display/Optical Disk symptom	"Service Processor Problem Determination" in the corresponding *Service Processor Installation and Maintenance* manual.
	Network Node Processor symptom	"Network Node Processor Problem Determination" in the corresponding *Network Node Processor Installation and Maintenance* manual.
	Problem with the service processor integrated modem	"How to Run the Service Processor Diagnostics" in the corresponding *Service Processor Installation and Maintenance* manual, and run the integrated V.32 modem, or refer to the *IBM Asynchronous/SDLC V.32 Modem/A; Installation, Operation, and Problem Determination Guide* SA27-3955.
	Problem on external modem attached at the service processor	To the following modem documentation: • For IBM 7855, refer to the *7855 Modem Model 10 Guide to Operation*, GA33-0160. • For IBM 7857, refer to the *IBM 7857 Guide to Operation*, GA13-1839. • For IBM 7858, refer to the *IBM 7858 Professional Modem Guide to Operation*, GA13-1981. • For other modem, refer to the appropriate documentation.
	Other Symptoms	"Other Symptoms" on page 1-4
MAINTENANCE ACTION	A customer problem number (CPN), system reference code sequence number, FRU list, or FRU group to exchange	"CPN or FRU to Exchange" on page 1-4
	Run diagnostics on the 3746-900, service processor, network node processor, or multiaccess enclosure	"Run Diagnostics" on page 1-4
	Miscellaneous Informations	"Miscellaneous Informations" on page 1-6

CPN or FRU to Exchange

IF YOU HAVE....	THEN GO TO
Customer problem number (CPN)	“3746-900/Service Processor Maintenance Using a CPN” on page 1-26
3746-900 System reference code sequence number	“3746-900 Maintenance Using an SRC Sequence Number” on page 1-28
3746-900 FRU group number to exchange	“Using the MIP FRU Group Table” on page 1-24.
3746-900 FRU list to exchange	“3746-900 Maintenance Using a FRU list” on page 1-28.
Service processor system reference code sequence number	“Service Processor Maintenance Using an SRC Sequence Number” on page 1-28.

Other Symptoms

IF YOU HAVE ...	THEN GO TO
3746-900 Configuration mismatch	“MAP 2615: 3746-900 Configuration Mismatch” on page 2-38.
3746-900 Service Processor Link Symptom	“MAP 5600: LAN Problem on LAN Attached to the Service Processor” on page 2-149.
3746-900 Token-Ring LAN problem	“MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
3746-900 Ethernet LAN problem	“MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
3746-900 ESCA problems	“MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
3746-900 ARCs Group problem	“MAP 2810: 3746-900 Problem on a Group of ARCs” on page 2-110.
3746-900 All the lines on CLP have a problem	“MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
3746-900 CLP fallback problem	“MAP 2850: 3746-900 CLP Fallback Problem” on page 2-138.
3746-900 All the lines on LIC11 have a problem	“MAP 2820: 3746-900 Problem on a LIC11” on page 2-115.
3746-900 LIC12 problem	“MAP 2830: 3746-900 Problem on a LIC12” on page 2-127.
3746-900 LIC16 problem	“MAP 2840: 3746-900 Problem on a LIC16” on page 2-133.
3746-900 Intermittent problems	“MAP 2660: 3746-900 Intermittent Box Errors” on page 2-58.
3746-900 Resource not present in CDF-E	“MAP 2665: 3746-900 Resource Not Present in CDF-E” on page 2-60.
A problem on your multiaccess enclosure	Refer to to the *Multiaccess Enclosure Installation and Maintenance*, manual manual.

Run Diagnostics

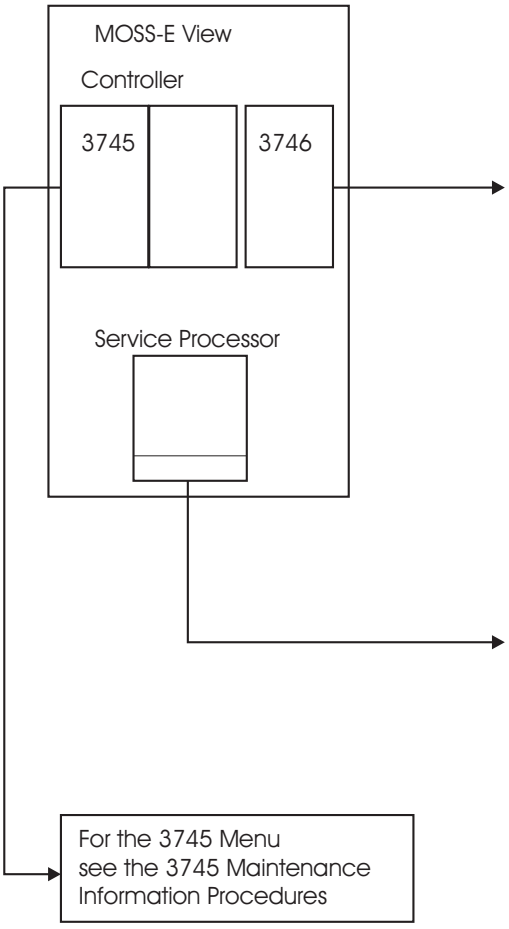
IF YOU WANT TO....	THEN GO TO
Run 3746-900 diagnostics in concurrent maintenance mode	“MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17.
Run 3746-900 diagnostics in offline mode	“MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.
Run 3746-900 Specific diagnostics in offline mode	“MAP 6020: How to Run 3746-900 Specific Diagnostics” on page 3-45.
Run the 3746-900 control panel test	“How to Run the 3746-900 Control Panel Test” on page 3-15
Run the 3746-900 service processor link restart	“How to run the 3746-900 Service Processor Link Restart” on page 3-16
Run diagnostics on service processor	"How to Run the Service processor Diagnostics" in the corresponding *Service Processor Installation and Maintenance* manual.
Run diagnostics on network node processor	The appropriate *Network Node Processor Installation and Maintenance*.

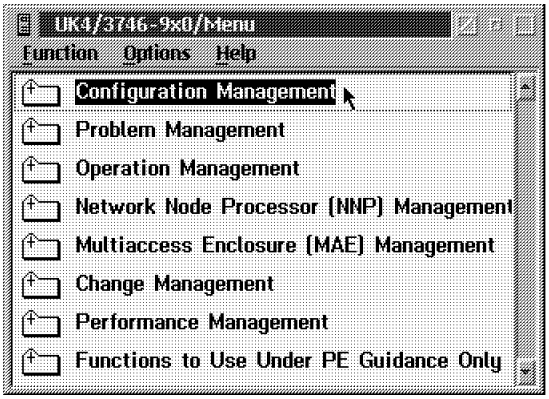
IF YOU WANT TO....	THEN GO TO
Run diagnostics on Ethernet Bridge	The *8229 Bridge Manual*, GA27-4025 manual.
Run diagnostics on multiaccess enclosure	The following: • For specific resource on multiaccess enclosure refer to the *Multiaccess Enclosure Installation and Maintenance*, manual manual. • For a selective IML on multiaccess enclosure refer to "MAP 6030: How to Run the Selective IML on the Multiaccess Enclosure" on page 3-51.

Miscellaneous Informations

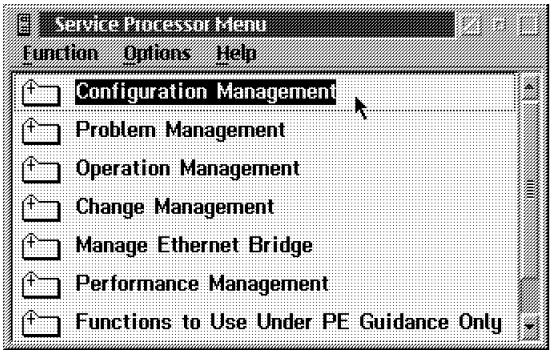
IF YOU WANT TO....	THEN GO TO
Find information about using the 3746-900 control panel	“3746-900 Control Panel Use” on page 1-160
Display the 3746-900 FRU list after a diagnostic failure	“Display the FRU List After a Diagnostic Failure” on page 1-154.
Investigate about 3746-900 Intermittent problems	“MAP 2660: 3746-900 Intermittent Box Errors” on page 2-58.
Display the 3746-900 bit error rate on ESCA	“MAP 2720: 3746-900 Bit Error Rate Validation” on page 2-90.
Check voltages on 3746 Model 900	3746-900 YZ pages
Perform the 3746-900 EEPROM Upgrade Function	“3746-900 EEPROM Upgrade” on page 1-155
Install a 3746-900 MES	The instruction provided with the MES. Use the service processor, when specified, to select the desired 3746-900 and all available functions necessary for installing and testing.
Apply a Microcode Change on 3746-900	The "Handling the Microcode Change Levels" in the chapter "Maintaining the Code Loaded in the Service Processor" in the *Service Processor and Network Node Processor Service User* or in the corresponding *Service Processor Installation and Maintenance* manual.
Perform Engineering Data Transfer	“Engineering Data Transfer” on page 1-157.
Apply a Microcode Change on a service processor	The *Service Processor and Network Node Processor Service User* or in the corresponding *Service Processor Installation and Maintenance* manual. Use the "Handling the Microcode Change Levels" procedure in chapter "Maintaining the Service Processor".
Find Modem Setting for RSF	The *Service Processor Installation and Maintenance* paragraph "Installing and Connecting the RSF Modem to the Service Processor", according to your modem type.
Have a Service Processor windows overview	“3745/3746-900/Service Processor Windows Overview” on page 1-7
Know 3746-900 control panel function	“3746-900 Control Panel Use” on page 1-160
See the 3746-900 parts catalog	• *IBM 3746 Expansion Unit Model 900, Parts Catalog*, S135-2013. **or** • *IBM 3746 Expansion Unit Model 900*, *IBM 3746 Nways Multiprotocol Controller Model 950, Parts Catalog*, S135-2015.

3745/3746-900/Service Processor Windows Overview





For **3746-9x0 Menu** details see page 1-10.



For **Service Processor Menu** details see page 1-8.

Service Processor Menu Details

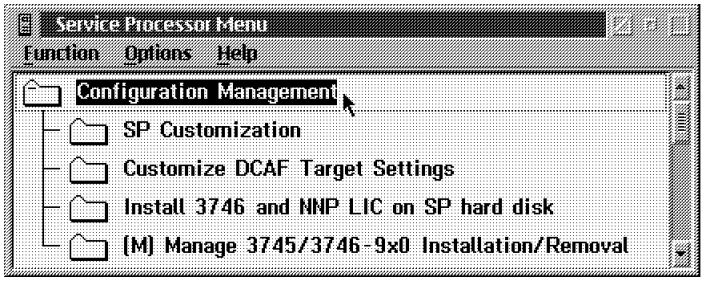


Figure 1-1. Service Processor Configuration Management Functions

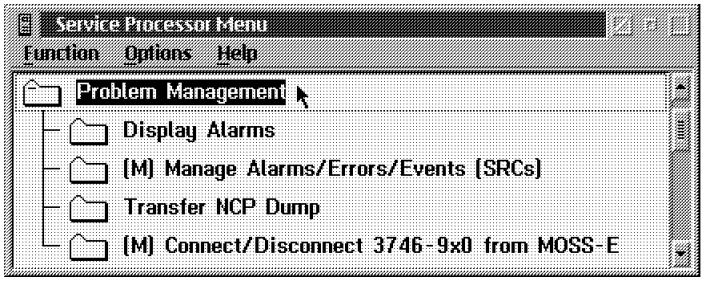


Figure 1-2. Service Processor Problem Management Functions

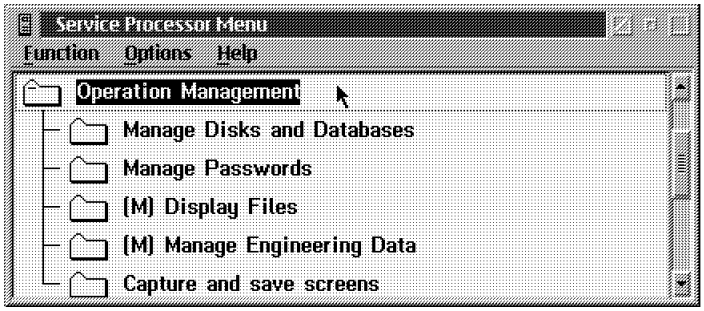


Figure 1-3. Service Processor Operation Management Functions

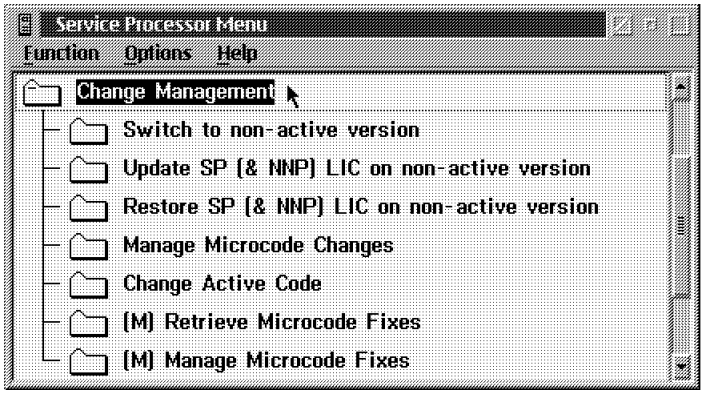


Figure 1-4. Service Processor Change Management Functions

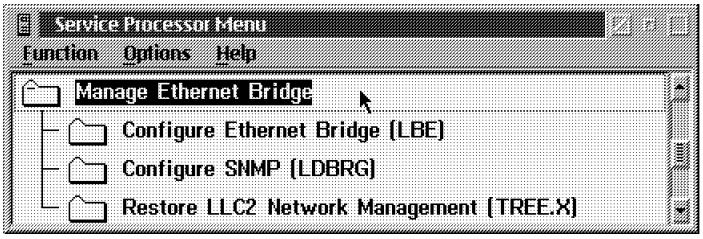


Figure 1-5. Service Processor Ethernet Bridge Functions

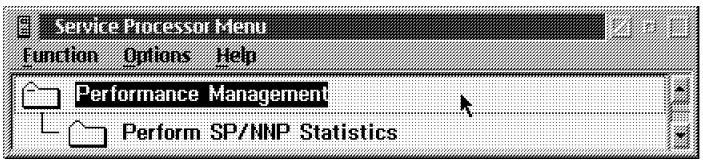


Figure 1-6. Service Processor Performance Management Function

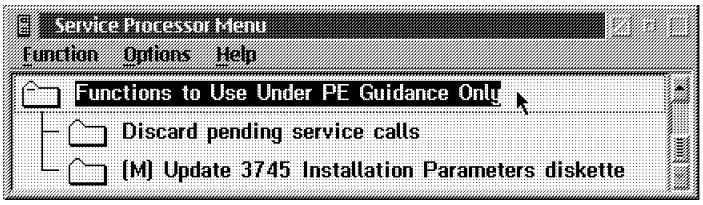


Figure 1-7. Service Processor PE Functions

3746-9x0 Menu Details

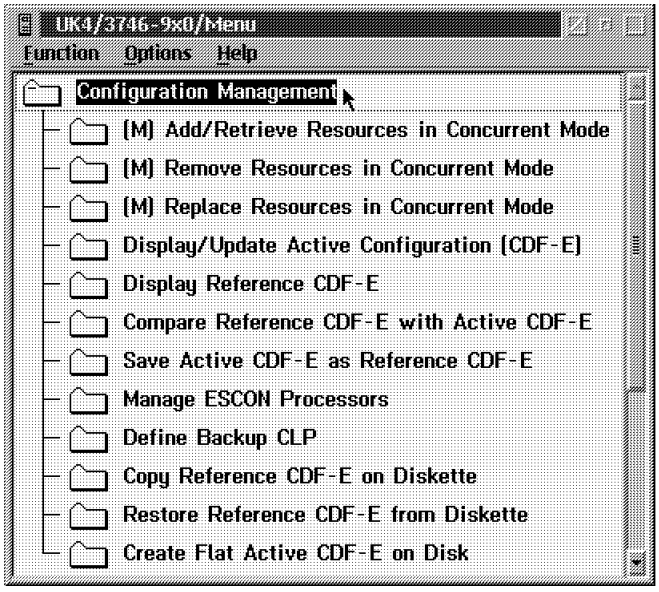


Figure 1-8. 3746-9x0 Configuration Management Functions

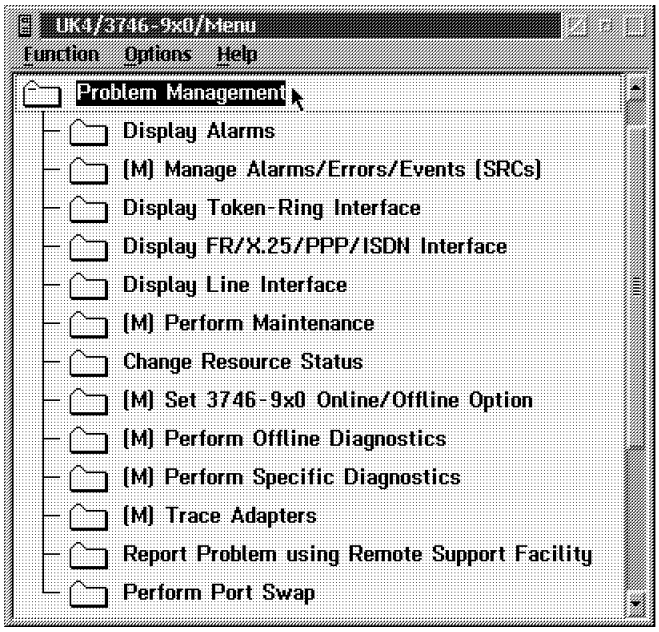


Figure 1-9. 3746-9x0 Problem Management Functions

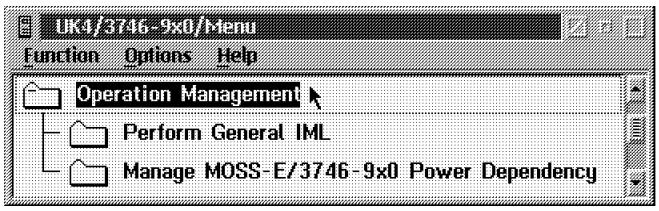


Figure 1-10. 3746-9x0 Operation Management Functions

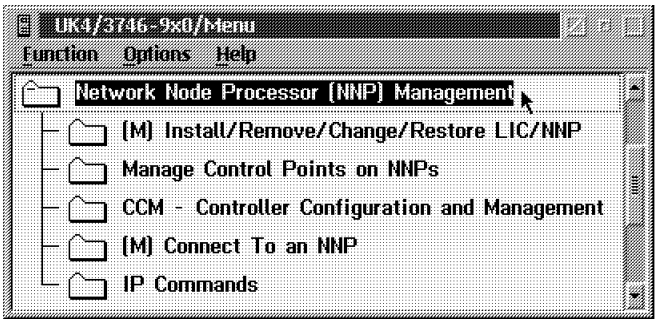


Figure 1-11. 3746-9x0 Network Node Processor Management Functions

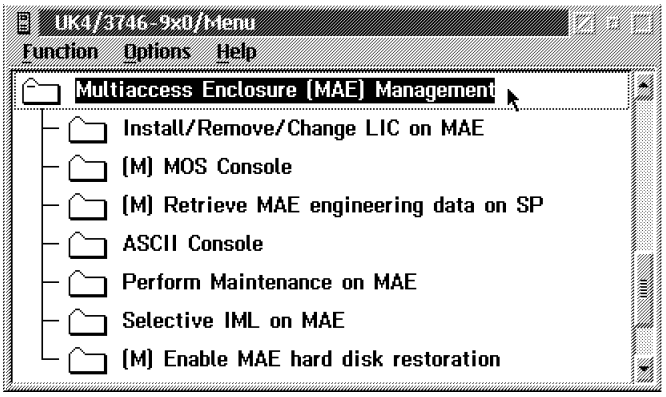


Figure 1-12. 3746-9x0 MAE Management Functions

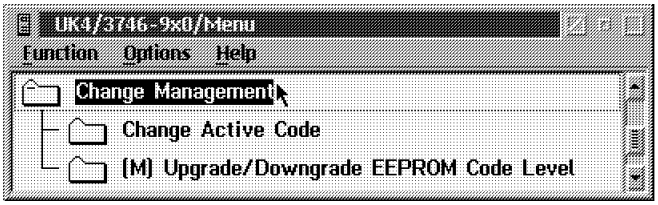


Figure 1-13. 3746-9x0 Change Management Functions

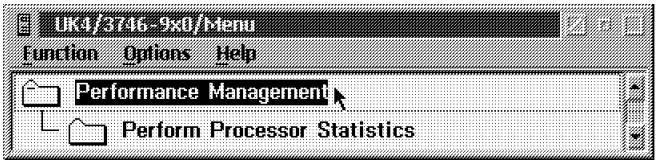


Figure 1-14. 3746-9x0 Performance Management Function

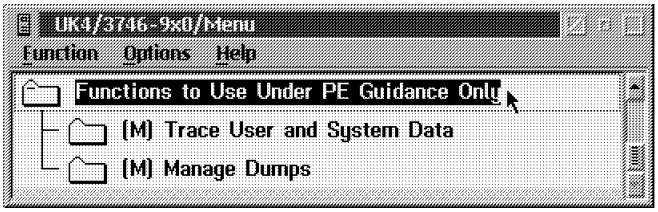


Figure 1-15. 3746-9x0 PE Functions

Problems During Machine, EC or MES Installation

When installing a 3746-900, the *IBM 3746 Expansion Unit Model 950, Installation Guide*, SY33-2114 should be used. When installing an EC or MES, the instructions supplied should be used. It is possible that the task or diagnostic you were asked to perform during the installation detected an error, and you were requested to start troubleshooting using this manual.

The primary purpose of this manual is to resolve problems that occur in an operational environment after a successful installation. That is, the machine has worked previously and is now failing.

At installation time, or after an EC or MES is installed, it is possible that errors may occur due to conditions which would not exist in an operational environment.

- Cables plugged incorrectly.
- Terminators missing.
- Mismatch between CDF-E and machine configuration.
- Mismatch between line characteristics and set ups.
- Wrong address set.
- Top card connectors incorrectly installed.
- Loose cards.

During your path through the service guide, you should remember these possibilities and, when the failing area is identified, check with the aid of this manual and YZ pages that these conditions do not exist prior to changing FRUs.

Now, starting at the top of the “Selection Table,” work down until you find an entry that matches the symptom detected during the installation.

Be sure to read “Exchange Precautions” on page 4-1 before removing any FRUs from this machine.

Selection Table

IF YOU HAVE A...	THEN GO TO...
3746-900 resource not present in CDF-E	“MAP 2665: 3746-900 Resource Not Present in CDF-E” on page 2-60.
3746-900 control panel code reported	“3746-900 Control Panel Codes” on page 1-15.
3746-900 diagnostic failure Display the FRU list	“Display the FRU List After a Diagnostic Failure” on page 1-154.
3746-900 any Power Problem	“MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4
multiaccess enclosure any Power Problem	The *Multiaccess Enclosure Installation and Maintenance*, manual manual.
3746-900 control panel symptoms	“3746-900 Control Panel Symptoms” on page 1-14.
General Verbal Symptoms	“General Verbal Symptoms” on page 1-13.

Symptom Index

General Verbal Symptoms

Table 1-1. General Symptoms

IF THE	SYMPTOM	THEN:
Host	Has detected • channel errors on this 3746-900 • route inop • missing interrupt	Go to “MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
	Is unable to activate an ESCA or no traffic on ESCA	Go to “MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
The 3745 or the APPN® control Point on the network node processor	Is unable to activate (start) a ring or has errors while running a ring connected to a 3746-900	Go to “MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
	Is unable to activate (start) or has problem on all the lines of a 3746-900 CLP.	Go to “MAP 2610: 3746-900 ESCA, LAN, or CLP Problem” on page 2-36.
	Is unable to activate (start) or has problem on all the lines of a 3746-900 LIC11.	Go to “MAP 2820: 3746-900 Problem on a LIC11” on page 2-115.
	Is unable to activate or has problem on all the lines of the same ARC group	Go to “MAP 2810: 3746-900 Problem on a Group of ARCs” on page 2-110.
	Is unable to activate or has problem on all the lines of the same line connection box expansion (LCBE)	Go to “MAP 2860: 3746-900 All the Lines of LCBE Have Problem” on page 2-144.
	Is unable to activate or has problem on all the line of a 3746-900 LIC12	Go to “MAP 2830: 3746-900 Problem on a LIC12” on page 2-127.
	Is unable to activate or has problem on all the line of a 3746-900 LIC16	Go to “MAP 2840: 3746-900 Problem on a LIC16” on page 2-133.
	Has a suspected program loop or hang	☎ your support structure for assistance with this problem.
	Has unexpected re-IPLs	☎ your support structure for assistance.
Hardware Central Service	On 3746-900, the RSF link is down	Go to “MAP 2000: 3746-900 Manual Call” on page 2-1.
The Service Processor	Is unable to establish a link with the 3746-900	Go to “MAP 5600: LAN Problem on LAN Attached to the Service Processor” on page 2-149.
3746-900	Has any Power Problem	Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4

3746-900 Control Panel Symptoms

Check the 3746-900 control panel with the following table.

Table 1-2. Control Panel Symptoms

IF THE 3746-900	**THEN:**
CBSA Check indicator ON.	Change the CBSP,go to “3746-900 FRU List” on page 1-29
Control panel displays any wrong character or all segments of all characters are On.	Run the Control Panel test, refer to “How to Run the 3746-900 Control Panel Test” on page 3-15. When a FRU is called for an error, go to “3746-900 FRU List” on page 1-29. If no error is detected and the problem still exists, contact your support structure for a possible microcode problem.
Control panel display has a missing character.	Run the Control Panel test, refer to “How to Run the 3746-900 Control Panel Test” on page 3-15. When a FRU is called for an error, go to “3746-900 FRU List” on page 1-29. If no error is detected and the problem still exists, contact your support structure for a possible microcode problem.
Has one or more control panel keys that do not work.	Run the Control Panel test, refer to “How to Run the 3746-900 Control Panel Test” on page 3-15. When a FRU is called for an error, go to “3746-900 FRU List” on page 1-29. If no error is detected and the problem still exists, contact your support structure for a possible microcode problem.
Control panel display is blank with Standby **or** Ready LED lighted or blinking.	Go to “How to Run the 3746-900 Control Panel Test” on page 3-15.
Control panel display is blank with Standby **and** Ready LED OFF.	Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

3746-900 Control Panel Codes

Note

When the microcode is a possible cause of the error, it is recommended that you check if you have the highest level of microcode for your machine and that any applicable MCFs are installed. Your support structure will have this information.

Important

The panel codes indicate an error when they are flashing or if they stay ON more than 60 seconds.

If a flashing panel code is not described below, a hardware problem is suspected, call your support for assistance.

Table 1-3 (Page 1 of 9). 3746 Model 900 Control Panel Code

Panel Code	Action to be Taken
00000000	IML complete, box available.
00101001	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24. If the error is not corrected a microcode problem is suspected. Contact your support structure.
00101003	Error detected with BATS. Exchange the FRU Group 2502 on page 1-25, go to page 1-24.
00101004 to 00101006	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101007	Error detected with BATS. Exchange the FRU Group 2503 on page 1-25, go to page 1-24.
00101008 to 0010100F	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101010	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101013	Error detected with BATS. Exchange the FRU Group 2520 on page 1-25, go to page 1-24.
00101020to 00101021	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101022	Error detected with BATS. Exchange the FRU Group 2503 on page 1-25, go to page 1-24.
00101030	BATS Start memory test
00101031	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101033	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101036	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00101038	Error detected with BATS. Exchange the FRU Group 2504 on page 1-25, go to page 1-24.
0010103F	BATS ended without error
00101041	BATS Responder phase started
00101050 to 00101052	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00323270	Error detected at IML. TIC3 of CBSP not present. If TIC3 is present exchange the FRU Group 2518 on page 1-25, go to page 1-24.
00323272	Coupler 1 (normally TIC3) of CBSP unplugged in concurrent mode.
00323273	Error detected at IML. Coupler 1 of the CBSP has an unknown type. Exchange the FRU Group 2506 on page 1-25, go to page 1-24.
00323274 or 00323275	Error detected at IML. Coupler 1 of the CBSP is not a TIC3. Install a TIC3 coupler in position 07N-A1-F1.
00323277	TIC3 of CBSP unplugged before being set to concurrent mode. If the TIC3 is correctly plugged exchange the FRU Group 2521 on page 1-25, go to page 1-24.
00323279	Error detected on hot plugging. Coupler 1 of the CBSP has an unknown type. Exchange the FRU Group 2506 on page 1-25, go to page 1-24.

Table 1-3 (Page 2 of 9). 3746 Model 900 Control Panel Code	
Panel Code	**Action to be Taken**
0032327A or 0032327B	Error detected on hot plugging. Coupler 1 of CBSP is not a TIC3. Install a TIC3 coupler in position 07N-A1-F1.
0032327C	TIC3 of CBSP successfully hot-plugged.
0032327D	Error detected on hot plugging. Coupler 1 of CBSP has been hot-plugged but cannot be accessed. Exchange the FRU Group 2518 on page 1-25, go to page 1-24.
003636600 to 00363661	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00363667	Error detected with BATS. Exchange the FRU Group 2504 on page 1-25, go to page 1-24.
00363669	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
0036366A	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00363670	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00363671	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
00363677	Error detected with BATS. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
0036367F	BATS ended without error
00393908 to 0039390A	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
0039390B	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
003939BB	Error detected at IML. TIC3 not present or not detected. Check the TIC3 plugging. If TIC3 is present and correctly plugged exchange the FRU Group 2507 on page 1-25, go to page 1-24.
003939C8 to 003939CB	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
003939E6	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
003939F3 to 003939F4	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
003939F8 to 003939FA	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
0050502A	A microcode problem is suspected. Contact your support structure.
04D50E02	Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
04D50EDC	Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
04D5D568	A microcode problem is suspected. Contact your support structure.
04D5D56E	The TIC3 of CBSP is missing at initialization. Check the plugging of TIC3 in position 07N-A1-F1 and do an IML with diags. If the same error is reported exchange the FRU Group 2506 on page 1-25, go to page 1-24.
04D5D57B	A microcode problem is suspected. Contact your support structure.
04D5D580	A microcode problem is suspected. Contact your support structure.
04D5D5B4	A microcode problem is suspected. Contact your support structure.
04D6D602	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
04D6D603	Do an IML with diag, if the same code is displayed exchange the FRU group 2505 on page 1-25, go to page 1-24. If after exchange the problem is still present contact your support structure.
04D6D604	Do an IML with diag, if the same code is displayed exchange the FRU group 2505 on page 1-25, go to page 1-24. If after exchange the problem is still present contact your support structure.
04D9D9A9	Error session. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710. If the problem persists exchange the FRU group 2506 on page 1-25, go to page 1-24.
04D9D9AA	Duplicate token ring local address. Two machines are installed on the LAN with the same token ring local address. Go to “MAP 2770: 3746-900 Duplicate Token Ring Local Address” on page 2-106.

Table 1-3 (Page 3 of 9). 3746 Model 900 Control Panel Code

Panel Code	Action to be Taken
04D9D9AB	Remove command received from the ring following a user request. Re-initialize the link by activating the 3746-900 service processor link restart. Refer to "How to run the 3746-900 Service Processor Link Restart" on page 3-16.
04D9D9AE	Error session. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710. If the problem persists exchange the FRU group 2506 on page 1-25, go to page 1-24.
04D9D9BA	Error session. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710. If the problem persists exchange the FRU group 2506 on page 1-25, go to page 1-24.
04D9D9BB	Re-initialize the link by activating the 3746-900 service processor link restart refer to "How to run the 3746-900 Service Processor Link Restart" on page 3-16 If the problem is always present, it can be a ring failure, refer to "MAP 5600: LAN Problem on LAN Attached to the Service Processor" on page 2-149.
04D9D9BC	Invalid parameter. A microcode problem is suspected. Contact your support structure.
04D9D9BD	A microcode problem is suspected. Contact your support structure.
04D9D9BE	A microcode problem is suspected. Contact your support structure.
05232320	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232330	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232339	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
0523233C	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232340	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232350	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232360	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232370	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232380	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05232390	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
052323A0	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
052323FF	IML Progression code. If this code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242400	Do an IML with diag, if the same code is displayed, a microcode problem is suspected or Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242401 to 05242405	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242407	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24. or microcode problem is suspected. Contact your support structure.
05242414	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242416	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242440	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242470	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242480	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05242490	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
052424A0	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05282800 to 05282804	IML progression code. If the code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.

Table 1-3 (Page 4 of 9). 3746 Model 900 Control Panel Code	
Panel Code	**Action to be Taken**
05282805	IML progression code. If the code is permanently displayed check the 'Service processor not accessible digit' on the 3746-900 control panel. • If A and F are alternatively displayed, a service processor problem is suspected. Go to *Service Processor Installation and Maintenance* manual, chapter "Service Processor Problem Determination". • If a B is displayed, wait 50 seconds either: – B is always displayed and a new control panel is flashing. Follow the procedure attached to this new control panel code. – Or, B is always displayed with the same control panel code. Exchange the FRU Group 2501 on page 1-25, go to page 1-24. – Or, B is no longer displayed and the IML continues. It was a transient error.
05282806	IML progression code. • If the code is permanently displayed and if the **Standby** LED is ON there is no error. The 3746-900 is in standby state waiting a power ON. The power ON can be initiated via the start key on the control panel if the 'Power control' is set in local mode (3). • If the **Standby** LED is blinking check the 'Service processor not accessible digit' on the 3746-900 control panel. – If A and F are alternatively displayed, a service processor problem is suspected. Go to *Service Processor Installation and Maintenance* manual, chapter "Service Processor Problem Determination". – If a B is displayed, wait 50 seconds either: - B is always displayed and a new control panel is flashing. Follow the procedure attached to this new control panel code. - Or, B is always displayed with the same control panel code. Exchange the FRU Group 2501 on page 1-25, go to page 1-24. - Or, B is no longer displayed and the IML continues. It was a transient error.
05282807 to 052828FD	IML progression code. If the code is permanently displayed check the 'Service processor not accessible digit' on the 3746-900 control panel. • If A and F are alternatively displayed, a service processor problem is suspected. Go to *Service Processor Installation and Maintenance* manual, chapter "Service Processor Problem Determination". • If a B is displayed, wait 50 seconds either: – B is always displayed and a new control panel is flashing. Follow the procedure attached to this new control panel code. – Or, B is always displayed with the same control panel code. Exchange the FRU Group 2501 on page 1-25, go to page 1-24. – Or, B is no longer displayed and the IML continues. It was a transient error.
052828FE to 052828FF	IML progression code. If the code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
052B2BFF	IML progression code. If the code is permanently displayed exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05303061	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05303063	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05303065	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05303067	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
0530306B	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05303077	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
0530307F	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05303083	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030B2 to 053030B3	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030B4 to 053030B6	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030B7	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.

Table 1-3 (Page 5 of 9). 3746 Model 900 Control Panel Code

Panel Code	Action to be Taken
053030B8	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030B9	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030BA to 053030BE	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030BF	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
053030C0 to 053030CB	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030CC to 053030CE	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030CF	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030D0	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030D1 to 053030D2	Error detected at IML. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
053030D3	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030D9	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053030DC	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
05313141	Error detected at IML. The type of the processor installed in position 07G-A1-F1 is unknown. It should be a CBSP. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05313143	Error detected on hot plugging. The type of the processor installed in position 07G-A1-F1 is unknown. It should be a CBSP. Exchange the FRU Group 2501 on page 1-25, go to page 1-24.
05393950	Too many EEPROM retry. Suspect any station on LAN ring and the service processor access control unit, otherwise exchange the FRU Group 2521 on page 1-25, go to page 1-24. If after exchange the same error is reported contact your support structure.
05393901	Code level incompatibility between CBSP EEPROM and CBSP code. Do an IML with diag, if the same code is displayed contact your support structure.
05393903	Bad loading of information table. Do an IML with diag, if the same code is displayed contact your support structure.
05393905	Bad frame length configuration. Check the frame length size of MOSS-E under communication manager. Contact your support structure.
05393906	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
05393907	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
05393965	Error detected at IML. Exchange the FRU Group 2506 on page 1-25, go to page 1-24.
05393967	Function failure on open adapter. Suspect a problem in LAN cable, service processor access unit, or TIC3. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710.
05393969	Signal loss on open adapter. LAN error, suspect the service processor access unit, or other LAN cables or other LAN adapters. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710.
0539396B	Error detected at IML. Wire fault on open adapter. Suspect a problem in the LAN cable
0539396D	Error detected at IML. Frequency error on open adapter. Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
0539396F	Error detected at IML. Insertion time out on open adapter. LAN ring congestion. Wait for decongestion. Re-IML if the same code is displayed exchange the FRU Group 2506 on page 1-25, go to page 1-24.
05393971	Error detected at IML. Ring failure on open adapter. Wait 30 seconds. Re-IML if the same code is displayed exchange the FRU Group 2506 on page 1-25, go to page 1-24.

Table 1-3 (Page 6 of 9). 3746 Model 900 Control Panel Code	
Panel Code	**Action to be Taken**
05393973	Error detected at IML. Ring beaconing open adapter. Wait 30 seconds. Re-IML and if the same code is displayed check the speed of the ring which should be 16 MB. Suspect also the service processor access unit or other LAN cable. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710.
05393975	Error detected at IML. Duplicate node address on open adapter. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after the FRU exchange the same error is reported contact your support structure.
05393977	Error detected at IML. No response from ring parameter server on open adapter. LAN ring congestion. Wait 30 seconds, Re-IML. If the same error is reported contact your support structure.
05393979	Error detected at IML. Removed received on open adapter. Too many stations on the ring. Check on network station management, if it is correct exchange the FRU Group 2506 on page 1-25, go to page 1-24.
0539397B	Error detected at IML. IMPL force received on open adapter. Exchange the FRU Group 2506 on page 1-25, go to page 1-24. or microcode problem is suspected. Contact your support structure.
0539397D	Error detected at IML. No monitor detected for RPL at open adapter. Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
0539397F	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. or microcode problem is suspected. Contact your support structure.
05393981	Check the LAN connection between the 3746-900 and the service processor access unit. If after IML the same code is reported a microcode problem is suspected. Contact your support structure.
05393983	Do an IML with diag, if the same code is reported a microcode problem is suspected. Contact your support structure.
05393985	Do an IML with diag, if the same code is reported, a microcode problem is suspected. Contact your support structure.
05393987	Error detected at IML. Exchange the FRU Group 2508 on page 1-25, go to page 1-24.
05393989	Error detected at IML. Exchange the FRU Group 2507 on page 1-25, go to page 1-24.
0539398B	Error detected at IML. Ring status change hard error (beaconing). Suspect any station on the ring or the service processor access unit. Exchange the FRU Group 2506 on page 1-25, go to page 1-24. Do the problem determination using *Token-Ring Network, Problem Determination Guide* SX27-3710.
0539398F	Error detected at IML. Exchange the FRU Group 2506 on page 1-25, go to page 1-24.
05393991	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
05393993	Error detected at IML. Suspect error on any station on the ring. Do the problem determination using *Token-Ring Network, Problem Determination Guide* SX27-3710.
05393995	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
05393997	Error detected at IML. Exchange the FRU Group 2506 on page 1-25, go to page 1-24.
05393999	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
0539399B	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
0539399D	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
0539399F	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
053939A1	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.

Table 1-3 (Page 7 of 9). 3746 Model 900 Control Panel Code

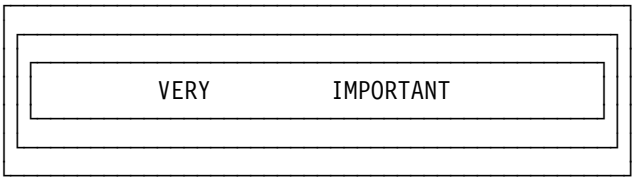
Panel Code	Action to be Taken
053939A3	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
053939A5	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
053939A7	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
053939A9	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939AB	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
053939AD	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939AF	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939B1	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939B2	Error detected at IML. Suspect any station on the ring. Do the problem determination using *Token-Ring Network, problem Determination Guide* SX27-3710. Exchange the FRU Group 2521 on page 1-25, go to page 1-24.
053939B3 to 053939B8	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939B9	Ring status change lobe wire fault. Check the 3746-900 LAN cable.
053939C1	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939C3 to 053939C4	Bad frame length configuration. Check the frame length size of MOSS-E under communication manager. If the frame length is OK suspect a microcode problem, contact your support structure.
053939C5 to 053939C6	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939C7	Error detected at IML. Exchange the FRU Group 2508 on page 1-25, go to page 1-24.
053939CC	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939CD	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939CF	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939D0 to 053939D1	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939D2	Suspect a problem on MOSS-E. Check error displayed on the MOSS-E screen.
053939D3	A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939D5 to 053939D6	Do an IML with diag, if the same code, is displayed contact your support structure.
053939D7	Permanent beaconing. Do an IML with diag. If the same code is displayed do the problem determination using *Token-Ring Network, Problem Determination Guide* SX27-3710.
053939DA	Error detected at IML. Ring status change auto removal or remove received. Exchange the FRU Group 2506 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed, a microcode problem is suspected. Contact your support structure.
053939DD	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24.
053939DE to 053939DF	Do an IML with diag. If the same code is displayed, contact your support structure.
053939E0	Do an IML with diag, if the same code, is displayed contact your support structure.
053939E1	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939E2	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.

Table 1-3 (Page 8 of 9). 3746 Model 900 Control Panel Code	
Panel Code	**Action to be Taken**
053939E3	Error detected at IML. Exchange the FRU Group 2505 on page 1-25, go to page 1-24. If after exchanging, the same code is displayed a microcode problem is suspected. Contact your support structure.
053939E4	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939E5	This panel code indicates that the service processor link test is successful.
053939E7	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939E8	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939E9	Error detected at IML. A microcode problem is suspected. Do an IML with diag, if the same code is displayed contact your support structure.
053939EA	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939EC	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939EE to 053939EF	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939F0	Missing file on MOSS-E. Contact your support structure.
053939F1 to 053939F2	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
053939F6 and 053939F7	Do an IML with diag, if the same code is displayed a microcode problem is suspected. Contact your support structure.
0533939FB to 053939FF	Do an IML with diag. If the same code is displayed, a microcode problem is suspected. Contact your support structure.
053C3C00 to 053C3C08	Progression code during CBSP dump If this code is permanently displayed, do a CBSA IML with diag to confirm the problem.
053C3C0C to 053C3C0D	Progression code during CBSP dump If this code is permanently displayed, do a CBSA IML with diag to confirm the problem.
053C3C50 to 053C3C53	Error code detected during a CBSP dump. Suspect the FRU Group 2521 on page 1-25. Do a CBSA IML with diag to confirm the problem before exchange.
053C3C54 to 053C3C56	Error code detected during a CBSP dump. Connection problem with the MOSS-E. Do a CBSA IML with diag to confirm the problem.
053C3C57 to 053C3C5A	Error code detected during a CBSP dump. Suspect the FRU Group 2521 on page 1-25. Do a CBSA IML with diag to confirm the problem before exchange.
053C3C5C	Error code detected during a CBSP dump. Connection problem with the MOSS-E. Do a CBSA IML with diag to confirm the problem.
053A3A00	IML Progression code
05AEAE2F	IML Progression code. If this code is permanently displayed, exchange the FRU Group 2519 on page 1-25, go to page 1-24.
05AEAE30	IML Progression code. If this code is permanently displayed, suspect a problem in any processor of the 3746-900.
05AEAE31	IML Progression code. If this code is permanently displayed, suspect a microcode error. Contact your support structure.
05AEAE32	IML Progression code. If this code is permanently displayed, suspect a microcode error. Contact your support structure.
05AF0901	Error detected with BATS. Exchange the FRU Group 2513 on page 1-25, go to page 1-24.
05AF0902	Error detected with BATS. Exchange the FRU Group 2510 on page 1-25, go to page 1-24.
05AF0908	Error detected with BATS. Exchange the FRU Group 2510 on page 1-25, go to page 1-24.
05AF0909	Error detected with BATS. Exchange the FRU Group 2513 on page 1-25, go to page 1-24.
05AF09F1	Error detected with BATS. Exchange the FRU Group 2511 on page 1-25, go to page 1-24.
05AF09F2	Error detected with BATS. Exchange the FRU Group 2512 on page 1-25, go to page 1-24.
05AFAF01	Error detected with BATS. Exchange the FRU Group 2513 on page 1-25, go to page 1-24.
05AFAF02	Error detected with BATS. Exchange the FRU Group 2514 on page 1-25, go to page 1-24.

Table 1-3 (Page 9 of 9). 3746 Model 900 Control Panel Code

Panel Code	Action to be Taken
05AFAF03	Error detected with BATS. Exchange the FRU Group 2513 on page 1-25, go to page 1-24.
05AFAF04	Error detected with BATS. Exchange the FRU Group 2514 on page 1-25, go to page 1-24.
05AFAF05	Error detected with BATS. Exchange the FRU Group 2514 on page 1-25, go to page 1-24.
05AFAF08	Error detected with BATS. Exchange the FRU Group 2515 on page 1-25, go to page 1-24.
05AFAF0A	Error detected with BATS. Exchange the FRU Group 2510 on page 1-25, go to page 1-24.
05AFAF0B	Error detected with BATS. Exchange the FRU Group 2516 on page 1-25, go to page 1-24.
05AFAF0E	Error detected with BATS. Exchange the FRU Group 2517 on page 1-25, go to page 1-24.
05AFAF0F	Error detected with BATS. Exchange the FRU Group 2517 on page 1-25, go to page 1-24.
05AFAF10	Error detected with BATS. Exchange the FRU Group 2515 on page 1-25, go to page 1-24.
05AFAF12	Error detected with BATS. Exchange the FRU Group 2510 on page 1-25, go to page 1-24.
05AFAF15	Error detected with BATS. Exchange the FRU Group 2510 on page 1-25, go to page 1-24.
05AFAF1E	Error detected with BATS. Exchange the FRU Group 2517 on page 1-25, go to page 1-24.
05AFAF21	Error detected with BATS. Exchange the FRU Group 2512 on page 1-25, go to page 1-24.
05AFAF22	Error detected with BATS. Exchange the FRU Group 2515 on page 1-25, go to page 1-24.
05AFAF25	Error detected with BATS. Exchange the FRU Group 2515 on page 1-25, go to page 1-24.
05AFAF41	Error detected with BATS. Exchange the FRU Group 2514 on page 1-25, go to page 1-24.
05AFAF42	Error detected with BATS. Exchange the FRU Group 2515 on page 1-25, go to page 1-24.
05AFAFF4	SPS diagnostics successfully ended during BATS.
05AFAFFD	Do an IML with diag, if the same code is displayed, a microcode problem is suspected. Contact your support structure.
05AFAFFE	Do an IML with diag. If the same code is displayed, a microcode problem is suspected. Contact your support structure.
05B0B0F0	The operator activated function 8 (CBC ESCC logical disconnection). The next operation is to press the general IML pushbutton as specified on the control panel.
05B0B0FD	Service processor link restart
05B0B0FE	Service processor link restart. User error
05B0B0FF	Service processor link restart error, a microcode problem is suspected. Contact your support structure.
05C2C269	TIC3 of CBSP unplugged. Check that the TIC3 is correctly plugged in position 07N-A1-F1. If it is correctly plugged, exchange the FRU Group 2506 on page 1-25, go to page 1-24.
05C2C26E	The maintenance switch has been pulled up
05C2C26F	The maintenance switch has been pushed down

Using the MIP FRU Group Table



The MIP FRU group table lists the FRU groups likely to be called in this manual.

- Each FRU group contains from one to three FRUs, listed by name and location.
- The “1st FRU” is the most likely to be failing; the “3rd FRU” is the least likely.
- Usually, only one FRU in an FRU group is failing, and you should **try to reduce the FRU group to the one failing FRU.**
- If you can reproduce the 3746 failure, exchange FRUs one at a time until the failing FRUs are isolated.
- ***As soon as you have recorded the FRU(s) and LOCATION in the FRU GROUP, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for 3746-900 problem.***

ALWAYS

- Ensure that the failing area of the machine is available for service.
- Consult the “Exchange Precautions” on page 4-1 before removing any FRUs.
- Check for loose cards, cables, and crossovers before exchanging FRUs.
- Run diagnostics after any repair action.
- Follow the 'CE leaving' procedure before returning the machine to the customer.

The FRU group table starts on next page.

3746-900 FRU Group Table

Table 1-4. 3746 Model 900 FRU Group

FRU Group	1st FRU Name Location	2nd FRU Name Location	3rd FRU Name Location
2501	CBSP 07G-A1-F1		
2502	SPS 07G-A1-D1	CBSP 07G-A1-F1	BOARD 07G-A1
2503	SPS 07G-A1-D1	CBSP 07G-A1-F1	
2504	CBSP 07G-A1-F1	TIC3 07N-A1-F1	TIC3 07N-A1-E1
2505	TIC3 07N-A1-F1	CBSP 07G-A1-F1	
2506	TIC3 07N-A1-F1		
2507	TIC3 07N-A1-F1	CBSP 07G-A1-F1	BOARD 07G-A1
2508	TIC3 07N-A1-F1	TIC3 07N-A1-E1	CBSP 07G-A1-F1
2509	CBSP 07G-A1-F1	TIC3 07N-A1-E1	BOARD 07G-A1
2510	SPS 07G-A1-D1	CBSP 07G-A1-F1	BOARD 07G-A1
2511	PANEL	SPD1 07N-A1-A1	SPS 07G-A1-D1
2512	SPS 07G-A1-D1		
2513	CBSP 07G-A1-F1	SPS 07G-A1-D1	BOARD 07G-A1
2514	CBSP 07G-A1-F1	BOARD 07G-A1	
2515	SPS 07G-A1-D1	BOARD 07G-A1	
2516	SPS 07G-A1-D1	BOARD 07G-A1	PANEL
2517	PANEL	SPS 07G-A1-D1	BOARD 07G-A1
2518	CBSP 07G-A1-F1	TIC3 07N-A1-F1	BOARD 07G-A1
2519	CS 07B-A1	CBSP 07G-A1-F1	
2520	CBSP 07G-A1-F1	CS 07B-A1	BOARD 07G-A1
2521	CBSP 07G-A1-F1	TIC3 07N-A1-F1	

3746-900/Service Processor Maintenance Using a CPN

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

1. On the "MOSS-E VIEW" window, click on "PROGRAM" (in the action bar).
2. Click on "Search CPN".
3. Enter the CPN.
4. The controller icon corresponding to the CPN is highlighted. On the bottom line of the MOSS-E VIEW the type of controller (3745, 3746-900 or 3746-950) and its serial number are displayed. Note the type of controller and double click on the highlighted controller icon.

001

Is a 3745 controller highlighted?
Yes **No**

002

Is a 3746-950 controller icon highlighted?
Yes **No**

003

Is a 3746-900 controller icon highlighted?
Yes **No**

004

Go to Step 013 on page 1-27.

005

Go to Step 008

006

For 3746-950 icon highlighted, stop your investigation using this *Service Guide* and restart it with the appropriate manual: *IBM 3746 Nways Multiprotocol Controller Model 950, Service Guide*, SY33-2108.

007

For 3745 icon highlighted, stop your investigation using this *Service Guide* and restart it with the appropriate *Maintenance Information Procedures* (MIP).

Use the following MIP according to the 3745 model.

- SY33-2070 for 3745 model 17A
- SY33-2054 for 3745 models 21A to 61A

008

A 3746-900 icon is highlighted.

Are you here for a hardware problem (with FRU)?
Yes **No**

009

Are you here for a mismatch configuration on 3746-900?
Yes **No**

010

For a 3746 microcode problem refer to the *Service Processor Installation and Maintenance* manual. Use the "Handling the Microcode Change Levels" procedure in chapter 3 "Maintaining the Service Processor".

011

Go to “MAP 2615: 3746-900 Configuration Mismatch” on page 2-38.

012

- On the "MOSS-E VIEW" window, double click on the 3746-900 on which you want to work.
- The "3746-9x0 menu" window is displayed.
- Click on the "Problem management" option.
- Double click on the "Perform Maintenance" option.
- The "Resource Selection Options for Maintenance" window is displayed.

  On this window, select:

  – "By specific Customer Problem Number (CPN)".
- Click on "OK". The "Specific Customer Problem Number" window is displayed.
- Enter the CPN number and click on "OK".
- The "Resource Selector" window shows the location of suspected FRUs and their fault probability.

  Note

  If a **resource** appears without its resource code, ignore it.
- Record this FRU list with their fault probability. Then go to “3746-900 FRU List” on page 1-29 to identify each FRU.

013

The service processor icon is highlighted.

Are you here for a hardware problem (with FRU)?
Yes No

014

For a service processor microcode problem, refer to the *Service Processor Installation and Maintenance* manual. Use the "Handling the Microcode Change Levels" procedure in chapter 3 "Maintaining the Service Processor".

015

- On the "MOSS-E VIEW" window, double click on the service processor.
- The "Service Processor Menu" window is displayed.
- Click on the "Problem management" option.
- Double click on the "Display Alarms" option.
- The "Display Alarms" window is displayed.
- Record the SRC number of the alarm which has the CPN corresponding to your call.
- Return to the "Problem management" window.
- Double click on the "Manage Alarms/Errors/Events (SRCs).
- Select "Alarms" then click on "OK".
- Double click on the alarm which has the SRC number previously recorded.
- A FRU or a list of FRUs with the FRU location is displayed.
- Record this FRU list with their fault probability. Then go to "Service Processor Problem Determination" in the corresponding *Service Processor Installation and Maintenance* manual.

3746-900 Maintenance Using an SRC Sequence Number

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

1. On the "MOSS-E VIEW" window, double click on the 3746-900 on which you want to work.
2. The "3746-9x0 Menu" window is displayed.
3. Click on the "Problem management" option. *
4. The "Problem management functions" window is displayed.
5. Double click on the "Perform Maintenance" option.
6. The "Resource Selection Options for Maintenance" window is displayed.

   On this window, select:

   - "By the sequence number of a system reference code".
7. Click on "OK". The "System Reference Code Sequence Number" window is displayed.
8. Enter the SRC sequence number and click on "OK".
9. The "Resource Selector" window is displayed with the FRU suspected and their fault probability.
10. Record this FRU list with their fault probability. Then go to “3746-900 FRU List” on page 1-29 to identify each FRU.

3746-900 Maintenance Using a FRU list

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

1. On the "MOSS-E VIEW" window, double click on the 3746-900 on which you want to work.
2. The "3746-9x0 Menu" window is displayed.
3. Click on the "Problem management" option.
4. Double click on the "Perform Maintenance" option.
5. The "Resource Selection Options for Maintenance" window is displayed.

   On this window, select:

   - "Via the active CDF-E".
6. Click on "OK". The "Resource selector" window is displayed. Go to “3746-900 FRU List” on page 1-29 to identify each FRU.

Service Processor Maintenance Using an SRC Sequence Number

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

1. On the "MOSS-E VIEW" window, double click on the service processor icon.
2. The "Service Processor Menu" window is displayed.
3. Click on the "Problem management" option.
4. Double click on the "Manage Alarms/Errors/Events (SRCs)" option.
5. Select the "Alarm" option then click on "OK".
6. On the next window double click on the alarm which has the SRC number that you want.
7. A FRU or a list of FRUs with the FRU location is displayed.
8. Record this FRU list with their fault probability. Then go to "Service Processor Problem Determination" in the corresponding *Service Processor Installation and Maintenance* manual.

3746-900 FRU List

The FRU codes for the 3746-900 are listed in alphabetical order in the following list. **Identify** the FRU you are going to work with and **go to the page shown**.

FRU Code	Type	FRU name	Text
ACPW	220	ACPW in 07K/J-A1	Alternative Current power box. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
ACUN	AC0	LAN ring access unit	Go to “MAP 2625: LAN Checking” on page 2-44.
AC1	220	ACPW in 07K-A1	Alternative Current power box. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AC2	220	ACPW in 07J-A1	Alternative Current power box. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
ARC		ARC	ARC type not identified.
ARCG		ARCG	Group of ARCs suspected defective. Go to “MAP 2810: 3746-900 Problem on a Group of ARCs” on page 2-110.
ARCS		ARCS	All ARCs of LCB.
AR1A	010	ARC1A1	V 24 DCE attachment with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1B	120	ARC1B	V 24 DTE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1C	090	ARC1C	V 24 DCE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1D	0A0	ARC1D	V 24 DTE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1E	110	ARC1A2	V 24 DCE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1F	DB0	ARC1AX	ARC V.24 without cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1G	C10	ARC1A0	ARC V.24 with cable to DCE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1H	C20	ARC1B0	ARC V.24 with cable to DTE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1J	C90	ARC1C0	ARC V.24 with cable to DCE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR1K	CA0	ARC1D0	ARC V.24 with cable to DTE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3A	040	ARC3A1	V 35 DCE attachment with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3B	150	ARC3B	V 35 DTE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3C	0C0	ARC3C	V 35 DCE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3D	0D0	ARC3D	V 35 DTE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3E	140	ARC3A2	V 35 DCE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3F	D50	ARC3AX	ARC V.35 without cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3G	C40	ARC3A0	ARC V.35 with cable to DCE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.

FRU Code	Type	FRU name	Text
AR3H	C50	ARC3B0	ARC V.35 with cable to DTE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3J	CC0	ARC3C0	ARC V.35 with cable to DCE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3K	CD0	ARC3D0	ARC V.35 with cable to DTE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3L	DC0	ARC3CX	ARC V.35 3745 DCE without cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR3M	DD0	ARC3DX	ARC V.35 3745 DTE without cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4A	060	ARC4A1	X 21 DCE attachment with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4E	160	ARC4A2	X 21 DCE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4F	260	ARC4A3	X 21 DCE attachment with 5 m tethered cable (transfix). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4G	360	ARC4A4	X 21 DCE attachment with 15 m tethered cable (transfix). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4B	070	ARC4B	X 21 DTE attachment with 15 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4C	0E0	ARC4C	X 21 DCE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4D	0F0	ARC4D	X 21 DTE 3745 interface with 5 m tethered cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4H	FF0	ARC4AX	ARC X.21 without cable. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4J	E60	ARC4A0	ARC X.21 with cable to DCE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4K	E70	ARC4B0	ARC X.21 with cable to DTE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4L	EE0	ARC4C0	ARC X.21 with cable to DCE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4M	EF0	ARC4D0	ARC X.21 with cable to DTE 3745 attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
AR4N	C60	ARC4E0	ARC X.21 with cable Transfix to DCE attached. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
BAS	310	Basic Board 07N-A1	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
BOAR	300	Board	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
CAB2	620	Cable	Cable assembly cooling control. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2635: 3746-900 Several Fans Are in Errors” on page 2-50.
CAB9	690	Cable	Cable DC distribution to FANs and connectivity switch (CS). This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2635: 3746-900 Several Fans Are in Errors” on page 2-50.
CABA	6A0	Cable	Cable Pres/reset from SPD1 to SPD2. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2640: 3746-900 Cable From SPD1 to SPD2” on page 2-52.

FRU Code	Type	FRU name	Text
CABB	780	Cable	Cable from SIE cassette to SAC in the Multiaccess Enclosure. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2655: 3746-900 Cable From SIE to SAC in Multiaccess Enclosure” on page 2-56.
CABC	6C0	Cable	Cable power signals/control from SPD1 to SPD2. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2645: 3746-900 Cable From DCDP to SPD1” on page 2-54.
CABD	6D0	Cable	Cable power signals/control from SPD1 to panel. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2650: 3746-900 Signal Power cable from SPD1 to the Control Panel” on page 2-55.
CABM	770	Cable	Cable between LIC11 and LCBB. This cable is suspected. In order to more precisely identify the defective FRU, go to “MAP 2820: 3746-900 Problem on a LIC11” on page 2-115.
CAB4	640	SL Cable	The 3746-900 service logic is suspected. In order to more precisely identify the defective FRU, go to “MAP 2630: 3746-900 Service Logic Problem” on page 2-45.
CBC	430	CBC	Controller bus coupler. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
CBSP	850 8A0	CBSP CBSP2 CBSP3	Controller bus and service processor Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
CLP	820 870	CLP CLP3	Communication line processor. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
CSCE	200	CSCE	Connectivity switch cable extension cassette. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
CS	580	CS	Connectivity switch. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DCDC	290	DCDC for Processor	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DCDP	210	DCDP	Direct Current power distribution board Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DCPW	240	DCPW	Direct current power distribution box. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DCSW	2A0	DCDC for CS	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DMSW	11C	DMSW	3745 Direct memory switch card. Exchange the CBC first if it is also in your FRU list (whatever its fault probability is). Refer to “MAP: 3746-900 FRU Exchange” on page 1-34. If you have already changed the CBC and if the problem is still present, exchange the DMSW card by using the *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 models 21A to 61A, or the *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A.
DRW1	250	Fan Drawer 1	(Fans 1 and 2) Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DRW2	250	Fan Drawer 2	(Fans 3 and 4) Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DRW3	250	Fan Drawer 3	(Fans 5 and 6) Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
DSKP	470	HDD of MAE System card	Hardware disk drive located on the multiaccess enclosure system card. For exchanging this FRU, refer to the *Multiaccess Enclosure Installation and Maintenance* manual.
ENCL	340	Enclosure	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
ESCC	410	ESCC ESCC2	Enterprise system connection coupler. ESCC and ESCC2 are identified by EC. Use “MAP: 3746-900 FRU Exchange” on page 1-34.

FRU Code	Type	FRU name	Text
ESCP	830 880	ESCP ESCP2 ESCP3	Enterprise system connection processor. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
FILT	260	Air Filter in 07G	Go to “3746-900 Maintenance Using a FRU list” on page 1-28. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LCBB		LCBB	Line connection enclosure expansion (board + enclosure + LCPB).
LCBE		LCBE	Line connection enclosure expansion (board + enclosure + LCPE).
LCEE	5E0	LCEE	Line connection enclosure expansion (board + enclosure). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LCEB	5F0	LCEB	Line connection enclosure base (board + enclosure). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LCPB	510	LCPB	DC/DC converter and logic card for LCBB. If the LIC11 FRU is also present in the FRU list, check it first (whatever its fault probability is). Refer to “MAP: 3746-900 FRU Exchange” on page 1-34.
LCPE	5B0	LCPE	DC/DC converter for LCBE. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LIC11 LICA	590	LIC11	Line interface coupler type 11. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LIC12 LICC	520	LIC12	Line interface coupler type 12. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
LIC16 LIC	560	LIC16	Line interface coupler type 16. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
MAE	870	MAE Problem	Suspect a mutiaccess enclosure problem which can be the SIE card, the SAC card, or the cable between SIE and SAC. Perform problem determination using the *Multiaccess Enclosure Installation and Maintenance* manual.
PNL1	2D0	Control panel 07A-A1	Operator panel card of the control panel. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
PNL2	2E0	Control panel 07A-A1	Keyboard display card of the control panel. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
PPC	460	System Control Card	System control card of the Multiaccess Enclosure. For exchanging this FRU refer to the *Multiaccess Enclosure Installation and Maintenance* manual.
PW45		PW45	3745/3746-950 connection. Go to “MAP 5160: Suspected Problem on 3745/3746-900 Power Connection” on page 2-20.
SAC	450	SAC	Switch attachment card of the Multiaccess Enclosure. For exchanging this FRU refer to the *Multiaccess Enclosure Installation and Maintenance* manual.
SCTL SCTL2 SCTL3	3AC 3BC 3CC	SCTL SCTL2 SCTL3	3745 Storage control card. Exchange the CBC first if it is also in your FRU list (whatever its fault probability is). Refer to “MAP: 3746-900 FRU Exchange” on page 1-34. If you have already changed the CBC and if the problem is still present, exchange the SCTL card by using the *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 models 21A to 61A, or the *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A.
SPD1	270	SPD1	Signal and power distribution cassette (base enclosure). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
SIE	440	SIE	Switch interface extender card. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
SPD2	280	SPD2	Signal and power distribution cassette (expansion enclosure). Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
SPS	5C0	SPS	Service and power support card. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
TRFM	2B0	Transformer	Go to “MAP: 3746-900 FRU Exchange” on page 1-34.

FRU Code	Type	FRU name	Text
TIC3	420	TIC3	Token ring coupler type 3. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
TRF1	2B0	Transformer	Transformer for AC1. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
TRF2	2B0	Transformer	Transformer for AC2. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
TRP	840 890	TRP TRP2 TRP3	Token ring processor. Go to “MAP: 3746-900 FRU Exchange” on page 1-34.
WLOB	AD0	Wire/cable to ring access unit	Go to “MAP 2625: LAN Checking” on page 2-44.

MAP: 3746-900 FRU Exchange

When using MOSS-E, use the Help facility if you need any help on the window. If you are not familiar with the MOSS-E window environment, refer to the *Basic Operations Guide, SA33-0177.*

You are here because you entered in maintenance mode with a CPN, SRC sequence number, or an FRU list.

001

Do you have to change a fan drawer and/or air filter on your 3746-900?
Yes No

002

Go to Step 005

003

Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the fan drawer or the air filter, then return here.

Do you have an other FRU to exchange?
Yes No

004

- Return to the "MOSS-E View" window.

Go to “CE Leaving Procedure” on page 4-55.

005

The maintenance mode depends of the state of the machine, thus before continuing, it is important to check it in the following order.

Status of the 3746-900 LEDs on control panel	**Action**
CBSA Check LED ON	Go to “MAP: CBSA Check LED ON” on page 1-36
Ready AND **Standby** LEDs are OFF	Go to “MAP: Ready and Standby LEDs are OFF” on page 1-37
Standby LED is blinking	Go to “MAP: Standby LED Blinking” on page 1-40
Standby LED is ON	Go to “MAP: Standby LED ON” on page 1-43
Ready LED is blinking	Go to “MAP: Ready LED Blinking” on page 1-49
Ready LED is ON	Go to Step 006

006

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?
Yes No

007

Ask to the customer if there is traffic on the 3746-900.

Is there customer traffic on the 3746-900?
Yes No

008

Go to “MAP: 3746-900 in Offline Mode” on page 1-124.

009

Go to “3746-900 FRU list for exchange” on page 1-55.

010

(Step **010** continues)

010 (continued)

Go to “MAP: Ready LED ON” on page 1-52.

MAP: CBSA Check LED ON

001

- You do not have the possibility to put the suspected FRU in concurrent mode and to run diagnostics. Nevertheless, follow these steps:
  - On the "Resource Selector" window, select the CBSP then click on "OK".
  - On the following "Resource Selector" window, select the CBSP then click on "OK".
  - The "Confirmation" window is displayed. Click on "OK".
  - A new window informs you that you cannot put the FRU in concurrent mode (The concurrent mode request will however be saved by the MOSS-E and taken into account at the next IML, and the FRU will be set in concurrent mode).
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the CBSP, then return here.

Is the CBSA check LED ON again.

Yes **No**

002

Problem solved.

- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the Resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected, then click on "Start".
- A "Specific Adapter" window is displayed. Select the "CBSP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?

Yes **No**

003

Call your support for assistance.

004

- Using the "Cancel" key, return to the "Maintenance Options" window.
- On the "Maintenance Options" window, select "Initialize Resource" and click on "OK".
- Select the "Remove from Concurrent Mode" option and click on "OK".
- On the "Resource Selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

005

Call your support for assistance

MAP: Ready and Standby LEDs are OFF

Before starting this MAP be sure that the unit emergency switch is ON.

001

Set the 3746-900 to Offline mode.

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem management" option.
- Double click on the "Set 3746-9x0 Online/Offline Option".
- On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
- On the next "Set 3746-9x0 Online/Offline" window, click on "OK".

Is there a backup ACPW or DCPW installed in your 3746-900?
Yes No

002

Go to Step 008.

003

Check the position of CB1 on both power supplies.

Are both CB1s in the ON position?
Yes No

004

Switch both CB1s to the ON position.

Is the 3746-900 powering ON now with its standby LED blinking?
Yes No

005

Go to Step 025 on page 1-39.

006

Go to Step 012.

007

Go to Step 012.

008

Check the position of CB1 on the Basic ACPW box.

Is CB1 in the ON position?
Yes No

009

Switch CB1 to the ON position.

Is the 3746-900 powering ON now with its standby LED blinking?
Yes No

010

Go to Step 012.

011

Go to Step 025 on page 1-39.

012

- Switch the CB1(s) OFF on your 3746-900.

(Step **012** continues)

012 (continued)
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the FRU on your FRU list which has the highest fault probability, then return here.
- Switch the CB1(s) ON.

Is the 3746-900 powering ON now with its standby LED blinking?
Yes **No**

013

Is there an other FRU in your FRU list for exchange?
Yes **No**

014

Restart the problem determination. Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

015

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to:
  - Remove the previously installed FRU.
  - Exchange the next FRU of your FRU list then return here.
- Switch the CB1(s) ON.

Is the 3746-900 powering ON now with its standby LED blinking?
Yes **No**

016

Go to Step 013

017

Go to Step 018.

018

After a power ON the standby LED blinks for about 20 seconds. Afterwards the standby LED is ON, **or** else the ready LED blinks until the end of IML and then comes permanently ON.

Is the ready LED ON?
Yes **No**

019

Is the standby LED ON?
Yes **No**

020

You have another problem. Restart the problem determination. Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

021

- Press the 'Start' key on the 3746-900 control panel.
- Wait for about 3 minutes at the end of IML.

Is the Ready LED ON?
Yes **No**

022

You have another problem. Restart the problem determination. Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

023

Go to “MAP: 3746-900 Ending Exchange Procedure After Power ON” on page 1-136

024

Go to “MAP: 3746-900 Ending Exchange Procedure After Power ON” on page 1-136

025

After a power ON the standby LED blinks for about 20 seconds. Afterwards the standby LED is ON, **or** else the ready LED blinks until the end of IML and then comes permanently ON.

Is the standby LED permanently blinking?
Yes No

026

Is the standby LED permanently ON?
Yes No

027

Is the ready LED permanently blinking (more than 3 mn)?
Yes No

028

Ready LED is ON. Go to Step 032

029

Go to “MAP: Ready LED Blinking” on page 1-49

030

Go to “MAP: Standby LED ON” on page 1-43.

031

Go to “MAP: Standby LED Blinking” on page 1-40.

032

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?
Yes No

033

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

034

Go to “MAP: Ready LED ON” on page 1-52.

MAP: Standby LED Blinking

You are here because the 3746-900 has its standby LED blinking permanently.

001

- Set the 3746-900 to Offline mode if not already done.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
  - Select the FRU of your FRU list with the highest fault probability, then go to Step 002

002

Is this FRU the CBSP or the TIC3 of CBSP?

Yes **No**

003

Go to Step 005.

004

- If you change the CBSP, go to Step 026 on page 1-42.
- If you change the TIC3 of the CBSP, go to Step 018 on page 1-41

005

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the selected FRU, then return here.
- Switch the CB1(s) ON.
- After a power ON the standby LED blinks for about 20 seconds. Afterwards the standby LED is ON, **or** else the ready LED blinks until the end of IML (about 3 minutes) and then comes permanently ON.

Is the 3746-900 standby LED permanently blinking (more than 30 seconds)?

Yes **No**

006

Go to Step 010.

007

Is there another FRU in your FRU list for exchange?

Yes **No**

008

Call support for assistance.

009

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to remove the FRU previously installed.
- Switch the CB1(s) ON.
- Go to Step 002 to exchange the next FRU.

010

Is the Standby LED ON?

Yes **No**

011

(Step **011** continues)

011 (continued)

Is the ready LED blinking?
Yes **No**

012

Go to Step 015.

013

- Wait for about 3 minutes at the end of IML.
- Go to Step 015.

014

- Press the 'Start' key on the 3746-900 control panel.
- Wait for about 3 minutes at the end of IML.
- Go to Step 015.

015

Is the Ready LED ON?
Yes **No**

016

You have another problem. Restart the problem determination. Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

017

Go to “MAP: 3746-900 Ending Exchange Procedure After Power ON” on page 1-136

018

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the TIC3 replacement and after replacing the FRU, continue this procedure.

Did you replace the TIC3 by a new one?
Yes **No**

019

Go to Step 023 on page 1-42

020

- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?
Yes **No**

021

- Changing the TIC3 did not solve the problem. Reinstall the TIC3 that was previously removed by following the next two steps.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement, then after FRU replacement return here to continue this procedure.
- Press the 'Exit' key on the 3746-900 control panel. then go to Step 023 on page 1-42.

022

- The TIC3 of the CBSP has been successfully changed. There is no diagnostic for this FRU.
- As you were here because the 3746-900 had its standby LED blinking permanently, and now that it is IMLed, you have solved your problem.
- Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

023

(Step **023** continues)

023 (continued)

Is there another FRU to exchange in your FRU list?

Yes **No**

024

Call support for assistance.

025

Go to Step 002 on page 1-40 to exchange the next FRU.

026

- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the CBSP replacement and after the CBSP replacement, continue this procedure.

Did you replace the CBSP by a new one?

Yes **No**

027

Is there another FRU to exchange in your FRU list?

Yes **No**

028

Call support for assistance.

029

Go to Step 002 on page 1-40 to exchange the next FRU.

030

- The CBSP has been successfully changed.
- As you were here because the 3746-900 had its standby LED blinking permanently, now that it is IMLed, you have solved your problem.
- Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

MAP: Standby LED ON

You are here because the 3746-900 has its standby LED ON. This state is usually a normal state, but in order to have all the diagnostics facilities the 3746-900 must be IMLed with its ready LED ON.

001

Set the 3746-900 to Offline mode if not already done.

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem management" option.
- Double click on the "Set 3746-9x0 Online/Offline Option".
- On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
- On the next "Set 3746-9x0 Online/Offline" window, click on "OK".

Is the "power control" mode (1) or (3) displayed on the 3746-900 control panel?
Yes No

002

- Select the FRU of your FRU list with the highest fault probability.
- Go to Step 006.

003

Go to Step 014 on page 1-44.

004

Is there another FRU to exchange in your FRU list?
Yes No

005

Call support for assistance.

006

Is this FRU the CBSP or the TIC3 of CBSP?
Yes No

007

Go to Step 009.

008

- If you change the CBSP, go to Step 061 on page 1-48.
- If you change the TIC3 of the CBSP, go to Step 056 on page 1-47.

009

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the FRU on your FRU list which has the highest fault probability, then return here.
- If not already done, switch the CB1(s) ON.

Is the "power control" mode displayed on the 3746-900 control panel?
Yes No

010

Is there another FRU in your FRU list for exchange?
Yes No

011

Call support for assistance.

012

(Step **012** continues)

012 (continued)
- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to remove the FRU previously installed
- If not already done, switch the CB1(s) ON.
- Go to Step 006 on page 1-43 to exchange the next FRU of your FRU list.

013

- You have found a problem. Nevertheless, continue this procedure.
- Go to Step 014

014

Is the "power control" display set to (3) on the 3746-900 control panel?
Yes No

015

Do the following:
- Press the "power control" key until (3) is displayed in the power control window.
- Press the "validate" key.

Did you succeed in changing the "power control" mode.
Yes No

016

Go to Step 037 on page 1-46.

017

Go to Step 018.

018

.
- Press on the "start" key on the 3746-900 control panel.

Does the ready LED start to blink?
Yes No

019
- Select the FRU on your FRU list with the highest fault probability.
- Go to Step 027 on page 1-45

020
- A normal IML is terminated when 00000000 is displayed on the control panel and the ready LED comes ON after about 3 minutes. In case a problem occurs during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED come steady ON?
Yes No

021

Go to “MAP: Ready LED Blinking” on page 1-49.

022

Did you change an FRU during this procedure?
Yes No

023

(Step **023** continues)

023 (continued)

Go to "MAP: 3746-900 in Offline Mode" on page 1-124.

024

Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

025

Is there another FRU to exchange in your FRU list?
Yes No

026

Call support for assistance.

027

Is this FRU the CBSP or the TIC3 of CBSP?
Yes No

028

Go to Step 030.

029

- If you change the CBSP, go to Step 061 on page 1-48.
- If you change the TIC3 of the CBSP, go to Step 056 on page 1-47

030

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 to exchange the FRU on your FRU list which has the highest fault probability, then return here.
- If not already done, switch the CB1(s) ON.
- When the standby LED is ON, press the start key.

Does the ready LED start to blink?
Yes No

031

Is there another FRU in your FRU list for exchange?
Yes No

032

Call support for assistance.

033

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 to remove the FRU previously installed
- If not already done, switch the CB1(s) ON.
- Go to Step 027 to exchange the next FRU of your FRU list.

034

- You have found a problem. Nevertheless continue this procedure.
- A normal IML is terminated when 00000000 is displayed on the control panel and the ready LED comes ON after about 3 minutes. In case a problem occurs during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

(Step **034** continues)

034 (continued)

Is the ready LED Steady ON?

Yes **No**

035

Go to “MAP: Ready LED Blinking” on page 1-49.

036

Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

037

- You are here because the 3746-900 "power control" mode is set to remote mode and you cannot change it. So you can be stopped at this state (standby LED ON) because of the 3746-900 problem or because the other units connected are not powered ON. In the following procedure after power ON, the 3746-900 can stop with a standby LED ON or continue its IML with the ready LED blinking.
- Select the FRU on your FRU list with the highest fault probability.
- Go to Step 040.

038

Is there another FRU to exchange in your FRU list?

Yes **No**

039

Call support for assistance.

040

Is this FRU the CBSP or the TIC3 of the CBSP?

Yes **No**

041

Go to Step 043.

042

- If you change the CBSP, go to Step 061 on page 1-48.
- If you change the TIC3 of the CBSP, go to Step 056 on page 1-47

043

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the FRU on your FRU list with the highest fault probability, then return here.
- If not already done, switch the CB1(s) ON, then wait about 30 seconds.

Does the standby LED stay ON?

Yes **No**

044

Go to Step 049 on page 1-47.

045

Do the following:

- Press the "power control" key until (3) is displayed in the power control window.
- Press the "validate" key.

(Step **045** continues)

045 (continued)

Did you succeed in changing the "power control" mode?
Yes **No**

046

Is there another FRU in your FRU list for exchange?
Yes **No**

047

Call support for assistance.

048

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to remove the FRU previously installed
- If not already done, switch the CB1(s) ON.
- Go to Step 040 on page 1-46 to exchange the next FRU on your FRU list.

049

- You have found a problem. Nevertheless continue this procedure.
- Press the "Start" key on the 3746-900 control panel.

After pressing the start key, the ready LED should blink until the end of IML with 00000000 displayed on the control panel and the ready LED ON. In case a problem occurs during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED start to blink?
Yes **No**

050

Is there another FRU in your FRU list for exchange?
Yes **No**

051

Call support for assistance.

052

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to remove the FRU previously installed
- If not already done, switch the CB1(s) ON.
- Go to Step 040 on page 1-46 to exchange the next FRU of your FRU list.

053

Wait about 3 minutes for the IML to end.

Is the ready LED ON?
Yes **No**

054

Restart the problem determination. Go to “MAP: Ready LED Blinking” on page 1-49.

055

Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137

056

(Step **056** continues)

056 (continued)
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the TIC3 replacement. After replacing the FRU, continue this procedure.

Did you replace the TIC3 by a new one?
Yes **No**

057

Go to Step 064.

058

- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?
Yes **No**

059

- Changing the TIC3 did not solve the problem. Reinstall the TIC3 previously removed using the following steps.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. Then after replacing the FRU, return here to continue this procedure.
- Press the 'Exit' key on the 3746-900 control panel. Then go to Step 064.

060

The TIC3 has been successfully changed. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

061

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the CBSP replacement. After replacing the CBSP, continue this procedure.

Did you replace the CBSP by a new one?
Yes **No**

062

Go to Step 064.

063

- The CBSP has been successfully changed.
- Since you were here because the 3746-900 was blocked with the standby LED ON, now that it is IMLed, you have solved the problem.
- Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

064

Continue the procedure according to the table below:

If you are here because:	Go to:
The "power control" mode (1) or (3) is not displayed	Step 004 on page 1-43
You can not change the "power control" mode	Step 038 on page 1-46
After pressing the 'start' key on the 3746-900 control panel, the ready LED does not blink.	Step 025 on page 1-45

MAP: Ready LED Blinking

You are here because the 3746-900 has its ready LED blinking with an error control panel code permanently displayed or flashing.

001

- Set the 3746-900 to Offline mode if not already done.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
  - Select the FRU on your FRU list with the highest fault probability, then go to Step 002.

002

Is this FRU the CBSP or the TIC3 of the CBSP?

Yes **No**

003

Go to Step 005.

004

- If you change the CBSP go, to Step 026 on page 1-51.
- If you change the TIC3 of the CBSP, go to Step 018 on page 1-50

005

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the FRU on your FRU list with the highest fault probability, then return here.
- If not already done, switch the CB1(s) ON.
- After a power ON the standby LED blinks for about 20 seconds. Then it should remain ON, **or** else the ready LED blinks until the end of IML (about 3 minutes) and then comes permanently ON.

Is the Standby LED ON?

Yes **No**

006

Is the ready LED blinking?

Yes **No**

007

Go to Step 010

008

- Wait for about 3 minutes at the end of IML.
- Go to Step 013 on page 1-50.

009

- Press the 'Start' key on the 3746-900 control panel.
- Wait for about 3 minutes at the end of IML.
- Go to Step 013 on page 1-50.

010

(Step **010** continues)

010 (continued)

Is the ready LED ON?
Yes **No**

011

You have another problem. Suspect the FRU that you exchanged. Restart the problem determination. Go to "MAP 5100: 3746 Model 900 Power Control Subsystem Problems" on page 2-4.

012

Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137

013

Is the ready LED ON?
Yes **No**

014

Is there another FRU in your FRU list for exchange?
Yes **No**

015

Call your support for assistance.

016

- Switch the CB1(s) OFF on your 3746-900.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 to remove the FRU previously installed
- Exchange the next FRU on your FRU list. Then return here.
- If not already done, switch the CB1(s) ON.
- Go to Step 002 on page 1-49 to exchange the next FRU.

017

Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137

018

- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the TIC3 replacement. After replacing the FRU, continue this procedure.

Did you replace the TIC3 by a new one?
Yes **No**

019

Go to Step 023 on page 1-51

020

- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?
Yes **No**

021

- Changing the TIC3 did not solve the problem. Reinstall the previously removed TIC3 by following the next two steps.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the FRU replacement. After replacing the FRU return here to continue this procedure.
- Press the 'Exit' key on the 3746-900 control panel. Then go to Step 023 on page 1-51.

022

(Step **022** continues)

022 (continued)
- The TIC3 of the CBSP has been successfully changed. There is no diagnostic for this FRU.
- Since you were here because the 3746-900 had its ready LED blinking permanently, now that it is IMLed, you have solved your problem.
- Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

023

Is there another FRU to exchange in your FRU list?

Yes **No**

024

Call support for assistance.

025

Go to Step 002 on page 1-49 to exchange the next FRU.

026

- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the CBSP replacement and after the CBSP replacement, continue this procedure.

Did you replace the CBSP by a new one?

Yes **No**

027

Is there another FRU to exchange in your FRU list?

Yes **No**

028

Call support for assistance.

029

Go to Step 002 on page 1-49 to exchange the next FRU.

030

- The CBSP has been successfully changed.
- Since you were here because the 3746-900 had its ready LED blinking permanently, now that it is IMLed, you have solved your problem.
- Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

MAP: Ready LED ON

You are here because the 3746-900 has:

- Its ready LED ON
- A character displayed in the "Service processor not accessible" window on the 3746-900 control panel.

001

There is no link between the 3746-900 and the service processor.

Is the CBSP and/or its associated TIC3 and/or the basic board in your FRU list?

Yes **No**

002

You have another problem on your 3746-900. Go to "MAP 2750: 3746-900 Permanent Service Processor Link Problem" on page 2-94 for problem determination.

003

- Select the FRU in your FRU list with the highest fault probability.
  - If the TIC3 has the highest fault probability, go to Step 004
  - If the CBSP has the highest fault probability, go to Step 018 on page 1-53
  - If the basic board has the highest fault probability, go to "MAP: 3746-900 in Offline Mode" on page 1-124.

004

- Ask the customer to stop traffic on the TIC3 of the CBSP.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the TIC3 replacement. After replacing the TIC3, continue this procedure.

Did you replace the TIC3 by a new one?

Yes **No**

005

Go to Step 015 on page 1-53.

006

- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?

Yes **No**

007

Go to Step 010.

008

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?

Yes **No**

009

- The TIC3 of the CBSP has been successfully changed. There is no diagnostic for this FRU.
- Since you were here because there was no link between the 3746-900 and the service processor, you have solved your problem.
- Go to Step 025 on page 1-54.

010

- Changing the TIC3 did not solve the problem. Reinstall the TIC3 previously removed using the following steps.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the FRU replacement, then after FRU replacement return here to continue this procedure.

(Step **010** continues)

010 (continued)
- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?
Yes **No**

011

The TIC3 is defective. Order a new one and restart the exchange procedure.

012

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel.
Yes **No**

013

The problem no longer exists. Suspect a connection problem. Go to Step 025 on page 1-54.

014

Go to Step 015

015

Is there the CBSP or the basic board in your FRU list?
Yes **No**

016

Call support for assistance.

017

- Go to Step 018 to exchange the CBSP if not already done.
- Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to exchange the basic board if it is in your FRU list.
- Otherwise call your support for assistance.

018

- Ask the customer to stop all traffic from the 3745.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the CBSP replacement and after the CBSP replacement, continue this procedure.

Did you replace the CBSP by a new one?
Yes **No**

019

Is there the TIC3 of the CBSP or the basic board in your FRU list?
Yes **No**

020

Call your support for assistance.

021

- Go to Step 004 on page 1-52 to exchange the TIC3 if not already done.
- Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to exchange the basic board if it is in your FRU list.
- Otherwise call your support for assistance.

022

(Step **022** continues)

022 (continued)

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?

Yes **No**

No

023

- The CBSP has been successfully changed.
- Since you were here because there was no link between the 3746-900 and the service processor, you have solved your problem.
- Go to Step 025.

Yes

024

- Changing the CBSP did not solve the problem. Reinstall the CBSP previously removed using the following steps.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement, then after FRU replacement return here to continue this procedure.
- Go to Step 004 on page 1-52 to exchange the TIC3 if not already done.
- Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to exchange the basic board if it is in your FRU list.
- Otherwise call your support for assistance.

025

- As you change an FRU, this FRU is automatically set to concurrent mode. Now you must get the FRU installed out of concurrent mode using the following steps.
  - Return to the "3746-9x0 Menu".
  - Click on the "Problem Management" option.
  - Double click on the "Perform Maintenance"
  - On the "Resource Selection Option for Maintenance" window, select the "Via active CDF-E" option and click on "OK".
  - On the next three "Resource Selector" windows that are displayed, select the FRU you have exchanged and click on "OK".
  - On the "Maintenance Options" window, select the "Remove the resource from the concurrent mode" option, then click on "OK".
  - On the "Warning" window, click on "OK".
- Before returning the machine to the customer, check on the CDF-E that all the resources of your 3746-900 are available or active.
  - Using the "Cancel" key, return to the "3746-9x0 Menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Display/update Active Configuration (CDF-E) option.
  - The contents of the active CDF-E is displayed.

Are the CBSP and its associated TIC3 available or active now?

Yes **No**

No

026

Call your support.

Yes

027

- Then go to Step 028.

028

- Return to the "3746-9x0 Menu" window.
  - Click on "Function" (in the action bar).
  - Click on the "Exit" option.
- If you have changed the power control mode from remote to local, set it back to remote mode:
  - Press the 'Power control' key until (1) is displayed in the power control window.
  - Press the 'Validate' key.

Inform the customer that the resource(s) is(are) now available, then go to “CE Leaving Procedure” on page 4-55.

3746-900 FRU list for exchange

Important

Before selecting a FRU for exchange, be sure that the 'power Control' display is set to local (3) on the control panel.

If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow knowing or changing this 'Power Control' mode, continue this procedure.

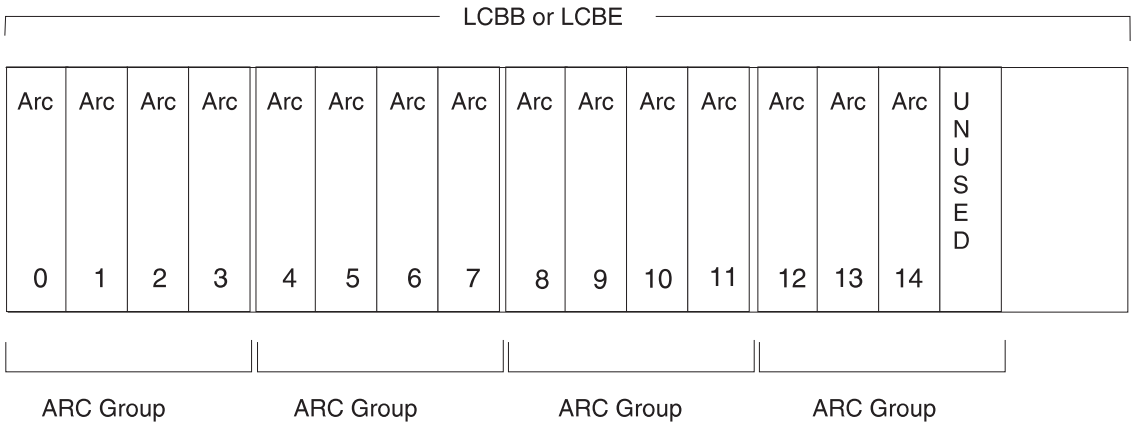
The first time you use this FRU table, select the FRU on your FRU list with the highest fault probability (except when that was specified before).

The second time you use this FRU table, select the FRU on your FRU list with the second highest fault probability, and so on.

Select FRU	Action
ARC	"MAP: ARC" on page 1-57
ACPW	"3746-900 ACPW, DCPW, Transformer" on page 1-123
Board	"MAP: 3746-900 in Offline Mode" on page 1-124
CBC	"MAP: CBC" on page 1-85
CBSP/CBSP2/CBSP3	"MAP: CBSP/CBSP2/CBSP3" on page 1-62
Control Panel	"MAP: 3746-900 SPS, Control Panel" on page 1-121
CLP/CLP3	"MAP: CLP/CLP3" on page 1-65
CS	"MAP: 3746-900 in Offline Mode" on page 1-124
CSCE	"MAP: 3746-900 in Offline Mode" on page 1-124
DCDC of CBSP/CBSP2/CBSP3	"MAP: CBSP/CBSP2/CBSP3" on page 1-62
DCDC of CLP/CLP3	First check the state of CP3, CP4, or CP5. If one or several CP(s) are OFF go to "MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped" on page 2-33 otherwise go to "MAP: CLP/CLP3" on page 1-65
DCDC of CS	"MAP: 3746-900 in Offline Mode" on page 1-124
DCDC of ESCP/ESCP2/ESCP3	First check the state of CP3, CP4, or CP5. If one or several CP(s) are OFF go to "MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped" on page 2-33 otherwise go to "MAP: ESCC/ESCC2/ESCP/ESCP2/ESCP3" on page 1-76
DCDC of TRP/TRP2/TRP3	First check the state of CP3, CP4, or CP5. If one or several CP(s) are OFF go to "MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped" on page 2-33 otherwise go to "MAP: TRP/TRP2/TRP3" on page 1-82
DCDP	"MAP: 3746-900 in Offline Mode" on page 1-124
DCPW	"3746-900 ACPW, DCPW, Transformer" on page 1-123
Enclosure	"MAP: 3746-900 in Offline Mode" on page 1-124
ESCC/ESCC2	"MAP: ESCC/ESCC2/ESCP/ESCP2/ESCP3" on page 1-76
ESCP/ESCP2/ESCP3	"MAP: ESCC/ESCC2/ESCP/ESCP2/ESCP3" on page 1-76
LCEB	"MAP: LCPB, LCPE, LCEB, LCEE" on page 1-94
LCEE	"MAP: LCEE" on page 1-92
LCPB	If LIC11 is present in your FRU list and not already tested using this procedure go to "MAP: LIC11" on page 1-97 otherwise go to "MAP: LCPB, LCPE, LCEB, LCEE" on page 1-94
LCPE	"MAP: LCPE" on page 1-90
LIC11	"MAP: LIC11" on page 1-97
LIC12	"MAP: LIC12" on page 1-103
LIC16	"MAP: LIC16" on page 1-107
SIE	"MAP: SIE" on page 1-114
SPD1	"MAP: 3746-900 in Offline Mode" on page 1-124
SPD2	"MAP: SPD2" on page 1-117
SPS	"MAP: 3746-900 SPS, Control Panel" on page 1-121
TIC3 of CBSP (which assures the link with the service processor, located in position 07N-A1-F1)	"MAP: TIC3 of the CBSP" on page 1-74
TIC3 other	"MAP: TIC3" on page 1-111
Transformer	"3746-900 ACPW, DCPW, Transformer" on page 1-123
TRP/TRP2/TRP3	"MAP: TRP/TRP2/TRP3" on page 1-82

Note: If during the preceding procedures you cannot select a resource because it is not present in CDF-E, go to "MAP 2665: 3746-900 Resource Not Present in CDF-E" on page 2-60.

MAP: ARC



001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 004.

003

Are you on the "Resource selector" window with the suspected FRU list displayed, obtained via the CPN number?
Yes No

004

- On the "Resource Selector" window, select the LIC11 (address range) associated with the ARC that you want to test, then click on "OK".
- On the following "Resource Selector" window, select the "ARCs" corresponding to the address range, then click on "OK".

Is the ARC that you want to test is alone in its ARC group?
Yes No

005

Continue with Step 007.

006

Go to Step 010 on page 1-58.

007

- Check with your customer **all** the lines speed connected to the ARCs which belong to the same ARC group of the ARC that you want to test.

(Step **007** continues)

007 (continued)

Is there a line speed higher than 64 Kbps in the ARC group?

Yes **No**

008

Go to Step 010.

009

- Ask your customer to deactivate **all** the lines of this ARC group.
- If APPN/IP is installed, deactivate all the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure with Step 010.

010

- On the next two "Resource Selector" windows, select the suspected ARC and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?

Yes **No**

011

- Check that the customer stopped traffic on the suspected ARC.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK", and go to Step 004 on page 1-57.

012

- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC SAT", then click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

013

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue with Step 029 on page 1-60.

014

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC MAT", then click on "OK".
- When the "Information Required" window is displayed, disconnect the ARC cable from the DTE, DCE, or cable and install the wrap plug according to the ARC type (see “Shipping Group Tools” on page A-2).
- Enter "YES" and click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap from the ARC cable, and reconnect the ARC cable previously removed. Click on "OK" when it is done.

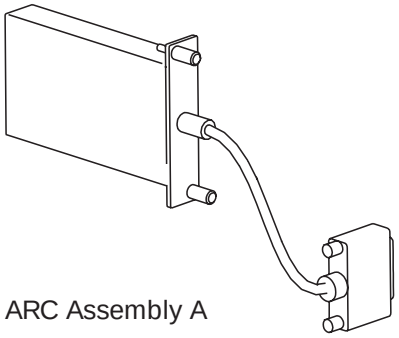
(Step **014** continues)

014 (continued)
- The "Diagnostic Active Status" window is displayed with the number of errors.

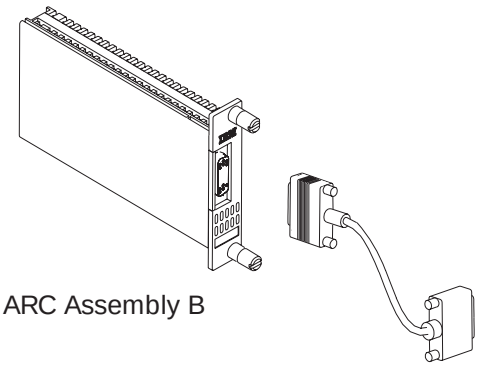
Is the diagnostic error-free ?
Yes No

015

Is the ARC you tested an ARC assembly B (with a detachable cable at the rear)?



ARC Assembly A



ARC Assembly B

Yes No

016

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue with Step 029 on page 1-60.

017

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC MAT", then click on "OK".
- When the "Information Required" window is displayed, disconnect the cable at the rear of the ARC and install the wrap plug according to the ARC type you are testing (see “Shipping Group Tools” on page A-2).
- Enter "YES" and click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap from the ARC cable, and reconnect the cable previously removed at the rear of the ARC. Click on "OK" when it is done.
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

018

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ARC replacement.
- After replacing the ARC, wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 029 on page 1-60.

019

(Step **019** continues)

019 (continued)
- The cable at the rear of the ARC is defective.
- Order a new cable and change it.
- Then continue with Step 033 on page 1-61.

020

Do you have ONLY this FRU in your FRU list?
Yes **No**

021

Is there any other FRU in your FRU list to test?
Yes **No**

022

You have tested all the FRU of your FRU list and all are error free.

Go to "MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode" on page 1-130

023

Is there any other processor or CS in your FRU list?
Yes **No**

024

Go to "3746-900 FRU list for exchange" on page 1-55 to select the next FRU.

025

Go to "MAP: 3746-900 in Offline Mode" on page 1-124

026

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the FRU replacement.
- After replacing the ARC, wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed with "SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

027

The FRU that you exchanged is defective.

028

Go to Step 033 on page 1-61.

029

- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".

(Step **029** continues)

029 (continued)
- The "Test and Running Option Selection" window is displayed with "SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

030

Is there another FRU in your FRU list to test?
Yes **No**

031

Call support for assistance. Restart the procedure.

032

Go to “3746-900 FRU list for exchange” on page 1-55.

033

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions of the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: CBSP/CBSP2/CBSP3

In this manual CBSP is the generic name for CBSP, CBSP2, or CBSP3.

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- In order to set the CBSP to concurrent mode, make sure there is no traffic on the CBSP. So stop the APPN.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Network Node Processor (NNP) Management" option.
  - On the following "Network Node Processor (NNP) Management" window, double click on the "Manage Control Points on NNPs" option.
  - On the "Manage Control Points (CP) on NNP" window, in the "Options" select the CP to stop (CP/NNP-A or CP/NNP-B), then click on the "Stop CP" option.
  - Click on "OK", and continue with Step 004.

004

- Return to the "3746-9x0 Menu".
- Click on the "Problem management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the next three "Resource Selector" windows, select the CBSP and click on "OK".
- Once the resource is set to concurrent mode the "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the "CBSP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostics error-free ?
Yes No

005

- Using the "Cancel" key, return to the "Maintenance Options" window and select "Replace the resource" option and click on "OK".
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue with Step 015 on page 1-63.

006

Do you have ONLY this FRU in your FRU list?
Yes No

007

(Step **007** continues)

007 (continued)

Is there any other FRU in your FRU list to test?
Yes **No**

008

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

009

Is there any other processor or CS in your FRU list?
Yes **No**

010

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

011

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

012

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After CBSP replacement continue with the next bullet.
- Wait for the end of IML and for the current CDF-E to be updated.
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on resource" option then click on "OK".
- A "Diagnostics" window is displayed, check that the "Specific Adapter" and "no wrap" options are selected, then click on "Start".
- A "Specific Adapter" window is displayed, select the "CBSP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

013

Suspect the FRU that you exchanged.

014

Go to Step 019 on page 1-64.

015

- Wait for the end of IML and for the current CDF-E to be updated.
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on resource" option then click on "OK".
- A "Diagnostics" window is displayed, check that the "Specific Adapter" and "no wrap" options are selected, then click on "Start".
- A "Specific Adapter" window is displayed, select the "CBSP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

(Step **015** continues)

015 (continued)

Is the diagnostic error-free ?

Yes **No**

016

Is there another FRU to diagnose ?

Yes **No**

017

go to “MAP: 3746-900 in Offline Mode” on page 1-124

018

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

019

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the CBSP with the attached couplers (CBC, TIC3).
- Select "Remove the resource from the concurrent mode" option, and click on "OK".
- On the "Resource selector" window, click on "Cancel"
- Return to the "Maintenance Options" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: CLP/CLP3

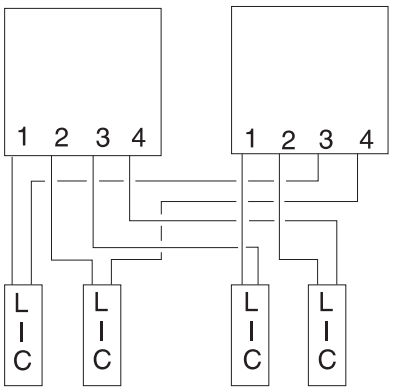
In this manual CLP is the generic name for CLP or CLP3.

The hardware can connect four adjacent LICs to two adjacent CLPs. This hardware connection allows the CLPs to operate in standard mode or backup mode depending upon the option defined in the MOSS-E table.

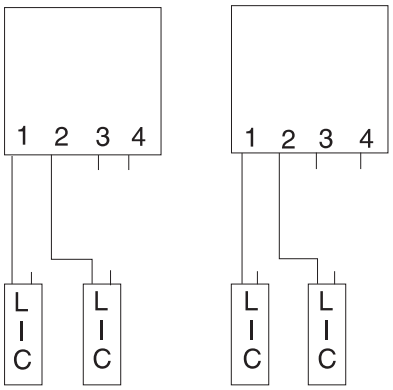
The Backup Mode is only possible between two adjacents positions

CLP Position	Line Addresses	Attached LIC Position	CLP Backup Position
07G-A1-H	2112-2175	07N-A1 G and H	07G-A1 K
07G-A1-K	2176-2239	07N-A1 J and K	07G-A1 H
07G-A1-M	2240-2303	07N-A1 L and M	07G-A1-P
07G-A1-P	2304-2367	07N-A1 N and P	07G-A1-M
07E-A1-D	2368-2431	07M-A1 C and D	07E-A1-F
07E-A1-F	2432-2495	07M-A1 E and F	07E-A1-D
07E-A1-H	2496-2559	07M-A1 G and H	07E-A1-K
07E-A1-K	2560-2623	07M-A1 J and K	07E-A1-H
07E-A1-M	2624-2687	07M-A1 L and M	07E-A1-P
07E-A1-P	2688-2751	07M-A1 N and P	07E-A1-M
07D-A1-D	2752-2815	07L-A1 C and D	07D-A1-F
07D-A1-F	2816-2879	07L-A1 E and F	07D-A1-D
07D-A1-H	2880-2943	07L-A1 G and H	07D-A1-K
07D-A1-K	2944-3007	07L-A1 J and K	07D-A1-H
07D-A1-M	3008-3071	07L-A1 L and M	07D-A1-P
07D-A1-P	3072-3135	07L-A1 N and P	07D-A1-M

CLP in Backup Mode



CLP in Standard Mode



001

- Before continuing it is necessary to check if the suspected CLP has a backup CLP and if the LICs normally under the control of the suspected suspected CLP are now under the control of the backup CLP.
  - Using the "Cancel" key return to the "3746-9x0 Menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Define Backup CLP" option.
  - The following "CLP Backup" window is displayed.

Processor Backup

Select a processor:

Processor Type	Primary Processor	Backup Processor	Automatic Fallback	Fallback State	Switchback Requested	
CLP	2112	2176	no	no	no	1
CLP	2176	2112	no	yes	no	2
CLP	2240		no	no	no	3
CLP	2304		no	no	no	3

Change Data | Fallback | Switchback | Cancel | Help

Notes:

1. **1** and **2** These lines indicate that the CLP line addresses ranges from 2112 and from 2176 can be backup for each other.
2. **2** This line with a "yes" in the fallback state column indicates that the primary processor (2176) is controlling the LICs of the backup processor (2112).
3. **3** These lines indicate that the CLPs have no backup.

Does the suspected primary CLP have a backup processor with a "Yes" in the fallback state column?

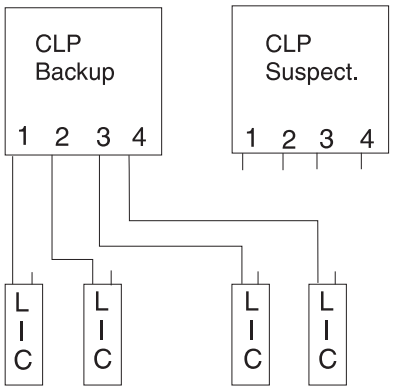
Yes **No**

002

Go to Step 027 on page 1-70.

003

The resources of the suspected CLP are under the control of the backup CLP.



Test of the suspected CLP without its LIC(s) attached

- Click on the "Cancel" key.
- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window select the "Via the active CDF-E" option and click on "OK".

(Step **003** continues)

003 (continued)
- On the "Resource Selector" windows, select the processor for concurrent maintenance, then click on "OK".
- Once the resource is set to concurrent mode the "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Go to Step 003 on page 1-66.

005

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the CLP replacement. After replacing the FRU, continue on Step 018 on page 1-69.

007

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU.
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option, then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

Now you must test the CLP with its attached LIC(s).

- Ask the customer to stop traffic on the LIC(s) associated with the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When the traffic is stopped, click on the "Configuration Management" option on the "3746-9x0 Menu" window.
- Double click on the "Define Backup CLP" option.
- The "CLP Backup" window is displayed.
- Select the suspected CLP. Then click on the "Switchback" key.
- On the "Confirmation" window, click on "OK".
- Wait for alarm "Switchback successful" and click on "OK".
- Click on "cancel" to return to the "3746-9x0 Menu" window.
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option.
- On each of the next "Resource Selector" windows displayed, select the suspected CLP for concurrent maintenance by clicking on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".

(Step **007** continues)

007 (continued)
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

008

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue on Step 018 on page 1-69.

009

Do you have ONLY this FRU in your FRU list?
Yes **No**

010

Is there any other FRU in your FRU list to test?
Yes **No**

011

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

012

Is there any other processor or CS in your FRU list?
Yes **No**

013

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

014

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

015

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue on with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected, then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

(Step **015** continues)

015 (continued)

Is the diagnostic error-free ?
Yes **No**

016

The FRU that you exchanged is defective.

017

Go to Step 024.

018

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected, then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

019

Is there another FRU in your FRU list to test?
Yes **No**

020

Call support for assistance.

021

Is there any other processor or CS in your FRU list?
Yes **No**

022

Go to “3746-900 FRU list for exchange” on page 1-55 to change the next FRU.

023

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

024

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU.
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option, then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

Now you must test the new CLP with its attached LIC(s).

- Ask the customer to stop traffic on the LIC(s) associated with the suspected processor and switchback the LIC(s) on the CLP.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When the traffic is stopped, click on the "Configuration Management" option on the "3746-9x0 Menu" window.

(Step **024** continues)

024 (continued)
- Double click on the "Define Backup CLP" option.
- The "CLP Backup" window is displayed.
- Select the CLP that you have changed. Then click on the "Switchback" key.
- On the "Confirmation" window, click on "OK".
- Wait for alarm "Switchback successful" and click on "OK".
- Click on "cancel" to return to the "3746-9x0 Menu" window.
- Select the "Problem Management" option.
- Double click on the "Perform maintenance" option.
- On each of the next "Resource Selector" windows displayed, select the suspected CLP for concurrent maintenance by clicking on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

No → **025**

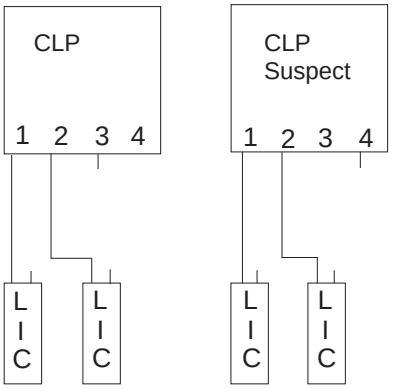
- Display the list of suspected FRUs. See “Display the FRU List After a Diagnostic Failure” on page 1-154.
- Select the FRU (other than the CLP) with the highest fault probability.
- Restart the procedure. Refer to “3746-900 FRU list for exchange” on page 1-55.

Yes → **026**

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the CLP and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option, and click on "OK".
- On the "Resource selector" window, click on "Cancel"
- Return to the "Maintenance Options" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

027

The suspected CLP has no backup.



- Click on the "Cancel" key to return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".

(Step **027** continues)

027 (continued)
- On each of the next three "Resource Selector" windows, select the processor for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes **No**

028

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Then go to Step 027 on page 1-70

029

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected, then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

030

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue on Step 040 on page 1-72.

031

Do you have ONLY this FRU in your FRU list?
Yes **No**

032

Is there any other FRU in your FRU list to test?
Yes **No**

033

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

034

Is there any other processor or CS in your FRU list?
Yes **No**

035

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

036

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

037

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

(Step **037** continues)

037 (continued)
- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue on with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected, then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

038

The FRU that you exchanged is defective.

039

Go to Step 046 on page 1-73.

040

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

041

Is there another FRU in your FRU list to test?
Yes **No**

042

Call support for assistance.

043

Is there any other processor or CS in your FRU list?
Yes **No**

044

Go to “3746-900 FRU list for exchange” on page 1-55 to change the next FRU.

045

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

046

(Step **046** continues)

046 (continued)

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU.
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option, and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: TIC3 of the CBSP

001

Is the "Resource Selector" window displayed?
Yes **No**

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- Ask the customer to stop all traffic on the TIC3 associated with the CBSP.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- On the "resource selector" window, select the TIC3 of the CBSP and click on "OK".
- On the next "resource selector" window, select the TIC3 of the CBSP and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.
- On this window, select the "Replace the resource" option and click on "OK".
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue this procedure.

Did you replace the TIC3 by a new one?
Yes **No**

004

Go to Step 016 on page 1-75.

005

- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?
Yes **No**

006

Go to Step 011 on page 1-75.

007

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?
Yes **No**

008

- The TIC3 of the CBSP has been successfully changed. There is no diagnostic for this FRU.
- On the "Maintenance Options" window, select the "Remove from concurrent mode" option.
- On the next "Resource selector" window, click on "Cancel".
- Return to the "Maintenance Options" window.

Is there another FRU in your FRU list?
Yes **No**

009

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

010

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

011

(Step **011** continues)

011 (continued)

- Suspect the TIC3 you have changed. Reinstall the TIC3 previously removed using the following steps.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. Then after FRU replacement, return here to continue this procedure.
- Press the 'Exit' key on the 3746-900 control panel.

Is 00000000 displayed on the 3746-900 control panel?

Yes **No**

012

The TIC3 is defective. Order a new one and restart the exchange procedure.

013

Is there a character displayed in the "Service processor not accessible" window on the 3746-900 control panel?

Yes **No**

014

The TIC3 that you received for exchange is defective. Order a new one and restart the exchange procedure.

015

Go to Step 016

016

Is there another FRU in your FRU list?

Yes **No**

017

Call support for assistance.

018

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

MAP: ESCC/ESCC2/ESCP/ESCP2/ESCP3

In this manual ESCP is the generic name for ESCP, ESCP2, or ESCP3, and ESCC is the generic name for ESCC or ESCC2.

001

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- On each of the next "Resource Selector" windows, select the ESCP for concurrent maintenance.
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

002

Go to Step 004

003

Go to Step 030 on page 1-79

004

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Perform the following steps to disable the ESCC.
  - Return to the "3746-9x0 Menu".
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP, and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "disable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request" option.
  - A "confirmation" window is displayed, click on "OK".
  - A "Warning" windows inform you that the ESCP configuration is saved. Click on "OK".
  - Click on "Refresh"(in the action bar). Then select "Permanent Refresh" (no more action is possible from this screen).
  - When the "disable" is complete the "ESCC x Status" line should display: DISABLED. It should not display: ENABLED.

Is the "ESCC x Status" line displaying: ENABLED?
Yes No

005

- Click on "Refresh" (in the action bar). Then select "Stop permanent refresh".
- Click on the "Options" (in the action bar). Then select the "Return" option.
- On the "ESCON Configuration lines" window, click on "Options" and then on "Exit".
- On the "Confirmation" window, click on "OK".
- On the "ESCP Management - Resource Selector" window, click on "Cancel".
- The "3746-Menu" is displayed.
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option
- On the "Resource Selection Options for Maintenance", select the "Via the Active CDF-E" option and click on "OK".
- On each of the next "Resource Selector" windows, select the ESCP for concurrent maintenance.
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

(Step **005** continues)

005 (continued)

Is the "Maintenance Options" window displayed?
Yes **No**

006

Call your support for assistance.

007

Go to Step 030 on page 1-79

008

In this Step we will try to set the ESCP in permanent reset. If the operation is not successfull nertheless continue with Step 009.

- Press the Ctrl/Esc keys at the same time.
- On the "Window List" Window, double click on the "3746-9x0 Menu".
- Click on "Problem Mangement" option.
- Double click on "Change Resource Status".
- Click on the ESCP that you want to remove the ESCC, then click on "OK".
- On "Resource Selector" window , select the ESCP then click on "OK".
- On "Resource Status Change - Selection" window, select "Permanent reset" option, then click on "OK".
- On the "Resource Status Change - Selection" window, click on "Cancel".
- Continue with Step 009.

009

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ESCC/ESCP replacement (Change first the FRU with the highest fault probability).
- After FRU replacement, return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- On each of the next "Resource Selector" windows, select the ESCP for concurrent maintenance.
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes **No**

010

Is there an ESCC or an ESCP in your FRU list not yet changed?
Yes **No**

011

Is there another FRU to test in your FRU list?
Yes **No**

012

Call support for assistance.

013

Is there any other processor or CS in your FRU list?
Yes **No**

014

Go to “3746-900 FRU list for exchange” on page 1-55 to change the next FRU.

015

(Step **015** continues)

015 (continued)

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

016

Go to Step 009 on page 1-77

017

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

018

Is there an ESCC or an ESCP in your FRU list not yet changed?
Yes No

019

- Display the list of suspected FRUs. (See “Display the FRU List After a Diagnostic Failure” on page 1-154 for the procedure).

Are the suspected FRU already changed?
Yes No

020

Go to Step 013 on page 1-77.

021

Call support for assistance.

022

- Using the "Cancel" key, return to the "Maintenance Options" window. Select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ESCC or ESCP replacement (change first the FRU with the highest fault probability, or the FRU not yet changed).
- After FRU replacement, wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

023

(Step **023** continues)

023 (continued)

Is there another FRU to test in your FRU list?
Yes No

024

Call support for assistance.

025

Is there any other processor or CS in your FRU list?
Yes No

026

Go to “3746-900 FRU list for exchange” on page 1-55 to change the next FRU.

027

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

028

Go to Step 046 on page 1-81.

029

Go to Step 046 on page 1-81.

030

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

031

Do you intend to exchange the ESCC?
Yes No

032

- Press the Ctrl/Esc keys at the same time.
- On the "Window List" Window, double click on the "3746-9x0 Menu".
- Click on "Problem Mangement" option.
- Double click on "Change Resource Status".
- Click on the ESCP that you want to remove the ESCC, then click on "OK".
- On "Resource Selector" window , select the ESCP then click on "OK".
- On "Resource Status Change - Selection" window, select "Permanent reset" option, then click on "OK".
- On the "Resource Status Change - Selection" window, click on "Cancel".
- Continue with Step 033.

033

- Using the "Cancel" key, return to the "Maintenance Options" window. Select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ESCC or ESCP replacement (change first the FRU with the highest fault probability, or the FRU not yet changed).

(Step **033** continues)

033 (continued)
- After FRU replacement, continue with Step 037.

034

Is there any other processor or CS in your FRU list?
Yes **No**

035

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130.

036

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

037

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- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

038

Is there an ESCC or an ESCP in your FRU list not yet changed?
Yes **No**

039

Is there another FRU to test in your FRU list?
Yes **No**

040

Call support for assistance.

041

Is there any other processor or CS in your FRU list?
Yes **No**

042

Go to “3746-900 FRU list for exchange” on page 1-55. to change the next FRU.

043

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

044

Go to Step 031 on page 1-79.

045

(Step **045** continues)

045 (continued)
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU.
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option. Then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

046

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option. Then click on "OK", to reinitialize the FRU(s).
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Enable the ESCC before removing the ESCC from concurrent mode.
  - Press the Ctrl/Esc keys at the same time.
  - On the "Window List" window, double click on the "3746-9x0 Menu" option.
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar), then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "enable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" windows informs you that the ESCP configuration is saved. Click on "OK".
  - Click on the "Options" (in the action bar). Then select the "Return" option.
  - On the "ESCON Configuration lines" window, click on "Options" and then on "Exit".
  - On the "Confirmation" window, click on "OK".
  - On the "ESCP Management Resource Selector" window, click on "Cancel".
  - The "3746-Menu" is displayed.
- Return to the "Maintenance Options" window.
- Select "Remove the resource from the concurrent mode" option. Then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- The "Resource Selection Options for Maintenance" window is displayed.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: TRP/TRP2/TRP3

In this manual TRP is the generic name for TRP, TRP2, or TRP3.

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the processor for concurrent maintenance.
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu"
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option. Then go to Step 003

005

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window. Select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 016 on page 1-83.

007

Do you have ONLY this FRU in your FRU list?
Yes No

008

Is there any other FRU in your FRU list to test?
Yes No

009

You have tested all the FRU of your FRU list and all are error free.
(Step **009** continues)

009 (continued)

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

010

Is there any other processor or CS in your FRU list?
Yes No

011

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

012

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

013

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

014

The FRU that you exchanged is defective.

015

Go to Step 022 on page 1-84.

016

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

(Step **016** continues)

016 (continued)

Is the diagnostic error-free ?
Yes **No**

017

Is there another FRU in your FRU list to test?
Yes **No**

018

Call support for assistance.

019

Is there any other processor or CS in your FRU list?
Yes **No**

020

Go to “3746-900 FRU list for exchange” on page 1-55 to change the next FRU.

021

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to continue the procedure.

022

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU.
- Follow the instruction of the "Warning" window and click on "OK" when Prompted.
- The "Maintenance options" window is displayed.
- Select the "Remove the resource from the concurrent mode" option, and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: CBC

001

Is the "Ressource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Mamagement" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- Check the location of the suspected CBC to identify the associated 3745 CCU.

CBC Location	3745 CCU
07N-A1-E	CCU A
07N-A1-G	CCU B

- Ask your customer to stop all traffic on the 3745 CCU-A or CCU-B.
- In order to set the CBC to concurrent mode, make sure that there is no traffic on the CBC. So perform a permanent reset of this CBC.
  - Return to the "problem management" window.
  - Double click on the "Change resource status" option.
  - On the "Resource selector" window, select the "CBSP" or the "TRP" associated with the CBC you want to test.
  - On the following "Resource selector" window, select the "CBC" and click on "OK".
  - On the "Resource Status Change-Selection" window, select "permanent reset" and click on "OK".
  - On the "Warning" window that says "Your request has been successfully completed", click on "OK".
- Return to the "3746-9x0 Menu" using the "Cancel" key.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the next three "Resource Selector" window(s), select the CBC and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "CBC SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

004

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Replace the Resource" option.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement.
- A "Confirmation" window is displayed. After the FRU replacement, continue with Step 016 on page 1-86.

005

Do you have ONLY this FRU in your FRU list?
Yes No

006

(Step **006** continues)

006 (continued)

Is there any other FRU in your FRU list to test?
Yes **No**

007

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

008

Is there the 3745 SCTL and/or 3745 DMSW card in you FRU list?
Yes **No**

009

Is there any other processor or CS in your FRU list?
Yes **No**

010

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

011

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

012

No error detected on the suspected CBC using the concurrent mode diagnostics. Before investigating the 3745 cards, change the CBC, using the procedure described in Step 021 on page 1-87.

013

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

014

Suspect the fru that you exchanged.

015

Go to Step 020 on page 1-87.

016

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.

(Step **016** continues)

016 (continued)
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

017

Is there another 3746 FRU to test in your FRU list?
Yes **No**

018

Call support for assistance. Restart the procedure.

019

Go to “3746-900 FRU list for exchange” on page 1-55.

020

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option then click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select the "Remove the resource from the concurrent mode" option, then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

021

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed with "CBC SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

022

The CBC that you install is faulty. Order a new one and restart the procedure.

023

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.

(Step **023** continues)

023 (continued)
- Select "Remove the resource from the concurrent mode" option and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window. Then click on "Cancel".
- Leave the concurrent maintenance and check on the CDF-E that all the resources of your 3746-900 are available or active.
  - Return to the "3746-9x0 menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Display/Update Active Configuration (CDF-E) option.

Are all the resources that you put in concurrent mode available or active now?
Yes **No**

024

- Return to the "Problem Management" window.
- Select the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On each the following "Resource Selector" windows select the resource that you want removed from concurrent mode.
- On the "Maintenance Options" window, select "Remove from concurrent mode" and click on OK.
- On the "Resource Selector" window, click on "Cancel".
- On the "Maintenance Options" window, click on "Cancel" to go back to the "3746-9x0 Menu" window.
- On the "3746-9x0 Menu" window, select the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E) option.

Are all the resources that you put in concurrent mode available or active now?
Yes **No**

025

Call your support.

026

Go to Step 027

027

- You need to copy the reference CDF-E on the 3746-900 installation parameter diskette.
  - Return to the "Configuration Management" window.
  - Double click on the "Copy Reference CDF-E on Diskette" option.
  - Follow the procedure displayed on the following screens.
- Then go to Step 028.

028

- Return to the "3746-9x0 Menu" window.
  - Click on "Function" (in the action bar).
  - Click on the "Exit" option.
- If you have changed the power control mode from remote to local, set it again to remote mode:
  - Press the 'Power control' key until (1) is displayed in the power control window.
  - Press the 'Validate' key.
- Inform the customer that the resource(s) is(are) now available, and ask him to restart traffic on the CCU connected to the suspected CBC.

Is there traffic on the suspected CBC without any alarm?
Yes **No**

029

Select the next FRU on the 3745 to exchange, then refer to the 3745 *Maintenance Information Procedure* (MIP) manual. Use the following MIP according to the 3745 model on which the 3746-900 is attached.

(Step **029** continues)

029 (continued)
- *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A
- *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 model 21A to 61A.

030

Problem solved. Go to “CE Leaving Procedure” on page 4-55.

MAP: LCPE

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the line connection box (LCB) for concurrent maintenance. Then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected line connection box.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

Is there a line traffic on ARCs installed in LCBB?
Yes No

006

Go to “MAP: LCPB, LCPE, LCEB, LCEE” on page 1-94

007

- On this window, select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LCPE replacement. After the FRU replacement, continue with the following bullet.
- On the "Maintenance Options" window, select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.

Is a LCEE in your FRU list?
Yes No

008

Go to Step 011 on page 1-91.

009

Did you already change the LCEE?
Yes **No**

010

Go to "MAP: LCEE" on page 1-92

011

Is there another FRU in your FRU list
Yes **No**

012

Go to "MAP: 3746-900 Ending Procedure in Concurrent Mode" on page 1-139

013

Go to "3746-900 FRU list for exchange" on page 1-55 to select the next FRU.

MAP: LCEE

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the line connection box (LCB) for concurrent maintenance. Then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected line connection box.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

Is there a line traffic on ARCs installed in LCBB?
Yes No

006

Go to “MAP: LCPB, LCPE, LCEB, LCEE” on page 1-94

007

- On this window, select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LCEE replacement. After the FRU replacement, continue with the following bullet.
- On the "Maintenance Options" window, select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.

Is a LCPE in your FRU list?
Yes No

008

Go to Step 011 on page 1-93.

009

Did you already change the LCPE?
Yes **No**

010

Go to "MAP: LCPE" on page 1-90

011

Is there another FRU in your FRU list
Yes **No**

012

Go to "MAP: 3746-900 Ending Procedure in Concurrent Mode" on page 1-139

013

Go to "3746-900 FRU list for exchange" on page 1-55 to select the next FRU.

MAP: LCPB, LCPE, LCEB, LCEE

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the line connection box (LCB) for concurrent maintenance. Then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected line connection box.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue with Step 012 on page 1-95.

007

- Using the "Cancel" key, return to the "Maintenance Options" window. Select the the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **007** continues)

007 (continued)

Is the diagnostic error-free ?
Yes No

008

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 015.

009

Is there another FRU to test in your FRU list (other than LCPB, LCEB, LCPE, LCEE)?
Yes No

010

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130.

011

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

012

- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

013

Go to Step 018 on page 1-96.

014

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

015

- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **015** continues)

015 (continued)

Is the diagnostic error-free ?
Yes **No**

016

Go to Step 018

017

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

018

Do you have another FRU to exchange?
Yes **No**

019

Are you sent here using a CPN or SRC sequence number?
Yes **No**

020

Go to Step 022.

021

Check if you have another FRU suspected in your FRU list.

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- The "Resource Options Selection for Maintenance" is displayed.
  On this window, select:
  – "By Specific Customer Problem Number (CPN)", if you are here with a CPN or,
  – "By the sequence number of a system reference code" if you are here with a SRC sequence number.
- Click on "OK".
- On the next window enter either the CPN or the SRC sequence number according to your previous selection, and click on "OK".
- The "Resource Selector" window is displayed with the FRU suspected and their fault probality.

Is there another FRU suspected in your FRU list?
Yes **No**

022

Call support for assistance.

023

- Order the FRU suspected and exchange it.
- Go to “3746-900 FRU list for exchange” on page 1-55.

024

Go to “3746-900 FRU list for exchange” on page 1-55.

MAP: LIC11

001

Is the "Ressource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Mamagement" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" windows, select the LIC11 for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected LIC11.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LIC11.
- Unfasten the screws which maintain the cable, coming from the LCBB, on the rear of the LIC11 and unplug the cable.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes No

006

Go to Step 026 on page 1-100.

007

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **007** continues)

007 (continued)

Is the diagnostic error-free ?
Yes **No**

008

Go to Step 027 on page 1-100.

009

- Click on "Cancel".
- Replug the cable coming from the LCBB on the rear of the LIC11 and secure it.
- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LCBB.
- Unfasten the screws which maintain the cable, coming from the LIC11, on the LCBB and unplug this cable from the LCBB.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

010

Go to Step 024 on page 1-99.

011

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

012

Go to Step 025 on page 1-100.

013

Do you have ONLY this FRU in your FRU list?
Yes **No**

014

Is there any other FRU in your FRU list to test?
Yes **No**

015

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

016

(Step **016** continues)

016 (continued)

Is there any other processor or CS in your FRU list?
Yes **No**

017

Go to Step 032 on page 1-101.

018

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

019

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement. After the LIC11 replacement, continue with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Install the wrap plug PN 58G9425 on the rear of the LIC11.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

020

Check the LIC11 installation. If everything is correct, the LIC11 that you installed is defective.

021

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

022

Check the LIC11 installation. If everything is correct, the LIC11 that you installed is defective.

023

- Connect and secure the cable from the LCBB to the rear of the LIC11.
- Go to Step 043 on page 1-102

024

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window informs you that the wrap test is not running. Click on "OK".

(Step **024** continues)

024 (continued)
- The "Diagnostic Active Status" window is displayed. Then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 025.

025

The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

026

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed. Then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 027.

027

.
- The LIC11 is defective.
- Using the "Cancel" key, return to the "Maintenance Options" window, select the "Replace the Resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement. After the LIC11 replacement, continue with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Install the wrap plug PN 58G9425 at the rear of the LIC11.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

028

Call your support for assistance.

029

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **029** continues)

029 (continued)

Is the diagnostic error-free ?
Yes No

030

Call your support for assistance.

031

- Connect and secure the cable from the LCBB to the rear of the LIC11.
- Go to Step 043 on page 1-102

032

- Connect and secure the cable from the LCBB to the rear of the LIC11.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".

Is initialization successful?
Yes No

033

- On the "Warning" window, click on "OK".
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the **all** LCB part replacement of your FRU list (LCPB or LCEB) and after the replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen then continue.
- Return to the "Maintenance Options" window, by clicking on "OK" on the "Resource Selector" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".

Is initialization successful?
Yes No

034

Call your support for assistance.

035

- On the "Warning" window, click on "OK".
- Using the "Cancel" and "Leave" keys, return to the "Resource Selection Options for Maintenance" window,
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LCB and click on "OK".
- On the next "Resource Selector" windows, select the LCB and click on "OK".

Is the "Maintenance Options" window displayed?
Yes No

036

Call your support for assistance.

037

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **037** continues)

037 (continued)

Is the diagnostic error-free ?
Yes No

038

Call your support for assistance.

039

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

040

Call your support for assistance.

041

Go to Step 043

042

- On the "Warning" window, click on "OK".
- Return to the "Maintenance options" window.
  - Select "Remove the resource from the concurrent mode" option and click on "OK".
  - On the "Warning" window, click on "OK".
  - On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

043

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Initialize and remove from the concurrent mode all the resources previously set in that mode using the following steps for each one:
  - Select the "Initialize the resource" option to reinitialize the FRU.
  - Follow the instructions on the "Warning" windows and click on "OK" when prompted.
  - The "Maintenance options" window is displayed.
  - Select "Remove the resource from the concurrent mode" option and click on "OK".
  - On the "Warning" window, click on "OK".
  - On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Click on "Cancel" key.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: LIC12

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the LIC12 for concurrent maintenance. Then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected coupler.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 023 on page 1-105.

007

- Using the "Cancel" key, return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want test on the 3746-900.

(Step **007** continues)

007 (continued)
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

008

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 023 on page 1-105.

009

- If you have installed the wrap plug according to the type of connection continue with Step 011.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?
Yes **No**

010

Go to Step 007 on page 1-103 to run the diagnostic again using the other wrap plug.

011

Do you have ONLY this FRU in your FRU list?
Yes **No**

012

Reconnect and secure the cable at the rear of LIC12.

Is there any other FRU in your FRU list to test?
Yes **No**

013

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

014

Is there any other processor or CS in your FRU list?
Yes **No**

015

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

016

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

017

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU,

using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 018.

018

- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

019

The FRU that you exchanged is defective.

020

- If you have installed the wrap plug according to the type of connection continue with Step 030 on page 1-106.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps?
Yes **No**

021

Go to Step 018 to run the diagnostic again using the other wrap plug.

022

Go to Step 030 on page 1-106.

023

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 024.

024

- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".

(Step **024** continues)

024 (continued)
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

025

Is there another FRU to test in your FRU list?
Yes **No**

026

Call support for assistance. Restart the procedure.

027

Go to “3746-900 FRU list for exchange” on page 1-55.

028

- If you have installed the wrap plug according to the type of connection continue with Step 030.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps?
Yes **No**

029

Go to Step 024 on page 1-105 to run the diagnostic again using the other wrap plug.

030

- Reconnect and secure the cable at the rear of LIC12.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: LIC16

001

Is the "Ressource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Mamagement" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the LIC16 for concurrent maintenance. Then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected coupler.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003

005

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 019 on page 1-109.

007

- Using the "Cancel" key, return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested on the 3746-900.

(Step **007** continues)

007 (continued)
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

008

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 019 on page 1-109.

009

Do you have ONLY this FRU in your FRU list?
Yes **No**

010

Reconnect and secure the cable at the rear of LIC16.

Is there any other FRU in your FRU list to test?
Yes **No**

011

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

012

Is there any other processor or CS in your FRU list?
Yes **No**

013

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

014

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

015

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 016 on page 1-109.

016

(Step **016** continues)

016 (continued)

- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

017

The FRU that you exchanged is defective.

018

Go to Step 023.

019

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warnig" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

020

Is there another FRU to test in your FRU list?
Yes **No**

021

Call support for assistance. Restart the procedure.

022

Go to “3746-900 FRU list for exchange” on page 1-55.

023

- Reconnect and secure the cable at the rear of LIC16.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".

(Step **023** continues)

023 (continued)
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: TIC3

001

Is the "Resource Selector" window displayed?
Yes No

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- On the "Resource Selector" window, select the coupler for concurrent maintenance.
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

004

- Check that the customer stopped traffic on the suspected coupler.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 003.

005

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "TIC3 SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

006

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, continue with Step 016 on page 1-112.

007

Do you have ONLY this FRU in your FRU list?
Yes No

008

Is there any other FRU in your FRU list to test?
Yes No

009

You have tested all the FRU of your FRU list and all are error free.
(Step **009** continues)

009 (continued)

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

010

Is there any other processor or CS in your FRU list?

Yes **No**

011

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

012

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

013

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Using the "Cancel" key, return to the "Maintenance Options" window. Then select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "TIC3 SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

014

The FRU that you exchanged is defective.

015

Go to Step 020 on page 1-113.

016

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "TIC3 SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

017

(Step **017** continues)

017 (continued)

Is there another FRU in your FRU list to test?
Yes **No**

018

Call support for assistance. Restart the procedure.

019

Go to “3746-900 FRU list for exchange” on page 1-55.

020

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

MAP: SIE

001

- Be sure that the customer stopped traffic on the MAE.
- Return to the "3746-9x0 Menu".
- Click on the "Multiaccess Enclosure (MAE) Management" option.
- Double click on the "Perform Maintenance on MAE" option.
- The "MAE Maintenance" window is displayed, asking you to confirm that you want to perform maintenance on MAE. Click on "Yes".
- A new "MAE Maintenance" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- Wait until an alarm window displays: "MAE Concurrent Maintenance in progress". Click on "OK".
- Wait until the MAE link icon comes red.
- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Selective IML" option.
- The "MAE Selective IML" window is displayed, asking you to confirm that you want to perform MAE selective IML. Click on "Yes".
- A new "MAE Selective IML" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- An alarm window is displayed with "MAE Selective IML in progress". Click on "OK".
- Wait until An alarm window is displayed with "MAE IML Complete". Click on "OK".

Is the MAE Selective IML Complete?
Yes No

002

- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Perform Maintenance on MAE" option.
- The "MAE Maintenance" window is displayed, asking you to confirm that you want to perform maintenance on MAE. Click on "Yes".
- A new "MAE Maintenance" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- Wait until an alarm window displays: "MAE Concurrent Maintenance in progress". Click on "OK".
- Wait until the MAE link icon comes red.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- Click on "OK" to remove the alarm messages.
- Go to Step Step 012 on page 1-115.

003

Do you have ONLY this FRU in your FRU list?
Yes No

004

Is there any other FRU in your FRU list to test?
Yes No

005

You have tested all the FRU of your FRU list and all are error free.

Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130

006

Is there any other processor or CS in your FRU list?
Yes No

007

Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

008

(Step **008** continues)

008 (continued)

Go to “MAP: 3746-900 in Offline Mode” on page 1-124

009

No error detected on the suspected FRU using the concurrent mode diagnostics. Change the FRU, using the following procedure.

- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Perform Maintenance on MAE" option.
- The "MAE Maintenance" window is displayed, asking you to confirm that you want to perform maintenance on MAE. Click on "Yes".
- A new "MAE Maintenance" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- Wait until an alarm window displays: "MAE Concurrent Maintenance in progress". Click on "OK".
- Wait until the MAE link icon comes red.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the following bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen. Then continue.
- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Selective IML" option.
- The "MAE Selective IML" window is displayed, asking you to confirm that you want to perform MAE selective IML. Click on "Yes".
- A new "MAE Selective IML" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- An alarm window is displayed with "MAE Selective IML in progress". Click on "OK".
- Wait until An alarm window is displayed with "MAE IML Complete". Click on "OK".

Is the MAE Selective IML Complete?
Yes No

010

The FRU that you exchanged is defective.

011

Go to Step 018 on page 1-116.

012

- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Selective IML" option.
- The "MAE Selective IML" window is displayed, asking you to confirm that you want to perform MAE selective IML. Click on "Yes".
- A new "MAE Selective IML" window is displayed, with "Operation Successfully sent on NNP", Click on "OK".
- An alarm window is displayed with "MAE Selective IML in progress". Click on "OK".
- Wait until An alarm window is displayed with "MAE IML Complete". Click on "OK".

Is the MAE Selective IML Complete?
Yes No

013

Is there another FRU in your FRU list to test?
Yes No

014

Call support for assistance.

015

(Step **015** continues)

015 (continued)

Is there any other processor or CS in your FRU list?

Yes **No**

016

Go to "3746-900 FRU list for exchange" on page 1-55 to change the next FRU.

017

Go to "MAP: 3746-900 in Offline Mode" on page 1-124 to continue the procedure.

018

- Go to "MAP: 3746-900 Ending Procedure in Concurrent Mode" on page 1-139

MAP: SPD2

Before exchanging the SPD2, make sure that all processors installed in the expansion enclosure are either unavailable or disconnected. Otherwise, you must set the processor(s) in concurrent mode.

001

Is the "Resource Selector" window displayed?
Yes **No**

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Options Selection for Maintenance" window, select the "Via the Active CDF-E" option, click on "OK".
- Go to Step 003.

003

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display Active Configuration CDF-E" option.
- Note all the processors belonging to the expansion enclosure which are active or available.

Is there processor of the expansion enclosure active or available?
Yes **No**

004

Go to Step 016 on page 1-118.

005

- Ask the customer to stop all the traffic on all the processors of the expansion enclosure.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Go to Step 006

006

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance"
- On the "Resource Selection Options for Maintenance" select the "Via the active CDF-E" option.
- On the three following "Resource Selector" windows, select the processor that you want to set in concurrent mode and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes **No**

007

- Check that the customer stopped traffic on the suspected processor.

Is the selected processor a ESCP?
Yes **No**

008

Go to Step 006

009

Go to Step 013 on page 1-118

010

(Step **010** continues)

010 (continued)

Is there another processor in the expansion enclosure to set in concurrent mode?

Yes **No**

No: **011**

Go to Step 016

Yes: **012**

Go to Step 006 on page 1-117

013

- Perform the following steps to disable the ESCC.
  - Return to the "3746-9x0 Menu".
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "disable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".
  - Click on "Refresh"(in the action bar). Then select "Permanent Refresh" (no more action is possible from this screen).
  - When the "disable" is complete the "ESCC x Status" line should display: DISABLED. It should **not** display: ENABLED.

Is the "ESCC x Status" line displaying: ENABLED?

Yes **No**

No: **014**

- Click on "Refresh" (in the action bar). Then select "Stop permanent refresh".
- Click on the "Options" (in the action bar). Then select the "Return" option.
- On the "ESCON Configuration lines" window, click on "Options" and on "Exit".
- On the "Confirmation" window, click on "OK".
- On the "ESCP Management Resource Selector" window, click on "Cancel".
- The "3746-Menu" is displayed.
- Go to Step 006 on page 1-117

Yes: **015**

- You are not able to disable the ESCC and set the ESCP in concurrent mode.
- If you have another processor to set in concurrent mode, go to Step 006 on page 1-117. Otherwise, go to Step 016.

016

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the SPD2 and continue with the next bullet.
- On the service processor screen, the alarms generated by SPD2 unplugging and plugging are displayed.
- Click on "OK" of each alarm received during the SPD2 exchange and check that all the processors of the expansion enclosure have generated a plug alarm.
- Since there is no specific diagnostic for the SPD2 card, start a diagnostic on a processor in the expansion enclosure.
- Go to Step 017

017

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option, and click on "OK".

(Step **017** continues)

017 (continued)
- A "Diagnostics" window is displayed. Check that the "specific Adapter" and "no wrap" options are selected and click on "OK".
- A "Specific Adapter" window is displayed. Select the desired processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

018

Is there another FRU in your FRU list to test?
Yes **No**

019

Call your support for assistance.

020

- Click on "Cancel" to return to the "Maintenance Options" window.
- Go to “3746-900 FRU list for exchange” on page 1-55 to select the next FRU.

021

- Click on "Cancel" to return to the "Maintenance Options" window.
- Select the "Initialize the Resource" option and click on "OK".
- At the "Warning" message, click on "OK".

Is this processor an ESCP?
Yes **No**

022

Go to Step 024.

023

- It is necessary to enable the ESCC before removing the ESCP from concurrent mode.
  - Simultaneously press the Ctrl/Esc keys.
  - On the "Window List" window, double click on the "3746-9x0 Menu" option.
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "enable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".
  - Click on the "Options" (in the action bar). Then select the "Return" option.
  - On the "ESCON Configuration lines" window, click on "Options" and then on "Exit".
  - On the "Confirmation" window, click on "OK".
  - On the "ESCP Management Resource Selector" window, click on "Cancel".
  - The "3746-Menu" is displayed.
- Return to the "Maintenance Options" window.
- Select "Remove the resource from the concurrent mode" option, then click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- The "Resource Selection Options for Maintenance" window is displayed.

024

(Step **024** continues)

024 (continued)

- On the "Maintenance Options" window, select the the "Remove the Resource from the Concurrent Mode" option and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource Selector" window, click on "Cancel".

Is there another processor in the expansion enclosure to remove from concurrent mode?

Yes **No**

025

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

026

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance"
- On the "Resource Selection Options for Maintenance", select the "Via the active CDF-E" option and click on "OK".
- On each of the next three "Resource Selector" windows, select the processor that you want removed from concurrent mode and click on "OK".
- A "Maintenance Options" window is displayed.
- Go to Step 017 on page 1-118

MAP: 3746-900 SPS, Control Panel

001

Do you want to change the control panel?
Yes **No**

002

Go to Step 012

003

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement and after the FRU replacement, return here.
- From the 3746-900 control panel, run the 3746-900 control panel test (see “How to Run the 3746-900 Control Panel Test” on page 3-15).

Is the diagnostic error-free?
Yes **No**

004

Is there another FRU in your FRU list?
Yes **No**

005

Restart problem determination. Go to “MAP 2620: 3746-900 Control Panel Problem” on page 2-43.

006

Go to “3746-900 FRU list for exchange” on page 1-55.

007

Is the control panel the only FRU in your FRU list?
Yes **No**

008

Have all other suspected FRUs been tested?
Yes **No**

009

Go to “3746-900 FRU list for exchange” on page 1-55.

010

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

011

- Return to the "3746-9x0 Menu" window.
- Click on "Functions" (in the action bar).
- Select "Exit".
- On the "MOSS-E View" window, click on "Program" (in the action bar).
- Click on "Log off MOSS-E"
- If you changed the power control mode from remote to local, set it back to remote mode:
  - Press the 'Power control' key until (1) is displayed in the power control window.
  - Press the 'Validate' key.

Inform the customer that the resource(s) is(are) now available.

012

- On the "Resource Selector" window, select the SPS.

(Step **012** continues)

012 (continued)

- A "Confirmation" window is displayed, prompting you to pull out the maintenance switch. After you pull out the maintenance switch, click on "OK".
- Once the resource is set to concurrent mode A "Concurrent Maintenance Options" window is displayed.
- On this window, select the "Replace the resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to exchange the SPS. Then return here.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Check that no alarm referring to SPS malfunction is displayed on the service processor.

Is there an SPS malfunction alarm displayed?
Yes **No**

013

- Return to the "Maintenance Options" window.
- Select the "Remove the resource from the concurrent mode" and click on "OK".
- On the next "Warning" window, click on "OK" after pushing in the maintenance switch.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

014

Suspect the FRU that you exchanged. Restart the problem determination. Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4.

3746-900 ACPW, DCPW, Transformer

001

Is there a backup ACPW or DCPW installed in your 3746-900

Yes **No**

002

Go to “MAP: 3746-900 in Offline Mode” on page 1-124.

003

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement, then return here.

Is there another FRU to exchange?

Yes **No**

004

- Return to the "3746-9x0 Menu" window.
- Click on "Functions" (in the action bar).
- Select "Exit".
- On the "MOSS-E View" window, click on the "Program" (in the action bar).
- Click on "Log off MOSS-E".
- If you have changed the power control mode from remote to local, set it again to remote mode:
  - Press the 'Power control' key until (1) is displayed in the power control window.
  - Press the 'Validate' key.

Inform the customer that the resource(s) is(are) now available.

005

Is the FRU that you have to exchange one of the following: CSCE, DCDP, SPD1?

Yes **No**

006

Go to “3746-900 FRU list for exchange” on page 1-55.

007

Go to “MAP: 3746-900 in Offline Mode” on page 1-124.

MAP: 3746-900 in Offline Mode

001

Ask the customer to stop all traffic on the 3746-900 if this is not already done. If APPN/IP is installed, deactivate all the ports (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.

Set the 3746-900 to Offline mode.

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem management" option.
- Double click on the "Set 3746-9x0 Online/Offline Option".
- On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
- On the next "Set 3746-9x0 Online/Offline" window, click on "OK".

Is the FRU that you have to exchange one of the following: ACPW, DCPW, transformer, CSCE, DCDP, SPD1?

Yes **No**

002

Go to Step 010

003

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. Then return here.
- Press the 'Start' key on the 3746-900 control panel. This starts an IML.

  A normal IML is terminated when 00000000 is displayed on the control panel and when the ready LED comes ON after about 3 minutes. In case of a problem during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED come ON?

Yes **No**

004

Check that you followed the FRU exchange procedure. If you cannot identify the problem, suspect the FRU that you installed and call your support.

005

Is there another FRU to exchange?

Yes **No**

006

Go to “MAP: 3746-900 Ending Exchange Procedure After Power ON” on page 1-136.

007

Is the FRU that you have to exchange one of the following: ACPW, DCPW, transformer, CSCE, DCDP, SPD1?

Yes **No**

008

Go to Step 010

009

Go to Step 003.

010

- Start a general IML.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Operations Management" option.
  - Double click on the "Perform a general IML" option.

(Step **010** continues)

010 (continued)
- On the "Perform general IML" window, click on "YES" to continue.
- On the next "Perform general IML" window, click on "NO" to start an IML without diagnostic.
- Return to the "MOSS-E View" window.
- Click on the "Program" title bar.
- Click on "Status" option and wait for the IML to end with 00000000 displayed and the ready LED ON. Then click on "OK". In case of a problem during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED come ON?
Yes **No**

011

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement, then return here.

Did you change the TIC3 of the CBSP?
Yes **No**

012

Go to Step 027 on page 1-126

013

Is there a character displayed in the "Console not accessible" window on the 3746-900 control panel?
Yes **No**

014

Go to Step 048 on page 1-128

015

Go to Step 028 on page 1-126

016

Are you here for a DCDC problem on CLP?
Yes **No**

017

Go to Step 019.

018

- First check the state of CP3, CP4, CP5, CP6, or CP7.
- If one or several CP(s) are OFF go to “MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped” on page 2-33
- Otherwise go to Step 019.

019

Are you here for a CLP problem?
Yes **No**

020

Go to Step 024 on page 1-126.

021

(Step **021** continues)

021 (continued)

Have you more than one CLP installed on the 3746-900?
Yes **No**

022

Go to Step 024.

023

Before starting this procedure check if CLP(s) are set in standard or backup mode in order to see what will be tested during this Offline procedure. Go to “MAP: 3746-900 CLP Backup or Standard Mode Setting” on page 1-146 to check the CLP status and change it if necessary. Then return here and continue with Step 024.

024

- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:” on page 1-129).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

025

- Change the FRU for which you entered in this procedure.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 032.

026

- No error detected. Exchange **all** the FRUs on your FRU list.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to replace all the FRUs. After replacing the FRUs, continue with Step 041 on page 1-127.

027

Does the ready LED come ON?
Yes **No**

028

Is there another FRU in your FRU list?
Yes **No**

029

Call your support for assistance, or restart problem determination.

030

Go to Step 011 on page 1-125 to exchange the next FRU.

031

Go to Step 048 on page 1-128

032

- Run all the diagnostics on the 3746-900.

(Step **032** continues)

032 (continued)
- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:” on page 1-129).
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

033

Is there another FRU to test in your FRU list?
Yes **No**

034

Call for assistance.

035

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to:
  - Remove the FRU previously installed
  - Exchange the next FRU on your FRU list. Then return here.
- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:” on page 1-129).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

036

Is there another FRU to test in your FRU list?
Yes **No**

037

call for assistance.

038

Go to Step 035.

039

Go to Step 040

040

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

041

Is the 3746-900 in standby?
Yes **No**

042

Go to Step 045 on page 1-128

043

- Press the 'Start' key on the 3746-900 control panel. An IML is started. A normal IML is terminated when 00000000 is displayed on the control panel and the ready LED comes ON after about 3 minutes. In case of a problem during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED come ON?
Yes No

044

Check that you followed the FRU exchange procedure. If you do not identify the problem. Suspect a FRU that you have installed and call your support.

045

- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:” on page 1-129).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes No

046

- Suspect an FRU that you changed.
- Display the list of suspected FRUs. (See “Display the FRU List After a Diagnostic Failure” on page 1-154 for procedure).
- Select the FRU with the highest fault probability.
- Restart the procedure, refer to “MAP: 3746-900 in Offline Mode” on page 1-124.

047

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

048

- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:” on page 1-129).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes No

049

Is there another FRU to test in your FRU list?
Yes No

050

Call for assistance.

051

(Step **051** continues)

051 (continued)
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 to:
  - Exchange the next FRU on your FRU list, then return here.
- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "Start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:”).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

052

Is there another FRU to test in your FRU list?
Yes **No**

053

Call your support for assistance.

054

Go to Step 051 on page 1-128.

055

Go to Step 056.

056

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

Note: If a diagnostic timeout occurs when you have started the diagnostic on the "Whole 3746-900" with "No wrap" option, restart once the diagnostic. If diagnostic timeout is again displayed contact your support.

MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode

Note

This procedure does not apply for SIE cassette and MAE cards.

No error detected on **all** on the FRU list using the concurrent mode diagnostics.

Change **all** FRUs, one by one, using the following procedure.

001

- Using the "Cancel" key, return to the "Maintenance options" window.
- Select the "Replace the Resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After replacing the FRU, continue with the next bullet.
- Wait until the 'Alarm xxxx FRU unplugged' and 'Alarm xxxx FRU plugged' messages are displayed on the service processor screen.
- On the "Confirmation" window, click on "OK".
- If you have another FRU to exchange, go to Step 001. Otherwise go to Step 002.

002

On the following table scan the FRU selection column from top to bottom, until you find one of the FRUs you suspected. Then select the test.

If none of the FRUs you changed are listed below, go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

FRU Selection	Test Name	FRU Tested	Action
CBSP/CBSP2/CBSP3	Specific Adapter	CBSP/CBSP2/CBSP3, CBC, Part of TIC3	Go to Step 003.
CLP/CLP2	Specific Adapter	CLP/CLP3, LIC11, LIC12, LCPB, LCEB, LCPE,LCEE, ARCs	Go to Step 003.
ESCP/ESCP2/ESCP3	Specific Adapter	ESCP/ESCP2/ESCP3, ESCC/ESCC2	Go to Step 003.
TRP/TRP2/TRP3	Specific Adapter	TRP/TRP2/TRP3, TIC3	Go to Step 003.
DCDC of CBSP/CBSP2/CBSP3, ESCP/ESCP2/ESCP3, CLP/CLP2/CLP3, or TRP/TRP2/TRP3	Specific Adapter	Processor and attached Coupler	Go to Step 003.
CBC	CBC SAT	CBC	Go to Step 006 on page 1-131.
ESCC/ESCC2	ESCC SAT	ESCC/ESCC2	Go to Step 006 on page 1-131.
TIC3	TIC3 SAT	TIC3	Go to Step 006 on page 1-131.
LIC11	LIC11 MAT	LIC11	Go to Step 009 on page 1-131.
LIC12	LIC12 MAT	LIC12	Go to Step 016 on page 1-132.
LIC16	LIC16 MAT	LIC16	Go to Step 023 on page 1-133.
LCPB LCEB LCPE LCEE	LCBB SAT1 LCBB SAT2	LCPB, LCEB, LCPE, LCEE	Go to Step 028 on page 1-133.
ARCx	ARCxx MAT	ARCxx	Go to Step 031 on page 1-134.

003

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "No Wrap" options are selected. Then click on "Start".

(Step **003** continues)

003 (continued)
- A "Specific Adapter" window is displayed. Select the processor that you want to test and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed Time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error free?
Yes **No**

004

Suspect a FRU that you changed. Restart the procedure.

005

Go to Step 033 on page 1-134.

006

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Test and Running Option Selection" window is displayed with the diagnostics available.
- Select the "xxx SAT" according to the coupler that you want to test. Then click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error free?
Yes **No**

007

Suspect a FRU that you changed. Restart the procedure.

008

Go to Step 033 on page 1-134.

009

You test a LIC11.

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LCBB.
- Unfasten the screws which maintain the cable, coming from the LIC11, on the LCBB and unplug this cable from the LCBB.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

010

Suspect a FRU that you changed. Restart the procedure.

011

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".

(Step **011** continues)

011 (continued)
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

012

Suspect a FRU that you changed. Restart the procedure.

013

Is there another FRU that you changed to test?
Yes **No**

014

- Plug the cable in the LCBB and secure it using screws.
- Go to Step 036 on page 1-134.

015

- Plug the cable in the LCBB and secure it using screws.
- Go to Step 002 on page 1-130.

016

You test a LIC12.

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want tested.
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

017

Suspect a FRU that you changed. Restart the procedure.

018

- If you have installed the wrap plug according to the type of connection continue with Step 020 on page 1-133.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?
Yes **No**

019

Go to Step 016 to run the diagnostic again using the other wrap plug.

020

(Step **020** continues)

020 (continued)

Reconnect and secure the cable at the rear of LIC12.

Is there another FRU that you changed to test?

Yes **No**

021

Go to Step 036 on page 1-134.

022

Go to Step 002 on page 1-130.

023

You test a LIC16.

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested.
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

024

Suspect a FRU that you changed. Restart the procedure.

025

Reconnect and secure the cable at the rear of LIC16.

Is there another FRU that you changed to test?

Yes **No**

026

Go to Step 036 on page 1-134.

027

Go to Step 002 on page 1-130.

028

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Test and Running Option Selection" window is displayed with the diagnostics available.
- Select the "LCBB SAT2" and click on "OK".
- The "Diagnostic Active Status" window is displayed. Then when the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **028** continues)

028 (continued)

Is the diagnostic error free?
Yes **No**

029

Suspect a FRU that you changed. Restart the procedure.

030

Go to Step 033.

031

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Test and Running Option Selection" window is displayed with the diagnostics available.
- Select the "ARC SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. Then when the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error free?
Yes **No**

032

Suspect a FRU that you changed. Restart the procedure.

033

Is there another FRU that you changed to test?
Yes **No**

034

Go to Step 036.

035

Go to Step 002 on page 1-130.

036

- Select "initialize the resource" option and click on "OK".
- On the "Warning" window, click on "OK".

Did you put the ESCC in concurrent mode?
Yes **No**

037

Go to Step 039 on page 1-135

038

- Enable the ESCC before removing the ESCC from concurrent mode.
  - Simultaneously press the Ctrl/Esc keys.
  - On the "Window List" window, double click on the "3746-9x0 Menu" option.
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - You obtain the "ESCC Status Management" window.
  - Select the "enable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".

(Step **038** continues)

038 (continued)
  – Click on the "Options" (in the action bar). Then select the "Return" option.
  – On the "ESCON Configuration lines" window, click on "Options" then on "Exit".
  – On the "Confirmation" window, click on "OK".
  – On the "ESCP Management Resource Selector" window, click on "Cancel".
  – The "3746-Menu" is displayed.
- Return to the "Maintenance Options" window.

039

- Select "Remove the resource from the Concurrent Mode" and click on "OK".
- On the "Resource Selector" window, click on "Cancel".
- The "Resource Selection Options for Maintenance" is displayed.
- Click on the "Cancel" key.

Have you removed all the resources from concurrent mode?
Yes **No**

040

Go to Step 036 on page 1-134 to remove resource from concurrent mode.

041

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

MAP: 3746-900 Ending Exchange Procedure After Power ON

You are here, because you put the 3746-900 in ready state, after an FRU replacement. Before returning the machine to the customer, perform all diagnostics from the service processor.

001

- Run all the diagnostics on the 3746-900.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Perform Offline Diagnostics" option.
  - The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "no wrap" options. Then click on "start".
  - The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:”).
  - At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free?

Yes **No**

002

Restart problem determination. See “Display the FRU List After a Diagnostic Failure” on page 1-154.

003

Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

Note: If a diagnostic timeout occurs when you have started the diagnostic on the "Whole 3746-900" with "No wrap" option, restart once the diagnostic. If diagnostic timeout is again displayed contact your support.

MAP: 3746-900 Ending Procedure In Offline Mode

You are here after performing procedure in offline mode.

001

Have you solved a connection problem to RETAIN?
Yes No

002

Was there a RETAIN connection problem for transmitting the last call?

(If you do not know and if the customer cannot provide the answer go to Step 006).
Yes No

003

Go to Step 009.

004

Go to “MAP 2000: 3746-900 Manual Call” on page 2-1.

005

Go to Step 009.

006

- Return to the "MOSS-E View" panel.
- Double click on the service processor icon.
- The "Service Processor Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Display Alarms" option.
- Scroll the alarm to find if there is an alarm 0643 or 064C.

Do you find an alarm 0643 or 064C in the alarm list?
Yes No

007

No RETAIN connection problem have been found. Go to Step 009.

008

You had a RETAIN connection problem. Go to “MAP 2000: 3746-900 Manual Call” on page 2-1.

009

- Return to the "3746-9x0 Menu" window.
- Select the "Configuration Management" option.
- Select the "Display/Update Active Configuration (CDF-E).

Have you changed any FRU which appears in the CDF-E?
Yes No

010

Go to Step 015 on page 1-138

011

- You need to save the active CDF-E as Reference CDF-E.
  - Return to the "Configuration Management" window.
  - Click on the "Save active CDF-E as Reference CDF-E" option.
  - Follow the procedure displayed on successive screens.
- You need to copy the reference CDF-E on the 3746-900 installation parameter diskette.
  - Return to the "Configuration Management" window.
  - Select the "Copy Reference CDF-E on Diskette" option.

(Step **011** continues)

011 (continued)
  – Follow the procedure displayed on successive screens.
- Then go to Step 012.

012

Have you changed a processor?
Yes No

013

Go to Step 015.

014

- Go to “3746-900 EEPROM Upgrade” on page 1-155 to perform the EEPROM upgrade. When it is complete continue with the next bullet.
- Return to the "3746-9x0 Menu" and click on "Operation Management".
- Double click on the "Perform General IML".
- A Normal IML is terminated when 00000000 is displayed on the 3746-900 control panel.
  – If the control panel displays 00000000 go to Step 015.
  – If the control panel displays another code than 00000000 call your support.

015

- Set the 3746-900 to online mode, if not already done.
  – Return to the "3746-9x0 Menu" window.
  – Click on the "Problem management" option.
  – Double click on the "Set 3746-9x0 Online/Offline Option".
  – On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  – On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
- Start a general IML.
  – Return to the "3746-9x0 Menu" window.
  – Click on the "Operations Management" option.
  – Double click on the "Perform a general IML" option.
  – On the "Perform general IML" window, click on "YES" to continue.
  – On the next "Perform general IML" window, click on "NO" to start an IML without diagnostic.
  – Return to the "MOSS-E View" window.
  – Click on the "Program" title bar.
  – Click on the "Status" option and wait for the IML to end with 00000000 displayed. Then click on "OK".
- Go to Step 016.

016

Have you been working on CLP?
Yes No

017

Go to Step 019.

018

Check the CLP mode setting with the customer and change it if necessary. Use the “MAP: 3746-900 CLP Backup or Standard Mode Setting” on page 1-146. When it is complete continue with Step 019.

019

- Return to the "MOSS-E VIEW" window.
- On the 3746-900 control panel, set the power control mode to its initial value.

Go to “CE Leaving Procedure” on page 4-55

MAP: 3746-900 Ending Procedure in Concurrent Mode

You are here after performing a procedure in concurrent mode.

001

Have you solved a connection problem to RETAIN?
Yes No

002

Was there a RETAIN connection problem for transmitting the last call?

(If you do not know and if the customer cannot provide the answer, go to Step 006).
Yes No

003

Go to Step 009.

004

Go to “MAP 2000: 3746-900 Manual Call” on page 2-1.

005

Go to Step 009.

006

- Return to the "MOSS-E View" panel.
- Double click on the service processor icon.
- The "Service Processor Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Display Alarms" option.
- Scroll the alarm to find if there is an alarm 0643 or 064C.

Do you find an alarm 0643 or 064C in the alarm list?
Yes No

007

No RETAIN connection problem have been found. Go to Step 009.

008

You had a RETAIN connection problem. Go to “MAP 2000: 3746-900 Manual Call” on page 2-1..

009

Before returning the machine to the customer, check on the CDF-E that all the resources of your 3746-900 are available or active

- Return to the "3746-9x0 Menu" window.
- Click on the "Configuration Management" option.
- Select the "Display/Update Active Configuration (CDF-E).

Are all the resources that you put in concurrent mode available or active now?
Yes No

010

- Return to the "Problem Management" window.
- Select the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" select, "Via the active CDF-E" option.
- On the following "Resource Selector" windows, select the resource that you want removed from concurrent mode.
- On the "Maintenance Options" window, select "Remove from concurrent mode" and click on OK.
- On the "Resource Selector" window, click on "Cancel".

(Step **010** continues)

010 (continued)
- On the "Maintenance Options" window, click on "Cancel" to go back to the "3746-9x0 Menu" window.
- On the "3746-9x0 Menu" window, select the "Configuration Management" option.
- Select the "Display/Update Active Configuration (CDF-E).

Are all the resources that you put in concurrent mode available or active now?
Yes **No**

011

Is there an ESCP or an ESCC not available?
Yes **No**

012

Call your support.

013

Go to “MAP: 3746-900 ESCC/ESCC2 Enabling” on page 1-144 to enable it then go to Step 009 on page 1-139.

014

Go to Step 015.

015

Have you changed any FRU which appears in the CDF-E?
Yes **No**

016

Go to Step 026 on page 1-141.

017

Have you changed a processor?
Yes **No**

018

Go to Step 022 on page 1-141.

019

- Go to “3746-900 EEPROM Upgrade” on page 1-155 to perform the EEPROM upgrade. When it is complete continue here.
- Return to the "3746-9x0 Menu" and click on "Problem Management".
- Double click on the "Change Resource Status" option.
- The "Resource Status Change-Resource Selector" window is displayed. Select the processor that you have changed and click on "OK".
- On the next "Resource Selector" window, click on "OK".
- On the "Resource Status Change-Selection" window, select the "IML without diagnostics" option and click on "OK".
- A "Warning" window is displayed saying you that your request is being performed and waiting for its completion.

Is the "Warning" window saying that your request has been successfully completed?
Yes **No**

020

Call your support.

021

- On the "warning" window, click on "OK".

(Step **021** continues)

021 (continued)
- The "Resource Status Change-Resource Selector" window is displayed. Click on "Cancel".
- The "3746-9x0 Menu" window is displayed.
- Go to Step 022

022

- You need to save the active CDF-E as Reference CDF-E.
  - Return to the "Configuration Management" window.
  - Click on the "Save active CDF-E as Reference CDF-E" option.
  - Follow the procedure displayed on successive screens.
- You need to copy the reference CDF-E on the 3746-900 installation parameter diskette.
  - Return to the "Configuration Management" window.
  - Select the "Copy Reference CDF-E on Diskette" option.
  - Follow the procedure displayed on successive screens.
- Then go to Step 023.

023

Have you been working on CLP?
Yes **No**

024

Go to Step 026

025

Check the CLP mode setting with the customer and change it if necessary. Use the “MAP: 3746-900 CLP Backup or Standard Mode Setting” on page 1-146. When it is complete continue with the Step 026

026

- Return to the "3746-9x0 Menu" window.
  - Click on "Function" (in the action bar).
  - Select "Exit".
- If you have changed the power control mode from remote to local set it again to remote mode:
  - Press the 'Power control' key until (1) is displayed in the power control window.
  - Press the 'Validate' key.

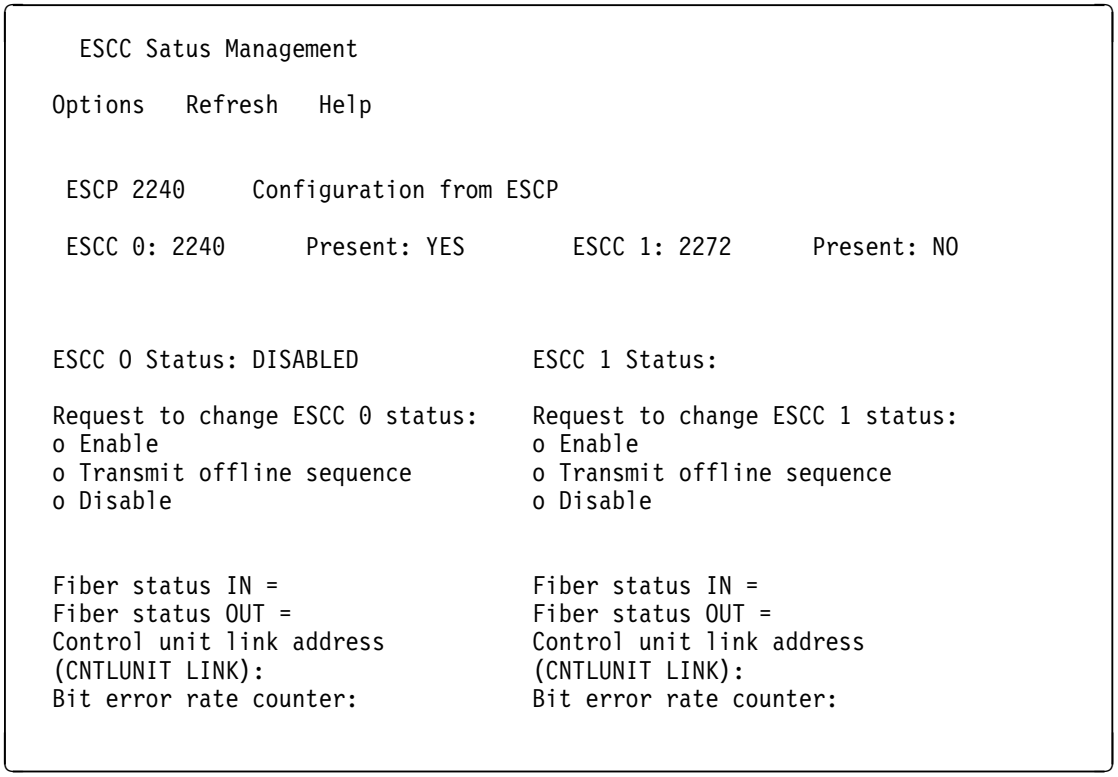
Inform the customer that the resource(s) is(are) now available, then go to “CE Leaving Procedure” on page 4-55.

MAP: 3746-900 ESCC/ESCC2 Disabling

001

Perform the following steps to disable the ESCC:

- You should be logged ON the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 icon on which you want to work.
- On the "3746-9x0 Menu", click on the "Configuration Management" option.
- Double click on the "Manage ESCON Processors" option.
- On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
- The "ESCON Configuration Lines" window is displayed.
- Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
- The "ESCC Status Management" window is displayed.



- Select the "disable" option.
- Click on "Options" (in the action bar). Then select the "Send request and save" option.
- A "confirmation" window is displayed. Click on "OK".
- A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".
- Click on "Refresh" (in the action bar). Then select "Permanent Refresh" (no further action is possible from this screen).
- When the "disable" is complete the "ESCC x Status" line displays: DISABLED.

Is DISABLED displayed?

Yes **No**

002

Suspect a problem in ESCC or ESCP. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 to exchange the suspected FRU.

003

- Click on "Refresh" (in the action bar). Then select "Stop permanent refresh".
- Return to the "3746-9x0 Menu".
  - Click on "Options" (in the action bar). Then select the "Return" option.
  - On the "ESCON Configuration lines" window, click on "Options" and on "Exit".

(Step **003** continues)

003 (continued)
- On the "Confirmation" window, click on "OK".
- On the "ESCP Management Resource Selector" window, click on "Cancel".
- The "3746-Menu" is displayed.

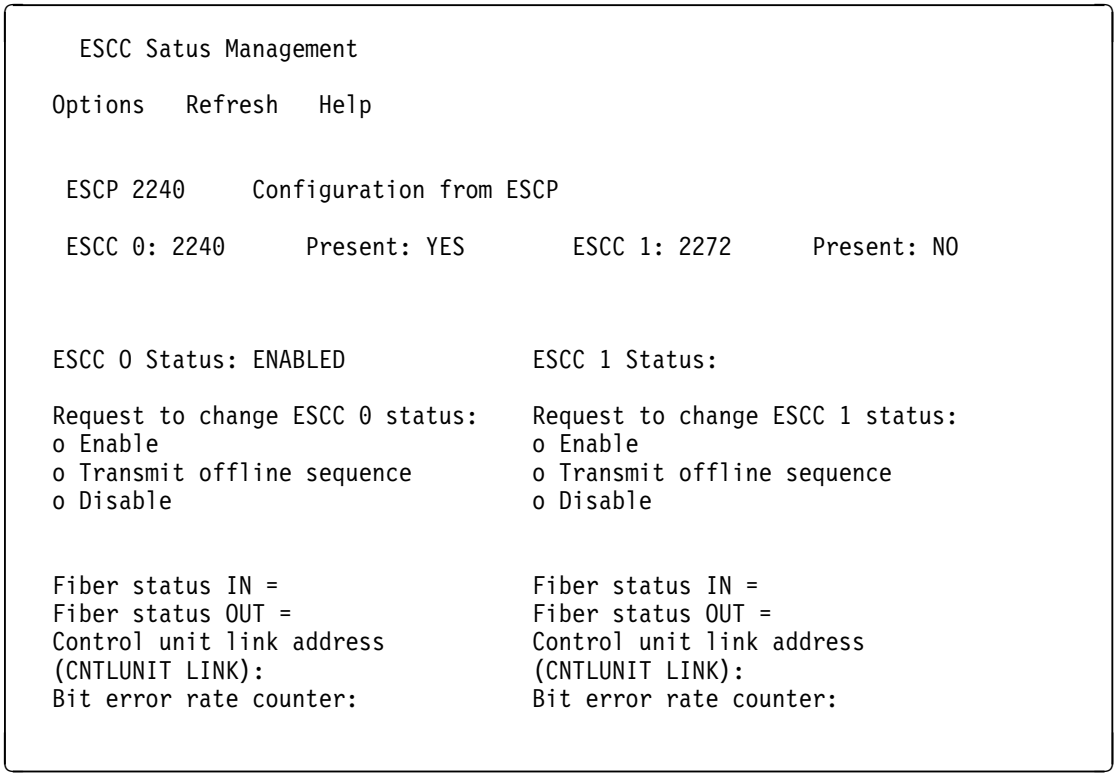
• Return to the step in the MAP you were performing.

MAP: 3746-900 ESCC/ESCC2 Enabling

001

Perform the following steps to enable the ESCC:

- You should be logged ON the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window double click on the 3746-900 icon on which you want to work.
- On the "3746-9x0 Menu", click on the "Configuration Management" option.
- Double click on the "Manage ESCON Processors" option.
- On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
- The "ESCON Configuration Lines" window is displayed.
- Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
- The "ESCC Status Management" window is displayed.



- Select the "enable" option.
- Click on "Options" (in the action bar). Then select the "Send request and save" option.
- A "confirmation" window is displayed. Click on "OK".
- A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".
- Click on "Refresh" (in the action bar). Then select "Permanent Refresh" (no further action is possible from this screen).
- When the "enable" is complete the "ESCC x Status" line displays: ENABLED.

Is ENABLED displayed?

Yes **No**

002

- Check that the wrap plug is not installed on the ESCC.
- Check that the fiber optic is well installed on the ESCC.

If everything is "OK", call your support. Otherwise correct the problem and re-start the ESCC enabling.

003

- Click on "Refresh" (in the action bar). Then select "Stop permanent refresh".

(Step **003** continues)

003 (continued)
- Return to the "3746-9x0 Menu".
  - Click on "Options" (in the action bar). Then select the "Return" option.
  - On the "ESCON Configuration lines" window, click on "Options" and on "Exit".
  - On the "Confirmation" window, click on "OK".
  - On the "ESCP Management Resource Selector" window, click on "Cancel".
  - The "3746-Menu" is displayed.
- Return to the step in the MAP you were performing.

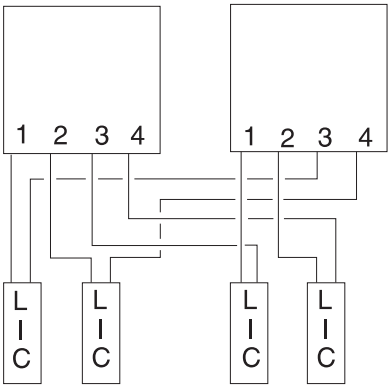
MAP: 3746-900 CLP Backup or Standard Mode Setting

The hardware can connect four adjacent LICs to two adjacent CLPs. This hardware connection allows the CLPs to operate in standard mode or backup mode depending on the option defined in the MOSS-E table.

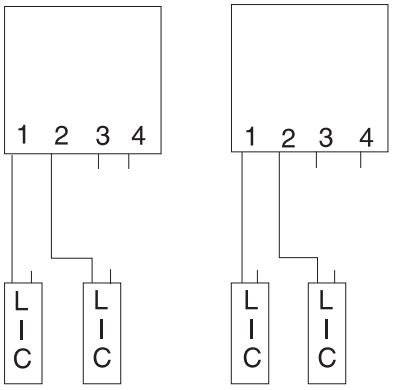
The Backup Mode is only possible between two adjacents positions

CLP Position	Line Addresses	Attached LIC Position	CLP Backup Position
07G-A1-H	2112-2175	07N-A1 G and H	07G-A1 K
07G-A1-K	2176-2239	07N-A1 J and K	07G-A1 H
07G-A1-M	2240-2303	07N-A1 L and M	07G-A1-P
07G-A1-P	2304-2367	07N-A1 N and P	07G-A1-M
07E-A1-D	2368-2431	07M-A1 C and D	07E-A1-F
07E-A1-F	2432-2495	07M-A1 E and F	07E-A1-D
07E-A1-H	2496-2559	07M-A1 G and H	07E-A1-K
07E-A1-K	2560-2623	07M-A1 J and K	07E-A1-H
07E-A1-M	2624-2687	07M-A1 L and M	07E-A1-P
07E-A1-P	2688-2751	07M-A1 N and P	07E-A1-M
07D-A1-D	2752-2815	07L-A1 C and D	07D-A1-F
07D-A1-F	2816-2879	07L-A1 E and F	07D-A1-D
07D-A1-H	2880-2943	07L-A1 G and H	07D-A1-K
07D-A1-K	2944-3007	07L-A1 J and K	07D-A1-H
07D-A1-M	3008-3071	07L-A1 L and M	07D-A1-P
07D-A1-P	3072-3135	07L-A1 N and P	07D-A1-M

CLP in Backup Mode

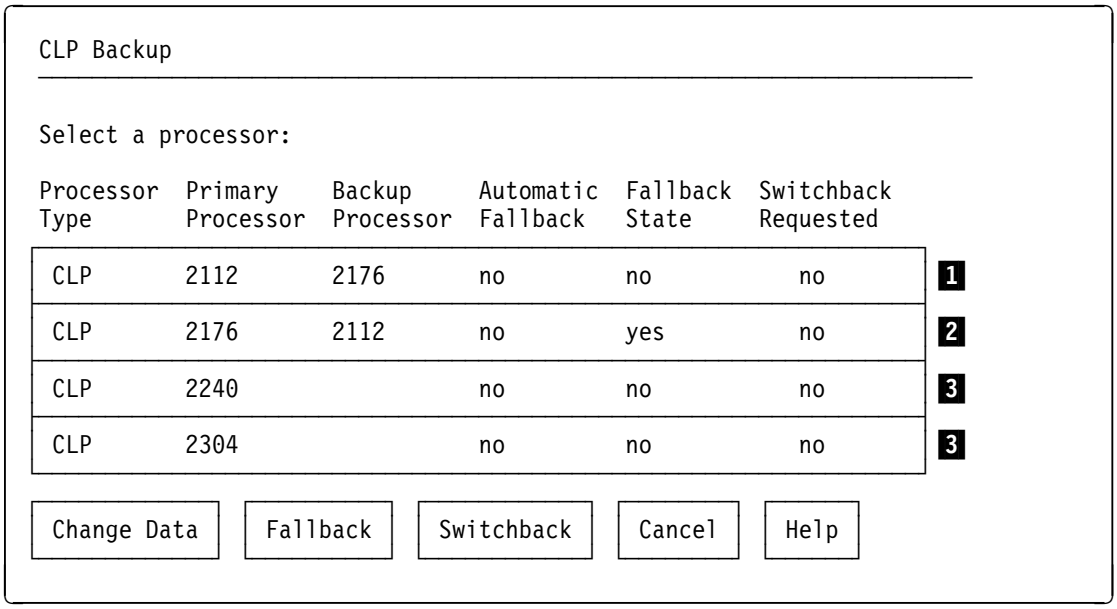


CLP in Standard Mode



001

- Before continuing it is necessary to check if the CLP under investigation has a backup CLP and if the LIC(s) normally under the control of the CLP under investigation are now under the control of the backup CLP.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Define Backup CLP" option.
  - The following "CLP Backup" window is displayed.



CLP Backup

Select a processor:

Processor Type	Primary Processor	Backup Processor	Automatic Fallback	Fallback State	Switchback Requested	
CLP	2112	2176	no	no	no	1
CLP	2176	2112	no	yes	no	2
CLP	2240		no	no	no	3
CLP	2304		no	no	no	3

Change Data | Fallback | Switchback | Cancel | Help

Notes:

1. 1 and 2 These lines indicates that the CLP line addresses ranges from 2112 and from 2176 can be backup for each other.
2. 2 This line with a "yes" in the fallback state column indicates that the primary processor (2176) is controlling the LICs of the backup processor (2112).
3. 3 These lines indicate that the CLPs have no backup.

- Note if the CLP under investigation is backuped by another one, then click on the "Cancel" key.

Does the primary CLP under investigation have a backup CLP with a "Yes" in the fallback state column?

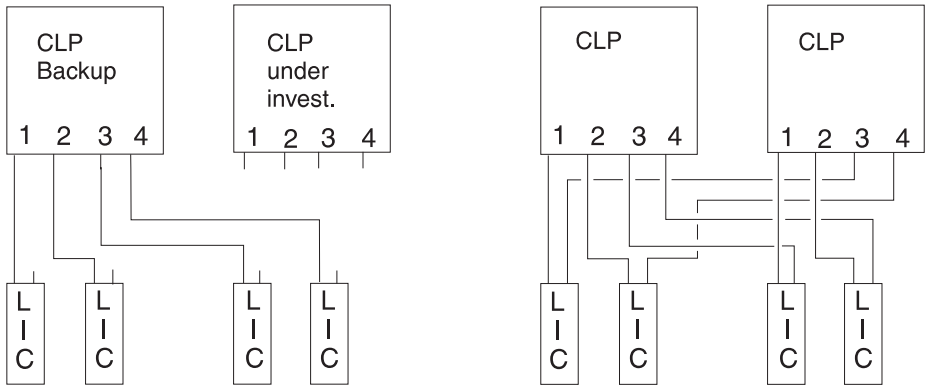
Yes **No**

002

Go to Step 006 on page 1-148

003

The LIC(s) of the CLP under investigation are under the control of the backup CLP.



LICs under control of the CLP Backup

LICs under control of their own CLP after Switchback

Do you want to switchback the LIC(s) under the control of their own CLP?
Yes No

004

Return to the step in the MAP you were performing.

005

- Ask the customer to stop traffic on the LIC(s) associated with the processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When the traffic is stopped, on the "CLP Backup" window, select the CLP and click on the "Switchback" key.
- On the "Confirmation" window, click on "OK". .
- Wait for alarm "Switchback successful" and click on "OK".
- Click on "Cancel" to return to the "3746-9x0 Menu".
- Return to the step in the MAP you were performing.

006

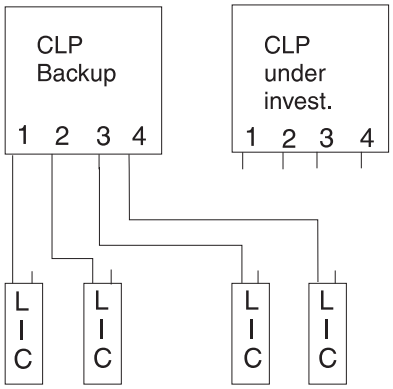
Do you want put the LIC(s) of the CLP under investigation, under the control of the backup CLP?
Yes No

007

Return to the step in the MAP you were performing.

008

The LIC(s) of the CLP under investigation, are under the control of the backup CLP.



- Ask the customer to stop traffic on the LIC(s) associated with the processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When the traffic is stopped, click on the "Configuration Management" option on the "3746-9x0 Menu" window.
- Double click on the "Define Backup CLP" option.
- The "CLP Backup" window is displayed.
- Select the CLP on which you want remove the attached resources and click on the "Fallback" key.
- On the "Confirmation" window, click on "OK".
- After fallback, the "3746-9x0 Menu" is displayed.
- Return to the step in the MAP you were performing.

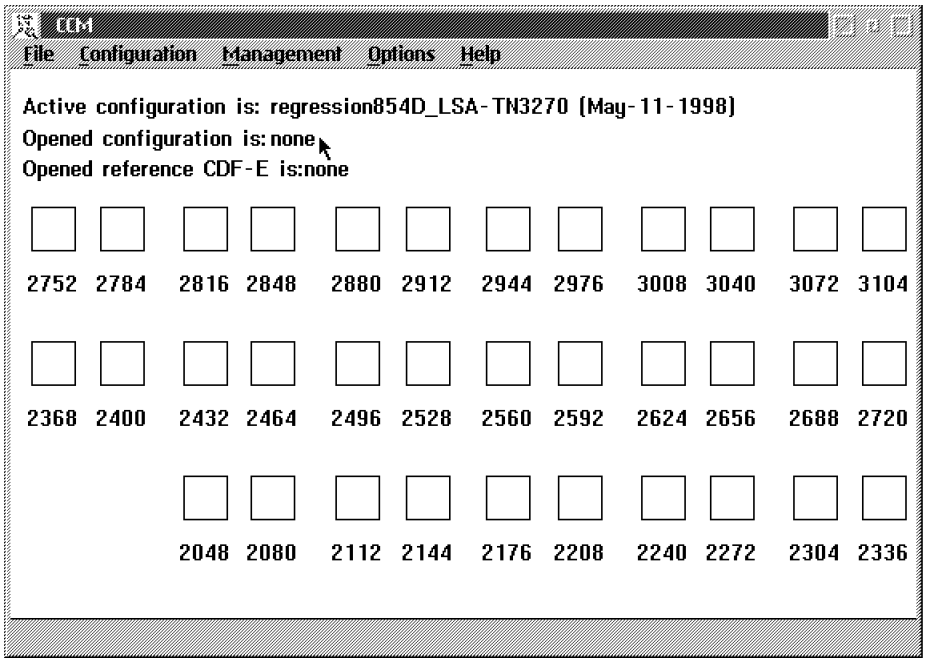
Activate/Deactivate a Resource Via CCM

Note

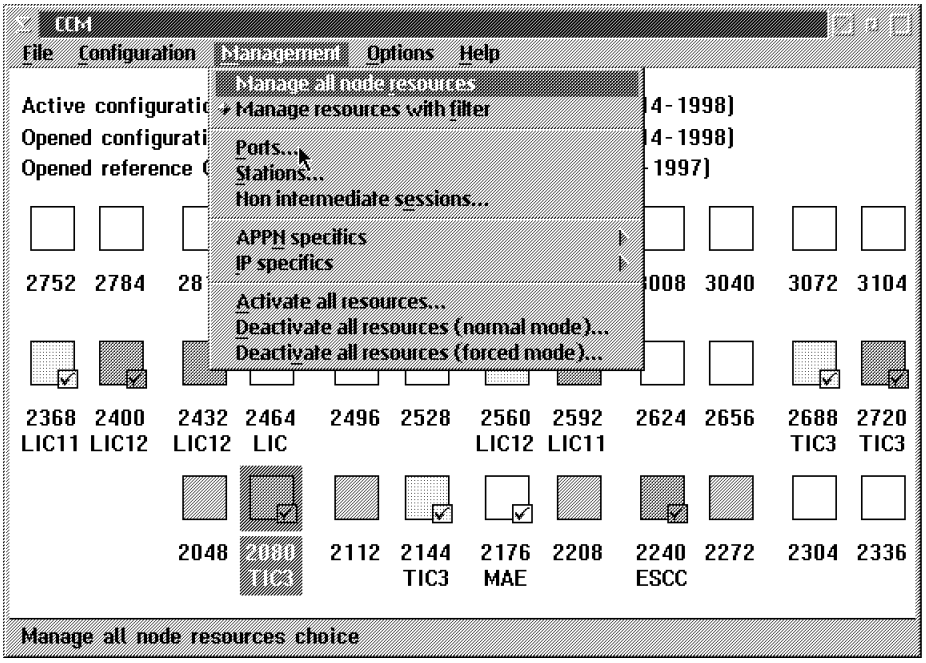
This procedure does not apply for MAE resources see the *Multiaccess Enclosure Installation and Maintenance*, manual manual.

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

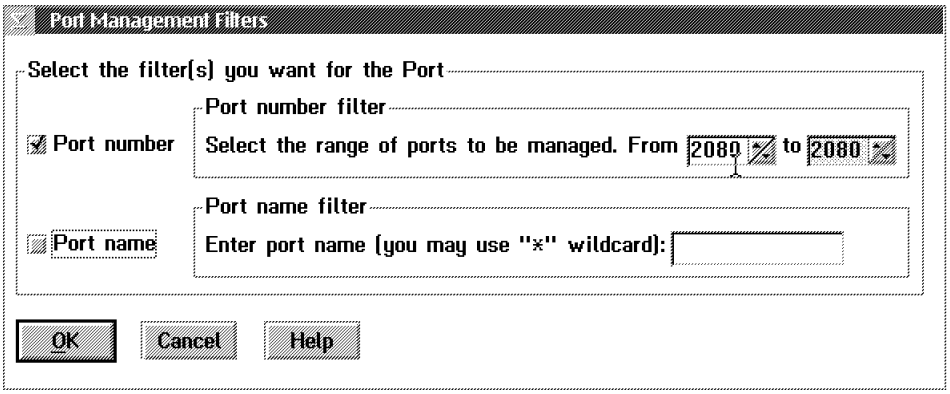
1. Click on the 3746-950 on which you want to work.
2. The "3746-900 menu" window is displayed.
3. Click on the "Network Node Processor (NNP) Management" option.
4. Double click on the "CCM Controller Configuration and Management" option.
5. The "CCM" window is displayed.



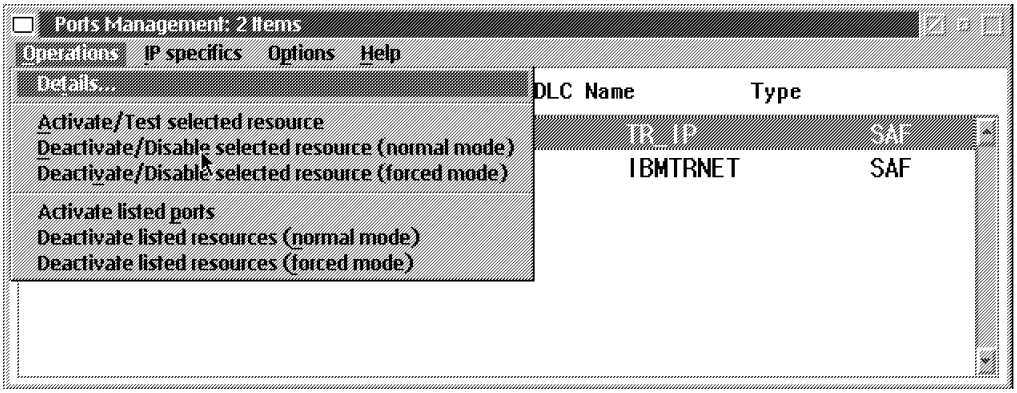
6. Click on "Management" in the title bar, select "Manage resources with filter" , then click on "Ports".



7. In the "Port Magement Filters" window, select "Port Number". The address range of the resource appears in the right of the window. Modify this address range according to the resource that you want to manage.



8. Click on "OK".
9. The "Ports Management" window is displayed, click on "Operations". A "Details" menu appears.
   - If you want to activate the resource select "Activate listed Ports" option.
   - If you want to deactivate the resource select "Deactivate/Disable Selected Resources (Normal Mode)".



10. Click on "OK" in the following window.
11. Return where do you come from.

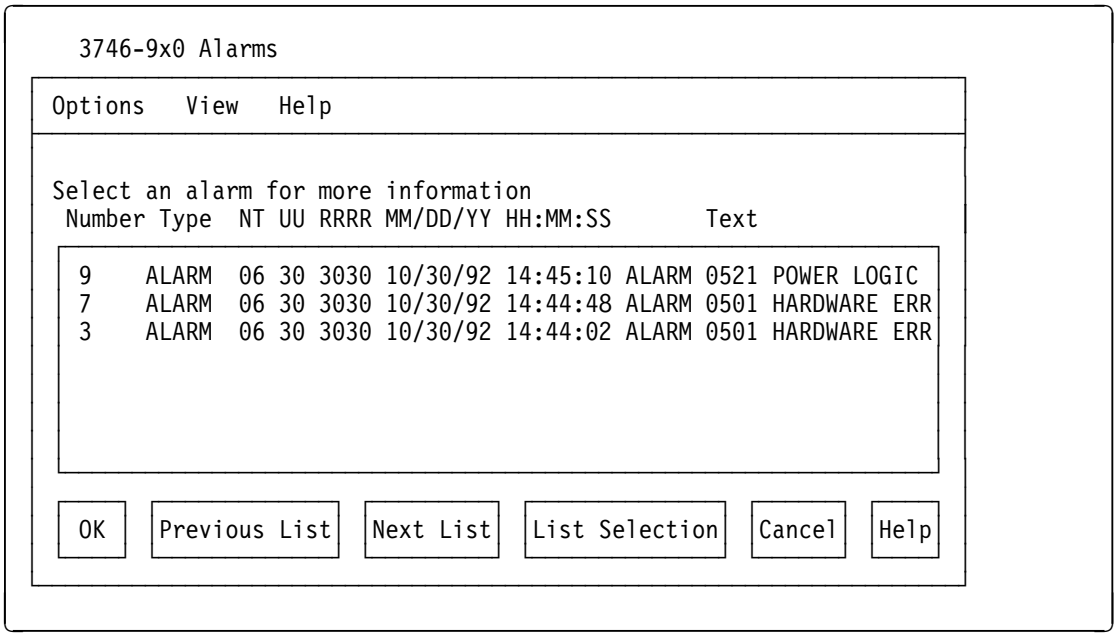
3746-900 Setting in Offline Mode

To set the 3746-900 in Offline mode, you must first set the 3746-900 in Offline mode and then start an IML.

- Set the 3746-900 in Offline mode.
  - You should be logged ON the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
  - On the "MOSS-E View" window, double click on the 3746-900 icon on which you want to work.
  - On the "3746-9x0 Menu", click on the "Problem Management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK"
- Start a general IML.
  - Return to the "3746-9x0 Menu".
  - Click on the "Operations management" option.
  - Double click on the "Perform a General IML" option.
  - On the "Perform General IML" window, click on "YES" to continue.
  - On the next "Perform General IML" window, click on "NO" to start the IML without diagnostic.
  - Return to the "MOSS-E View" window.
  - Click on the "Program" title bar.
  - Click on the "Status" option and wait for the IML to end with 00000000 displayed. Then click on "OK".
- Return to the step in the MAP you were performing.

Display the FRU List After a Diagnostic Failure

1. If you are here after following the steps in a MAP press simultaneously the Ctrl/Escp keys on the keyboard and continue with the next step otherwise go to step 4.
2. The "Window List" window is displayed.
3. Double click on the "3746-9x0 Menu" option.
4. From the "3746-9x0 Menu" window, click on the "Problem management" option.
5. The "Problem management" window is displayed.
6. Double click on "Manage Alarms/Errors/Events (SRC)".
7. The "System reference code option Selection" window is displayed.
8. Select "Alarms (Interpretation possible)", "All resources" option and click on "OK".
9. An "Alarms" window is displayed.



10. Select the last alarm (it is the one which is at the top of the screen).
11. Click on "View" (in the action bar). Then click on "Problem Interpretation" option.
12. A "Problem Interpretation" window gives you the list of suspected FRUs with their fault probability.
13. Record the FRU list and probability for later use.
14. If you were there leaded by a procedure return to the point in the procedure where you come from using the "Cancel" key.

3746-900 EEPROM Upgrade

EEPROM Upgrade Overview

The EEPROM of processors in the 3746-900 must be upgraded after certain:

- Microcode change levels (MCLs)

  Note: For MCL, the EEPROM Upgrade is done automatically.
- Microcode change fixes (MCFs),
- EC installation
- Processor replacement.

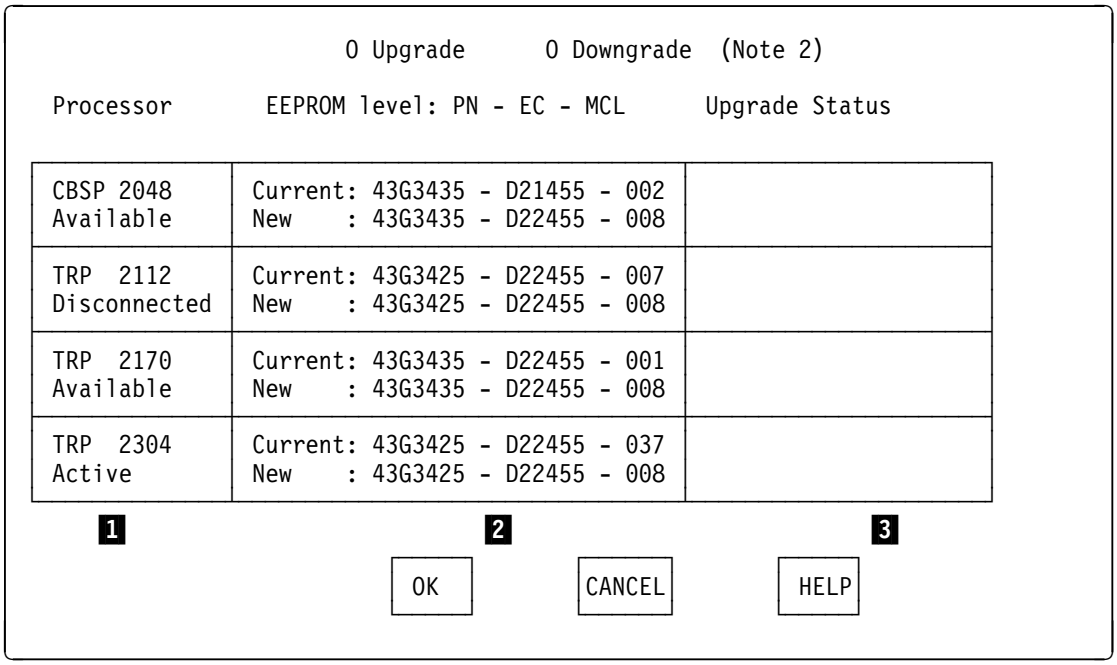
EEPROM Upgrade/Downgrade Processing

Warning

During EEPROM Upgrade/Downgrade, **Do not** power OFF or IML the 3746-900.

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

1. On the "MOSS-E VIEW" window, double click on the 3746-900 icon on which you want to work (Note 1).
2. On the "3746-9x0 Menu" window, click on the "Change Management" option.
3. Double click on the "Upgrade/Downgrade EEPROM Code Level".
4. An "EEPROM Upgrade" window is displayed telling you that the service processor is searching the 3746-900 configuration.
5. On the "EEPROM Upgrade" window, the upgradable or downgradable processors are highlighted in reverse video according to the preselected status of the "Upgrade" or "Downgrade" options at the top of the window.



- **1** Shows the list of the 3746-900 processors in CDF-E with their status (available, disconnected or active).
- **2** Shows the current and new EEPROM levels: PN/EC/Level of each processor.
- **3** The upgrade status after the activation of the function.

6. Select the "Upgrade" or "Downgrade" option at the top of the screen. Then click on "OK" according to the action that you want to perform.
7. An "EEPROM Upgrade" window informs you that the EEPROM upgrade or downgrade is in progress and the time duration.
8. At the end of the EEPROM upgrade or downgrade, an updated "EEPROM Upgrade" window is displayed with the status of the upgrade or downgrade for each processor.
9. Check the result of your EEPROM upgrade/downgrade operation using the following table and take the appropriate action:

EEPROM Status	Action
Complete	Upgrade done without error continue with the next step.
Start failed	Call your support
Failed	Call your support
Completion failed	Call your support

10. **If you have done the EEPROM Upgrade after exchanging a processor, leave this procedure and return to the step in the MAP you were performing.** Otherwise, continue with the next step.
11. Return to the "3746-9x0 Menu" and click on "Operation Management".
12. Double click on the "Perform General IML".
13. A Normal IML is terminated when 00000000 is displayed on the 3746-900 control panel.
    - If the control panel displays 00000000, go to “CE Leaving Procedure” on page 4-55
    - If the control panel displays another code than 00000000, call your support.

Notes:

1. During MCL (which is automatic), steps 1, 2, 3 are hidden (see MCL process).
2. During MCL (which is automatic), Upgrade and Downgrade options are not shown on screen.

Engineering Data Transfer

Overview

The engineering data can be transferred in three main ways:

- On diskettes
- DCAF (Distributed Console Access Facility) via LAN, SDLC
- Using Java file manager.

The transfer can be done from:

- The local service processor using diskettes (when files are not too big)
- The remote service processor using DCAF or console for Java.

Preparing Engineering Data on the Local Service Processor

1. If not already logged, enter the "Service Processor maintenance password" (default is IBM3745), or ask the customer if a specific password has been defined.
2. Double click on the "Service Processor" icon.
3. Click on "Operation Management".
4. Double click on "Manage Engineering Data". The following window is displayed:

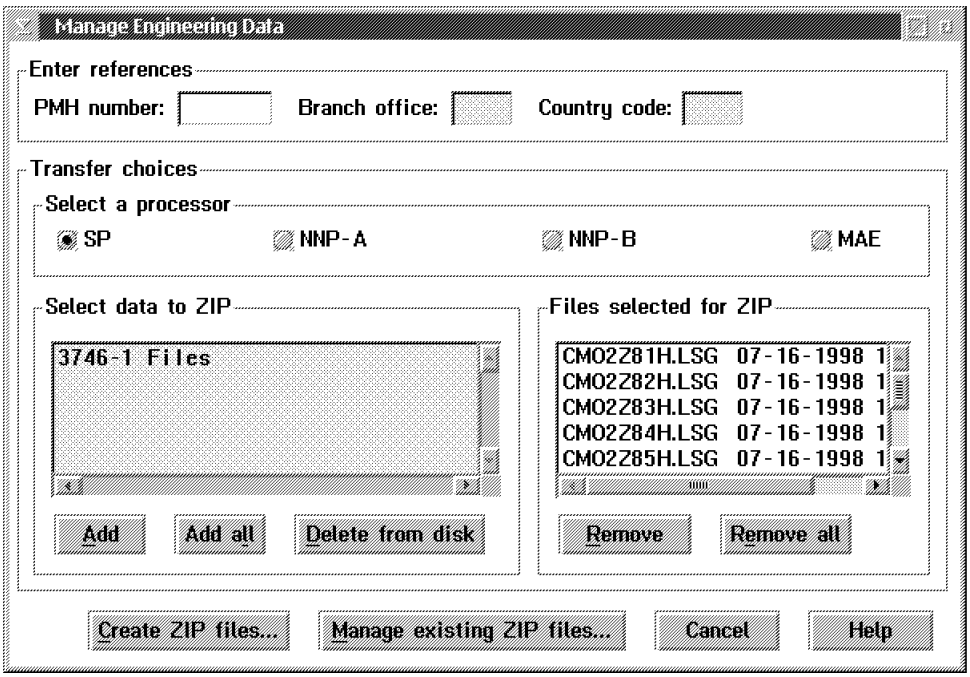


Figure 1-16. Manage Engineering Data Window

5. Enter the PMH number, the branch office and the country codes.
6. Select the "processor" with the radio button. If you do not want zip some of these files, select them and click on "Remove".
7. Repeat the two preceding Steps for each processor.
8. When you have terminated your selection, click on "Create Zip Files...", then wait until the message "zip files successfully created" is displayed.
9. Click on "OK".

Note: The Zip files created are on the disk H: of the service processor.

Transferring Engineering Data from the Service Processor

Using a Diskette

To copy the engineering data on diskette you must have access to an OS/2 window which is available after logging on the "MOSS-E View" with a PE password. An OS/2 window is available in the "Functions to Use Under PE Guidance only". Copy the Zip files which are on the H: disk of the service processor on the diskette.

Using DCAF or Console for Java

The transfer of the engineering data from the service processor to the remote service processor (or workstation) must be initiaded from the remote site using DCAF or console for Java. Refer to the &csg. manual for detailed procedure.

Note

Do not forget to "Delete" the engineering data when they have been successfully recorded on diskette, or transferred to a support center via DCAF or Java.

3746 Model 900 Diagnostic Requirements

If you want to run diagnostics you must first ensure that the area to be tested by the diagnostics is correctly disabled, from customer resources.

The following list gives the prerequisite to be able to run test on specific 3746-900 area.

For tests available for each 3746-900 area refer to “3746-900 Diagnostics Invocation” on page 3-2.

AREA	WHERE YOU SHOULD GO
ALL	Only very rarely should it be necessary to run all diagnostics. If the customer is using the machine, consider if it is **really necessary** to run all. If so ask the customer to stop using the machine and go to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.
CBC	To run the diagnostic in concurrent mode the CBC must be reseted. Refer to “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17.
CBSP/CBSP2	To run the diagnostic in concurrent mode the CBC must be reseted. Refer to “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17.
CLP	No specific requirement.
CS	The 3746-900 must be set in Offline mode. Refer to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43
CSCE	The 3746-900 must be set in Offline mode. Refer to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43
ESCC/ESCC2	To run the diagnostic in concurrent mode the ESCC must be disabled: Refer to “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 or refer to “MAP: 3746-900 ESCC/ESCC2 Disabling” on page 1-142. After diagnostic the ESCC must be enabled again, follow the procedure “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 or refer to “MAP: 3746-900 ESCC/ESCC2 Enabling” on page 1-144.
ESCP/ESCP2	To run the diagnostic in concurrent mode the ESCC must be disabled: Refer to “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 or refer to “MAP: 3746-900 ESCC/ESCC2 Disabling” on page 1-142. After diagnostic the ESCC must be enabled again, follow the procedure “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 or refer to “MAP: 3746-900 ESCC/ESCC2 Enabling” on page 1-144.
LCPB/LCPE/ARC	No specific requirement.
LIC11	No specific requirement.
LIC12	No specific requirement.
LIC16	No specific requirement.
MAE	No specific requirement for specific device of the MAE. For the complete test of the MAE no customer traffic, refer to “MAP 6030: How to Run the Selective IML on the Multiaccess Enclosure” on page 3-51.
TIC3	No specific requirement.
TRP	No specific requirement. except for testing of TRP with CBC attached where it is necessary to reset the CBC (see above) in concurrent mode.

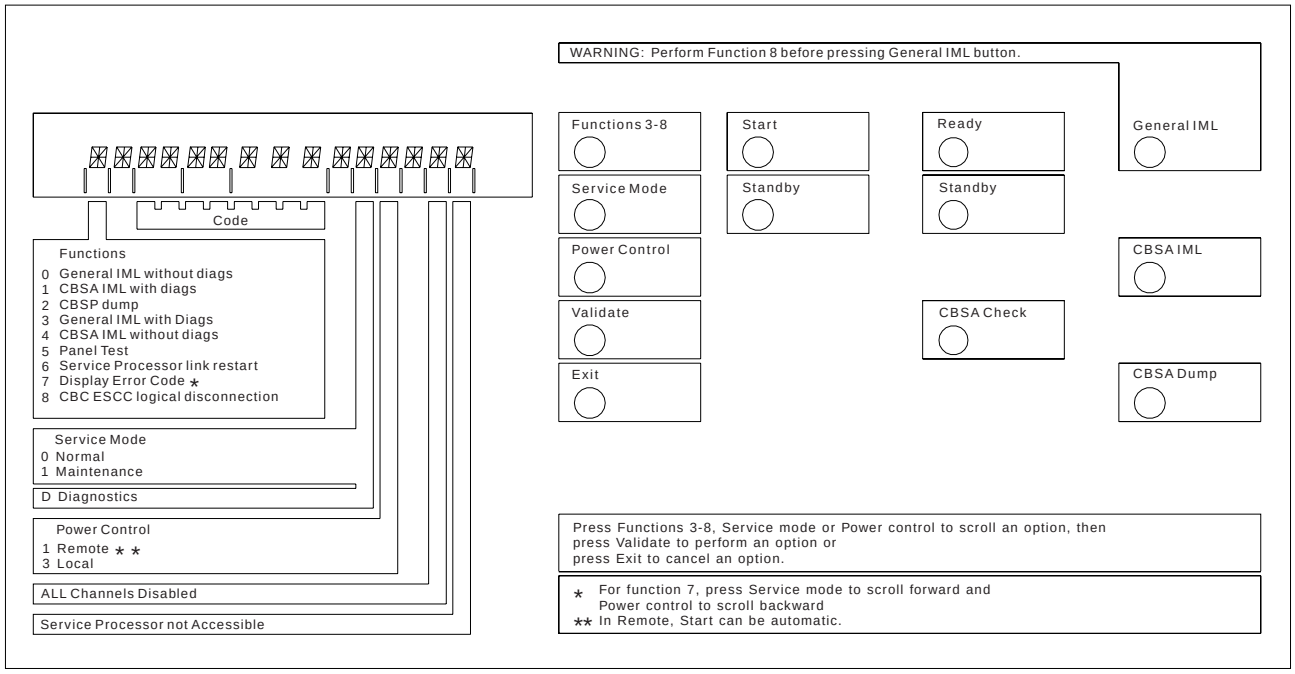
3746-900 Control Panel Use

control panel control panel control panel control panel

WARNING: Providing the 3745 UEPO switch or 3746-900 CB1 have not been activated, the control panel always has power and will display information on power control and service even though the 3746-900 is powered OFF.

Purpose of the Control Panel

The control panel allows the execution of functions which cannot be accessed via the service processor.



Note: Functions 0, 1, and 2 are not selectable using the function key.
Use the keys on the right of the panel to initiate these functions.

Figure 1-17. 3746 Model 900 Control Panel Layout

Explanation of 3746-900 Panel Keys, LEDs and Switches

switches
Refer to Figure 1-17 on page 1-160 for the location of the keys and switches.

The following three keys allow the operator to scroll the different options available.

Function key: The 'Function' key allows you to scroll through functions (3, 4, 5, 6, 7, 8) in the display window. On the panel display, the digit of the selected function starts blinking.

Notes:

1. In 'normal (0)' service mode, pressing the function key will scroll through functions 3, 4, 6 and 8.
2. In 'maintenance (1)' service mode, pressing the function key will scroll through functions 3 to 8.

Service Mode Key: The 'Service mode' key allows you to scroll through functions (0, 1) in the display window. On the panel display, the digit of the selected function starts blinking.

Note: A 'D' is displayed when the SPS card is under test and no action is allowed on the 3746-900 control panel.

Power Control Key: The 'Service mode' key allows you to scroll through functions (1, 3) in the display window. On the panel display, the digit of the selected function starts blinking.

Validate Key: When you press this key, the digit of the selected function stop blinking and the action is carried out. A function that is not validated is de-selected after a time out of 60 seconds.

Exit Key: Pressing this key cancels the selected function.

Start Key: This key allows the operator to put the 3746-900 in 'Ready' state when in 'Local' power control mode and 'Standby' state.

Standby Key: This key allows the operator to put the 3746-900 in 'Standby' state when in 'Local' power control mode and 'Ready' state.

General IML Key: This key allows the operator to initiate a general reset and IML without diagnostics.

Warning

Before starting a general IML perform a function 8. This prevents alarms/alerts beinf sent from the service processor to 3745 on CBC, or to ESCON manager on fiber link.

CBSA IML Key: This key allows the operator to initiate a CBSA reset followed by a CBSA IML with diagnostics.

CBSP Dump Key: This key allows the operator to initiate a CBSP reset followed by a CBSP dump.

Ready Indicator: This indicator is a green LED. It blinks when the 3746-900 starts to power ON. It stays ON as soon as the machine is in power ON state and IML is complete.

Standby Indicator: This indicator is a yellow LED. It blinks when the AC is applied on the 3746-900. It stays ON when the Standby state is reached and turns OFF as soon as the machine is in power ON state.

CBSA Check Indicator: This indicator is a yellow LED. It goes ON when the CBSP card is diagnosed as being faulty.

3746-900 Control Panel Display Description

The control panel display is a gas panel and the various fields can have different values. The meaning of each value is given in Table 1-5.

Table 1-5. Panel Display Values

Indicator	Display	Description
Function	0	General IML without diagnostics (see Note 1)
	1	CBSA IML with diagnostics (see Note 1)
	2	CBSP dump (see Note 1)
	3	General IML with diagnostics (see Note 2)
	4	CBSA IML without diagnostics (see Note 2)
	5	Panel test
	6	Service processor link restart
	7	Display error code
	8	CBC/ESCC logical disconnection
Code	00000000 to FFFFFFFF	An 8 hexadecimal character code which shows function progress codes and error codes. A code blinks when an error condition has been detected.
Service Mode	D	Diagnostics (SPS under test)
	0	Normal
	1	Maintenance
Power Control	1	Remote: the 3746-900 is powered ON and OFF from the host system, service processor or 3745. If ac power is lost and then restored, an *Auto Restart* is performed.
	3	Local: the 3746-900 is powered ON from the 'START' key and powered OFF from the 'STAND-BY' key on the control panel.
All channels disabled	✳	Indicator ON indicates all channels are disabled.
	Blank	Indicator OFF indicates that at least one channel is enabled.
Service processor not accessible	✳	Indicator ON, the service processor is not available for the CBSP

Notes:

1. Functions 0, 1, and 2 are not selectable using the function key. Use the keys on the right side of the panel to start these functions.
2. Function 8 is automatically executed when you start functions 3 and 4.

How to Perform 3746 Model 900 Control Panel Operations

IMPORTANT

Before working on non-customer access areas of the 3746-900, power control should be set to Local Mode. This can be done as follows:

1. Using the 'Power Control' key, scroll until the selected value is ***3***, Local Mode.
2. Press the 'Validate' key.

Power ON

To start the machine in 'Standby' state, press the 'Start' key. A Power ON sequence is executed followed by a general IML.
At successful conclusion of the operation, the display appears as follows:

0	0 0 0 0 0 0 0 0	X X

X= variable values

General IML

Press the 'General IML' key to select 'Function **0**' (General IML without diagnostics). A general reset, followed by a general IML is executed. At successful conclusion of the operation the display appears as follows:

0	X X X X X X X X	X X

X= variable values

CBSA IML

Press the 'CBSA IML' key to select 'Function **1**' (CBSA IML with diagnostics). A CBSA reset is initiated, followed by a CBSA IML. At successful conclusion of the operation the display appears as follows:

1	X X X X X X X X	X X

X= variable values

CBSP Dump

Press the 'CBSA Dump' key to select 'Function **2**' (CBSP dump). A CBSA reset and dump of CBSP microcode are executed. At successful conclusion of the operation, the display appears as follows:

2	X X X X X X X X	X X

X= variable values

General IML With Diagnostics

1. Using the 'Function' key scroll until the selected value is **3**, (General IML with diagnostics).
2. Press the 'Validate' key.

This initiates a General Reset and IML with diagnostics.

The progression code (system reference code SRC) is dynamically displayed on the control panel until the normal end of the power ON IML, is indicated as follows:

- Ready LED **ON**
- Standby LED **OFF**
- SRC **00000000** is displayed on the control panel.

CBSA IML Without Diagnostics

1. Using the 'Function' key, scroll until the selected value is **4**, CBSA IML without diags.
2. Press the 'Validate' key.

This initiates a CBSA reset and CBSA IML without diagnostics.

Panel Test

See the procedures described in “How to Run the 3746-900 Control Panel Test” on page 3-15.

Service Processor Link Restart

See the procedures described in “How to run the 3746-900 Service Processor Link Restart” on page 3-16.

Display Error Code

1. Using the 'Function' key, scroll until the selected value is **7**, (Display reference code).
2. Press the 'Validate' key.

This displays the next part of the reference code.

- Press the 'Service mode' key to scroll forward.
- Press the 'Power control' key to scroll backward.

Control Panel LED Status Versus 3746-900 States

Table 1-6. LED Status Versus 3746-900 States

Standby LED	Ready LED	3746-900 State	Comment
Blinking	OFF	AC ON	Initialization of the CBSP hardware, and the 3746-900 waits for first recognition by the MOSS-E on LAN connection.
ON	OFF	Standby	The 3746-900, initially recognized by the MOSS-E, waits for a power ON condition, (only the CBSP EEPROM code is running).
OFF	Blinking	Power ON	IML loading in all 3746-900 processors.
OFF	ON	Ready	The 3746-900 is now available.

IML Request Versus 3746 Model 900 States

The CBSA IML, the general IML, the service processor link restart function started from the control panel, and the selective IML on a processor started from the MOSS-E are all executed (or not) depending on the initial 3746-900 state.

The requested action is started only if the 3746-900 is in ready state. If not, a default action is started as shown in the following table.

Table 1-7. IML Request Versus 3746-900 States

Initial 3746-900 State	CBSA IML Request (1/4)	General IML Request (0/3)	Selective IML Request	Service Processor Link Restart (6)
AC ON (Note 1)	General IML (0/3)	General IML (0/3)	NA	General IML (3)
Standby (Note 1)	General IML (0/3)	General IML (0/3)	NA	General IML (3)
Power ON /IML in progress (Note 2)	General IML (0/3)	General IML (0/3)	NA	General IML (3)
Ready (Note 2)	CBSA IML (1/4)	General IML (0/3)	Selective IML	Service Processor Link Restart (6)
CBSA IML in progress (Note 2)	CBSA IML (1/4)	General IML (0/3)	NA	CBSA IML (1/4)
Selective IML (Note 2)	CBSA IML (1/4)	General IML (0/3)	Wait previous selective IML end	Service Processor Link Restart (6)

Notes:

1. The final state is standby.
2. The final state is ready.

Chapter 2. MAPs for FRU Isolation

3746-900 RSF MAP

MAP 2000: 3746-900 Manual Call

You are here because there was a problem in connecting the service processor to RETAIN or because you want to test this facility.

Perform a manual call using the 3746-900 facilities to check this connection.

You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

Before starting this MAP check the "Remote Support facility" options using the following procedure:

- On the "MOSS-E VIEW" window, double click on the service processor icon.
- The "Service Processor Menu" window is displayed.
- Click on the "Configuration Management" option.
- Double click on the "Manage Remote Operations" option.
- On the "Remote Operation Management" window, select the "Remote operations authorization" option and click on "OK".
- On the "Remote Support Facility" window, check that the two following options:
  - "Enable Remote Support Facility"
  - "Generate alerts"

  are selected.
- Select them if not already done and click on "OK".
- Click on "Cancel" to return to "Service Processor Menu".

001

- Return to the "MOSS-E View" window, then double click on the 3746-900 icon.
- Click on the "Problem Management" option.
- Double click on the "Report Problem Using Remote Support Facilities".
- On the "Problem Analysis" window, enter a short description: 'Testing the RSF link'. Then click on "OK".
- On the "Report Problem Using RSF" window click on "OK".
- Wait for either the alarm "Call to RETAIN successful" indicating the normal end of transmission, or the message "Call to RETAIN failed".
- Write down the alarm number.

Is the alarm "Call to RETAIN successful" displayed?

Yes **No**

002

Go to Step 004 on page 2-2.

003

The connection to RETAIN is successful. The following table shown the alarms generated by this connection.

Select the alarm number	Meaning
0641	Your microcode is up-to-date, so no fix has been downloaded.
0642	Fix has been downloaded automatically. Install the fix.
0649	Call to RETAIN successful but no download, MCL too large/not enough disk space. Active and accepts all MCL(s) already received to free space disk and retry the normal call for the new MCL(s). If problem persits call your support. PE problem.

If following the MAP you changed a FRU:

- In concurrent mode, go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.
- In offline mode, go to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.

Otherwise, go to “CE Leaving Procedure” on page 4-55.

004

Locate the alarm number in the following table and perform the action required.

Select the alarm number	Action
0643	Go to Step 005
0644	Call to RETAIN not authorized. Refer to the *Service Processor Installation and Maintenance"* manual, step "Recording the Customer Informations".
064C	The call to RETAIN has been performed but RETAIN required a disconnection due to a bad product set up. The following information is missing in RETAIN customer CCPF file or system registration file. • Customer number • Machine model xxA • Branch office number • Area number • Warranty/Status Provide thus information to your support before he contacts the RETAIN coordinator for updating.
068C	Suspect a communication manager problem. Check the communication manager configuration. Refer to the *Service Processor Installation and Maintenance"* manual, step "Setting Up Communication Parameters to Allow Remote and Netview Operations". Re-boot the service processor. If the problem persits call your support.
068D	Check the connection between modem and the line. Check that the telephone number used is correct. Refer to the *Service Processor Installation and Maintenance"* manual, step "Recording the Customer Informations".

005

Click on "OK" on the alarm window. A second alarm should be displayed. Locate this second alarm number in the following table and perform the action required.

Select the alarm number	Action
064A	PE problem. Call your support
064B	PE problem. Call your support
064D	The call to RETAIN has not been performed because: • The associated data have not been tersed or • The associated tersed data have not been written to the service processor disk (the partition was full). To free space on disk perform the following steps. 1. Return to the "MOSS-E View" window. 2. Double click on the service processor icon. 3. On the "Service Processor Menu" click on the "Operation Management" option. 4. Double click on "Delete Engineering Data" option. 5. A "Deleting Engineering Data" window is displayed, asking you to confirm your choice. Click on "YES". 6. Follow the prompts. 7. When this operation is finished retry a call to RETAIN. If the problem persits call your support for assistance.
0681	Suspect a multiprotocol adapter problem. • Run the multiprotocol diagnostic (refer to the *Service Processor Installation and Maintenance* manual, chapter "How to Run the Service Processor Diagnostics"). • Check that the communication manager has been correctly initialized. • If everything is correct, suspect a modem problem. Refer to the modem documentation to run diagnostics.
0682	Suspect a communication manager problem. Re-start the communication manager or if this fails re-boot the service processor.
0685	Machine not registered in RETAIN data base. The following information are missing in RETAIN CCPF. • Machine type • Serial number Provide thus information to your support before he contacts the RETAIN coordinator for updating.
0686	Check telephone number and prefix configuration. Refer to the *Service Processor Installation and Maintenance"* manual, step "Recording the Customer Informations".
0687	Suspect an integrated modem problem. • Run the integrated modem diagnostics using the wrap plug (refer to the *Service Processor Installation and Maintenance* manual, chapter "How to Run the Service Processor Diagnostics"). • If the modem is error free and if the problem persits call your support.
0688	Suspect an integrated modem problem. • Run the modem diagnostic using the wrap plug (refer to the *Service Processor Installation and Maintenance* manual, chapter "How to Run the Service Processor Diagnostics"). • If the modem is error free and if the problem persits call your support.
0689	Local modem is already in use. Check that the remote console is not in use.
068A	Integrated modem is already in use. Check that the remote console is not in use.
068B	Suspect a modem problem. • If you have an integrated modem, run the modem diagnostic using the wrap plug (refer to the *Service Processor Installation and Maintenance* manual, chapter "How to Run the Service Processor Diagnostics"). • If you have an external modem, refer to the modem documentation to run diagnostics. • If the modem is error free, suspect a line problem. Call the appropriate service representative.

3746-900 Power MAPs

MAP 5100: 3746 Model 900 Power Control Subsystem Problems

Symptom Explanation	Conditions That Could Cause This Symptom
Machine will not Power ON. Ready or standby LED not lit.	• UEPO • CB1 or CP1 tripped • ACPW or DCPW • Any CBSA card or control panel • SPD1 or Basic board • SPS

FUNCTIONAL NOTE

Power may be present when nothing is displayed on the control panel.

001

– On the 3746-900 control panel.

Are the ready and standby LEDs OFF?

Yes **No**

002

Go to Step 025.

003

– Check the position of CB1 on the basic ACPW box. See Figure 2-2 on page 2-5.

Is CB1 in the ON position ?

Yes **No**

004

Go to Step 020.

005

– Refer to Figure 2-1. Check the ac main voltage on TB1 of the transformer.

Between pin	and pin	if input is
1	2	200 v
1	3	220 v
1	4	240 v

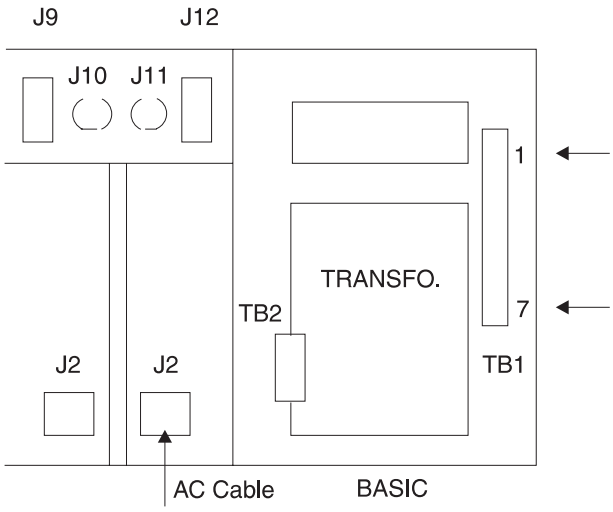


Figure 2-1. TB1 and TB2 Location on Transformer

Is the voltage correct?

Yes **No**

006

The customer power supply is defective. Also check that the ac cable is correctly seated in J2.

007

– Check CP1 on the AC box. See Figure 2-2 on page 2-5.

Is CP1 in the ON position ?

Yes **No**

008

Continue at “MAP 5130: 3746-900 CP1 Tripped.” on page 2-14.

009

– Check CP2 and CP3 on the DCDP. See Figure 2-2 on page 2-5.

(Step **009** continues)

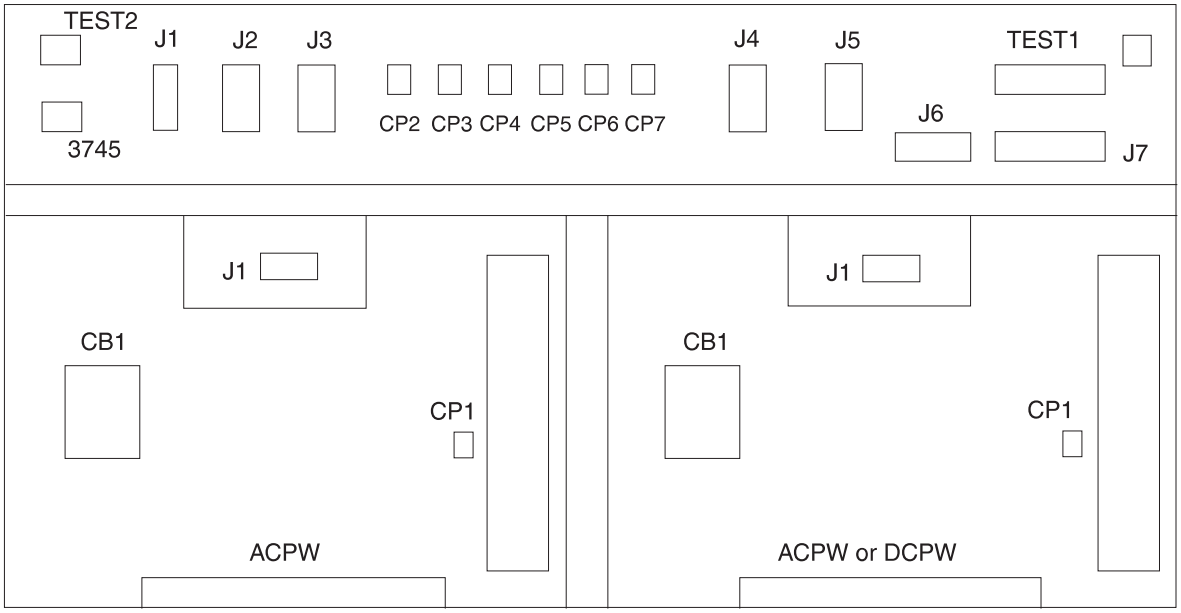


Figure 2-2. DCDP and Power Boxes

009 (continued)
Are both CP2 and CP3 in the ON position ?
Yes **No**

010

Continue at "MAP 5140: 3746-900 CP2 or CP3 Tripped" on page 2-17.

011

– Check CP4, CP5, CP6, and CP7 on the DCDP. See Figure 2-2.

Are all the previous CPs in the ON position ?
Yes **No**

012

Continue at "MAP 5150: 3746-900 CP4, CP5, CP6, or CP7 Tripped" on page 2-19.

013

– Measure the 'dc sense 1' -48v at the Test 1 connector pin 5 as shown in Figure 2-2. Refer to YZ page 234 for test 1 pin assignment.

Is the voltage present and within tolerance between -40V and -60V. ?
Yes **No**

014

Exchange the ACPW box, go to "3746-900 Maintenance Using a FRU list" on page 1-28.

015

– Measure the 'UEPO SENSE' -5v at the Test 1 connector pin 14. Refer to YZ page 234 for test 1 pin assignment.

(Step **015** continues)

015 (continued)
Is the voltage present ?
Yes **No**

016

UEPO problem. Check that the 3745 UEPO switch is in the normal position or use the YZ 242 page.

017

– Measure the 'HOLD UP' -48v at the SPD1 test connector J10 pin 5. Refer to YZ page 131 for SPD1 test connector pin assignment.

Is the voltage present ?
Yes **No**

018

Exchange the ACPW box, go to "3746-900 Maintenance Using a FRU list" on page 1-28.

019

First exchange the SPS. Then if the problem persists exchange the CBSP and the control panel. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

020

– Switch CB1 to the ON position.
– Try to power ON again.

(Step **020** continues)

020 (continued)
Is the 3746-900 powering ON now ?
Yes No

021

Is CB1 tripping again?
Yes No

022

Go to Step 005.

023

Check that the machine is correctly wired for the customer's input voltage. Refer to Figure 2-1 on page 2-4. Check the ac main voltage on the TB1 of the transformer.

Between pin	and pin	if input is
1	2	200 v
1	3	220 v
1	4	240 v

If the voltage is correct exchange the ACPW box, go to "3746-900 Maintenance Using a FRU list" on page 1-28. Refer to YZ page 105 for an eventual transformer problem.

024

Go to "CE Leaving Procedure" on page 4-55 to return the machine to the customer. If the problem is still present, contact your support.

025

Is the STANDBY light permanently ON?
Yes No

026

Is the STANDBY light blinking?
Yes No

027

Go to Step 038.

028

Is the SERVICE PROCESSOR NOT ACCESSIBLE digit ON?
Yes No

029

Is the CBSA CHECK light ON?
Yes No

030

Note the 3746-900 control panel code. Go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required.

031

Exchange the CBSP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

032

Go to "MAP 2750: 3746-900 Permanent Service Processor Link Problem" on page 2-94.

033

– Look at the power control window on the 3746-900 control panel and check the mode validity.
(1) for remote
(3) for Local.

Is the power mode in 'remote' ?
Yes No

034

Are you here because you have a problem putting the 3746-900 power ON in 'local' mode?
Yes No

035

Press the 'Power Control' key until **1** ('remote' mode) is displayed in the power control window. Then press the 'Validate' key. Try to power ON again.

036

Go to "MAP 5120: 3746-900 Power ON Problem in Local Mode" on page 2-13.

037

Go to "MAP 5110: 3746-900 Power ON Problem in Remote Mode" on page 2-8.

038

Is the READY indicator blinking ?
Yes No

039

The READY LED is ON, the 3746-900 power ON is completed.

040

The 3746-900 has received a power ON command.
(Step **040** continues)

040 (continued)
Is the SRC displayed on the 3746-900 control panel changing?
Yes **No**

041

Is the SRC different from 0528 2806?
Yes **No**

042

Go to "MAP 5180: 3746-900 Ready LED Blinking." on page 2-23.

043

Note the 3746-900 control panel code. Go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required.

044

Does the READY LED come ON?
Yes **No**

045

Note the 3746-900 control panel code. Go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required.

046

– The 3746-900 power ON sequence is complete. The READY LED is ON, the 3746-900 power ON sequence is complete.

MAP 5110: 3746-900 Power ON Problem in Remote Mode

Symptom Explanation	Conditions That Could Cause This Symptom
Standby LED ON. Machine will not Power ON.	• ACPW or DCPW • Any CBSA cassette or control panel • SPD1 or Basic board • SPS cassette • 3745 K3

FUNCTIONAL NOTE

Power may be present when nothing is displayed on the control panel.

The 3746-900 can be powered ON, when in 'remote' power mode by:

Host system connected to the 3746-900 (1)
Service Processor (2)
3745 connected to the 3746-900 (3)

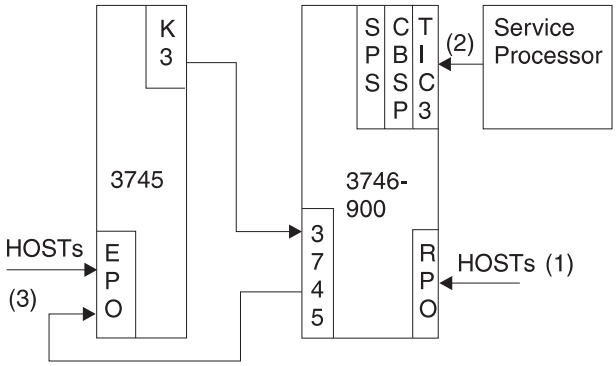


Figure 2-3. 3745/3746-900 Remote Powering Possibilities

001

Is the 3746-900's power sequence initiated by a host connected to the 3746-900 (1), or by the service processor (2)?

Yes **No**

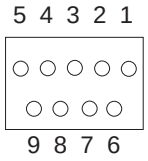
002

The power ON sequence is controlled by the 3745.

		Power On Initiated from the 3745	
		Power Pick Cmd from any Host	Scheduled Power On Cmd
3745 mode		Host	Network
3746-900 Mode		Remote	Remote
State Result	3745	On	On
	3746-900	On	On

– On the Test 2 connector on the DCDP, check:

Pin 1 '3745 Presence' line. Must be ground
Pin 2 '3745 ON normal open' line.
Must be at +5v.
Pin 4 '3745 ON common' line.
Must be at +5v.



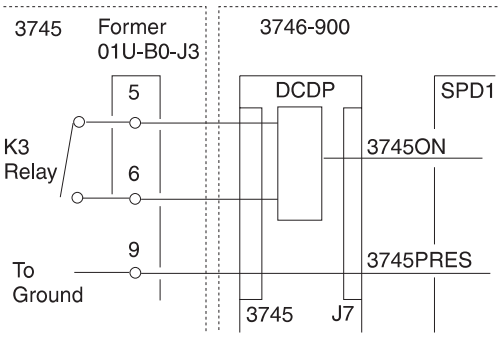
Test 2 Pin Assignment

Are all voltages correct as indicated?

Yes **No**

003

Check 3745 K3 or cable.



004

– On the Test 1 connector on the DCDP, check:

Pin 34 '3745PRES' line is at 0v.
Pin 33 '3745ON' line is at +5v.
Refer to YZ page 234 for
test 1 pin assignment.

(Step **004** continues)

004 (continued)
Are all voltages correct as indicated ?
Yes **No**

005

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

006

Go to Step 036.

007

The power ON sequence is controlled by the 3746-900.

		Power On Initiated from the 3746-900		
		Power PickOn from 3746-900 host or Power On Command from service processor		
3646-900 Mode		Remote		
3745 Mode		Local	Host	Network
State Result	3746-900	On	On	On
	3745	Off	On	Off

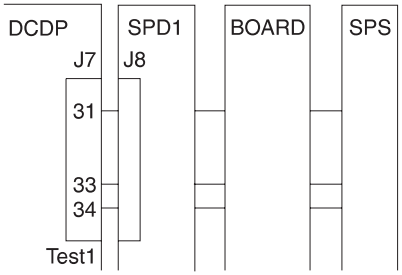
Is the 3746-900's power sequence initiated by a host connected to the 3746-900?
Yes **No**

008

The 3746-900's power sequence is controlled by the service processor.
– Check on the Test 1 connector pin 31 if 'PWRHOLDCMD' line is at +5v. Refer to YZ page 234 for test 1 pin assignment.
Is + 5v present on pin 31?
Yes **No**

009

– Check that the cable is correctly plugged into the J8 connector on SPD1 and into the J7 connector on DCDP.



Is plugging correct?
Yes **No**

010

Plug the cable correctly and restart the operation.

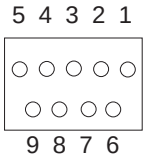
011

First exchange the SPS. Then if the problem persits, exchange the SPD1. Go to "3746-900 Maintenance Using a FRU list" on page 1-28 for FRU exchange.

012

– On the Test 2 connector on the DCDP, check:

Pin 1 '3745 Presence' line. Must be ground
Pin 2 '3745 ON normal open' line.
Must be at +5v.
Pin 4 '3745 ON common' line.
Must be at +5v.

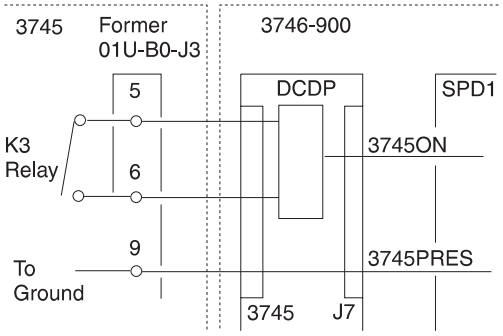


Test 2 Pin Assignment

Are all voltages correct as indicated?
Yes **No**

013

Check 3745 K3 or cable.



014

– On the Test 1 connector on the DCDP, check:

Pin 34 '3745PRES' line is at 0v.
Pin 33 '3745ON' line is at +5v.
Refer to YZ page 234 for test 1 pin assignment.

Are all voltages correct as indicated ?
Yes No

015

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

016

Go to Step 036.

017

the 3746-900's power sequence is controlled by a host connected to the 3746-900.

– Check for -24v between frame ground and the back of the host connector that initiated the command at RPO 01S Jx pins 1 and 5. See Figure 2-4.

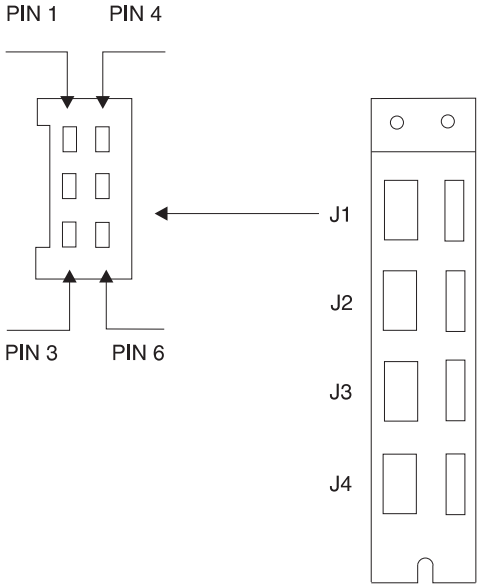


Figure 2-4. RPO Location 07R-A1

– Check the '-24 v unit source' on pin 1.
Is -24v present on pin 1 ?
Yes No

018

– Check that the cable is correctly plugged into the J8 connector at the back of the DCDP.
Is plugging correct?
Yes No

019

Plug the cable correctly and restart the operation.

020

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

021

– Check the 'Power hold command' on pin 5.
Is -24v present on pin 5 ?
Yes No

022

Host or cable problem.

023

– Check the 'SEQCOMPLEPO' on pin 35 of test 1 connector. Refer to YZ234 for test 1 pin assignment.

(Step **023** continues)

023 (continued)
Is +5v present on pin 35 ?
Yes No

024

– Check the 'PWRHOLDEPO' on pin 36 of the test 1 connector. Refer to YZ page 234 for test 1 pin assignment.

Is -5v present on pin 36?
Yes No

025

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

026

First exchange the SPS. If the problem persists exchange the SPD1. Go to "3746-900 Maintenance Using a FRU list" on page 1-28 for FRU exchange.

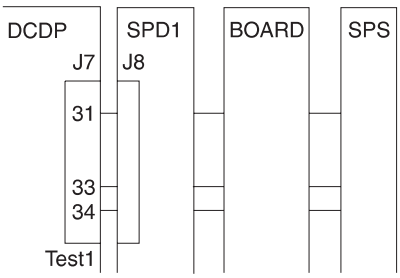
027

– Check on the Test 1 connector pin 31 if 'PWRHOLDCMD' line is at +5v. Refer to the YZ page 234 for test 1 pin assignment.

Is +5v present on pin 31?
Yes No

028

– Check that the cable is correctly plugged into the J8 connector on SPD1 and into the J7 connector on DCDP.



Is plugging correct?
Yes No

029

Plug the cable correctly and restart the operation.

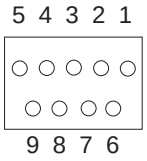
030

First exchange the SPS. If the problem persists, exchange the SPD1. Go to "3746-900 Maintenance Using a FRU list" on page 1-28 for FRU exchange.

031

– On the Test 2 connector on the DCDP, check:

Pin 1 '3745 Presence' line. Must be ground
Pin 2 '3745 ON normal open' line. Must be at +5v.
Pin 4 '3745 ON common' line. Must be at +5v.

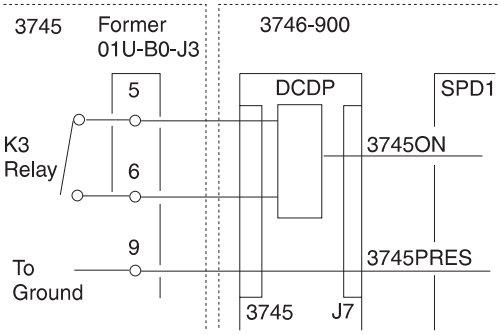


Test 2 Pin Assignment

Are all voltages correct as indicated?
Yes No

032

Check 3745 K3 or cable.



033

– On the Test 1 connector on the DCDP, check:

Pin 34 '3745PRES' line is at 0v.
Pin 33 '3745ON' line is at +5v.
Refer to YZ page 234 for test 1 pin assignment.

Are all voltages correct as indicated ?
Yes No

034

Exchange the DCDP, go to "3746-900 Maintenance Using a FRU list" on page 1-28.

035

Go to Step 036.

036

– Check that the cable is correctly plugged into the J8 connector on SPD1 and into the J7 connector on DCDP.

(Step **036** continues)

036 (continued)
Is plugging correct?
Yes **No**

037

Plug the cable correctly and restart the operation.

038

First exchange the SPS. If the problem persists, exchange the SPD1. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 5120: 3746-900 Power ON Problem in Local Mode

Symptom Explanation	Conditions That Could Cause This Symptom
Standby LED ON. Machine will not power ON.	• ACPW or DCPW • Any CBSA cassette or control panel • SPD1 or basic board • SPS cassette

FUNCTIONAL NOTE

Power may be present when nothing is displayed on the control panel

In 'Local' mode, you can only power ON the 3746-900 manually using the 'start' key on the 3746-900 control panel. Power ON in 'local' mode is totally independent from the 3745 status mode.

		Power On Initiated from the 3746-900		
		3746-900 control panel 'Start' key		
3646-900 Mode		Local		
3745 Mode		Local	Host	Network
State Result	3746-900	On	On	On
	3745	Off	Off	Off

001

– Press the 'start' key on the 3746-900 control panel.

Is the READY LED blinking on the 3746-900 control panel?

Yes **No**

002

Is the 3746-900 control panel display blank or is there an undefined message displayed (jumbled characters)?

Yes **No**

003

Go to Step 005

004

Go to "MAP 2620: 3746-900 Control Panel Problem" on page 2-43.

005

(Step **005** continues)

005 (continued)

Is system reference code 0528 2806 displayed on the 3746-900 control panel?

Yes **No**

006

Note the 3746-900 control panel code. Go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required.

007

Go to "MAP 5180: 3746-900 Ready LED Blinking." on page 2-23.

MAP 5130: 3746-900 CP1 Tripped.

Symptom Explanation	Conditions That Could Cause This Symptom
CP1 tripped -48v missing	• Overload on -48v • CP

The entire machine must be available to perform this procedure.

001

CP1 trips with overcurrent of the 'STANDBY' or 'HOLD UP' voltage distribution or a fan error condition.
Locate in Figure 2-5 on page 2-16 the tripping CP1 and its corresponding circuit.
– On the service processor, see if there is an SRC pointing to a fan catastrophic error condition. To do so:

  You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

  - Return to the "MOSS-E View" window and double click on the 3746-900 icon.
  - Click on the "Problem Management" option.
  - Double click on the "Display Alarms" option.
  - Scan the last alarms to see if you have one of the following SRCs indicating a FAN error.
    – **05B2 098A**
    – **05B2 098B**
    – **05B2 098C**
    – **05B2 0984**
    – **05B2 0985**
    – **05B2 0986**
    – **05B2 0987**
    – **05B2 0988**
    – **05B2 0989**

SRC pointing to fan error?
Yes No

002

– Unplug the DCDP connector J5. See Figure 2-5 on page 2-16.
– Reset CP1.
Is CP1 tripping again?
Yes No

003

Check the fan circuits. (fans 1 and 3). Refer to YZ page 118.

004

– Reconnect J5,
(Step **004** continues)

004 (continued)
– Remove connector J11 from the DCDP.
– Reset CP1.
Is CP1 tripping again ?
Yes No

005

Exchange the DCDP. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

006

– Reconnect J11.
– Unplug the DCDP connector J4.
– Reset CP1.
Is CP1 tripping again?
Yes No

007

An overload exists on the -48v HOLDUP.
– Unplug from the basic board the following cassettes:
– SPS 07G-A1-D, CBSP 07G-A1-F.
– Reconnect J4.
Is CP1 tripping ?
Yes No

008

Reinstall the cards one at a time to isolate the failing one and exchange it.

009

The problem is either on the board, SPD1 card, or cable between DCDP and SPD1. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

010

– Remove connector J12 from the DCDP.
– Reset CP1.
Is CP1 tripping again?
Yes No

011

Exchange the DCDP. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

012

Exchange the AC box. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

013

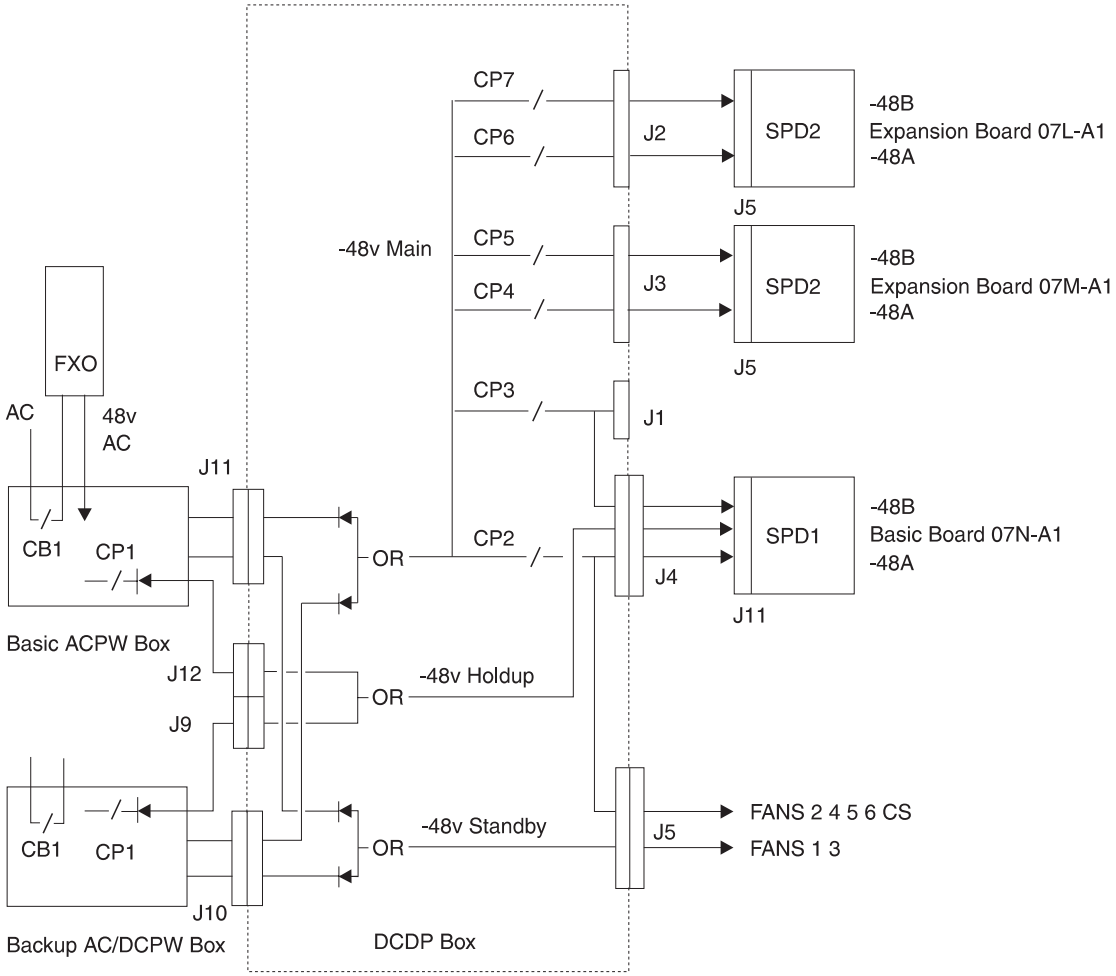
CP1 trips two minutes after a two or more fan error condition occurs.

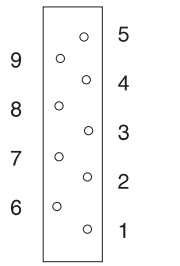
– Refer to the following fan SRCs to identify the failing fans and exchange them.

SCR	Interpretation
05B2 098A	Two or more fans faulty in drawer 1, 3
05B2 098B	Two or more fans faulty in drawer 2, 3
05B2 098C	Three or more fans faulty drawer 1, 2, 3
05B2 0984	Four fans are reported as faulty or CP2
05B2 0985	All fans are reported as faulty
05B2 0986	Two fans are faulty in drawer 1
05B2 0987	Two fans are faulty in drawer 2
05B2 0988	Two fans are faulty in drawer 3
05B2 0989	Two or more fans faulty in drawer 1, 2

– Reset CP1 and power ON the 3746-900. (Also reset CP1 on ACPW or DCPW backup if present)

3746-900 -48v DC DISTRIBUTION





SPDs Test Points

Pin	Signal Name
9	Power Ground
7	Logic Ground
6	General Reset
5	-48v Hold Up
4	-48v A
3	-48v B
2	SPA Dump
1	SPA Reset

SPD1 Test Points
Connector J10

Pin	Signal Name
9	Power Ground
7	
6	
5	
4	-48v A
3	-48v B
2	
1	

SPD2 Test Points
Connector J4

Figure 2-5. -48 Volts DC Distribution

MAP 5140: 3746-900 CP2 or CP3 Tripped

Symptom Explanation	Conditions That Could Cause This Symptom
CP2 or CP3 tripped -48v missing	• Overload on -48v • CS/DCDC • FANS • SPD1 or basic board • Any processor or coupler

001

An overload is mainly due to a board or cabling malfunction. All the processor cassettes or CS DC/DCs are protected by an individual fuse. The fuse is located inside of each of those elements and prevents a general -48v overload. These fuses are non-replaceable.
Locate the tripping CP and its corresponding circuit in Figure 2-5 on page 2-16.
Is CP2 tripped?
Yes **No**

002
CP3 tripped
Go to Step 007.

003

Unplug the DCDP connector J5 and reset CP2.
Is CP2 tripping again ?
Yes **No**

004

The overload is on the CS or fans.
Using Figure 2-6 on page 2-18 locate the CP2-protected circuit.
Disconnect the J1 connector on the CS/DCDC and reset CP2.
Is CP2 tripping again?
Yes **No**

005

Exchange the CS/DCDC. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

006

Locate the failing fans by disconnecting the J2 connector alternatively on them one at time.

007

The overload is on the basic board or in its SPD1 cassette.
Pull the corresponding SPD1 cassette out and reset the CP.
(Step **007** continues)

007 (continued)
Is the CP tripping again ?
Yes **No**

008

The problem is on the board distribution.
Reseat the SPD1 cassette
Unplug all the processors and couplers connected on the board and reset the CP.
Is the CP tripping again ?
Yes **No**

009

Reinstall all the processors and couplers one at a time until the failing part is isolated.

010

The board is failing. Exchange it. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

011

The problem is in the cable between the DCDP connector J4 and the SPD1 cassette connector J11 or SPD1 cassette. Check with a meter on the test points. The CP may also be failing.

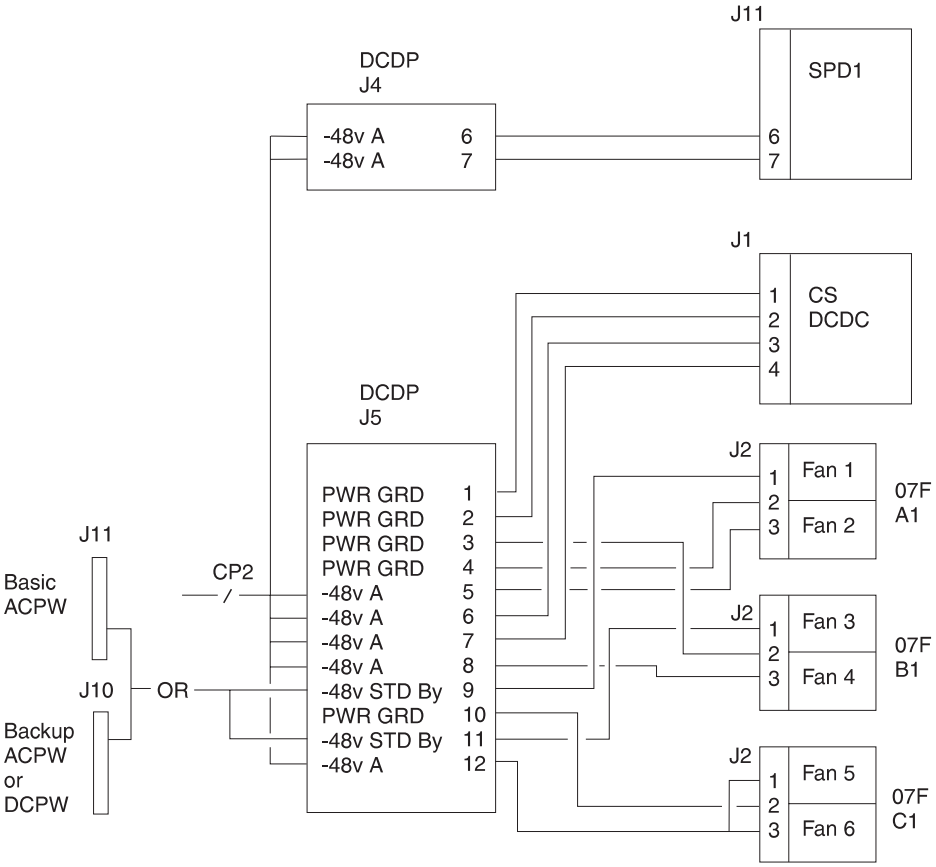


Figure 2-6. CP2 Circuit

MAP 5150: 3746-900 CP4, CP5, CP6, or CP7 Tripped

Symptom Explanation	Conditions That Could Cause This Symptom
CP4, CP5, CP6, or CP7 tripped -48v missing	• Overload on -48v • SPD2 or expansion board • Any processor or coupler

An overload is mainly due to a board or cabling malfunction. All the processor cassettes or CS DC/DCs are protected by an individual fuse. The fuse is located inside of each of those elements and prevents a general -48v overload. These fuses are non-replaceable.

Locate the tripping CP and its corresponding circuit in Figure 2-5 on page 2-16.

Notes:

1. CP4 and CP5 are used for expansion enclosure 1.
2. CP6 and CP7 are used for expansion enclosure 2.

001

Is CP4 and/or CP5 tripped?
Yes No

002

Go to Step 006.

003

CP4 and/or CP5 are tripped
Unplug the DCDP connector J3 and reset CP4 and/or CP5.
Is CP4 and/or CP5 tripping again ?
Yes No

004

Go to Step 009.

005

Go to Step 008

006

CP6 and/or CP7 are tripped
Unplug the DCDP connector J2 and reset CP6 and/or CP7.
Is CP6 and/or CP7 tripping again ?
Yes No

007

Go to Step 009.

008

Exchange the DCDP box. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

009

The overload is on the expansion board or in its SPD2 cassette.
Pull the corresponding SPD2 cassette out and reset the CP(s).
Is/are the CP(s) tripping again ?
Yes No

010

The problem is on the board distribution.
Reseat the SPD2 cassette
Unplug all the processors and couplers connected on the board and reset the CP(s).
Is/are the CP(s) tripping again ?
Yes No

011

Reinstall all the processors and couplers one at a time until the failing part is isolated.

012

The expansion board is failing. Exchange it. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

013

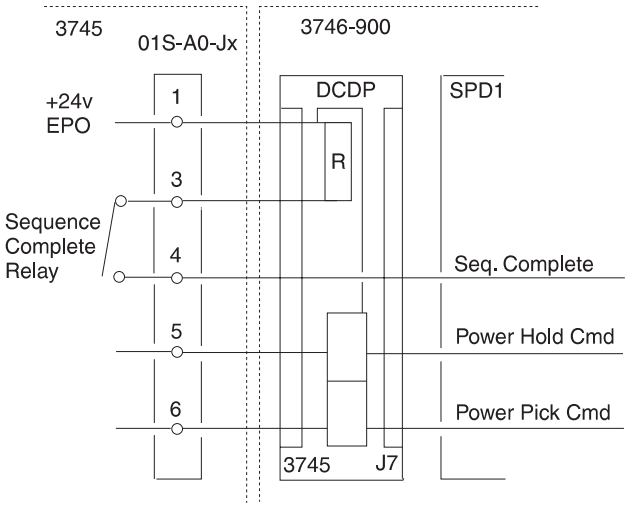
- If CP4 and/or CP5 are tripped, the problem is in the cable between the DCDP connector J3 and the SPD2 cassette connector J5 or SPD2 cassette. Check with a meter on the test points.
- If CP6 and/or CP7 are tripped, the problem is in the cable between the DCDP connector J2 and the SPD2 cassette connector J5 or SPD2 cassette. Check with a meter on the test points.

MAP 5160: Suspected Problem on 3745/3746-900 Power Connection

Symptom Explanation	Conditions That Could Cause This Symptom
3745/3746-900 power connection problem	• 3745/3746-900 cables • DCDP • SPS cassette • SPD1 or Basic board • 3745

FUNCTIONAL NOTE

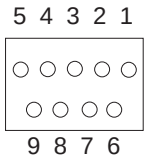
Power may be present when nothing is displayed on the control panel



001

– On the Test 2 connector on the DCDP, check:

Pin 3 'Sequence Complete Normal Open' line.
Must be at +5v.



Test 2 Pin Assignment

Is voltage correct as indicated?
Yes No

002

– On the Test 2 connector on the DCDP, check:

Pin 5 'Sequence Complete Common' line.
Must be at +24v.

(Step **002** continues)

002 (continued)
Is voltage correct as indicated?
Yes No

003

– On the Test 2 connector on the DCDP, check:

Pin 6 '+ 24 V EPO' line.
Must be at +24v.

Is voltage correct as indicated?
Yes No

004

Go to "MAP 5170: Suspected Problem on 3745/3746-900 EPO Cable" on page 2-22.

005

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

006

Check the sequence complete relay on the 3745 using the YZ pages.

007

– On the Test 1 connector on the DCDP, check:

Pin 15 'SEQCOMPL' line is at + 5v.

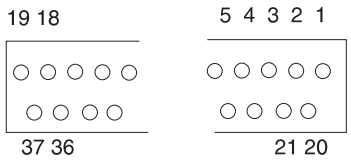


Figure 2-7. Test 1 pin assignment

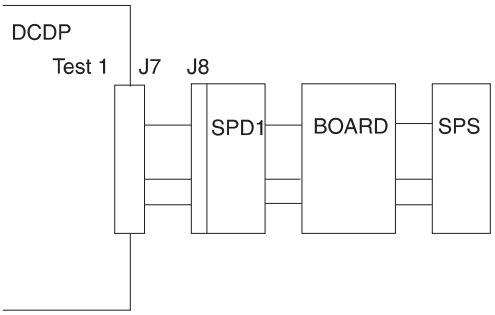
Is voltage correct as indicated ?
Yes No

008

Exchange the DCDP. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

009

– Check that the cable is correctly plugged into the J8 connector on SPD1 and into the J7 connector on DCDP.



Is plugging correct?
Yes No

010

Plug the cable correctly and restart the operation.

011

First exchange the SPS. If the problem persists, exchange the SPD1. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 5170: Suspected Problem on 3745/3746-900 EPO Cable

Symptom Explanation	Conditions That Could Cause This Symptom
3745/3746-900 power connection problem	• 3745/3746-900 EPO cable • 3745

FUNCTIONAL NOTE

Power may be present when nothing is displayed on the control panel

001

Check that the cable is correctly plugged between the 3745 01S-A0-Jx and the DCPD 3745 connector.

Is plugging correct?

Yes **No**

002

Plug the cable correctly and restart the operation.

003

- Check the EPO cable between the 3746-900 and the 3745.
  - Unplug the cable from the 3746-900 DCDP (07H-A1-3745).
  - Unplug the cable from the 3745 (01S-A0-Jx) and (01U-B0-J3).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the 3746-900 YZ page 258 check the cable continuity between each pin connector.

Is the cable correct?

Yes **No**

004

Change the cable if you have it or repair it, or order a new one.

005

Is there another FRU in your FRU list to test?

Yes **No**

006

Suspect a problem on the 3745. Refer to the YZ pages.

007

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 5180: 3746-900 Ready LED Blinking.

Symptom Explanation	Conditions That Could Cause This Symptom
Ready LED blinking. Machine will not power ON.	• ACPW or DCPW • SPD1 or Basic board • SPS

Do not go directly through this MAP. You must first go through the "MAP 5100: 3746 Model 900 Power Control Subsystem Problems" on page 2-4 or "MAP 5120: 3746-900 Power ON Problem in Local Mode" on page 2-13.

001

– Check on the test 1 connector pin 24 if DCS2.1 line is at - 5v. Refer to YZ page 234 for test 1 pin assignment.

Is - 5v present on pin 24?

Yes **No**

002

Is there a backup power (ACPW or DCPW) installed on your 3746-900?

Yes **No**

003

Go to Step 008.

004

– Check on the test 1 connector pin 26 if DCS2.2 line is at - 5v. Refer to YZ page 234 for test 1 pin assignment.

Is - 5v present on pin 26?

Yes **No**

005

Go to Step 013.

006

Go to Step 018.

007

Go to Step 018.

008

– Check on the test 1 connector pin 9 if the PWRONCMD1 line is at + 5v. Refer to YZ page 234 for test 1 pin assignment.

Is + 5v present on pin 9?

Yes **No**

009

Go to Step 018.

010

Are the power cables correctly plugged into the J11 and J12 connectors at the rear of DCDP?

Yes **No**

011

Plug the cables correctly and restart the operation.

012

First exchange the DCDP. If the problem persists exchange the ACPW (basic). Go to "3746-900 Maintenance Using a FRU list" on page 1-28 for FRU exchange.

013

– Check on the test 1 connector pin 28 if the PWRONCMD2 line is at + 5v. Refer to YZ page 234 for test 1 pin assignment.

Is + 5v present on pin 28?

Yes **No**

014

Go to Step 018.

015

Are the power cables correctly plugged into the J09 and J10 connectors at the rear of DCDP?

Yes **No**

016

Plug the cables correctly and restart the operation.

017

First exchange the DCDP. If the problem persists exchange the backup power (ACPW or DCPW). Go to "3746-900 Maintenance Using a FRU list" on page 1-28 for FRU exchange.

018

– Check that the cable is correctly plugged into the J8 connector on SPD1 and into the J7 connector on the DCDP.

(Step **018** continues)

018 (continued)
Is plugging correct?
Yes **No**

019

Plug the cable correctly and restart the operation.

020

First exchange the DCDP. If the problem persists exchange the backup power (ACPW or DCPW). Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

3746-900/Service Processor/Network Node Processor MAPs

MAP 2600: 3746-900/Service Processor/Network Node Processor/ Multiaccess Enclosure Link Icons Color Symptom

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900, Network Node Processor (NNP), or &MAEn. problem The 3745 icon, the 3746-900 icon, the NNP, the Multiaccess Enclosure Link icon on the "MOSS-E View" window are/is not green.	• 3746-900 one or more processors, or ESCC have failed • No link between 3746-900 with the service processor • No link between NNP and the service processor • No link between NNP and the 3746-900 • NNP has failed • No link between the service processor and multiaccess enclosure • PCMCIA card, cable, multiaccess enclosure

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- The color of the 3746-900, network node processor, and service processor icons reflects their status. For example a green icon indicates that the machine is operational. The following table shows what step describes the status represented by the other icon colors.

Table 2-1. Icons Color Selection Table

Machine/Icon	Icon Color	Go to
Service Processor	White	Step 002 on page 2-26.
3745	Any Color	The appropriate MIP: • *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 Model 17A. • *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 Models 21A to 61A.
3746	Yellow	Step 003 on page 2-26.
	White	Step 004 on page 2-27.
	Grey	Step 005 on page 2-27.
	Pink	Step 006 on page 2-27.
	Red	Step 030 on page 2-30.
NNP-X	White	The control point is being started and the configuration is being activated. This is a normal state, however if this state stay a too long time suspect a problem. Check if you have alarms at the service processor
	Grey	There is: • No connection betweeen the service processor and the network node processor. • Or link not ready between the 3746-9xx and the control point of the network node processor. Go to Step 031 on page 2-30.
	Pink	The control point is waiting for operator start, or no NDF (Node Definition File). Go to Step 044 on page 2-31.
	Blue	The connection between the service processor and the network node processor is OK. The network node processor is in standby mode state. The control point must be started. Go to Step 047 on page 2-32.
MAE-Link	White	A selective IML is being started on the multiaccess enclosure. This is a normal state, however if this state stay a too long time suspect a problem. Check if you have alarms at the service processor
	Grey	There is no connection betweeen the service processor and the multiaccess enclosure. Go to Step 022 on page 2-29.
	Red	The multiaccess enclosure is in concurrent maintenance. To put back the multiaccess enclosure in normal mode start a "Selective IML on MAE". Refer to “3745/3746-900/Service Processor Windows Overview” on page 1-7.

002

The service processor icon is white.

- Check if the yellow LED of the service processor indicating disk access is active.
- If the yellow LED is sometimes ON and sometimes OFF wait a few more minutes. If the symptom persists, call your support for assistance.
- If the yellow LED is always OFF, call your support for assistance.

003

The 3746-900 icon yellow is a normal state. Its duration depends on the 3746-900 configuration.

(Step **003** continues)

003 (continued)

- On the 3746-900 control panel, check if there is a character displayed on the "Service processor not accessible" digit.
- If a character is displayed, go to “MAP 5600: LAN Problem on LAN Attached to the Service Processor” on page 2-149. Otherwise check if the yellow LED of the service processor indicating disk access is active.
- If the yellow LED is sometimes ON or sometimes OFF wait a few more minutes. If the symptom persists, call your support for assistance.
- If the yellow LED is always OFF call your support for assistance.

004

The 3746-900 icon white is a normal state. Its duration depends on the 3746-900 configuration.

- Check either the 3746-900 control panel code displayed or
- The 3746-900 status on the service processor:
  - On the "MOSS-E View" window double click on the 3746-900 icon.
  - Click on "Program" (in the action bar)
  - Click on "Status" option.
  - The "3746-900 Status" window indicates the IML steps, the address of any processor, CBC or unavailable ESCC, and the control panel code.
- Note the control panel code displayed. Go to “3746-900 Control Panel Codes” on page 1-15 and follow the procedure.

005

The 3746-900 icon is grey.

- The 3746-900 is not connected to the service processor.
- Go to “MAP 5600: LAN Problem on LAN Attached to the Service Processor” on page 2-149.

006

The 3746-900 icon is pink.

- On the "MOSS-E View" window double click on the 3746-900 pink icon.
- Click on "Program" in the action bar.
- Click on "Status" option.
- The "3746-900 Status" window indicates the IML steps and the address of any processor or CBC, or unavailable ESCC.
- The normal status is: IML complete with CDF-E updated and no processor unavailable.
- Check that CP3, CP4, and CP5 are ON.

Are CP3, CP4, and CP5 ON?

Yes **No**

007

Go to “MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped” on page 2-33

008

If you have several resource unavalaible perform the following procedure for each resource one by one.

- Unplug and then plug in again the suspected resource.
- Wait a few minutes for the "unplug/plug alarm" to be displayed on the service processor screen.

Is there an unplug alarm displayed?

Yes **No**

009

(Step **009** continues)

009 (continued)
Is there a plug alarm displayed?
Yes **No**

010

Exchange the suspected resource. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

011

- Click on "OK".
- Go to Step 014.

012

Click on "OK". Then wait for the "plug alarm" to be displayed.
Is there a plug alarm displayed?
Yes **No**

013

Exchange the suspected resource. Go to “3746-900 FRU List” on page 1-29.

014

After plugging the ressource must be IMLed.

- Return to the "3746-9x0 menu" window.
- Click on the "Problem Management" option.
- Double click on the "Change Resource Status" option.
- The "Resource Status Change - Resource Selector" window is displayed, select the resource that you have pluged/unpluged and click on "OK".
- On the next "Resource Selector", select the resource that you have pluged/unpluged and click on "OK".
- The "Resource Status Change - Selection" window is displayed, select the "IML without Diagnostic" option and click on "OK".
- On "Confirmation" window, click on "OK".
- A "Warning" window informs you that your request is being performed and to wait for its completion.
- At completion a "Warning" window is displayed, click on "OK".

Is the IML completed successfully?
Yes **No**

015

Exchange the suspected FRU. Go to “3746-900 FRU List” on page 1-29.

016

Remove the resource from the concurrent mode.

- Return to the "3746-9x0 menu" window.
- Click on the "Configuration Management" option.
- Double click on the "Add/Retrieve Resource in Concurrent Mode" option.
- On the "Confirmation" window, click on "OK".
- On the "Resource Selector" select the resource and clock on "OK".
- The "Add/Retrieve Resource Options" window is displayed.
- Select the "Remove the Resource from the concurrent mode" and click on "OK".
- At completion a "Warning" window is displayed, click on "OK".
- On the "Confirmation" window, click on "Cancel" and go to Step 017.

017

(Step **017** continues)

017 (continued)
Did you unplug and plug all the suspected resources?
Yes **No**

018

Go to Step 008 on page 2-27.

019

Is the 3746-900 icon always pink?
Yes **No**

020

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

021

- On the "MOSS-E View" window double click on the 3746-900 pink icon.
- Click on "Program" in the action bar.
- Click on "Status" option.
- The "3746-900 Status" window indicates the IML steps and the address of any processor, CBC, or unavailable ESCC.
- List the resource unavalaible and go to “3746-900 FRU List” on page 1-29 for exchange.

022

The MAE-Link icon is grey when there is no link between the service processor and the multiaccess enclosure.
Is the multiaccess enclosure powered ON?
Yes **No**

023

Refer to the 'Multiaccess Enclosure Basic Verification' in the *Multiaccess Enclosure Installation and Maintenance*, manual manual to check the multiaccess enclosure.

024

Is the PCMCIA LED ON?
Yes **No**

025

Continue with Step Step 027

026

Refer to the 'Multiaccess Enclosure Basic Verification' in the *Multiaccess Enclosure Installation and Maintenance*, manual manual to check the multiaccess enclosure.

027

Check that:

- The PCMCIA card cable is correctly plugged into the PCMCIA card.
- The PCMCIA card cable is correctly plugged into the SPAU (8228).
- The Token-Ring cable coming from the service processor is correctly connected into the SPAU (8228) and to the rear of the service processor.

(Step **027** continues)

027 (continued)
Did you find the problem?
Yes **No**

028

If the other units connected to the service processor have their icon green on the service processor display suspect an multiaccess enclosure problem. Refer to the 'Multiaccess Enclosure Basic Verification' in the *Multiaccess Enclosure Installation and Maintenance*, manual manual to check the multiaccess enclosure.

029

Go to “CE Leaving Procedure” on page 4-55.

030

The 3746-900 icon is red when it is set in Offline mode.

- To set the 3746-900 in Online mode follow these steps.
  - Double click on the 3746-900 icon.
  - On the "3746-9x0 Menu" window, click on the "Problem management" option.
  - Click on the "Set 3746-900 Online/Offline option".
  - On the "Set 3746-900 Online/Offline" window, click on "Yes".
  - On the next "Set 3746-900 Online/Offline" window click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-900 Online/Offline" window, click on "OK".
- Start a general IML in order to set the 3746-900 in Online mode.
- At completion of the IML, the 3746-900 icon must be green.
- Return to the "MOSS-E View" window.
- Go to “CE Leaving Procedure” on page 4-55 to return the machine to the customer. If the problem persists contact your support.

031

There is no connection between the service processor and the network node processor or the link between the 3746-9xx and the control point of the network node processor is not ready.
Is the network node processor powered ON?
Yes **No**

032

– Power ON the network node processor.
Is the network node processor powered ON?
Yes **No**

033

Go to *Network Node Processor Installation and Maintenance* manual.

034

Problem solved.

035

- Return on the "MOSS-E View" window, double click on the 3746-900 icon.
- The "3746-9x0 menu" is displayed.
- Click on the "Network Node Processor (NNP) Management" option.
- Double click on the "Manage Controls Points on NNP" option.
- The "Manage Control Points (CP) on NNP" window is displayed.
- On this window look the status of the CP/NNP. This status is displayed in the **CP/NNP-X Status Area**.

(Step **035** continues)

035 (continued)
Is in CP/NNP-x Status Area "Down" displayed?
Yes **No**

036

Is in CP/NNP-x Status Area "Link not ready" displayed?
Yes **No**

037

Check the NNP-X icon color and restart the problem determination. Go to Step 001 on page 2-25.

038

– On the 3746-900 control panel check the status of the "Service Processor Not Accessible" digit.
Is the "Service Processor Not Accessible" digit present?
Yes **No**

039

Go to "MAP 5610: 3746-900/APPN Link Problem" on page 2-154.

040

Suspect a 3746-900 LAN problem. Go to "MAP 2750: 3746-900 Permanent Service Processor Link Problem" on page 2-94.

041

– Check the network node processor and service processor LAN cable are well connected at the rear of the network node processor and service processor and on the service processor access unit.
Is your problem solved?
Yes **No**

042

Go to *Network Node Processor Installation and Maintenance* manual.

043

Go to "CE Leaving Procedure" on page 4-55.

044

- On the "MOSS-E View" window, double click on the 3746-900 icon.
- The "3746-9x0 menu" is displayed.
- Click on the "Network Node Processor (NNP) Management" option.
- Double click on the "Manage Controls Points on NNP" option.
- The "Manage Control Points (CP) on NNP" window is displayed.
- On this window in "Options" select the CP/NNP that you want to manage: CP/NNP-A or CP/NNP-B, then click on "Activate Configuration".

Is the problem solved?
Yes **No**

045

call for suport.

046

Go to "CE Leaving Procedure" on page 4-55.

047

(Step **047** continues)

047 (continued)

- On the "MOSS-E View" window, double click on the 3746-900 icon.
- The "3746-9x0 menu" is displayed.
- Click on the "Network Node Processor (NNP) Management" option.
- Double click on the "Manage Controls Points on NNP" option.
- The "Manage Control Points (CP) on NNP" window is displayed.
- On this window in "Options" select the CP/NNP that you want to manage: CP/NNP-A or CP/NNP-B, then click on "Start CP".

Is the problem solved?

Yes **No**

048

call for suport.

049

Go to “CE Leaving Procedure” on page 4-55.

MAP 2605: 3746-900 Either CP3, CP4, CP5, CP6, or CP7 is Tripped

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem The 3746-900 icon on the "MOSS-E View" window is not green.	• Overload on -48v • CS/DCDC • FANS • SPD1 • Basic or Expansion board • Any processor or coupler

001

Reset the CP(s).
Is/are the CP(s) trip again?
Yes **No**

002

Are you here via a CPN?
Yes **No**

003

Go to Step 011 on page 2-34.

004

- On the "Resource Selector" window, select the suspected processor and click on "OK".
- The "Maintenance Options" window is displayed.
- Select the "Initialize the resource" option and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.

Is the initialization successfully?
Yes **No**

005

Exchange the suspected FRU. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

006

- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- On the "Resource Selection" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to Step 008.

007

Go to “MAP 5140: 3746-900 CP2 or CP3 Tripped” on page 2-17 or “MAP 5150: 3746-900 CP4, CP5, CP6, or CP7 Tripped” on page 2-19.

008

(Step **008** continues)

008 (continued)
Do you have an other CPN?
Yes **No**

009

Go to Step 016.

010

- On the "Resource Selection Options for Maintenance" window, select the "By Specific Customer Problem Number (CPN)" and click on "OK".
- On the "Specific Customer Problem Number" window, enter the new CPN and click on "OK".
- The "Resource Selector" window is displayed with the FRUs suspected their location and their fault probability.
- go to Step 004 on page 2-33.

.

011

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the suspected resource and click on "OK".
- The "Maintenance Options" window is displayed.
- Select the "Initialize the resource" option and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.

Is the initialization successfully?
Yes **No**

012

Exchange the suspected FRU. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

013

- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- On the "Resource Selection" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.

Is there another DCDC of processor suspected in your FRU list.
Yes **No**

014

Go to Step 016

015

Go to Step 011

016

- Return to the "MOSS-E View" window.

(Step **016** continues)

016 (continued)
Is the 3746-900 icon green?
Yes **No**

017

Restart problem determination. Go to "MAP 2600: 3746-900/Service Processor/Network Node Processor/ Multiaccess Enclosure Link Icons Color Symptom" on page 2-25.

018

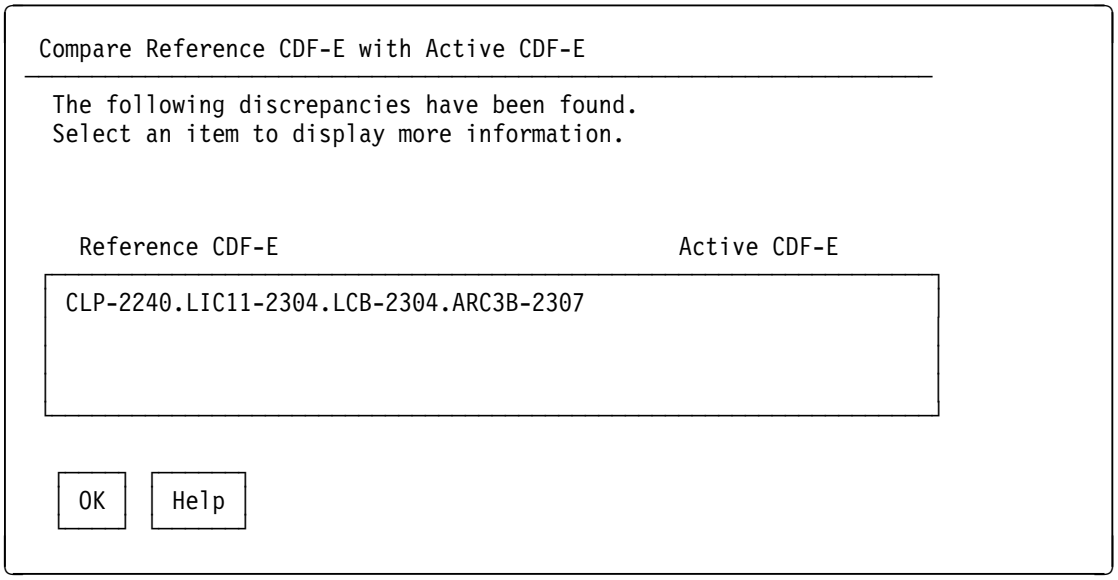
Go to "MAP: 3746-900 Ending Procedure in Concurrent Mode" on page 1-139.

MAP 2610: 3746-900 ESCA, LAN, or CLP Problem

Symptom Explanation	Conditions That Could Cause This Symptom
LAN or ESCA activation problem Line activation problem on all the lines of one or more CLP Traffic down on one or more ESCAs, LANs (Token-Ring or Ethernet) or all the lines of CLP	• One or more processors are unplugged or failing • ESCP or ESCC • TRP or TIC3 • Fiber Optic • Host System • LAN Ring (Token-Ring, Ethernet, 8229) • CLP or TIC3

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Configuration Management" option.
- Double click on the "Compare Reference CDF-E with Active CDF-E".
- If there is no discrepancy a "Compare CDF-E" window is displayed and warms you. Click on OK, and go to Step 004 on page 2-37.
- If there is discrepancies a "Compare reference CDF-E with Active CDF-E" window is displayed.



- Two cases have to be considered:
  - Only in the reference CDF-E column, one or more processors/coupler/arcs are displayed. That means that the resource listed are not present in the active CDF-E.
  - Processor(s) are present both under reference CDF-E and active CDF-E. That means that the resource are present but not in a correct status (not IMLed) or with an EC discrepancy.

Is there a mismatch?

Yes **No**

002

Go to Step 004 on page 2-37.

003

Go to “MAP 2615: 3746-900 Configuration Mismatch” on page 2-38.

004

Is the problem reported on a ESCA?

Yes — **No**

005

Is the problem reported on a LAN (Token-Ring or Ethernet)?

Yes — **No**

006

Go to "MAP 2800: 3746-900 All the Lines of CLP Have a Problem" on page 2-107.

007

Go to "MAP 2760: 3746-900 TRP LAN Problem" on page 2-96

008

Is the problem permanent?

Yes — **No**

009

Go to "MAP 2710: 3746-900 Any Intermittent ESCA Problem" on page 2-89.

010

Go to "MAP 2700: 3746-900 Permanent ESCA Problem" on page 2-88.

MAP 2615: 3746-900 Configuration Mismatch

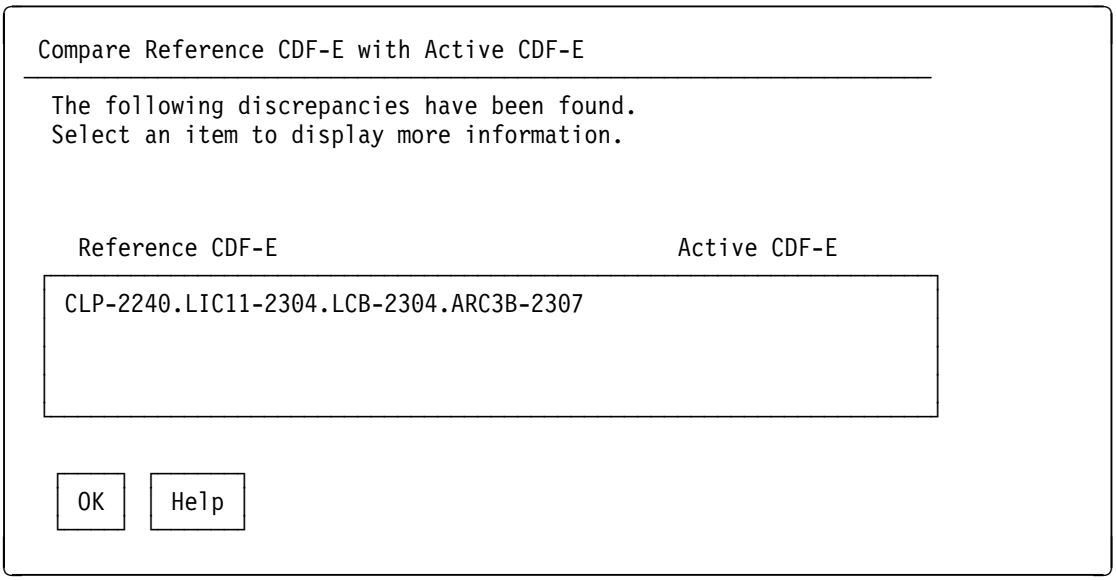
Symptom Explanation	Conditions That Could Cause This Symptom
There is a discrepancy between the current and the reference CDF-E	• One or more processors are unplugged, or failing • One or more couplers are unplugged, or failing • One or more ARCs are unplugged or failing • SPD1, SPD2, or cables • CP3, CP4, or CP5 OFF

001

Do you come from "MAP 2610: 3746-900 ESCA, LAN, or CLP Problem" on page 2-36?
Yes No

002

- You should be logged ON on the service processor console. If not go to "Console Use for maintenance" on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Configuration Management" option.
- Double click on the "Compare Reference CDF-E with Active CDF-E".
- If there is no discrepancy a "Compare Reference CDF-E with Active CDF-E" window is displayed. It warms you. Click on OK, and restart problem determination.
- If there is discrepancies a "Compare reference CDF-E with Active CDF-E" window is displayed.



- Two cases have to be considered:
  - Only in the reference CDF-E column, one or more processors/coupler/arcs are displayed. That means that the resource listed are not present in the active CDF-E.
  - Processor(s) are present both under reference CDF-E and active CDF-E. That means that the resource are present but not in a correct status (not IMLed) or with an EC discrepancy.
- Go to Step 003.

003

(Step **003** continues)

003 (continued)
Is the mismatch concern several processor?
Yes **No**

004

Go to Step 006.

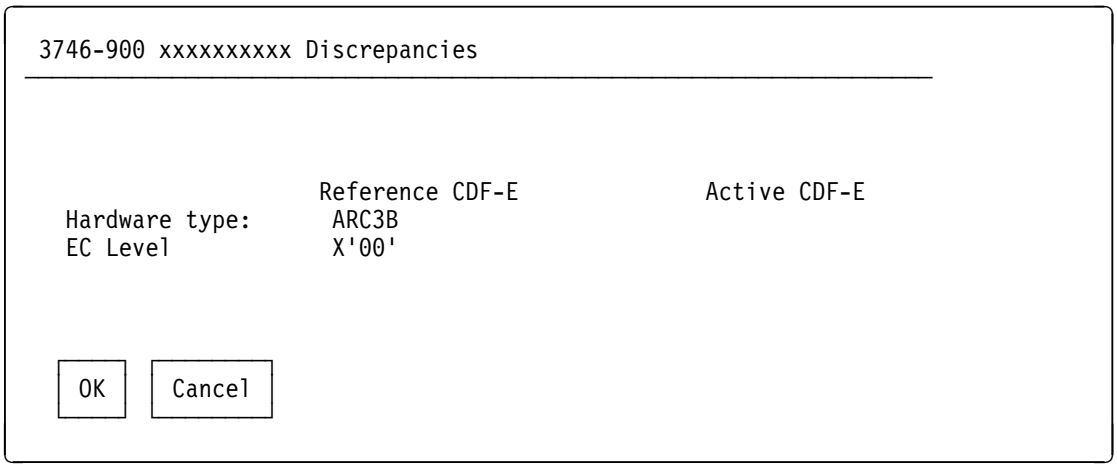
005

Go to Step 026 on page 2-41.

006

- Click on "OK".
- Either you get a message saying you cannot have any more information and go to Step 007, or you get a window giving you the hardware cause of the problem.

  Example



- Click on "OK and continue the procedure go to Step 007.

007

For the suspected resource perform the following procedure. (If the mismatch concerns **several** resources. Select **one** of them and perform the following procedure).

- Unplug and then plug in again the suspected resource.
- Wait a few minutes for the "unplug/plug alarm" to be displayed on the service processor screen.

Is there an unplug alarm displayed?
Yes **No**

008

Is there a plug alarm displayed?
Yes **No**

009

Go to Step 023 on page 2-41.

010

- Click on "OK".
- Go to Step 013 on page 2-40.

011

Click on "OK". Then wait for the "plug alarm" to be displayed.

Is there a plug alarm displayed?

Yes **No**

012

Exchange the suspected resource. Go to “3746-900 FRU List” on page 1-29.

013

Did you unplug/plug a processor?

Yes **No**

014

Go to Step 018.

015

After plugging the resource must be IMLed.

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Change Resource Status" option.
- The "Resource Status Change - Resource Selector" window is displayed, select the resource that you have plugged/unplugged and click on "OK".
- On the next "Resource Selector", select the resource that you have plugged/unplugged and click on "OK".
- The "Resource Status Change - Selection" window is displayed, select the "IML without Diagnostic" option and click on "OK".
- On "Confirmation" window, click on "OK".
- A "Warning" window informs you that your request is being performed and to wait for its completion.
- At completion a "Warning" window is displayed, click on "OK".

Is the IML completed successfully?

Yes **No**

016

Exchange the suspected FRU. Go to “3746-900 FRU List” on page 1-29.

017

Remove the resource from the concurrent mode.

- Return to the "3746-9x0 Menu" window.
- Click on the "Configuration Management" option.
- Double click on the "Add/Retrieve Resource in Concurrent Mode" option.
- On the "Confirmation" window, click on "OK".
- On the "Resource Selector" select the resource and clock on "OK".
- The "Add/Retrieve Resource Options" window is displayed.
- Select the "Remove the Resource from the concurrent mode" and click on "OK".
- At completion a "Warning" window is displayed, click on "OK".
- On the "Confirmation" window, click on "Cancel" and go to Step 018.

018

Did you unplug and plug all the suspected resources?

Yes **No**

019

Go to Step 007 on page 2-39.

020

- Return to the "3746-9x0 Menu" window.
- Click on the "Configuration Management" option.
- Double click on the "Compare Reference CDF-E with Active CDF-E".
- A "Compare reference CDF-E with Active CDF-E" window is displayed. Click on "OK".
- The discrepancies are displayed on a "Compare reference CDF-E with Active CDF-E" window.

Is the mismatch always present?
Yes No

021

Problem solved. Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

022

Exchange the suspected resource(s). Go to “3746-900 FRU List” on page 1-29.

023

Is the suspected resource a processor?
Yes No

024

Exchange the suspected FRU. Go to “3746-900 FRU List” on page 1-29.

025

- If the suspected processor is alone in the expansion enclosure:
  - Check the SPD2 connection on the expansion board.
  - Check all cables connected on the SPD2.
  - Check that CP4 and CP5 are ON.
- Exchange the suspected processor. Go to “3746-900 FRU List” on page 1-29.

026

- Click on "Cancel". The "3746-9x0 Menu" is displayed.
- Make sure that the 'power control' display is set to local (3) on the control panel. If not, do the following:
  - Press the 'Power Control' key until (3) is displayed in the power control window.
  - Press the 'Validate' key.
- Ask the customer to stop all the traffic on the 3746-900 (if this has not been already done).
- When the traffic is stopped, press the 'standby' key on the control panel.
- The 3746-900 is now powered-OFF:
  - Unplug and then plug in again all the suspected processors.
  - Check the SPD1 connection on the basic board.
  - Check all the cables connected on the SPD1.
  - Check the SPD2 connection on the expansion board.
  - Check all cables connected on the SPD2.
  - Check that CP3, CP4, CP5 are ON.
- Set the 3746-900 to Offline mode.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Problem Management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting to put the 3746-900 in Offline mode.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK"
- From the 3746-900 control panel, press the 'Start' key to start an IML.
- The end of the IML is indicated when 00000000 is displayed on the control panel and the ready LED is ON.

Is the ready led ON?

Yes **No**

027

Go to “MAP 5100: 3746 Model 900 Power Control Subsystem Problems” on page 2-4

028

- Click on "Program" in the action bar.
- Click on "Status" option.
- The "3746-9x0 Status" window indicates the IML steps and the address of any Processor or ESCC unavailable.

Is there any resource unavailable?

Yes **No**

029

Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

030

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 to exchange the resource.

MAP 2620: 3746-900 Control Panel Problem

Symptom Explanation	Conditions That Could Cause This Symptom
Undefined or no panel message No action possible from the control panel.	• Loose cables • Control panel cards • SPS • CBSP

001

– Refer to the MOSS-E screen to see if a system reference code is displayed.

Is system reference code xxxxxxxx displayed?

Yes **No**

002

Go to Step 004.

003

Using the service processor "Problem Management" menu, look up the SCR meaning and the corresponding action required.

004

Is the 3746-900 control panel display blank?

Yes **No**

005

Is there an undefined message displayed (jumbled characters)?

Yes **No**

006

Go to Step 011.

007

Go to Step 010

008

– Check that the cable is correctly plugged into the the control panel card display 07A-A1 and into the SPD1 connector J7. Refer to page YZ 232.

Is the cable correctly plugged?

Yes **No**

009

Plug the cable correctly and restart the operation.

010

– First exchange the display card from the control panel. If the problem persists, exchange the SPS and then the CBSP. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

011

– If the nature of the fault does not allow control panel actions, first exchange the lamp card from the control panel. If the problem persists, exchange the SPS. Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 2625: LAN Checking

You are here because you suspect the LAN cable (WLOB) or the service processor access unit (ACUN).

001

Perform the following steps:

- Check that the service processor LAN cable is correctly connected to the rear of the service processor and in the service processor access unit.
- Check that all the LAN cables are correctly connected to the service processor access unit.

Did you find the problem?

Yes **No**

002

Exchange the suspected FRU.

003

Problem solved go to “CE Leaving Procedure” on page 4-55.

MAP 2630: 3746-900 Service Logic Problem

The FRU CAB4 is an undetermined problem on the 3746-900 service logic. This MAP will lead you to run specific diagnostic on the suspected service logic.

Ask the customer to stop all traffic on the 3746-900 (if this has not already done). If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here. These diagnostics must be run in Offline Mode.

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- Set the 3746-900 in Offline mode if it is not already.
  - Double click on the 3746-900 icon.
  - The "3746-9x0 Menu" is displayed.
  - Click on the "Problem Management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
  - Start a general IML.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Operation Management" option.
  - Double click on the "Perform General IML" option.
  - When the 3746-900 has terminated its IML with the ready LED ON, go to Step 002.

002

- Return to the "3746-9x0 Menu.
- Click on the "Problem Management" option.
- Double click on the "Perform Specific Diagnostics" option.
- On the "Diagnostic Control Monitor" window select the "Run diagnostics for the Service Bus" option and click on "OK".
- The "Service Bus Group Selection" window is displayed.
- Select the "PRC SL" option and click on "OK".
- On the "Resource option Selection" window, select the "All Resources" option and click on "OK".
- On the "Test and Running Options selection" window, select the "SAS BUS MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed briefly. Then the first "Information required" window is displayed prompting you to perform tasks on the 3746-900. Perform all the steps following the prompts. Refer to Figure 2-8 on page 2-47, Figure 2-9 on page 2-48, or Figure 2-10 on page 2-49 to locate the different components.

Is the diagnostic error free?

Yes **No**

003

Have you changed all the suspected FRU?

Yes **No**

004

- Go to “Display the FRU List After a Diagnostic Failure” on page 1-154.
- Once you have the FRU list, go to Chapter 4, “3746-900 FRU Exchange” on page 4-1. to exchange the faulty FRU.
- After FRU exchange go to Step 002.

005

(Step **005** continues)

005 (continued)
Call your support for assistance.

006

Did you exchange a FRU?
Yes **No**

007

- If you have:
  - A FRU list, exchange **all** FRUs. Go to Chapter 4, "3746-900 FRU Exchange" on page 4-1 for the exchange. Then go to Step 002 on page 2-45.
  - No FRU list or no suspected FRU, call your support for assistance.

008

Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

3746-900 Service Logic Cabling

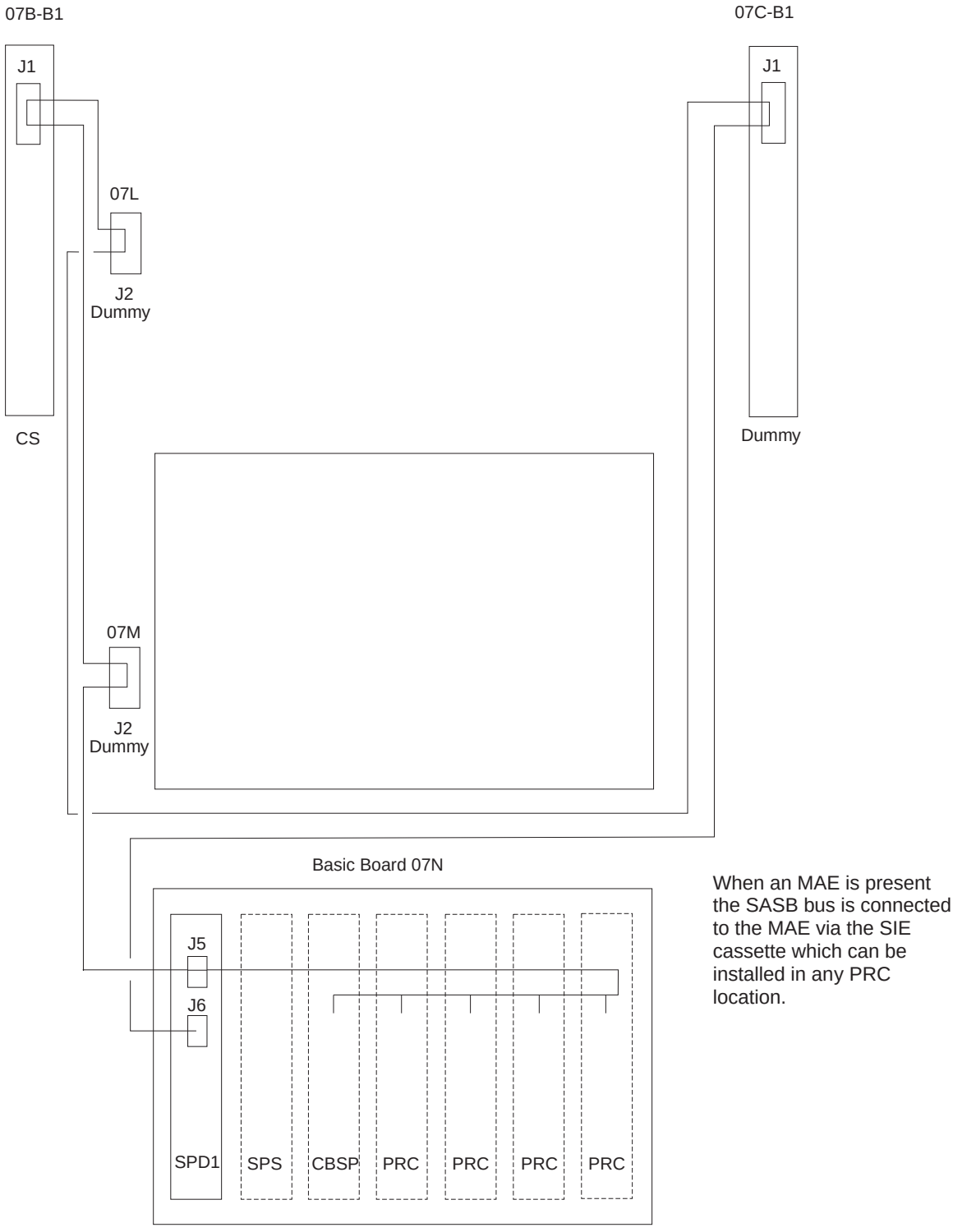


Figure 2-8. Stand Alone Service Bus (SASB) Routing with Basic Board Only

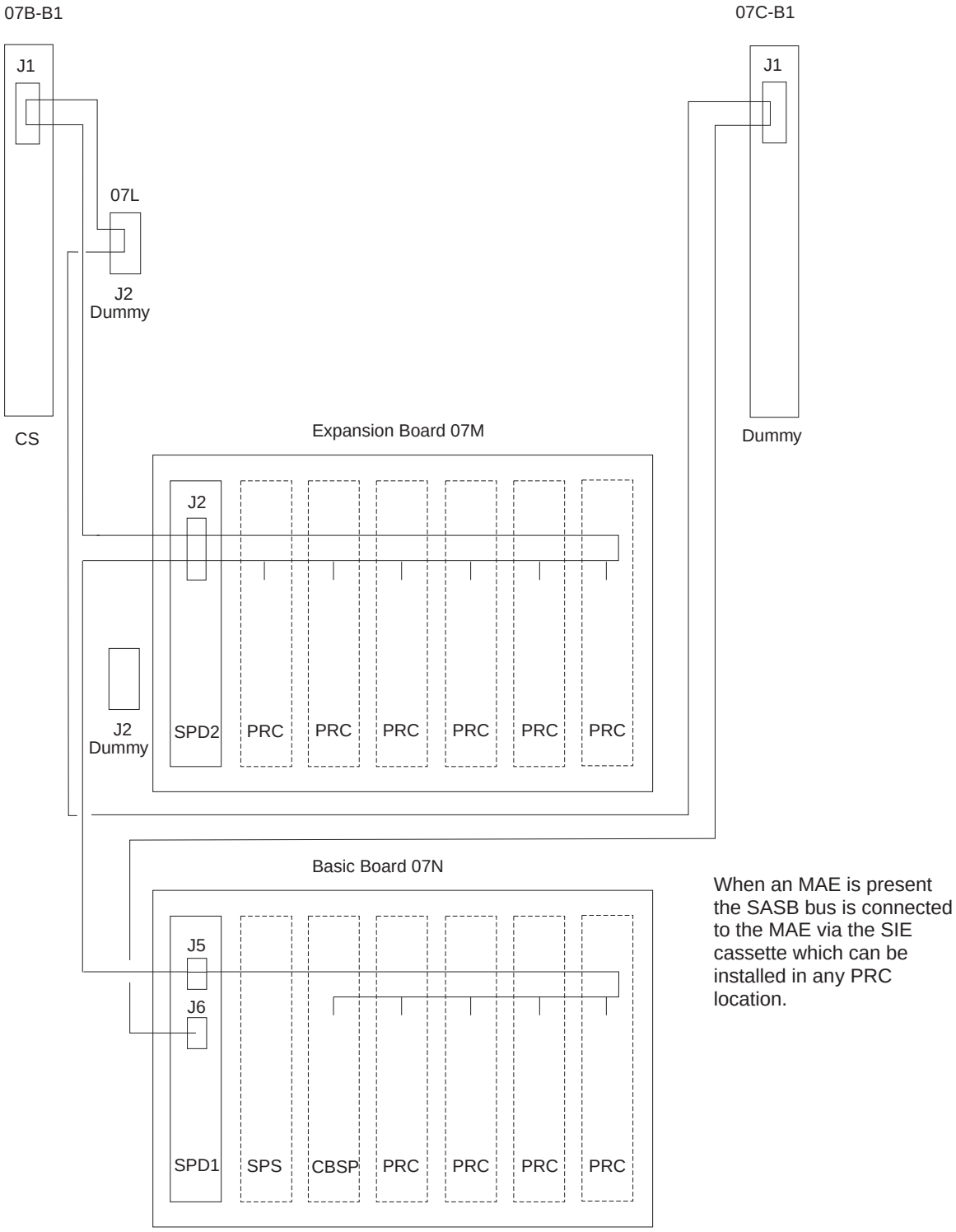


Figure 2-9. Stand Alone Service Bus (SASB) Routing with Expansion Board

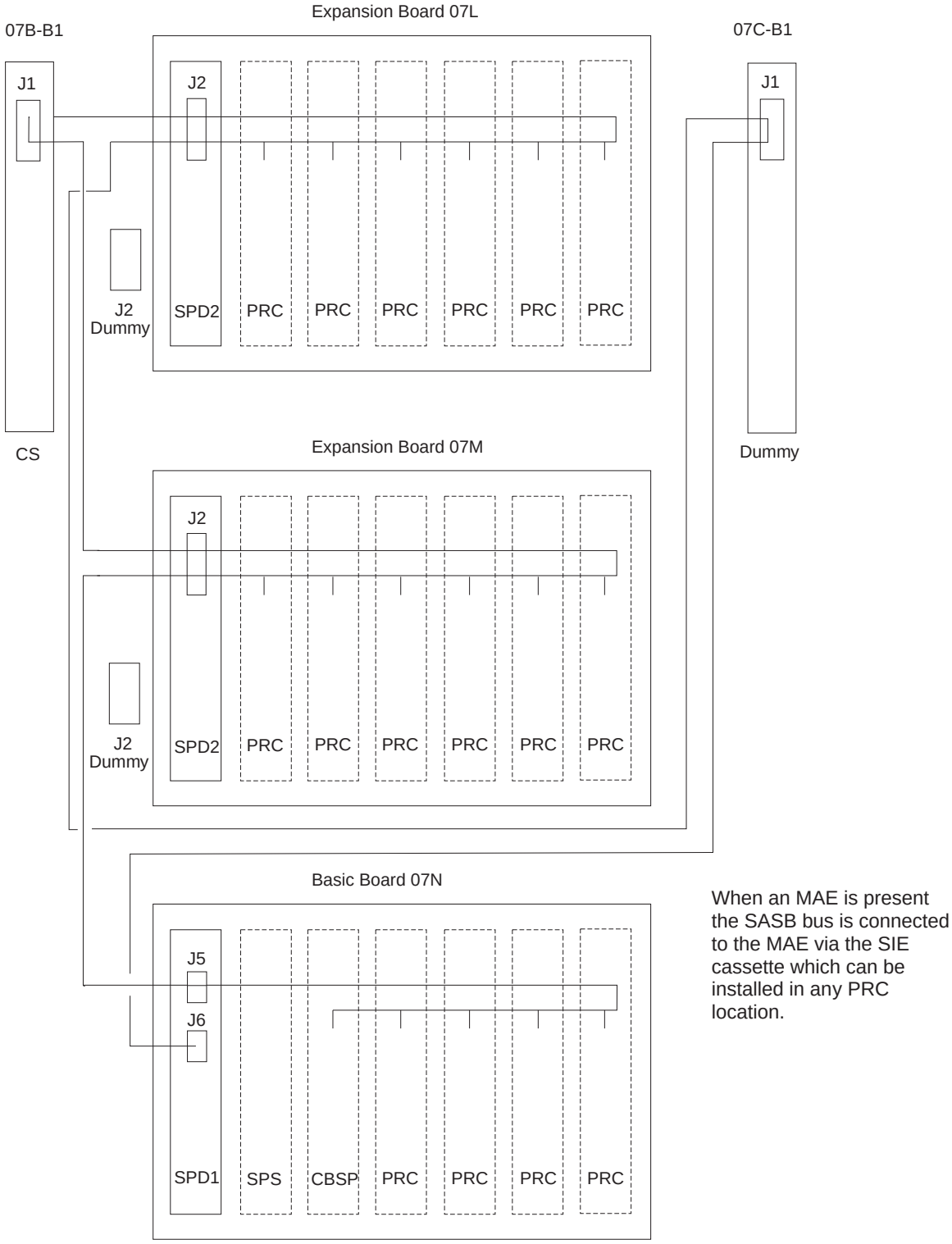


Figure 2-10. Stand Alone Service Bus (SASB) Routing Two Expansion Boards

MAP 2635: 3746-900 Several Fans Are in Errors

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem Several Fans are in error	• Missing -48v • Cable between DCDP/Fans • Cable between SPD1/Fans • DCDP • SPD1 • CP2

The entire machine must be available to perform this procedure.

001

- Check the CP2.

Is the CP2 tripped?
Yes **No**

002

Go to Step 004.

003

Suspect an overload condition, go to “MAP 5140: 3746-900 CP2 or CP3 Tripped” on page 2-17.

004

- Check that the cable between DCDP (07H-A1-J5), the Fans (07F-A1/B1/C1) and the CS (07B-B2-J1) is correctly plugged in each of these connectors.

Is plugging correct?
Yes **No**

005

Plug the cable correctly and restart the operation.

006

- Check that the cable between the Fans (07F-A1/B1/C1) and the SPD1 (07N-A1-A-J1) is correctly plugged in each of these connectors.

Is plugging correct?
Yes **No**

007

Plug the cable correctly and restart the operation.

008

- Check that the cable between DCDP, the Fans, and the DCDC of CS.
  - Unplug the cable between the DCDP (07H-A1-J5), from the Fans (07F-A1-J1/B1-J1/C1-J1) and from the DCDC of CS (07B-B2-J01).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the YZ page 118 check the cable continuity between each pin connector.

(Step **008** continues)

008 (continued)
Is the cable correct?
Yes **No**

009
Repair the cable (if possible) or order a new one.

010

- Check that the cable between the Fans and the SPD1.
  - Unplug the cable between from the Fans (07F-A1-J2/B1-J2/C1-J2) and from the SPD1 (07N-A1-A-J1).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the YZ page 236 check the cable continuity between each pin connector.

Is the cable correct?
Yes **No**

011
Repair the cable (if possible) or order a new one.

012

Is there an other FRU in your FRU list to test?
Yes **No**

013
Call your support for assistance.

014

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 2640: 3746-900 Cable From SPD1 to SPD2

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem All adapters of expansion enclosure have a problem	• Cable between SPD1/SPD2 • SPD1 • SPD2 • SPS

The entire machine must be available to perform this procedure.

001

Identify the expansion enclosure which has the problem, the go to:

- Step Step 002 for expansion enclosure 07M-A1
- Step Step 007 for expansion enclosure 07L-A1

002

- Check that the cable between SPD1 (07N-A1-A-J2), and the SPD2 (07M-A1-A-J1) is correctly plugged in each of these connectors.

Is plugging correct?
Yes No

003

Plug the cable correctly and restart the operation.

004

- Check the cable between SPD1 (07N-A1-A-J2), and the SPD2 (07M-A1-A-J1).
  - Unplug the cable from SPD1 (07N-A1-A-J2), and from the SPD2 (07M-A1-A-J1).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the YZ page 229 check the cable continuity between each pin connector.

Is the cable correct?
Yes No

005

Repair the cable (if possible) or order a new one.

006

Go to Step 011 on page 2-53

007

- Check that the cable between SPD1 (07N-A1-A-J3), and the SPD2 (07L-A1-A-J1) is correctly plugged in each of these connectors.

Is plugging correct?
Yes No

008

Plug the cable correctly and restart the operation.

009

- Check the cable between SPD1 (07N-A1-A-J3), and the SPD2 (07L-A1-A-J1).
  - Unplug the cable from SPD1 (07N-A1-A-J3), and from the SPD2 (07L-A1-A-J1).

(Step **009** continues)

009 (continued)
- On each connector of the cable check that the pins are present and not damaged.
- Using the YZ page 229 check the cable continuity between each pin connector.

Is the cable correct?

Yes **No**

010

Repair the cable (if possible) or order a new one.

011

Is there an other FRU in your FRU list to test?

Yes **No**

012

Call your support for assistance.

013

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 2645: 3746-900 Cable From DCDP to SPD1

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem The machine is not ready All adapters of the machine have a problem	• Cable between DCDP/SPD1 • SPD1 • SPD2 • SPS

The entire machine must be available to perform this procedure.

001

- Check that the cable between DCDP (07H-A1-J7), and the SPD1 (07N-A1-A-J8) is correctly plugged in each of these connectors.

Is plugging correct?
Yes **No**

002

Plug the cable correctly and restart the operation.

003

- Check the cable between DCDP (07H-A1-J7), and the SPD1 (07N-A1-A-J8).
  - Unplug the cable from DCDP (07H-A1-J7), and from the SPD1 (07N-A1-A-J8).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the YZ page 234 check the cable continuity between each pin connector.

Is the cable correct?
Yes **No**

004

Repair the cable (if possible) or order a new one.

005

Is there an other FRU in your FRU list to test?
Yes **No**

006

Call your support for assistance.

007

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 2650: 3746-900 Signal Power cable from SPD1 to the Control Panel

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem Control panel problem Diagnostics failed on control panel or SPS	• Cable between SPD1 and the control panel • SPS • CBSP • SPD1 • PNL1 • BAS

001

- Check that the cable between SPD1 (07N-A1-A-J7), and the control panel (07A-A1-J1) is correctly plugged in each of these connectors.

Is plugging correct?
Yes No

002

Plug the cable correctly and restart the operation.

003

- Check the cable between SPD1 (07N-A1-A-J7), and the control panel (07A-A1-J1).
  - Unplug the cable from SPD1 (07N-A1-A-J7), and from the control panel (07A-A1-J1).
  - On each connector of the cable check that the pins are present and not damaged.
  - Using the YZ page 232 check the cable continuity between each pin connector.

Is the cable correct?
Yes No

004

Repair it (if possible) or order a new one.

005

Is there an other FRU in your FRU list to test?
Yes No

006

Call your support for assistance.

007

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

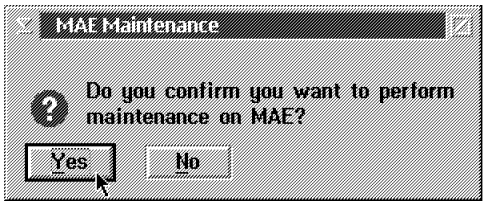
MAP 2655: 3746-900 Cable From SIE to SAC in Multiaccess Enclosure

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 problem no link with the Multiaccess Enclosure	• Cable between SIE/SAC • SIE • SAC

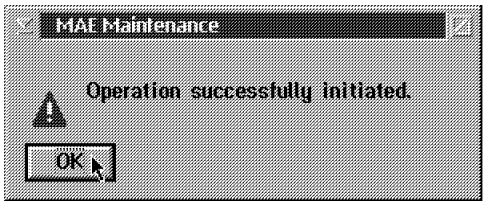
The entire multiacces enclosure (MAE) must be available to perform this procedure.

001

- You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- Ask the customer to stop the traffic on "all" the Multiaccess Enclosure.
- Be sure that all the MAE resources has been deactivated using CCM (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150).
- On the Service Processor select the "3746/9x0 Menu".
- Click on the "Multiaccess Enclosure (MAE) Management".
- Double click on the "Perform Maintenance on MAE".
- The following window is displayed:



  Click on "Yes".
- The following window is displayed:



  Click on "OK".
- You should first received an alarm message saying: "MAE Concurrent Maintenance in Progress".
- Click on "OK".
- Wait until the "MAE Link" icon is red.
- Power OFF the MAE.
- Check that the cable between SIE and SAC located in the Multiaccess Enclosure is correctly plugged in each of these connectors.

Is plugging correct?

Yes **No**

002

Plug the cable correctly and restart the operation.

003

- Check the cable between SIE and SAC.

(Step **003** continues)

003 (continued)
- Unplug the cable from SIE and from the SAC.
- On each connector of the cable check that the pins are present and not damaged.
- Refer to the *Multiaccess Enclosure Installation and Maintenance*, manual manual, in appendix *Multiaccess Enclosure Cables* to check the cable continuity between each pin connector.

Is the cable correct?

Yes **No**

004

Repair the cable (if possible) or order a new one.

005

- Replug the cable into the SIE cassette and into the SAC of the MAE.
- Power ON the MAE.

Is there an other FRU in your FRU list to test?

Yes **No**

006

Call your support for assistance.

007

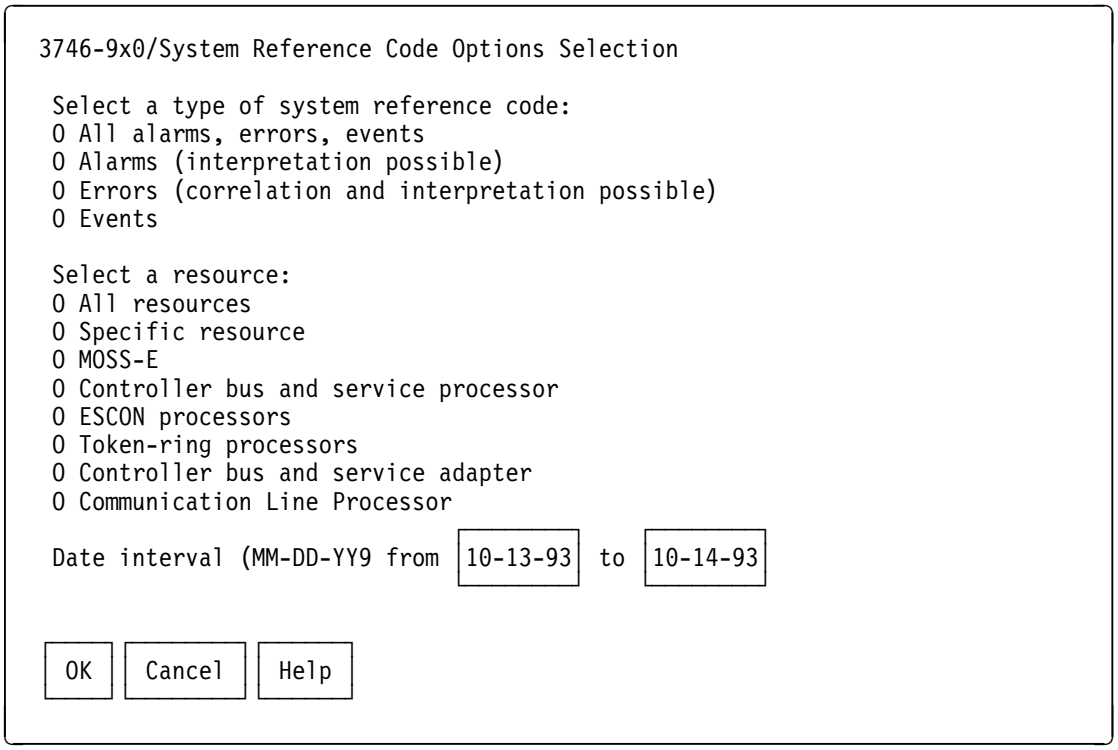
Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU exchange.

MAP 2660: 3746-900 Intermittent Box Errors

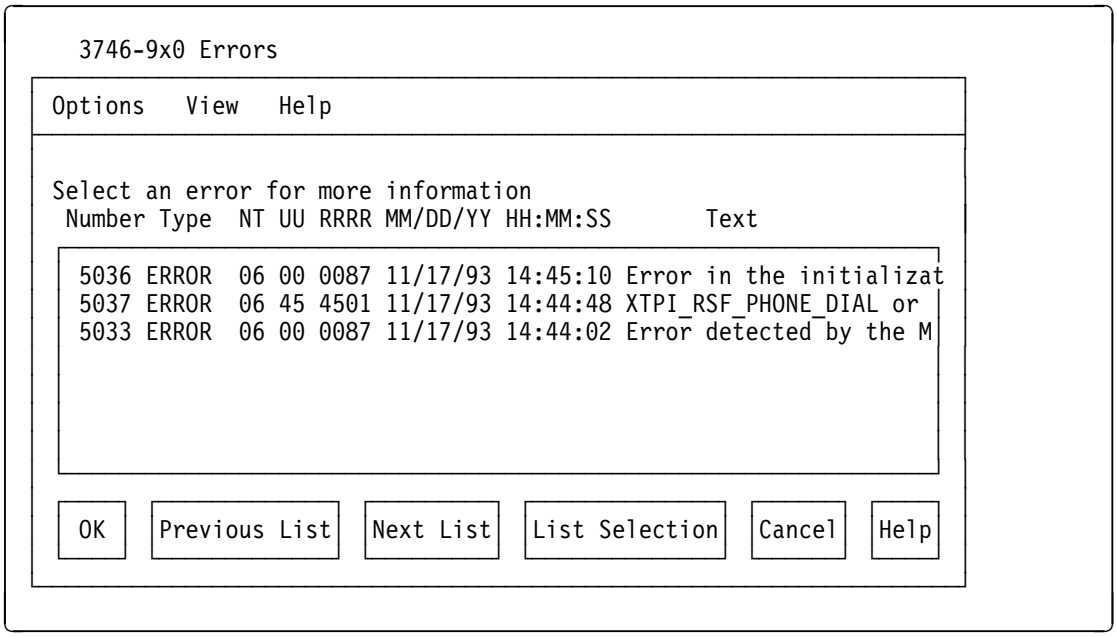
This procedure can help you in case of intermittent problem on 3746-900.

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 icon.
- On the "3746-9x0 Menu", click on the "Problem Management" option.
- Double click on the "Manage Alarms/Errors/Events (SRCs)" option.
- The "System Reference Code Option Selection" window is displayed.



- On this Screen select the options:
  1. "Errors (Correlation and interpretation possible)"
  2. "All resources" if you have no idea on the resource which can cause the errors. Otherwise select "Specific resource" or the attachement type suspected.
  3. Specify the Date interval that you want to see.
- Click on "OK".
- The "Error Type Selection" window is displayed.
- Select the "All types" option and click on "OK".
- An "Errors" window is displayed.



- Select the error that you want to see. You can display all the lists using the "Previous List" and "Next List" keys.
- Click on "View" (in the action bar). Then click on "Problem Interpretation" option.
- A "Problem Interpretation" window gives you the list of suspected FRUs with their fault probability.
- Record the FRU list and their fault probability for later use.
- Return to the "3746-9x0 Menu" window using the "Cancel" key.

MAP 2665: 3746-900 Resource Not Present in CDF-E

Important

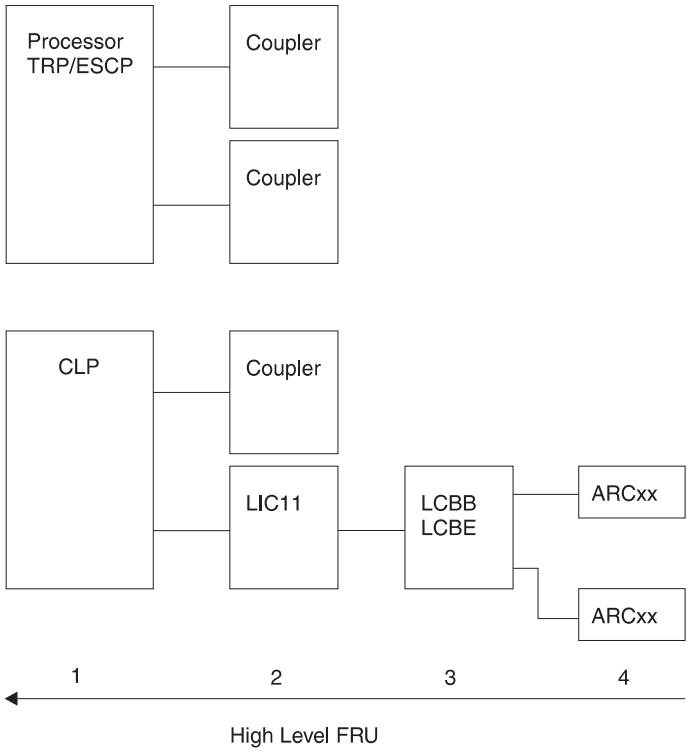
The SIE and MAE Resources are not present in CDF-E

You are here because you try to select a resource which is not present in the CDF-E.

This resource cannot be present because:

- The resource is defective
- The resource with the level higher is not present too.

So before to start this MAP you must determine from your FRU list the FRU with the highest level and start this procedure from this FRU



001

- From your FRU list identify the FRU with the highest level and check if this FRU is identified in current active CDF-E. The FRU is identified when its name **and** and its address are present.
- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window search for the highest non-identified resource.

Once you have identified the highest missing resource in the CDF-E select it in the table below and perform the specified action.

Resource Level	Not Identified Resource	Then go
1	ESCP/TRP/CLP	“MAP 2670: 3746-900 Processor Non-Identified in CDF-E” on page 2-62.
2	CBC/ESCC/TIC3	“MAP 2675: 3746-900 CBC/ESCC/TIC3 Non-Identified in CDF-E” on page 2-64.
2	LIC11/LIC12/LIC16	“MAP 2680: 3746-900 LIC11/LIC12/LIC16 Non-Identified in CDF-E” on page 2-68.
3	LCB	“MAP 2685: 3746-900 LCB Non-Identified in CDF-E” on page 2-83.

MAP 2670: 3746-900 Processor Non-Identified in CDF-E

001

Test of the processor alone

- Unplug all the couplers connect on the suspected processor, but without to remove them from the enclosure.
- Continue with Step 002

002

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the processor and click on "OK".
- On the next "Resource Selector" windows, select the processor and click on "OK".

Is the "Maintenance Options" window displayed?

Yes **No**

003

Go to Step 009 on page 2-63.

004

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- A "Diagnostic" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start". .
- A "specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostics error free?

Yes **No**

005

Did you change the suspected processor?

Yes **No**

006

Go to Step 012 on page 2-63.

007

Go to Step 009 on page 2-65.

008

According to the processor type that you have tested continue this procedure as indicated in the following table.

Processor Tested	Go to
ESCP/TRP	“MAP 2675: 3746-900 CBC/ESCC/TIC3 Non-Identified in CDF-E” on page 2-64.
CLP	“MAP 2680: 3746-900 LIC11/LIC12/LIC16 Non-Identified in CDF-E” on page 2-68.

009

Did you already change the processor?
Yes No

010

- Exchange the suspected FRU. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- After replacing the FRU, wait until the 'alarm xxxx FRU plugged' is displayed and continue with Step 002 on page 2-62.

011

Call your support for assistance.

012

- Return to the "Maintenance Options" window.
- Select the "Replace the resource" and click on "OK".
- Exchange the suspected FRU. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- After replacing the FRU, continue with Step 002 on page 2-62.

MAP 2675: 3746-900 CBC/ESCC/TIC3 Non-Identified in CDF-E

001

Did you test or replace a processor?
Yes No

002

Note

Before continuing this procedure you must be sure that all traffic is stopped on attached processor.

You are here with processor identified but not tested or replaced.

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the **processor** and click on "OK".
- On the next "Resource Selector" windows, select the **processor** and click on "OK".

Is the "Maintenance Options" window displayed?
Yes No

003

- Exchange the suspected processor. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- After replacing the FRU, continue with Step 002.

004

- **Unplug the couplers associated with this processor**, but without to remove them from the enclosure.
- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- A "Diagnostic" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start". .
- A "specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostics error free?
Yes No

005

Did you change the processor?
Yes No

006

- Return to the "Maintenance Options" window.
- Select the "Replace the resource" and click on "OK".
- Exchange the suspected processor. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- After replacing the FRU, continue with Step 002.

007

Call your support for assistance.

008

Go to Step 009.

009

You are here with a processor installed, error free and without any coupler.

- Plug the first coupler associated with the processor.
- Continue with Step 010.

010

- Plug the coupler associated with the processor.
- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the plugged coupler. The coupler must be identified by **both** its name and line address.

Is the coupler identified by its name and its line address in the CDF-E?
Yes No

011

Is the associated processor still identified in the current CDF-E?
Yes No

012

Go to Step 026 on page 2-66

013

Go to Step 014

014

Here we test the processor and its attached coupler

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the **processor** and click on "OK".
- On the next "Resource Selector" windows, select the **processor** and click on "OK".

Is the "Maintenance Options" window displayed?
Yes No

015

Call your support for assistance.

016

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".

(Step **016** continues)

016 (continued)
- A "Diagnostic" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start". .
- A "specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostics error free?
Yes **No**

017

Did you change the suspected coupler?
Yes **No**

018

Go to Step 025.

019

Call your support for assistance.

020

Is there another coupler to replug on the processor?
Yes **No**

021

Did you change a FRU during this procedure?
Yes **No**

022

- The problem can be intermittent change all the suspected FRU(s).
- Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130.

023

Problem solved. Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

024

- Go to Step 010 on page 2-65.

025

- Return to the "Maintenance Options" window.
- Select the "Replace the resource" and click on "OK".
- Exchange the suspected **coupler** Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue.
- On the "Confirmation" window, click on "OK".
- Go to Step 016 on page 2-65.

026

- Exchange the suspected coupler. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue.

(Step **026** continues)

026 (continued)
- Go to Step 014 on page 2-65.

MAP 2680: 3746-900 LIC11/LIC12/LIC16 Non-Identified in CDF-E

001

Is/are the suspected LIC unplugged.?

Yes **No**

002

Go to Step 008.

003

Is a LIC11 to plug?

Yes **No**

004

Is a LIC12 to plug?

Yes **No**

005

- Plug the LIC16.
- Go to Step 089 on page 2-79.

006

- Plug the LIC12.
- Go to Step 069 on page 2-76.

007

- Remove the cable at the rear of the LIC11.
- Plug the LIC11.
- Go to Step 013 on page 2-69.

008

Is the LIC not identified a LIC11?

Yes **No**

009

Is the LIC not identified a LIC12?

Yes **No**

010

Go to Step 090 on page 2-79.

011

Go to Step 070 on page 2-76.

012

LIC11 not identified in CDF-E

- Remove the cable at the rear of the LIC11.
- Unplug, then plug the LIC11.
- Go to Step 013 on page 2-69.

013

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the plugged coupler. The coupler must be identified by **both** its name and line address.

Is the coupler now present in CDF-E and identified by its name and its line address?
Yes **No**

014

Go to Step 016.

015

Go to Step 025 on page 2-70.

016

- Exchange the suspected **coupler.** Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue.

017

- On the "Active CDF-E Display" - Resource Selector" check the presence of the plugged coupler. The coupler must be identified by **both** its name and line address.

Is the coupler now present in CDF-E and identified by its name and its line address?
Yes **No**

018

Did you change the processor?
Yes **No**

019

Go to Step 024 on page 2-70.

020

Call your support for assistance.

021

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LIC11 and click on "OK".
- On the next "Resource Selector" windows, select the LIC11 and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

022

Call your support for assistance.

023

(Step **023** continues)

023 (continued)
Go to Step 040 on page 2-72.

024

Note

Before continuing this procedure you must be sure that all traffic is stopped on attached processor.

- Exchange the suspected **processor**. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue with Step 017 on page 2-69.

025

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LIC11 and click on "OK".
- On the next "Resource Selector" windows, select the LIC11 and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

026

Call your support for assistance.

027

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" then, click on "OK".
- An "Information Required" window is displayed asking you to install a wrap plug.
- Locate the LIC11.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

028

Go to Step 038 on page 2-72.

029

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **029** continues)

029 (continued)
Is the diagnostic error-free ?
Yes **No**

030

Go to Step 038 on page 2-72.

031

- Click on "Cancel".
- Locate the LCBB connected to the LIC11.
- **On the LCBB** unfasten the screws which maintain the cable coming from LIC11 and unplug it.
- On the rear of the LIC11 plug the cable coming from the LCBB and secure it.
- On the "Maintenance Options" window select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" then, click on "OK".
- An "Information Required" window is displayed asking you to install a wrap plug.
- On the end of the cable plugged on LIC11, install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

032

Go to Step 036.

033

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

034

Go to Step 036.

035

Go to Step 044 on page 2-73.

036

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 037 on page 2-72.

037

The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

038

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 039.

039

.

- The LIC11 is defective.
- Using the "Cancel" key return to the "Maintenance Options" window, select the "Replace the Resource" option then click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement and after the LIC11 replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen.
- On the "Confirmation" window click on "OK".
- Return to the "Maintenance Options" window, then continue with Step 040.

040

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" then, click on "OK".
- An "Information Required" window is displayed asking you to install a wrap plug.
- Install the wrap plug PN 58G9425 at the rear of the LIC11.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

041

Call your support for assistance.

042

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **042** continues)

042 (continued)
Is the diagnostic error-free ?
Yes **No**

043

Call your support for assistance.

044

- Connect and secure the cable from the LCBB to the rear of the LIC11.
- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".

Is the LIC11 identified by both its name and line address in the "Resource Selector" window?
Yes **No**

045

Go to Step 062 on page 2-75.

046

Is the LCB attached present in the "Resource Selector" window?
Yes **No**

047

Go to Step 062 on page 2-75.

048

Go to Step 049.

049

You are here with LIC11 changed and/or tested error free.

- On the "Resource Selector" window, select the LCB and click on "OK".
- On the next "Resource Selector" windows, select the LCB and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

050

Go to Step 062 on page 2-75.

051

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

(Step **051** continues)

051 (continued)
Is the diagnostic error-free ?
Yes **No**

052

- Using the "Cancel" key return to the "Maintenance Options" window, select the "Replace the Resource" option then click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LCB part replacement of your FRU list (LCPB or LCEB) and after the replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen, then continue with Step 056.

053

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

054

- Using the "Cancel" key return to the "Maintenance Options" window, select the "Replace the Resource" option then click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LCB part replacement of your FRU list (LCPB or LCEB) and after the replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen, then continue with Step 059 on page 2-75.

055

Go to Step 068 on page 2-76.

056

- On the "Confirmation" window, click on "OK".
- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

057

Call support for assistance.

058

Go to Step 068 on page 2-76.

059

- On the "Confirmation" window, click on "OK".
- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

060
Call support for assistance.

061

Go to Step 068 on page 2-76.

062

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the all LCB part replacement of your FRU list (LCPB or LCEB) and after the replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen then continue.
- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LCB and click on "OK".
- On the next "Resource Selector" windows, select the LCB and click on "OK".

Is the "Maintenance Options" window displayed?
Yes No

063
Call your support for assistance.

064

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

065
Call your support for assistance.

066

- Using the "Cancel" key, return to the "Maintenance Options" window.

(Step **066** continues)

066 (continued)
- Select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

067

Call your support for assistance.

068

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option and click on "OK".
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance Options" window is displayed.
- Select the "Remove the resource from concurrent mode" option and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource Selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to Step 109 on page 2-81

069

LIC12 was unplugged

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the plugged LIC12. The LIC12 must be identified by **both** its name and line address.

Is the LIC12 now identified by its name and its line address in the CDF-E?
Yes **No**

070

LIC12 not identified in CDF-E

- Exchange the suspected **LIC12.** Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue with Step 072.

071

Go to Step 080 on page 2-77.

072

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the LIC12. The LIC12 must be identified by **both** its name and line address.

(Step **072** continues)

072 (continued)
Is the LIC12 now identified by its name and its line address in the CDF-E?
Yes **No**

073

Did you change the processor?
Yes **No**

074

Go to Step 079.

075

Call your support for assistance.

076

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LIC12 and click on "OK".
- On the next "Resource Selector" windows, select the LIC12 and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

077

Go to Step 073.

078

Go to Step 086 on page 2-78.

079

Note

Before continuing this procedure you must be sure that all traffic is stopped on attached processor.

- Exchange the suspected **processor**. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue with Step 072 on page 2-76.

080

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LIC12 and click on "OK".
- On the next "Resource Selector" windows, select the LIC12 and click on "OK".

(Step **080** continues)

080 (continued)
Is the "Maintenance Options" window displayed?
Yes **No**

081

Go to Step 070 on page 2-76.

082

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 SAT" then, click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

083

Go to Step 085.

084

Go to Step 088.

085

- Return to the "Maintenance Options" window.
- Select the "Replace the resource" and click on "OK".
- Exchange the suspected FRU. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- The "Maintenance Options" window is displayed.
- Continue with Step 086.

086

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

087

Go to Step 073 on page 2-77.

088

- Reconnect and secure the cable at the rear of LIC12.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.

(Step **088** continues)

088 (continued)
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Continue with Step 109 on page 2-81

089

LIC16 was unplugged

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the plugged LIC16. The LIC16 must be identified by **both** its name and line address.

Is the LIC16 now identified by its name and its line address in the CDF-E?
Yes **No**

090

LIC16 not identified in CDF-E

- Exchange the suspected **LIC16.** Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue with Step 092.

091

Go to Step 100 on page 2-80.

092

- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window check the presence of the LIC16. The LIC16 must be identified by **both** its name and line address.

Is the LIC16 now identified by its name and its line address in the CDF-E?
Yes **No**

093

Did you change the processor?
Yes **No**

094

Go to Step 099 on page 2-80.

095

Call your support for assistance.

096

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".

(Step **096** continues)

096 (continued)
- On the "Resource Selector" window, select the LIC16 and click on "OK".
- On the next "Resource Selector" windows, select the LIC16 and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

097

Go to Step 093 on page 2-79.

098

Go to Step 106 on page 2-81.

099

Note

Before continuing this procedure you must be sure that all traffic is stopped on attached processor.

- Exchange the suspected **processor**. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the "alarm xxxx FRU unplugged' and 'alarm xxxx FRU plugged' are displayed then continue with Step 092 on page 2-79.

100

- Return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LIC16 and click on "OK".
- On the next "Resource Selector" windows, select the LIC16 and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

101

Go to Step 090 on page 2-79.

102

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 SAT" then, click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

103

Go to Step 105 on page 2-81.

104

Go to Step 108 on page 2-81.

105

(Step **105** continues)

105 (continued)

- Return to the "Maintenance Options" window.
- Select the "Replace the resource" and click on "OK".
- Exchange the suspected FRU. Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- The "Maintenance Options" window is displayed.
- Continue with Step 106.

106

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

107

Go to Step 093 on page 2-79.

108

- Reconnect and secure the cable at the rear of LIC16.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Continue with Step 109

109

Is there another LIC to test?
Yes No

110

Did you change a FRU during this procedure?
Yes No

111

- The problem can be intermittent change all the suspected FRU(s).
- Go to “MAP: No Problem Found on All the FRUS with Diagnostics in Concurrent Mode” on page 1-130.

112

Problem solved. Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

113

(Step **113** continues)

113 (continued)
Go to Step 001 on page 2-68.

MAP 2685: 3746-900 LCB Non-Identified in CDF-E

001

Is the cable between the LIC11 and the suspected LCB unplugged?

Yes **No**

002

Go to Step 005

003

- Plug correctly the suspected cable.
- Return to the "3746-9x0 Menu".
- Click on the "Configuration Management" option.
- Double click on the "Display/Update Active Configuration (CDF-E)" option.
- On the "Active CDF-E Display - Resource Selector" window, check the presence of the LCB.

Is the LCB now present in CDF-E?

Yes **No**

004

Go to Step 005

005

- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the "Resource Selector" windows, select the LIC11 for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?

Yes **No**

006

- Check that the customer stopped traffic on the suspected LIC11.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Then go to Step 005

007

- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LIC11.
- Unfasten the screws which maintain the cable, coming from the LCBB, on the rear of the LIC11 and unplug the cable.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

008

Go to Step 018 on page 2-85.

009

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

010

Go to Step 019 on page 2-85.

011

- Click on "Cancel".
- Replug the cable coming from the LCBB on the rear of the LIC11 and secure it.
- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LCBB connected to this LIC11.
- **On the LCBB** unfasten the screws which maintain the cable, coming from the LIC11, and unplug it.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

012

Go to Step 016 on page 2-85.

013

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

014

Go to Step 017 on page 2-85.

015

Go to Step 023 on page 2-86.

016

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed. Then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 017.

017

The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

018

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed. Then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 019.

019

.

- The LIC11 is defective.
- Using the "Cancel" key, return to the "Maintenance Options" window, select the "Replace the Resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement. After the LIC11 replacement, continue with the next bullet.
- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Install the wrap plug PN 58G9425 at the rear of the LIC11.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

020
Call your support for assistance.

021

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".

(Step **021** continues)

021 (continued)

- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

022

Call your support for assistance.

023

- Plug the cable in the LCBB and secure it using the screws.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".

Is initialization successful?

Yes **No**

024

Go to Step 026

025

Go to Step 028

026

- On the "Warning" window, click on "OK".
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the **all** LCB part replacement of your FRU list (LCPB or LCEB) and after the replacement, continue with the next bullet.
- Wait until you have seen messages saying 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' displayed on the service processor screen then continue.
- Return to the "Maintenance Options" window, by clicking on "OK" on the "Resource Selector" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".

Is initialization successful?

Yes **No**

027

Call your support for assistance.

028

- On the "Warning" window, click on "OK".
- Using the "Cancel" and "Leave" keys, return to the "Resource Selection Options for Maintenance" window,
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the LCB and click on "OK".
- On the next "Resource Selector" windows, select the LCB and click on "OK".

Is the "Maintenance Options" window displayed?

Yes **No**

029

Call your support for assistance.

030

- On the "Maintenance Options" window, select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

031

Call your support for assistance.

032

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Perform Diagnostic on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then, click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done a "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

033

Call your support for assistance.

034

- Using the "Cancel" key, return to the "Maintenance Options" window.
- Initialize and remove from the concurrent mode all the resources previously set in that mode using the following steps for each one:
  - Select the "Initialize the resource" option to reinitialize the FRU.
  - Follow the instructions on the "Warning" windows and click on "OK" when prompted.
  - The "Maintenance options" window is displayed.
  - Select "Remove the resource from the concurrent mode" option and click on "OK".
  - On the "Warning" window, click on "OK".
  - On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Click on "Cancel" key.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

3746-900 ESCA MAPs

MAP 2700: 3746-900 Permanent ESCA Problem

Symptom Explanation	Conditions That Could Cause This Symptom
ESCA reported problem Host reporting error on Host/3746-900 fiber optic link	• ESCP • ESCC • Fiber optic

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 on which you want to work.
- According to the status of the 3746-900, run diagnostic on the suspected ESCP/ESCC using either “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43 or “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17.

Does the diagnostic run error-free?
Yes No

002

Exchange the faulty element (ESCP or ESCC). Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

003

Run the manual assurance test (MAT) using the specific wrap plug installed in the ESCC. According to the status of the 3746-900, use either “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 if the 3746-900 is set in Online mode, or “MAP 6020: How to Run 3746-900 Specific Diagnostics” on page 3-45 if the 3746-900 is set in Offline mode.

Does the diagnostic run error-free?
Yes No

004

Exchange the faulty ESCC. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

005

Go to “MAP 2730: 3746-900 ESCA Activation Problem” on page 2-91.

MAP 2710: 3746-900 Any Intermittent ESCA Problem

Symptom Explanation	Conditions That Could Cause This Symptom
ESCA reported problem Host reporting error on Host/3746-900 fiber optic link	• ESCP • ESCC • Fiber optic

001

You are here because a host system or connected node indicated an error on the 3746-900 host fiber optic link or you have been leaded here under the guidance of the *Enterprise System Connection Link Fault Isolation* ZZ22-9473 manual.

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 on which you want to work.
- A according to the status of the 3746-900 (offline or online), run diagnostic on the ESCP suspected using either “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43 or “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17.

Does the diagnostic run error-free?
Yes No

002

Exchange the faulty element (ESCP or ESCC). Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

003

Run the manual assurance test (MAT) using the specific wrap plug installed in the ESCC fiber optic position. According to the status of the 3746-900, run MAT diagnostic on the ESCC suspected using either “MAP 6020: How to Run 3746-900 Specific Diagnostics” on page 3-45 if the 3746-900 is set in Offline mode, or “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 if the 3746-900 is set in Online Mode.

Does the MAT diagnostic run error-free?
Yes No

004

Exchange the faulty ESCC. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

005

Perform the optical power measurement.

- Use the *Problem Determination Procedures, Maintenance Information for Enterprise Systems Connection Links,* SY27-2597.
- To do this you must to set the specific ESCC to transmit offline sequence, using the following procedure from the service processor.
  - From the "3746-9x0 Menu", click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the ESCP on which you want the measurement. Then click on "OK".
  - On the "ESCON configuration Lines" window, select "Options" (in the action bar). Then select the "Manage ESCC status" option..
  - On the "ESCC status Management" window, select the "Transmit offline sequence".
- Return or refer to the *Enterprise System Connection Link Fault Isolation* ZZ22-9473 manual to continue the problem determination.

MAP 2720: 3746-900 Bit Error Rate Validation

Symptom Explanation	Conditions That Could Cause This Symptom
ESCA reported problem Host reporting error on Host/3746-900 fiber optic link	• ESCP • ESCC • Fiber optic

001

You are here under the guidance of the *Enterprise System Connection Link Fault Isolation* ZZ22-9473 manual.

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 on which you want to work.
- On the "3746-9x0 Menu" window, click on the "Configuration Management" option.
- Double click on the "Manage ESCON Processors" option.
- On the "ESCP Management-Resource Selector" window, select the desired ESCP then click on "OK".
- The "ESCON Configuration-Lines" window is displayed.
- Click on the "Options" (in the action bar). Then click on the "Manage ESCC status" option.
- The "ESCC Status Management" window is displayed.
- Look the bit error count displayed for the ESCC.
- This bit error count is reset every five minutes and, if the maximum count value (15) is reached, an SRC is generated. If the maximum count is reached before the five minutes the counter stays at that value until the reset.
- Record the bit error rate counter.
- Click on the "Refresh" (in the action bar) then click on the "Permanent Refresh" option.
- Wait five minutes.
- Record the new bit error rate counter.
- Click on the "Refresh" (in the action bar). Then click on the "Stop Permanent Refresh" option.
- Click on the "Options" (in the action bar). Then click on the "Return" option.
- On the "ESCON Configuration-Lines" window, click on the "Options" (in the action bar). Then click on the "Exit" option.
- On the "Confirmation" window, click on "OK".
- Return to the "3746-9x0 Menu" window using the "Cancel" key.
- Return or refer to the *Enterprise System Connection Link Fault Isolation* ZZ22-9473 manual to continue the problem determination.

MAP 2730: 3746-900 ESCA Activation Problem

Symptom Explanation	Conditions That Could Cause This Symptom
ESCA activation problem Host reporting ESCA enable problem	• ESCP • ESCC • Fiber optic • Host system

A host system cannot enter in communication with the 3745 via the 3746-900 ESCA.

001

If you are not logged ON the service processor console, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.

- On the "MOSS-E View" window, double click on the 3746-900 on which you have the problem.
- The "3746-9x0 Menu" is displayed.
- Double click on the "Configuration Management" option.
- Double click on the "Manage ESCON Processors" option.
- On the "ESCP Management Resource Selector" window, select the desired ESCP. Then click on "OK".
- The "ESCON Configuration Lines" window is displayed.
- Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
- The following "ESCC Status Management" window is displayed.

```
   ESCC Satus Management

Options   Refresh   Help

 ESCP 2240     Configuration from ESCP

 ESCC 0: 2240      Present: YES        ESCC 1: 2272      Present: NO

ESCC O Status: ENABLED              ESCC 1 Status:

Request to change ESCC 0 status:    Request to change ESCC 1 status:
o Enable                            o Enable
o Transmit offline sequence         o Transmit offline sequence
o Disable                           o Disable

Fiber status IN = IDLE CHARACTERS   Fiber status IN =
Fiber status OUT = ENABLE OBTAINED  Fiber status OUT =
Control unit link address           Control unit link address
(CNTLUNIT LINK):                    (CNTLUNIT LINK):
Bit error rate counter:             Bit error rate counter:
```

- Select the "enable" option.
- Click on the "Options" (in the action bar). Then select the "Send request and save" option.
- A "confirmation" window is displayed, click on "OK".
- A "Warning" window inform you that the ESCP configuration is saved, click on "OK".
- Click on "Refresh"(in the action bar). Then select "Permanent Refresh" (no further action is possible from this screen). The screen is refreshed with the last status.
- When the "enable" is complete the "ESCC x Status" line displays : ENABLED.
- Click on "Refresh" (in the action bar). Then select "Stop permanent refresh".

(Step **001** continues)

001 (continued)
Is the "ESCC x Status" line displaying: ENABLED?
Yes **No**

002
Go to Step 004

003

- The ESCC is enabled. Return to the "MOSS-E View" window.
- Go to “CE Leaving Procedure” on page 4-55 to return the machine to the customer. If the problem persists contact your support.

004
Is the "fiber status IN" with LIGHT OFF indication displayed?
Yes **No**

005
Go to Step 007

006
Suspect a problem in the neighbor. Refer to *Problem Determination Procedures, Maintenance Information for Enterprise Systems Connection Links* SY27-2597.

007
Is the "fiber status In" with OFFLINE SEQUENCES indication displayed?
Yes **No**

008
Go to Step 010

009
Check the indication displayed on the "fiber status **OUT**". Then take the appropriate action described in the following table.

Fiber Status OUT indication	Action to Perform
ESCP EMITS OLS	Suspect a problem in the neighbor. Refer to *Problem determination Procedures, maintenance Information for Enterprise Systems Connection Links* SY27-2597.

010

- The fiber status **IN** indicates: ESCC DOWN, NO INFO.
- Check the indication displayed on the "fiber status **OUT**". Then take the appropriate action described in the following table.

Fiber Status OUT indication	Action to Perform
ESCP FORCED OLS	Suspect a problem in the ESCC. Go to “Run Diagnostics” on page 1-4 to run diag on the suspected FRU.
ESCC ERROR / NO INFO	Suspect a problem in the ESCC,then in the ESCP Go to “Run Diagnostics” on page 1-4 to run diag on the suspected FRUs.

(Step **010** continues)

010 (continued)
If you have already changed the ESCC and the ESCP, call your support for assistance.

3746-900 LAN MAPs

MAP 2750: 3746-900 Permanent Service Processor Link Problem

Symptom Explanation	Conditions That Could Cause This Symptom
Service processor not accessible digit present Console Message	• Service processor • CBSP cassette • TIC3 cassette • Service Processor Access Unit • Loop

001

Is there a panel code displayed on the 3746-900 control panel?

Yes **No**

002

Go to "3746-900 Control Panel Symptoms" on page 1-14.

003

Using the control panel code displayed on the 3746-900 control panel, go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required.

Is your problem solved?

Yes **No**

004

Go to Step 006

005

Restart your application.

006

– Run the service processor link restart test as follows:

1. Set the service mode to maintenance.
   a. Press the 'Service' key until the number '1' is displayed in the service window.
   b. Press the 'Validate' key.
2. Start the test as follows:
   a. Press the 'Function' key until the number '6' is displayed in the function window.
   b. Press the 'Validate' key.
3. On the display, note the control panel code and perform the required action using the following table.

Control Panel Code	Action
05B0B0FD	Go to Step 007
05B0B0FE	TIC3 already active. User error
05B0B0FF	Microcode error call your support
Any other panel code	If the panel code displayed is NOT the same in step 3 go to "3746-900 Control Panel Codes" on page 1-15 and perform the action required. Otherwise exchange the CBSP.

007

(Step **007** continues)

007 (continued)
On the display, note the value of the 'Console not accessible' window.
Is there a value displayed?
Yes **No**

008

Connection established successfully. Press the 'Exit' pushbutton on the 3746-900 control panel, 00000000 must be displayed.

009

Is the displayed value permanently ON?
Yes **No**

010

- The 3746-900 is trying to establish a link with the service processor and the values are changing.
- According to the progress of the retries some value are displayed. These value are:
  - '*****': Physical link not active
  - '**$**': Disconnected at SSA level
  - '**A**': 'OK' frame received on 'Hello' frame
  - '**C**': Connected at DLC level
  - '**D**': Disconnected sent by the service processor
  - '**E**': Internal error
  - '**F**': 'Hello' frame sent
  - '**G**': Ring failure
  - '**I**': Inserted
  - '**N**': Inserting on LAN or retrying insertion
  - '**R**': Link reset
  - '**5**': Congestion of CBSP during general IML
- When the connection or the retry is not possible a fixed value is displayed.
- Go to Step 011.

011

In the following table, locate the character displayed in the 'service processor not accessible' digit and perform the appropriate action.

Service Processor Not Accessible Digit Value	Action
*	Physical link not active. if not already done, note the control panel code and go to “3746-900 Control Panel Codes” on page 1-15 Otherwise call your support structure.
$	Call your support structure.
B	Permanent beaconing. Refer to *Token-Ring Network, Problem Determination Guide* SX27-3710.
C	Call your support structure.
G	Ring failure (see your LAN manager).
H	Exchange the TIC3 of the CBSA
L	Your 3746-900 is not connected to the LAN. Check the 3746-900 LAN cable connection on the TIC3 and on the service processor access unit.
T	A physical link is established but there is no answer from the service processor. Suspect a microcode problem and contact your support.
U	TIC3 is unplugged. Replug the TIC3 cassette, run the service processor link restart again, if the same digit code is displayed exchange the TIC3.
U	Suspect a microcode problem and contact your support structure.

MAP 2760: 3746-900 TRP LAN Problem

Symptom Explanation	Conditions That Could Cause This Symptom
Unable to activate or deactivate a ring. Errors occur while ring is running. Console Message	• TRP • TIC3 • ring • Ethernet Bridge • Ethernet Bridge Connection Box

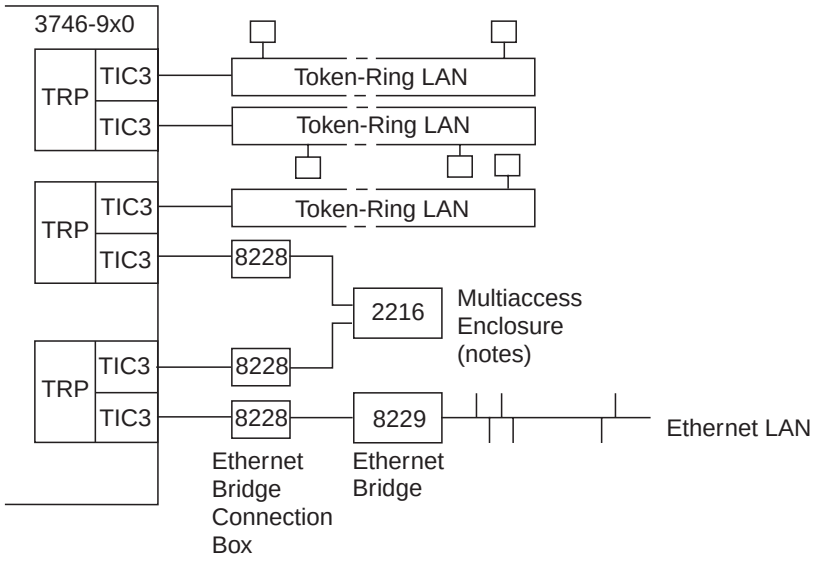


Figure 2-11. 3746 Model 9x0 TRP LAN

Notes:

1. The multiaccess enclosure can be connected to TIC3s of the same or different TRP.
2. One TIC3 of the multiaccess enclosure can be a TIC3 of the CBSTRP.

001

You are here because there is a problem on a LAN connected to a TRP.
Are there two LANs connected on the same suspected TRP?
Yes No

002

Go to Step 010 on page 2-97

003

Have the two LANs a problem?
Yes No

004

Is there a Ethernet Bridge connected to the suspect Token-Ring LAN?
Yes No

005

(Step **005** continues)

005 (continued)
Is there a multiaccess enclosure connected to the suspect Token-Ring LAN?
Yes **No**

006
Go to Step 047 on page 2-100

007
Go to Step 035 on page 2-99

008
Go to Step 038 on page 2-99

009
Go to Step 054 on page 2-101.

010
Is there a Ethernet Bridge connected to the suspect Token-Ring LAN?
Yes **No**

011
Is there a multiaccess enclosure connected to the suspect Token-Ring LAN?
Yes **No**

012
Go to Step 026 on page 2-98

013
Go to Step 023 on page 2-98

014
You are here because there is a problem on a Ethernet LAN connected to a TRP.

Check that all the cables are properly plugged in:

- The Ethernet bridge connection box,
- The Ethernet Bridge
- The TIC3 of the 3746.

Everything OK?
Yes **No**

015
Correct the problem

016
Are the Ethernet Bridge powered ON.
Yes **No**

017
Check the power cable connection
(Step **017** continues)

017 (continued)
Is the problem corrected?
Yes **No**

018

Go to Step 073 on page 2-102.

019

Problem solved. Return the machine to the customer, go to "CE Leaving Procedure" on page 4-55.

020

Is there a yellow LED, or number displayed on the Ethernet Bridge?
Yes **No**

021

Go to Step 070 on page 2-102.

022

Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

023

Check the status of the multiaccess enclosure using the *Multiaccess Enclosure Installation and Maintenance*, manual.
Are all LEDs OK?
Yes **No**

024

Continue problem determination of the multiaccess enclosure with the *Multiaccess Enclosure Installation and Maintenance*, manual.

025

Go to Step 070 on page 2-102.

026

You are here because there is a problem on a Token-Ring LAN connected to a TRP.

- Check that all the cables are properly plugged to the ring, and in the TIC3 of the 3746.

Everything OK?
Yes **No**

027

Correct the problem

028

From the service processor run the SAT on the suspected TIC3 coupler. Refer either to "MAP 6010: How to run 3746-900 Diagnostic in Offline Mode" on page 3-43 to run diagnostic in offline mode or to "MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode" on page 3-17 to run diagnostic in concurrent mode.
Does the diagnostic run error-free?
Yes **No**

029

(Step **029** continues)

029 (continued)
Exchange the faulty FRU. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

030

Run the manual assurance test (MAT) using the specific wrap plug installed in the TIC3. According to the status of the 3746-900 use either "MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode" on page 3-17 if the 3746-900 is set in Online mode, or "MAP 6020: How to Run 3746-900 Specific Diagnostics" on page 3-45 if the 3746-900 is set in Offline mode.
Does the MATs diagnostic run error-free?
Yes No

031

Exchange the faulty FRU. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

032

Run diagnostic on the token ring processor. Refer either to "MAP 6010: How to run 3746-900 Diagnostic in Offline Mode" on page 3-43 to run diagnostic in offline mode or to "MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode" on page 3-17 to run diagnostic in concurrent mode.
Is the diagnostic run error-free?
Yes No

033

Exchange the faulty FRU. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

034

You can suspect a problem on the link. Perform the problem determination on the ring using the *Token-Ring Network, Problem Determination Guide* SX27-3710, or call your support for assistance.

035

Check the status of the multiaccess enclosure using the *Multiaccess Enclosure Installation and Maintenance*, manual.
Are all LEDs OK?
Yes No

036

Continue problem determination of the multiaccess enclosure with the *Multiaccess Enclosure Installation and Maintenance*, manual.

037

Go to Step 047 on page 2-100

038

You are here because you suspect a problem on a Ethernet LAN connected to a TRP.

- Check that all the cables are properly plugged in the Ethernet bridge connection box, in the Ethernet Bridge, and in the TIC3 of the 3746.

Everything OK?
Yes No

039

Correct the problem

040

(Step **040** continues)

040 (continued)
Are the Ethernet Bridge powered ON.
Yes **No**

041

Check the power cable connection
Is the problem corrected?
Yes **No**

042

Go to Step 073 on page 2-102.

043

Problem solved. Return the machine to the customer, go to "CE Leaving Procedure" on page 4-55.

044

Is there a yellow LED, or number displayed on the Ethernet Bridge?
Yes **No**

045

Go to Step 049.

046

Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

047

You are here because you suspect a problem on a Token-Ring LAN connected to a TRP.

- Check that all the cables are properly plugged to the ring, and in the TIC3 of the 3746.

Everything OK?
Yes **No**

048

Correct the problem

049

From the service processor run the SAT on the suspected TIC3 coupler. Refer either to "MAP 6010: How to run 3746-900 Diagnostic in Offline Mode" on page 3-43 to run diagnostic in offline mode or to "MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode" on page 3-17 to run diagnostic in concurrent mode.
Does the diagnostic run error-free?
Yes **No**

050

Exchange the faulty FRU. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

051

Run the manual assurance test (MAT) using the specific wrap plug installed in the TIC3. According to the status of the 3746-900 use either "MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode" on page 3-17 if the 3746-900 is set in Online mode, or "MAP 6020: How to Run 3746-900 Specific Diagnostics" on page 3-45 if the 3746-900 is set in Offline mode.
(Step **051** continues)

051 (continued)
Does the MATs diagnostic run error-free?
Yes **No**

052

Exchange the faulty FRU. Go to "3746-900 Maintenance Using a FRU list" on page 1-28.

053

You can suspect a problem on the link.

- If you are investigating on Ethernet LAN problem run test on the Ethernet Bridge using the *8229 Bridge Manual*, GA27-4025. If the Ethernet Bridge is error free call your support for assistance.
- If you are investigating on multiaccess enclosure problem run test on the multiaccess enclosure using the *Multiaccess Enclosure Installation and Maintenance*, manual. If the multiaccess enclosure is error free call your support for assistance.
- If you are investigating on a Token-Ring LAN problem, perform the problem determination on the ring using the *Token-Ring Network, Problem Determination Guide* SX27-3710. If you do not solve your problem call your support for assistance.

054

Are there two Ethernet Bridge connected to the suspect TRP?
Yes **No**

055

Are there a multiaccess enclosure connected to the suspect TRP?
Yes **No**

056

Go to Step 070 on page 2-102.

057

Go to Step 067 on page 2-102

058

The two LANs are Ethernet LANs.

- Check that all the cables are properly plugged in the Ethernet bridge connection box, in the Ethernet Bridge, and in the TIC3 of the 3746.

Everything OK?
Yes **No**

059

Correct the problem

060

Are the Ethernet Bridge powered ON.
Yes **No**

061

Check the power cable connection
Is the problem corrected?
Yes **No**

062

(Step **062** continues)

062 (continued)
Go to Step 073.

063

Problem solved. Return the machine to the customer, go to “CE Leaving Procedure” on page 4-55.

064

Is there a yellow LED, or number displayed on the Ethernet Bridge?
Yes **No**

065

Go to Step 070.

066

Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

067

Check the status of the multiaccess enclosure using the *Multiaccess Enclosure Installation and Maintenance*, manual.
Are all LEDs OK?
Yes **No**

068

Continue problem determination of the multiaccess enclosure with the *Multiaccess Enclosure Installation and Maintenance*, manual.

069

Go to Step 070

070

Run diagnostic on the token ring processor. Refer either to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43 to run diagnostic in offline mode or to “MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode” on page 3-17 to run diagnostic in concurrent mode.
Is the diagnostic run error-free?
Yes **No**

071

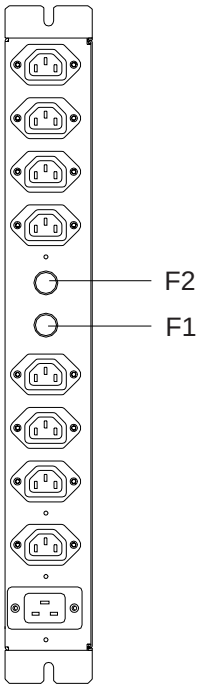
Exchange the faulty FRU. Go to “3746-900 Maintenance Using a FRU list” on page 1-28.

072

You can suspect a problem on the link.

- If you are investigating on a Token-Ring LAN problem, perform the problem determination on the ring using the *Token-Ring Network, Problem Determination Guide* SX27-3710.
- If you are investigating on Ethernet LAN problem run test on the Ethernet Bridge using the *8229 Bridge Manual*, GA27-4025. If the Ethernet Bridge is error free call your support for assistance.
- If you are investigating on multiaccess enclosure problem run test on the multiaccess enclosure using the *Multiaccess Enclosure Installation and Maintenance*, manual. If the multiaccess enclosure is error free call your support for assistance.

073



Fuse Location on ac outlet distribution box

- On the ac outlet distribution box:
  - Fuse F1 controls the range of connectors J1 to J4
  - Fuse F2 controls the range of connectors J5 to J8.
- Check if other units are connected to the same range of connectors than the suspected unit.

Are there other units connected to the same range than the suspected unit?
Yes **No**

074

Go to Step 083 on page 2-104.

075

Check that the other units have their power ON/OFF switch to ON.
Are other units powered ON?
Yes **No**

076

Go to Step 078

077

Suspect a power problem in the Ethernet Bridge. Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

078

Check the corresponding fuse.
Is the fuse OK?
Yes **No**

079

- Switch to OFF all the units controlled by this fuse.
- Disconnect the power cord of the Ethernet Bridge.
- Exchange the defective fuse.
- Switch ON all the units controlled by this fuse.
- Reconnect the power cord of the Ethernet Bridge.

(Step **079** continues)

079 (continued)
Is the fuse blown again?
Yes **No**

080

Problem solved go to “CE Leaving Procedure” on page 4-55.

081

- Suspect a power problem in a unit powered through the ac outlet distribution box.
- Switch to OFF all the units controlled by this fuse.
- Exchange the fuse.
- Switch one by one the units controlled by this fuse to identify the unit which has a problem.
- Once you have identified the faulty unit continue with Step 090.

082

Suspect the ac wall socket.

083

Check the corresponding fuse.
Is the fuse OK?
Yes **No**

084

- Disconnect the power cord of the Ethernet Bridge.
- Exchange the defective fuse.
- Reconnect the power cord of the Ethernet Bridge.

Is the fuse blown again?
Yes **No**

085

Problem solved go to “CE Leaving Procedure” on page 4-55.

086

Suspect a power problem in the Ethernet Bridge. Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

087

Are all other units installed in the controller rack powered ON?
Yes **No**

088

Suspect the ac wall socket.

089

Suspect a power problem in the Ethernet Bridge. Refer to the *8229 Bridge Manual*, GA27-4025 to investigate the problem.

090

According to the defective unit type select, the action to be performed.

Unit Type	Action
Service Processor, Display, Optical Disk	Refer to "Service Processor Problem Determination" in the corresponding *Service Processor Installation and Maintenance* manual.
Network Node Processor	Refer to the *Network Node Processor Installation and Maintenance* manual according to the network node processor type to investigate the problem.
Modem	Refer to the following modem documentation: • For IBM 7855, refer to the *7855 Modem Model 10 Guide to Operation*, GA33-0160 • For IBM 7857, refer to the *IBM 7857 Guide to Operation*, GA13-1839 • For IBM 7858, refer to the *IBM 7858 Professional Modem Guide to Operation*, GA13-1981 • For other modem, refer to the appropriate documentation.
Ethernet Bridge	Refer to the *8229 Bridge Manual*, GA27-4025.
Multiaccess Enclosure	Refer to the *Multiaccess Enclosure Installation and Maintenance*, manual.

MAP 2770: 3746-900 Duplicate Token Ring Local Address

Symptom Explanation	Conditions That Could Cause This Symptom
3746-900 has the same token ring local address as another unit on the ring.	

001

Are you installing the 3746-900?
Yes No

002

- There is another unit already in the ring with the same address. Determine which unit it is and change its token ring local address.
- Press the 'General IML' button on the 3746-900 control panel.

003

Do you want to keep the 3746-900 token ring local address?
Yes No

004

- Return to the service processor console.
- Click on "Remove", on the window displayed.
- Remove the 3746-900 installation diskette from the service processor.
- Press on "Standby" key on the 3746-900 control panel.
- Reinstall the 3746-900 starting from step "Verifying the 3746-900 Code Level" in chapter 2 "Installing and connecting the 3746-900 to the Service Processor" of the *IBM 3746 Expansion Unit Model 900, Installation Guide*.

005

- Change the address of the other device already on the ring. Refer to its installation documentation.
- Press the 'General IML' button on the 3746-900 control panel.
- Return to the *IBM 3745 Communication Controller, IBM 3746 Expansion Unit Model 900, Installation Guide* step 2 of the paragraph "Configuring the Service Processor".

3746-900 CLP MAPs

MAP 2800: 3746-900 All the Lines of CLP Have a Problem

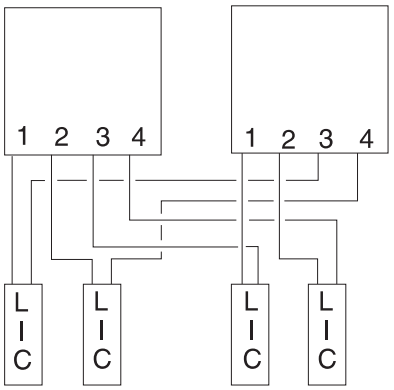
Symptom Explanation	Conditions That Could Cause This Symptom
All lines of CLP have problem Line activation problem on all the lines of one or more CLPs	• One or more Processor unplugged or failing • CLP

The hardware can connect four adjacent LICs to two adjacents CLPs. This hardware connection allows the CLPs to operate in standard mode or backup mode depending upon the option defined in the MOSS-E table.

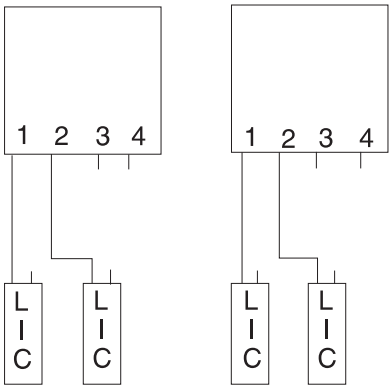
The Backup Mode is only possible between two adjacents positions

CLP Position	Line Addresses	Attached LIC Position	CLP Backup Position
07G-A1-H	2112-2175	07N-A1 G and H	07G-A1 K
07G-A1-K	2176-2239	07N-A1 J and K	07G-A1 H
07G-A1-M	2240-2303	07N-A1 L and M	07G-A1-P
07G-A1-P	2304-2367	07N-A1 N and P	07G-A1-M
07E-A1-D	2368-2431	07M-A1 C and D	07E-A1-F
07E-A1-F	2432-2495	07M-A1 E and F	07E-A1-D
07E-A1-H	2496-2559	07M-A1 G and H	07E-A1-K
07E-A1-K	2560-2623	07M-A1 J and K	07E-A1-H
07E-A1-M	2624-2687	07M-A1 L and M	07E-A1-P
07E-A1-P	2688-2751	07M-A1 N and P	07E-A1-M
07D-A1-D	2752-2815	07L-A1 C and D	07D-A1-F
07D-A1-F	2816-2879	07L-A1 E and F	07D-A1-D
07D-A1-H	2880-2943	07L-A1 G and H	07D-A1-K
07D-A1-K	2944-3007	07L-A1 J and K	07D-A1-H
07D-A1-M	3008-3071	07L-A1 L and M	07D-A1-P
07D-A1-P	3072-3135	07L-A1 N and P	07D-A1-M

CLP in Backup Mode



CLP in Standard Mode



001

- Before continuing it is necessary to check if the suspected CLP has a backup CLP and if the LICs normally under the control of the suspected suspected CLP are now under the control of the backup CLP.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Define Backup CLP" option.
  - The following "CLP Backup" window is displayed.

Processor Backup

Select a processor:

Processor Type	Primary Processor	Backup Processor	Automatic Fallback	Fallback State	Switchback Requested	
CLP	2112	2176	no	no	no	1
CLP	2176	2112	no	yes	no	2
CLP	2240		no	no	no	3
CLP	2304		no	no	no	3

Change Data | Fallback | Switchback | Cancel | Help

Notes:

1. 1 and 2 These lines indicates that the CLP line addresses range from 2112 and from 2176 can be backup for each other.
2. 2 This line with a "yes" in the fallback state column indicates that the primary processor (2176) is controlling the LICs of the backup processor (2112).
3. 3 These lines indicate that the CLPs have no backup.

- Note if the suspected CLP is backuped by another one, then click on the "Cancel" key.

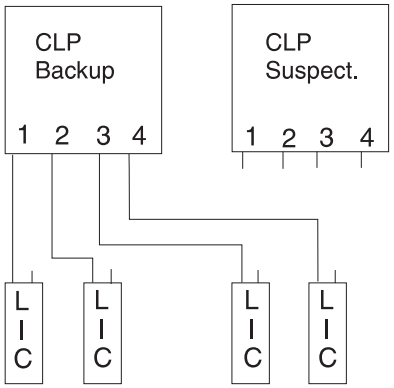
Does the suspected primary CLP have a backup CLP with a "Yes" in the fallback state column?
Yes No

002

Test the suspected CLP. Go to Step 004 on page 2-109

003

The resources of the suspected CLP are under the control of the backup CLP.



Test the CLP which does the backup. Go to Step 004 on page 2-109.

004

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the processor for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

005

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Go to Step 004.

006

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes No

007

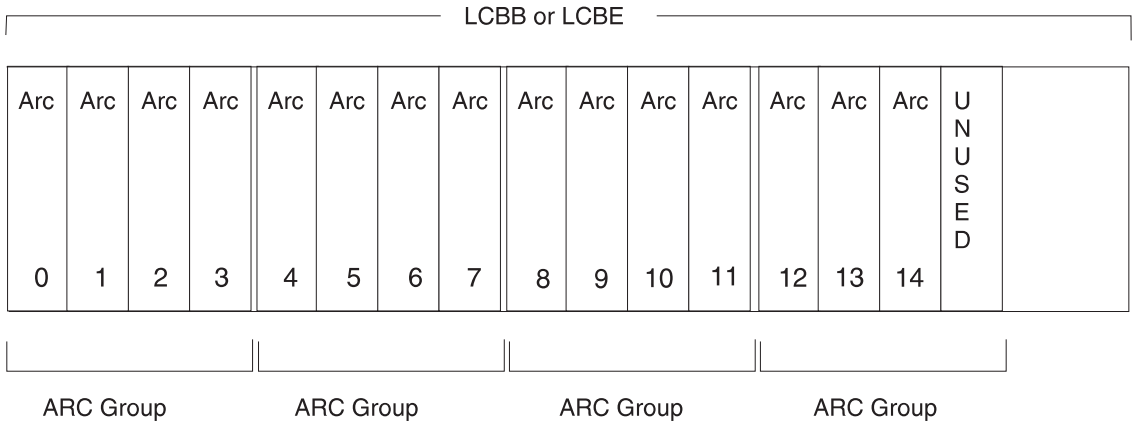
- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154 for procedure).
- Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28.

008

Call your support for assistance.

MAP 2810: 3746-900 Problem on a Group of ARCs

Symptom Explanation	Conditions That Could Cause This Symptom
All the lines of the same ARC group have a problem.	• One or more ARCs failing • LCPB • LCEB or LCEE problem



001

Is the 3746-900 set in Offline mode?

Yes **No**

002

Go to Step 004.

003

- To set the 3746-900 in Online, mode follow these steps.
  - Double click on the 3746-900 icon.
  - On the "3746-9x0 Menu" window, click on the "Problem management" option.
  - Click on the "Set 3746-9x0 Online/Offline option".
  - On the "Set 3646-9x0 Online/Offline" window, click on "Yes".
  - On the next "Set 3746-9x0 Online/Offline" window click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
- Start a general IML in order to set the 3746-900 in Online mode.
- At completion of the IML, the 3746-900 icon must be green.

Go to Step 004.

004

Did you arrive here using a FRU list, or a SRC sequence number?

Yes **No**

005

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Problem Management" option.

(Step **005** continues)

005 (continued)
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 006

006

- Check that the customer stopped the traffic on the suspected ARCs.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Locate the line connection box (LCBB or LCBE) housing the suspected defective group of ARCs.
- Locate the suspected ARC group in the LCB.

Is there only one ARC present in the suspected ARC group?
Yes **No**

007

Go to Step 017 on page 2-112.

008

- On the next "Resource Selector" windows, select the ARC of the ARC group for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes **No**

009

- Check that the customer stopped the traffic on the suspected ARC.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 008

010

- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

011

Have you already changed this ARC?
Yes **No**

012

(Step **012** continues)

012 (continued)
- Using the "Cancel" key return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ARC replacement. After the ARC replacement, continue with Step 010 on page 2-111

013

Go to Step 032 on page 2-114.

014

Have you already changed this ARC?
Yes **No**

015

Go to Step 032 on page 2-114.

016

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

017

- On the next "Resource Selector" windows select one ARC of the ARC group which has not been yet set in concurrent mode and click on "OK".

Is the "Maintenance Options" window displayed?
Yes **No**

018

- Check that the customer stopped the traffic on the suspected ARCs.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Then go to Step 017.

019

Have you put all the suspected ARCs of the ARC group in concurrent mode?
Yes **No**

020

- On the "Maintenance Options" window, click on "Cancel".
- On the "Resource Selector" window, click on "Cancel".
- On the "Concurrent Mode Confirmation" window, click on "Leave".
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- Go to Step 017.

021

- Unscrew the knobs on the suspected ARCs and unplug all the suspected ARCs except **one**, from the LCBB or LCBE. (Note carefully the position of each ARC in the LCB).

(Step **021** continues)

021 (continued)
- Go to Step 022.

022

You need to select again the ARC installed in the LCB

- Return to the "Maintenance Options" window and click on "Cancel".
- On the "Resource Selector" window, click on "Cancel".
- On the "Concurrent Mode Confirmation" window, click on "Leave".
- On the "Resource Selection Options for Maintenance" window, select the "Via the Active CDF-E" option and click on "OK".
- On the next "Resource Selector" windows select the ARC of the ARC group which is install in the LCB and click on "OK".
- Go to Step 023.

023

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

024

Have you already changed this ARC?
Yes **No**

025

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the ARC replacement. After the ARC replacement, return to the "Maintenance Options" window and continue with Step 023

026

- Reinstall in the LCB all the ARCs removed.
- Go to Step 032 on page 2-114.

027

Is there another ARC of the suspected ARC group to test?
Yes **No**

028

Have you already changed an ARC during this procedure?
Yes **No**

029

(Step **029** continues)

029 (continued)
- Reinstall in the LCB all the ARCs removed.
- Go to Step 032.

030

Problem has been identified and solved. Plug all the ARCs unplugged, then go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

031

- Unplug the tested ARC. Then plug the next ARC of the ARC group.
- Go to Step 022 on page 2-113.

032

- Problem is not an ARC problem.
- If you have already tested the LCB components call your support for assistance.
- Otherwise using the "Cancel" key return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the "Resource Selector" window select the LCB that you want to test.
- Go to “3746-900 FRU list for exchange” on page 1-55 and select the LCB component and continue the procedure.

MAP 2820: 3746-900 Problem on a LIC11

Symptom Explanation	Conditions That Could Cause This Symptom
All the lines on LIC11 have a problem.	• LIC11 • Cable between LIC11 and LCPB • LCPB • LCEB • CLP

001

Is the 3746-900 set in Offline mode?
Yes No

002

Did you arrive here using a FRU list, or a SRC sequence number?
Yes No

003

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004

004

- On the "Resource Selector" window, select the LIC11 for concurrent maintenance, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

005

- Check that the customer stopped the traffic on the suspected LIC11.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004

006

Go to Step 008 on page 2-116.

007

Go to Step 042 on page 2-120

008

(Step **008** continues)

008 (continued)

- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LIC11.
- Unfasten the screws which maintain the cable coming from the LCBB on the rear of the LIC11 and unplug the cable.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

No → **009**

Go to Step 013.

Yes → **010**

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

No → **011**

Go to Step 014.

Yes → **012**

Go to Step 019 on page 2-117.

013

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 014.

014

- The LIC11 is defective.
- Using the "Cancel" key, return to the "Maintenance Options" window, select the "Replace the Resource" option and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement and after the LIC11 replacement, continue with the next bullet.

(Step **014** continues)

014 (continued)

- Wait until 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Install the wrap plug PN 58G9425 at the rear of the LIC11.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

015

Call your support for assistance.

016

- Enter "Yes" on the information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

017

Call your support for assistance.

018

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

019

- Click on "Cancel".
- Replug the cable coming from the LCBB on the rear of the LIC11 and secure it.
- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LCBB connected to this LIC11.
- **On the LCBB** unfasten the screws which maintain the cable coming from LIC11and unplug it.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?

Yes **No**

020

Go to Step 024 on page 2-118.

021

(Step **021** continues)

021 (continued)
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

022

Go to Step 025.

023

Go to Step 026.

024

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 025.

025

The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

026

- Plug the cable in its LCBB, and secure it using the screws.
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

027

- Display the list of suspected FRU(s) (see “Display the FRU List After a Diagnostic Failure” on page 1-154).
- Select the FRU with the highest fault probability.
- Continue with Step 029 on page 2-119.

028

(Step **028** continues)

028 (continued)
Go to Step 034.

029

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue.
- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

030

Is there another FRU in your FRU list?
Yes **No**

031

Call your support for assistance.

032

Go to Step 029.

033

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

034

- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

035

- Display the list of suspected FRU(s) (see “Display the FRU List After a Diagnostic Failure” on page 1-154).
- Select the FRU with the highest fault probability.
- Continue with Step 037 on page 2-120.

036

All diagnostics are error free. The problem can be intermittent. Call your support for assistance.

037

(Step **037** continues)

037 (continued)

- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LCEB replacement. After the LCEB replacement, continue.
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

038

Is there another FRU in your FRU list?
Yes **No**

039

Call your support for assistance.

040

Go to Step 037.

041

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

042

- Double click on the 3746-900 icon.
- The "3746-9x0 Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "Start".
- On the next window select the processor which has the suspected LIC11, then click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

043

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154).
- Select the FRU with the highest fault probability.

Is this FRU the CABM?
Yes **No**

044

- Exchange the FRU, go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.

(Step **044** continues)

044 (continued)
- Using the "Cancel" key return to the "Diagnostics" window.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "OK".
- On the next window select the processor which has the suspected LIC11, then click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

045

Go to Step 049.

046

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

047

Go to Step 054

048

All diagnostics are error free. The problem can be intermittent. Call your support for assistance.

049

Is there another FRU in your FRU list?
Yes **No**

050

Call your support for assistance.

051

Is this FRU the CABM?
Yes **No**

052

Go to Step 044 on page 2-120.

053

Go to Step 054

054

- Return to the "Problem management" window.
- Double click on the "Perform Specific Diagnostics" option.
- On the "Diagnostic Control Monitor" window, select the option:
  - "Run diagnostics for a specific hardware resource"
- Then click on "OK".
- On the "Resource Selector" window, select the LIC11 that you want to test, then click on "OK".
- On the next "Resource Selector" window, select again the LIC.
- On the "Test and Running Option Selection" the resource desired is displayed with "LIC11 MAT" (Manual Assurance Test) option preselected, click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LIC11.

(Step **054** continues)

054 (continued)
- Unfasten the screws which maintain the cable coming from the LCBB on the rear of the LIC11.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

055

Go to Step 065 on page 2-123.

056

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

057

- Using the "Cancel" key return to the "Diagnostic Control Monitor" window.
- Go to Step 066 on page 2-123.

058

- Replug the cable on the rear of the LIC11.
- Return to the "Resource Selector" window.
- On the "Resource Selector" window, select the LIC11 that you want to test. Then click on "OK".
- On the next "Resource Selector" window, select again the LIC.
- On the "Test and Running Option Selection" the resource desired is displayed with "LIC11 MAT" (Manual Assurance Test) option preselected. Click on "OK".
- An "Information Required" window is displayed asking you to install a wrap plug.
- Locate the LCBB connected to this LIC11.
- **On the LCBB** unfasten the screws which maintain the cable coming from LIC11 and unplug it.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

059

Go to Step 063 on page 2-123.

060

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.

(Step **060** continues)

060 (continued)
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

061

Go to Step 064.

062

Go to Step 071 on page 2-124.

063

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Using the "cancel" key return to the "3746-9x0 Menu".
- Go to Step 064.

064

The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

065

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Using the "Cancel" key return to the "Diagnostic Control Monitor" window.
- Go to Step 066.

066

- The LIC11 is defective.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the LIC11 replacement. After the FRU replacement, wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Diagnostic Control Monitor" window, select the "Run diagnostic for a specific hardware resource" option, then click on "OK".
- On the "Resource Selector" window, select the LIC11 that you want to test. Then click on "OK".
- On the next "Resource Selector" window, select again the LIC.
- On the "Test and Running Option Selection" window the resource desired is displayed with "LIC11 MAT" (Manual Assurance Test) option preselected. Click on "OK".
- An "Information Required" window is displayed asking you to install a wrap plug.
- Locate the LIC11.

(Step **066** continues)

066 (continued)
- Unfasten the screws which maintain the cable coming from the LCBB on the rear of the LIC11.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the two LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

067

Call your support for assistance.

068

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds. Then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

069

- Using the "Cancel" key return to the "3746-9x0 Menu".
- Call your support for assistance

070

- Using the "Cancel" key return to the "3746-9x0 Menu".
- Go to Step 015 on page 1-138.

071

- Plug the cable in its LCBB, and secure it using the screws.
- Return to the "Resource Selector" window.
- On the "Resource Selector" window, select the LCB that you want to test. Then click on "OK".
- On the next "Resource Selector" window, select again the LIC.
- On the "Test and Running Option Selection" the resource desired is displayed.
- Select the "LCBB SAT1" option, click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

072

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154).
- Select the FRU with the highest fault probability.
- Go to Step 074 on page 2-125.

073

(Step **073** continues)

073 (continued)
Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

074

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue.
- Return to the "Resource Selector" window.
- Select the LCB that you want to test and click on "OK".
- On the next "Resource Selector" window, select again the LIC.
- On the "Test and Running Option Selection" the resource desired is displayed.
- Select the "LCBB SAT1" option, click on "OK".
- The "Diagnostic Active Status" window is displayed. Then when the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

075

Is there another FRU in your FRU list?
Yes **No**

076

Call your support for assistance.

077

Go to Step 074.

078

- Return to the "Resource Selector" window.
- On the "Resource Selector" window, select the LCB that you want to test. Then click on "OK".
- On the next "Resource Selector" window, select again the LCB.
- On the "Test and Running Option Selection" the resource desired is displayed.
- Select the "LCBB SAT2" option, click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

079

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154).
- Select the FRU with the highest fault probability.
- Go to Step 081.

080

All diagnostics are error free. The problem can be intermittent. Call your support for assistance.

081

- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue.
- Return to the "Resource Selector" window.

(Step **081** continues)

081 (continued)

- On the "Resource Selector" window, select the LCB that you want to test. Then click on "OK".
- On the next "Resource Selector" window, select again the LCB.
- On the "Test and Running Option Selection" the resource desired is displayed.
- Select the "LCBB SAT2" option, click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

082

Is there another FRU in you FRU list?

Yes **No**

083

Call your support for assistance.

084

Go to Step 081 on page 2-125.

085

Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

MAP 2830: 3746-900 Problem on a LIC12

Symptom Explanation	Conditions That Could Cause This Symptom
Line on LIC12 has a problem.	• LIC12 • CLP

001

Is the 3746-900 set in Offline mode?
Yes No

002

Did you arrive here using a FRU list, or a SRC sequence number?
Yes No

003

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004

004

- On the "Resource Selector" windows, select the LIC12 for concurrent maintenance. Click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

005

- Check that the customer stopped the traffic on the suspected LIC12.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option. Click on "OK".
- Go to Step 004

006

Go to Step 008.

007

Go to Step 019 on page 2-129

008

(Step **008** continues)

008 (continued)

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

009

- Using the "Cancel" key, return to the "Maintenance Options" window, select the "Replace the Resource" option, and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 013 on page 2-129.

010

- If you have installed the wrap plug according to the type of connection continue with Step 012.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?

Yes **No**

011

- Using the "Cancel" key return to the "Maintenance Options" window.
- Go to Step 008 on page 2-127 to run the diagnostic again using the other wrap plug.

012

- Reconnect and secure the cable at the rear of LIC12.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

013

(Step **013** continues)

013 (continued)

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 014.

014

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

015

Call support for assistance.

016

- If you have installed the wrap plug according to the type of connection continue with Step 018.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps?

Yes **No**

017

- Using the "Cancel" key return to the "Maintenance Options" window.
- Go to Step 014 to run the diagnostic again using the other wrap plug.

018

- Reconnect and secure the cable at the rear of LIC12.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

019

(Step **019** continues)

019 (continued)

- Double click on the 3746-900 icon.
- The "3746-9x0 Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "Start".
- On the next window select the processor which has the suspected LIC12 and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

020

- Exchange the LIC12 go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Return to the "Diagnostics" window.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "OK".
- On the next window select the processor which has the suspected LIC12, then click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

021

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

022

Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

023

Run the LIC12 MAT diagnostic using a wrap plug.

- Using the "Cancel" key return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Specific Diagnostics" option.
- Continue with Step 024.

024

- On the "Diagnostic Control Monitor" window, select the "Run diagnostics for specific hardware resource" option and click on "OK".
- On the next "Resource Selector" windows, select the LIC12 resource and click on "OK".
- On the "Test and Running Option Selection" window the "LIC12 MAT" is preselected click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

(If you do not know which kind of connection you have, install either one of these wraps).
(Step **024** continues)

024 (continued)
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

025

- Using the "Cancel" key, return to the "Diagnostic Control Monitor" window.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 029.

026

- If you have installed the wrap plug according to the type of connection continue with Step 028.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?
Yes **No**

027

- Using the "Cancel" key return to the "Diagnostic Control Monitor" window.
- Go to Step 024 on page 2-130 to run the diagnostic again using the other wrap plug.

028

- Reconnect and secure the cable at the rear of LIC12.

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

029

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- Continue with Step 030.

030

- On the "Diagnostic Control Monitor" window, select the "Run diagnostics for a specific hardware resource" option and click on "OK".
- On the next "Resource Selector" windows, select the LIC12 resource and click on "OK".
- On the "Test and Running Option Selection" window the "LIC12 MAT" is preselected click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".

(Step **030** continues)

030 (continued)
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

031

Call support for assistance.

032

- If you have installed the wrap plug according to the type of connection continue with Step 034.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps?
Yes **No**

033

- Using the "Cancel" key return to the "Diagnostic Control Monitor" window.
- Go to Step 030 on page 2-131 to run the diagnostic again using the other wrap plug.

034

- Reconnect and secure the cable at the rear of LIC12.
- Using the "Cancel" key, return to the "3746-9x0 Menu" window.
- Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

MAP 2840: 3746-900 Problem on a LIC16

Symptom Explanation	Conditions That Could Cause This Symptom
Line on LIC16 has a problem.	• LIC16 • CLP

001

Is the 3746-900 set in Offline mode?
Yes No

002

Did you arrive here using a FRU list, or a SRC sequence number?
Yes No

003

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 menu" window is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004

004

- On the "Resource Selector" windows, select the LIC16 for concurrent maintenance. Click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

005

- Check that the customer stopped the traffic on the suspected LIC16.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option. Click on "OK".
- Go to Step 004

006

Go to Step 008.

007

Go to Step 015 on page 2-135

008

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".

(Step **008** continues)

008 (continued)

- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

009

- Using the "Cancel" key, return to the "Maintenance Options" window, select the "Replace the Resource" option, and click on "OK".
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 011.

010

- Reconnect and secure the cable at the rear of LIC16.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

011

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- On the "Confirmation" window, click on "OK".
- Continue with Step 012.

012

- On the "Maintenance Options" window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".

(Step **012** continues)

012 (continued)
- A "Diagnostic Warnig" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

013

Call support for assistance.

014

- Reconnect and secure the cable at the rear of LIC16.
- Using the "Cancel" key, return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" windows and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "Resource Selection Options for Maintenance" window.
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139

015

- Double click on the 3746-900 icon.
- The "3746-9x0 Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "Start".
- On the next window select the processor which has the suspected LIC16 and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

016

- Exchange the LIC16 go to Chapter 4, “3746-900 FRU Exchange” on page 4-1.
- Return to the "Diagnostics" window.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "OK".
- On the next window select the processor which has the suspected LIC16, then click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

017

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

018

(Step **018** continues)

018 (continued)
Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

019

Run the LIC16 MAT diagnostic using a wrap plug.

- Using the "Cancel" key return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Specific Diagnostics" option.
- On the "Diagnostic Control Monitor" window, select the "Run diagnostics for specific hardware resource" option and click on "OK".
- On the next "Resource Selector" windows, select the LIC16 resource and click on "OK".
- On the "Test and Running Option Selection" window the "LIC16 MAT" is preselected click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

020

- Using the "Cancel" key, return to the "Diagnostic Control Monitor" window.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with Step 022.

021

- Reconnect and secure the cable at the rear of LIC16.

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

022

- Wait until the 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' messages are displayed on the service processor screen, then continue.
- Continue with Step 023.

023

- On the "Diagnostic Control Monitor" window, select the "Run diagnostics for a specific hardware resource" option and click on "OK".
- On the next "Resource Selector" windows, select the LIC16 resource and click on "OK".
- On the "Test and Running Option Selection" window the "LIC16 MAT" is preselected click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is Complete an, "Information Message" gives the test result. Click on "OK".

(Step **023** continues)

023 (continued)

- A "Diagnostic Warning" window ask you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

024

Call support for assistance.

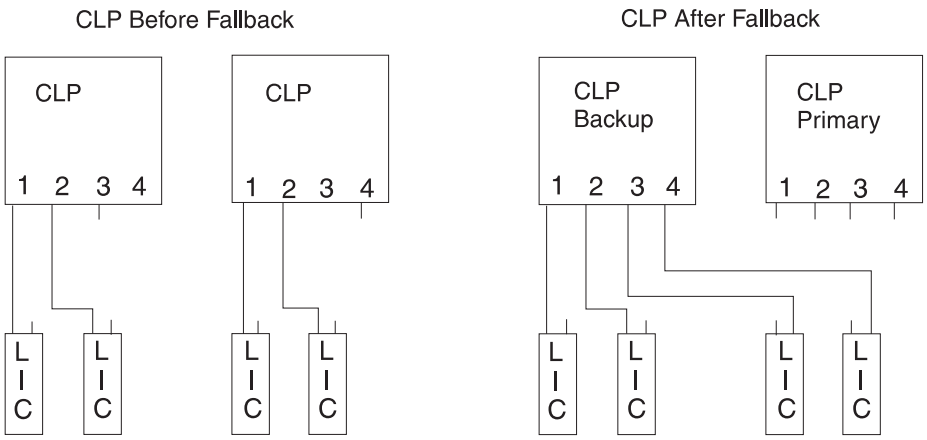
025

- Reconnect and secure the cable at the rear of LIC16.
- Using the "Cancel" key, return to the "3746-9x0 Menu" window.
- Problem solved. Go to “MAP: 3746-900 Ending Procedure In Offline Mode” on page 1-137.

MAP 2850: 3746-900 CLP Fallback Problem

Symptom Explanation	Conditions That Could Cause This Symptom
Fallback operation failed on one or two LICs	• LIC11 or 12 • CLP • Board

The fallback operation give the LIC control from one CLP to the CLP backup.



You are here because a problem was detected during the fallback operation. One or two LICs of the primary CLP have not been successfully controlled by the backup CLP.

001

Is the problem present on all the LICs previously controlled by the primary CLP?

Yes **No**

002

Suspect a problem on the LIC which failed to fallback. Exchange it, go to "3746-900 Maintenance Using a FRU list" on page 1-28

003

Was there only one LIC controlled by the primary CLP?

Yes **No**

004

Suspect a problem on the CLP which failed to fallback. Exchange it, go to "3746-900 Maintenance Using a FRU list" on page 1-28

005

Suspect a problem on the LIC which failed to fallback. Exchange it, go to "3746-900 Maintenance Using a FRU list" on page 1-28

MAP 5550: 3746-900 Activate/Deactivate Line Problems or Line Errors on CLP

001

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 icon.
- On the "3746-9x0 menu", click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- Go to Step 002.

002

Is the problem reported on LIC11 line?
Yes No

003

Is the problem reported on LIC12 line?
Yes No

004

Go to Step 022 on page 2-142.

005

Go to Step 013 on page 2-140.

006

- On the "Resource Selector" window, select the LIC11 (address range) associated with the ARC that you want to test and click on "OK".
- On the following "Resource Selector" window, select the "ARCs" corresponding to the adress range.
- On the two next windows, select the suspected ARC and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

007

- Check that the customer stopped traffic on the suspected ARC.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 006

008

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.

(Step **008** continues)

008 (continued)
- Select the "ARC SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

009

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

010

- Click on "Cancel" to return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC MAT" and click on "OK".
- When the "Information Required" window is displayed, disconnect the ARC cable from the DTE, DCE, or cable and install the wrap plug according to the ARC type (see “Shipping Group Tools” on page A-2).
- Enter "Yes" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap from the ARC cable, and reconnect the ARC previously removed. Click on "OK" when it is done.
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

011

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

012

Go to Step 029 on page 2-143.

013

- On the "Resource Selector" window, select the LIC12 for concurrent maintenance, then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes **No**

014

- Check that the customer stopped traffic on the suspected LIC12.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".

(Step **014** continues)

014 (continued)
- Go to Step 013 on page 2-140.

015

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

016

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

017

- Using the "Cancel" key return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

018

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

019

- If you have installed the wrap plug according to the type of connection continue with Step 021 on page 2-142.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?
Yes No

020

(Step **020** continues)

020 (continued)

Go to Step 017 on page 2-141 to run the diagnostic again using the other wrap plug.

021

- Reconnect and secure the cable at the rear of LIC12.
- Go to Step 029 on page 2-143.

022

- On the "Resource Selector" window, select the LIC16 for concurrent maintenance, then click on "OK".
- On the next "Resource Selector" window, click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?

Yes **No**

023

- Check that the customer stopped traffic on the suspected LIC16.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 022.

024

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 SAT" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

025

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

026

- Using the "Cancel" key return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".

(Step **026** continues)

026 (continued)

- A "Diagnostic Warning" window asks you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?

Yes **No**

027

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

028

- Reconnect and secure the cable at the rear of LIC16.
- Go to Step 029.

029

- Click on "Cancel" to return to the "Maintenance Options" window.
- On this window, select the "Initialize Resource" option and click on "OK".
- On the "Warning window" click on "OK".
- Select the "Remove the Resource from the Concurrent Mode" option and click on "OK".
- On the "Resource Selector" window, click on "Cancel".
- The "Resource Selection Options for Maintenance" window is displayed. Click on "Cancel".
- Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139 and perform the procedure.
- If the problem persists, call your support for assistance.

MAP 2860: 3746-900 All the Lines of LCBE Have Problem

Symptom Explanation	Conditions That Could Cause This Symptom
All the lines installed on the same LCBE have problem	• LCEE • LCPE

001

Is the 3746-900 set in Offline mode?
Yes No

002

Did you arrive here using a FRU list, or a SRC sequence number?
Yes No

003

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, click on the 3746-900 on which you want to work.
- The "3746-9x0 Menu" window is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004.

004

- Check that the customer stopped the traffic on the lines of the suspected LCBE and associated LCBB.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- On the "Resource Selector" window, select the LCBB associated with the suspected LCBE for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?
Yes No

005

- Check that the customer stopped the traffic on the lines of the suspected LCBE and associated LCBB.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window select the "Via the active CDF-E" option and click on "OK".
- Go to Step 004

006

- Return to the "Maintenance Options" window.

(Step **006** continues)

006 (continued)
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed, with the number of errors.

Is the diagnostic error-free ?
Yes **No**

007

Go to Step 010.

008

Go to Step 016 on page 2-146.

009

Go to Step 025 on page 2-147.

010

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154)
- Go to Step 011.

011

- If you are here for the first time select the FRU with the highest fault probability. Otherwise select the next FRU not already tested.
- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with the next bullet.
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" then click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is done an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed, with the number of errors.

Is the diagnostic error-free ?
Yes **No**

012

Is there another FRU to exchange?
Yes **No**

013

Call your support for assistance.

014

(Step **014** continues)

014 (continued)

Go to Step 011 on page 2-145.

015

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

016

- Return to the "Maintenance Options" window.
- On the window displayed select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

017

Go to Step 019.

018

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

019

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154)
- Go to Step 020.

020

- If you are here for the first time select the FRU with the highest fault probability. Otherwise select the next FRU not already tested.
- Using the "Cancel" key, return to the "Maintenance Options" window and select the "Replace the Resource" option.
- A "Confirmation" window is displayed.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with the next bullet.
- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the Resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" then click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed, with the number of errors.

Is the diagnostic error-free ?
Yes **No**

021

(Step **021** continues)

021 (continued)

Is there another FRU to exchange?
Yes **No**

022

Call your support for assistance.

023

Go to Step 020 on page 2-146.

024

Go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

025

- Double click on the 3746-900 icon.
- The "3746-9x0 Menu" is displayed.
- Click on the "Problem Management" option.
- Double click on the "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "OK".
- On the next window select the CLP which has the LIC11 with the suspected LCBE, then click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?
Yes **No**

026

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154)
- Go to Step 028.

027

All the diagnostics are error free. The problem can be intermittent. Call your support for assistance.

028

- If you are here for the first time select the FRU with the highest fault probability. Otherwise select the next FRU not already tested.
- Go to Chapter 4, “3746-900 FRU Exchange” on page 4-1 for the FRU replacement. After the FRU replacement, continue with the next bullet.
- Wait until 'alarm xxxx FRU unplugged', and 'alarm xxxx FRU plugged' are displayed on the service processor screen (if you have changed CLP, or LIC11) then continue.
- Return to the "Diagnostics" window.
- The "Diagnostics" window is displayed, select the "specific Adapter" and the "No" wrap options. Then click on "OK".
- On the next window select the CLP which has the LIC11 with the LCBE suspected and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

(Step **028** continues)

028 (continued)

Is the diagnostic error-free?

Yes **No**

029

Is there another FRU to exchange?

Yes **No**

030

Call your support for assistance.

031

Go to Step 028 on page 2-147.

032

Go to "MAP: 3746-900 Ending Procedure In Offline Mode" on page 1-137.

Service Processor MAPs

MAP 5600: LAN Problem on LAN Attached to the Service Processor

Symptom Explanation	Conditions That Could Cause This Symptom
Unable to activate or deactivate a ring Errors occur while ring is running No connection with the service processor	• Service processor or network node processor LAN adapter • Ring • Service processor access unit • 3746-900 TIC3 or CBSP • 3745 MLA card

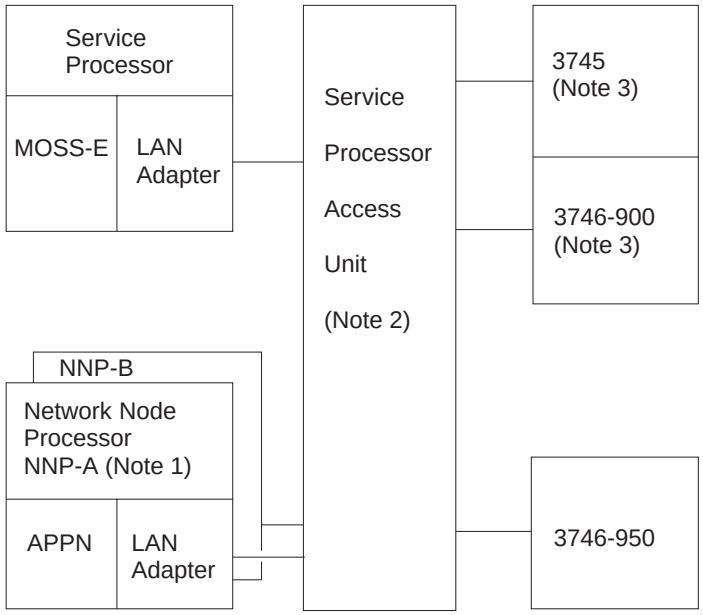


Figure 2-12. LAN attached to the Service Processor

Notes:

1. The network node processor is an optional feature which is present only when APPN is installed. Until four network node processor can be installed on the same LAN. A backup network node processor can also be present.
2. The LAN can be made of two service processor access units (8228).
3. Only 37XX units can be connected on the LAN when APPN is installed.

001

You are here because there is a problem on the LAN attached to the service processor. The following links can be impacted (one or more):

- 3745 MOSS/MOSS-E link
- 3746-900/MOSS-E link
- 3746-900/APPN link (if present)
- MOSS-E/APPN link (if present)

(Step **001** continues)

001 (continued)
Is the problem permanent?
Yes **No**

002

Go to Step 020 on page 2-151.

003

Does the problem appear on all units connected to the service processor?
Yes **No**

004

Go to Step 010.

005

Is the service processor powered ON ?
Yes **No**

006

Power ON the service processor.
Is the service processor powered On?
Yes **No**

007

Go to *Service Processor Installation and Maintenance* manual, chapter "Service Processor Problem Determination".

008

Problem solved.

009

- Check that the service processor LAN cables are correctly connected at the rear of the service processor
- Check that the LAN cables are correctly connected to the service processor access unit.
- If everything is correct go to chapter "Service Processor Problem Determination" in the corresponding *Service Processor Installation and Maintenance* manual.

010

Is the problem only on a 3745?
Yes **No**

011

Is the problem only on a 3746-900?
Yes **No**

012

On the following list, select the unit on which you have a problem:

The problem is	Action
3746-950	Restart problem determination using the *IBM 3746 Nways Multiprotocol Controller Model 950, Service Guide*, SY33-2108.
Network Node Processor	Perform problem determination on the network node processor using the appropriate *Network Node Processor Installation and Maintenance* manual.

Other unit

If you have an other unit other than a 3745, 3746-900, 3746-950 connected on the LAN. Refer to the specific documentation of this unit or do the problem determination on the ring using *Token-Ring Network, Problem Determination Guide* SX27-3710.

013

Go to Step 015.

014

Continue the problem investigation using the 3745 *Maintenance Information Procedures* (MIP) manual. Use the following MIP according to the 3745 model on which the 3746-900 is attached.

- *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A
- *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 model 21A to 61A.

015

On the 3746-900 control panel check the status of the "Service Processor Not Accessible" digit.
Is the "Service Processor Not Accessible" digit present?
Yes **No**

016

Is there a panel code displayed on the 3746-900 control panel?
Yes **No**

017

You have a 3746-900/APPN link problem, go to “MAP 5610: 3746-900/APPN Link Problem” on page 2-154.

018

Go to “3746-900 Control Panel Codes” on page 1-15.

019

Go to “MAP 2750: 3746-900 Permanent Service Processor Link Problem” on page 2-94.

020

You are here because you have transient errors on the service processor LAN .
Does the problem appear on all units connected to the service processor?
Yes **No**

021

Go to Step 023 on page 2-152.

022

- Check that the service processor LAN cable is correctly connected at the rear of the service processor.
- Check that all the LAN cables are correctly connected in the service processor access unit.
- Do the problem determination on the ring using *Token-Ring Network, Problem Determination Guide* SX27-3710.
- If you do not identify the problem call your support.

023

Is the problem only on a 3745?
Yes No

024

Is the problem only on a 3746-900?
Yes No

025

The problem is	Action
3746-950	Restart problem determination using the *IBM 3746 Nways Multiprotocol Controller Model 950, Service Guide*, SY33-2108.
Network Node Processor	Perform problem determination on the network node processor using the appropriate *Network Node Processor Installation and Maintenance*.
Other unit	If you have an other unit other than a 3745, 3746-900, 3746-950 connected on the LAN. Refer to the specific documentation of this unit or do the problem determination on the ring using *Token-Ring Network, Problem Determination Guide* SX27-3710.

026

Go to Step 028.

027

Continue the problem investigation using the 3745 *Maintenance Information Procedures* (MIP) manual. Use the following MIP according to the 3745 model on which the 3746-900 is attached.

- *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A
- *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 model 21A to 61A.

028

Using the service processor check the errors logged.

- Go to the service processor console and if your are not already logged ON, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the service processor icon.
- On the "Service Processor Menu" Click on the "Problem Management" option.
- Double click on the "Display Alarms" option.
- The "Display Alarms" window is displayed.
- On this window, search if you have alarm matching with one of the following list:
  - **0611**
  - **0614**
  - **061A**
  - **061F**
  - **0621**
  - **062A**
  - **062D**
  - **062E**
  - **062F**
  - **06A1**
  - **06A4**

(Step **028** continues)

028 (continued)
- **06AA**
- **06AF**
- **06B1**
- **06BA**
- **06BD**
- **06BE**
- **06BF**
- **06CD**

Is there any alarm matching?
Yes **No**

029

- Check that the service processor LAN cables are correctly connected at the rear of the service processor
- Check that the LAN cables are correctly connected to the service processor access unit.
- If that not solve the problem do the problem determination on the ring using *Token-Ring Network, Problem Determination Guide* SX27-3710.
- If you do not identify the problem call your support.

030

Select the alarm in the following table and perform the action required.

Alarm	Action
0611 **0614** **061A** **062D**	Suspect the MOSS-E service processor adapter card. To exchange the MOSS-E service processor adapter card, see chapter "Service processor FRU Exchange" in the corresponding *Service Processor Installation and Maintenance* manual.
061F **0621** **062A** **062E** **062F**	• Check that the service processor LAN cables are correctly connected at the rear of the service processor and in the service processor access unit. If that not solve the problem continue with the next bullet. • Suspect the MOSS-E service processor adapter card. To exchange the MOSS-E service processor adapter card, see chapter "Service processor FRU Exchange" in in the corresponding *Service Processor Installation and Maintenance* manual.
06A1	Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance*.
06A4	Link lost between the network node processor and the 3746. Go to “MAP 5610: 3746-900/APPN Link Problem” on page 2-154.
06AA **06BD**	Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance*.
06AF **06B1** **06BA** **06BE** **06BF**	• Check that the network node processor LAN cables are correctly connected at the rear of the network node processor and in the service processor access unit. If that not solve the problem continue with the next bullet. • Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card see the appropriate *Network Node Processor Installation and Maintenance*.
06CD	Microcode update incomplete. There is a microcode discrepancy between the network node processor and the service processor.

MAP 5610: 3746-900/APPN Link Problem

Symptom Explanation	Conditions That Could Cause This Symptom
Unable to activate or deactivate a port Errors occur while ring is running No session between the APPN and the 3746-900	• Network node processor or network node processor LAN adapter • Ring • Service processor access unit • APPN

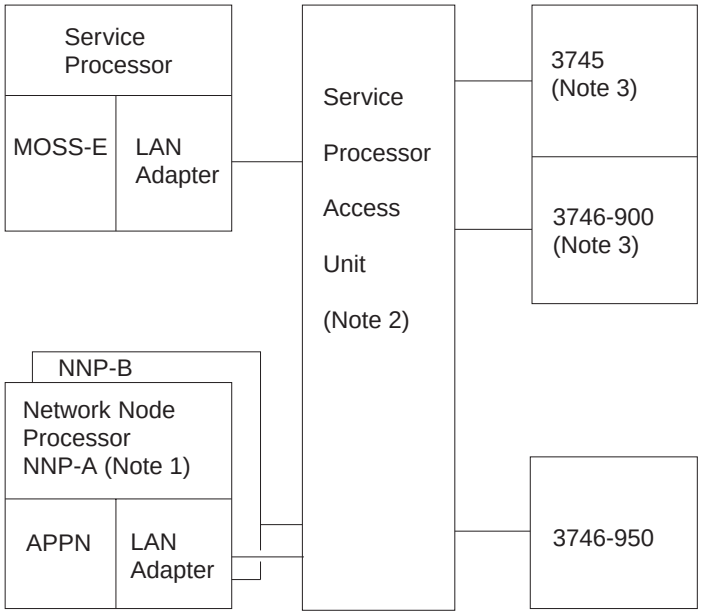


Figure 2-13. LAN attached to the Service Processor

Notes:

1. The network node processor is an optional feature which is present only when APPN is installed. A backup network node processor can also be present. Until four network node processor can be installed on the same LAN.
2. The LAN can be made of two service processor access units (8228).
3. Only 37XX units can be connected on the LAN when APPN is installed.

001

You are here because you suspect a link problem between the APPN and the 3746-900.

Using the service processor check the errors logged.

- Go to the service processor console and if your are not already logged ON, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the service processor icon.
- On the "Service Processor Menu" Click on the "Problem Management" option.
- Double click on the "Display Alarms" option.
- The "Display Alarms" window is displayed.
- On this window, search if you have alarm matching with one of the following list:
  - **06A1**
  - **06A4**
  - **06AA**
  - **06AF**

(Step **001** continues)

001 (continued)
- **06B1**
- **06BA**
- **06BD**
- **06BE**
- **06BF**

Is there any alarm matching?
Yes **No**

002

Perform problem determination on the network node processor using the appropriate *Network Node Processor Installation and Maintenance* manual.

003

Select the alarm in the following table and perform the action required.

Alarm	Action
06A1	Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance* manual.
06A4	Link lost between the network node processor and the 3746-900. Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance* manual.
06AA **06BD**	Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance* manual.
06AF **06B1** **06BA** **06BE** **06BF**	• Check that the network node processor LAN cables are correctly connected at the rear of the network node processor and in the service processor access unit. If that not solve the problem continue with the next bullet. • Suspect the network node processor LAN adapter card. To exchange the LAN network node processor adapter card, see the appropriate *Network Node Processor Installation and Maintenance* manual.

Chapter 3. How to Run Diagnostics

3746-900 Diagnostic Description

The 3746-900 diagnostics are composed of:

- **The basic assurance tests (BATs)** which are of two types:
  - ***BATs*** which are located in the EEPROM of each processor
  - ***Loaded BATs*** which are on the service processor disk.

  They test the common part of the processor (microprocessor, bus, storage, DSI and switch bus adapter).
- **The specific assurance tests (SATs)** which are located on the service processor disk and loaded as required in the processor to test TIC3, ESCC, CS, SAS Bus and interfaces.
- **The manual assurance tests (MATs)** which are located on the service processor disk and loaded as required in the processor to test part of the 3746-900. These diagnostics prompt the CE to perform specific operations such as, plug, unplug, install wrap, and so on. They run under the control of the DCM.

Both BATs and SATs use the self-test capabilities of the 3746-900 modules.

They report the errors via the SRCs on the service processor console when the link to the service processor is operational. BATs of the CBSP report errors on the 3746-900 panel when the link to the service processor is not operational.

Additionnal Diagnostics available from the 3745

- CBA Diagnostics from 3745 MOSS console
- Wrap Tests.

Refer to the following documentation according to the 3745 model attached to the 3746-900

- *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 Models 21A to 61A
- *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A.

3746-900 Diagnostics Invocation

Table 3-1 (Page 1 of 3). 3746-900 Diagnostics Available

Area tested	Diagnostics Available	Invoked Function	From	Results
ARC	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
CBC	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		CBSA IML with diags IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
CBSP	BATs and Loaded BATs (note 1)	Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		CBSA IML with diags IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
CLP	BATs and Loaded BATs (note 1) SAT1 / SAT2 (note 5)	Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
CS	Assurance tests	Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	
ESCC	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
ESCP	BATs and Loaded BATs (Note 1)	Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	

Table 3-1 (Page 2 of 3). 3746-900 Diagnostics Available

Area tested	Diagnostics Available	Invoked Function	From	Results
OP Panel	CBSP BATs	Specific adapter (CBSA) Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		CBSA IML with diags IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
	3746-900 Panel test	Panel test	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
LCPB	SATs	Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
LCPB + LCPE + ARC Interface	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
LIC11	CLP SAT2	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on service processor
LIC12 LIC16	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on service processor
MAE (SIE, SAC, System Card)	Firmware	MAE Selective IML Whole 3746-900	Service Processor (Note 6)	MAE errors do no generate a SRC error displayed on 3746-900 control panel
		IML with diags	3746-900 control panel	MAE errors do not generate a SRC error displayed on 3746-900 control panel
	Firmware Operational Diagnostics	Select Device to test Diags	Service Processor (Note 7)	Error displayed on service Processor

Table 3-1 (Page 3 of 3). 3746-900 Diagnostics Available

Area tested	Diagnostics Available	Invoked Function	From	Results
SL	Assurance tests	Whole 3746-900 Specific adapter	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	
	SATs MATs	Selective resource	Service Processor (Note 4)	
SPS	CBSP BATs	Specific adapter (CBSA) Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		CBSA IML with diags IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)
TIC3	SATs	Selective resource Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (note 2)
	MATs	Selective resource	Service Processor (Note 4)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
TRP	BATs and Loaded BATs (Note 1)	Specific adapter Whole 3746-900	Service Processor (Note 3)	SRC Error displayed on 3746-900 control panel or alarm on Service Processor
		IML with diags	3746-900 control panel	
3746-900 link to service processor	Connection detection	Service Processor Link Restart CBSA IML without diags CBSA IML with diags IML without diags IML with diags	3746-900 control panel	SRC Error displayed on 3746-900 control panel (Note 2)

Notes:

1. These tests cannot be run separately.
2. If no SRC is displayed on the 3746-900 front panel, go to “MAP 2620: 3746-900 Control Panel Problem” on page 2-43.
3. These diagnostics are invoked from the service processor console by selecting:
   - Either 'Perform Offline diagnostics' (off-line mode) for:
     – Specific adapter
     – Whole 3746-900
   - Or 'Perform maintenance' (concurrent mode) for:
     – Specific adapter
     – Selective resource

   in the 'Problem management' menu.
4. These diagnostics are invoked from the service processor console by selecting either "Perform Maintenance" (concurrent mode) or "Perform specific diagnostics" (Offline mode).
5. These diagnostics are invoked from the service processor console by selecting either "Perform Offline Diagnostics" or "Perform specific diagnostics" (Offline mode).
6. These diagnostics are invoked from the service processor console only when the MAE is connected to the 3746-900 via an SIE/SAC cable. Otherwise these diagnotics are not available.

- For the whole 3746-900 select successively:
  - 'Problem Management'
  - 'Perform Offline diagnostics' (off-line mode)
  - 'Whole 3746-900'
- For MAE Selective IML select successively:
  - 'Multiaccess Enclosure (MAE) Management'
  - 'MAE Selective IML'

7. For more detail about MAE area tested and diagnostic invocation refer to the *Multiaccess Enclosure Installation and Maintenance*, manual manual.

IML with Diags

- Reset CBSP
- BATs test the CBSP, SPS, OP Panel and TIC3 and the connection to the service processor.
- IML the CBSP from the service processor
- Run the loaded BATs
- Load the CBSP environment from the service processor
- The CBSP resets the CS and the other processors via the SPS card.
- From the service processor, load and run the SATs on the CBC.
- The VPD of the CS is collected via the service logic bus.
- Assurance tests test the CS and the SAS bus.
- BATS are run on all other processors, then initialized.
- When processors are initialized, they send their VPD via the CS.
- The operational code is loaded in each processor. Then the VPD of the attached coupler is sent to the CBSP and resource status table (RST) and the configuration data file extended (CDFE) is updated.
- SATs are loaded and run on couplers
- Operational code is loaded in each coupler
- IML ends.

Action of IML with Diags on MAE:

When the MAE is connected via a SIE/SAC cable to a 3746-900 the following happens:

- Via the SPS and SIE/SAC link the MAE is reset.
- MAE firmware tests the MAE subsystem card.
- MAE operationnal code is loaded.
- SAC diagnostics are run.
- A frame is exchanged from MAE to 3746-900 Switch.

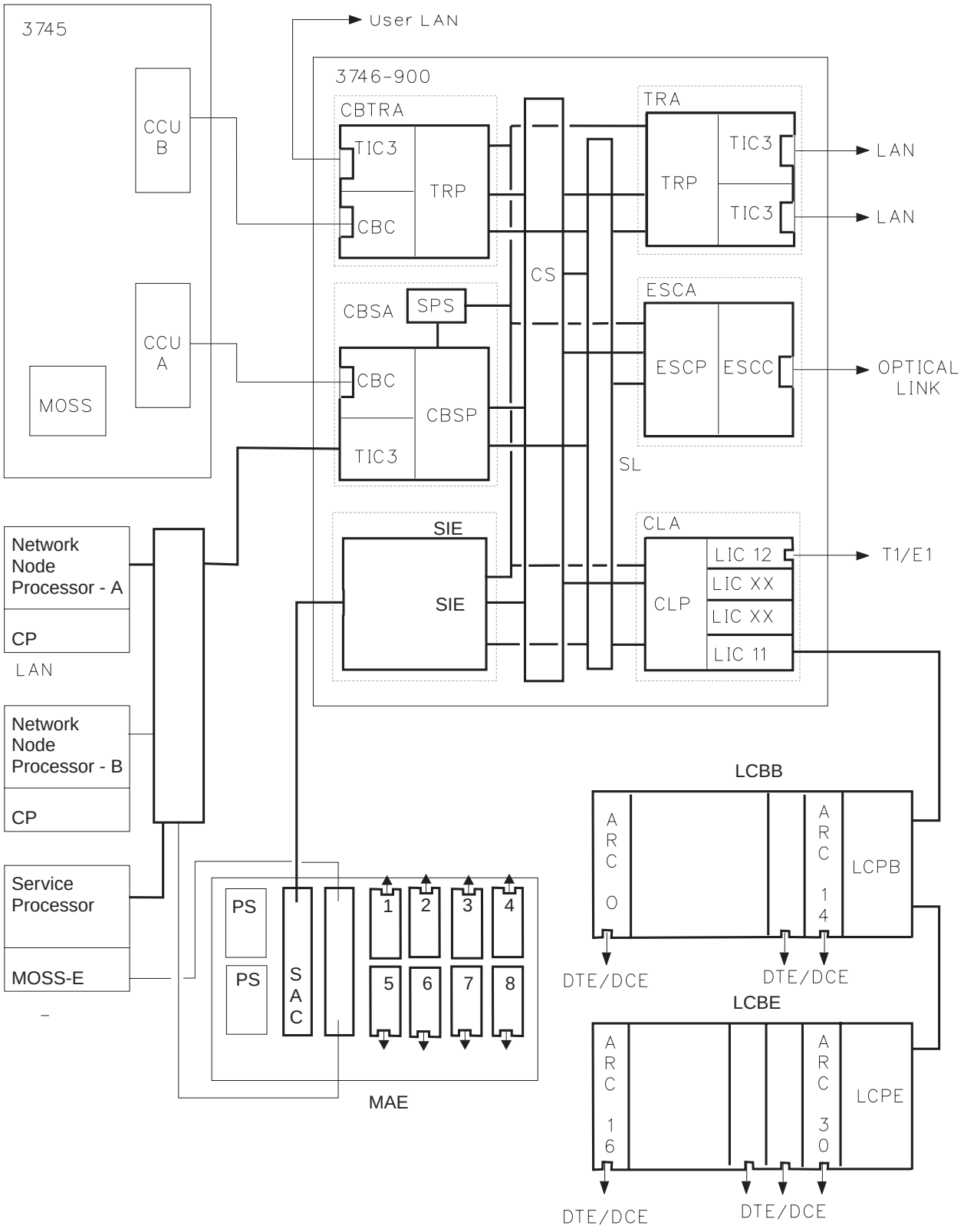


Figure 3-1. Parts of 3746-900 Tested by IML With Diagnostics or Whole 3746-900 Offline Diagnostics

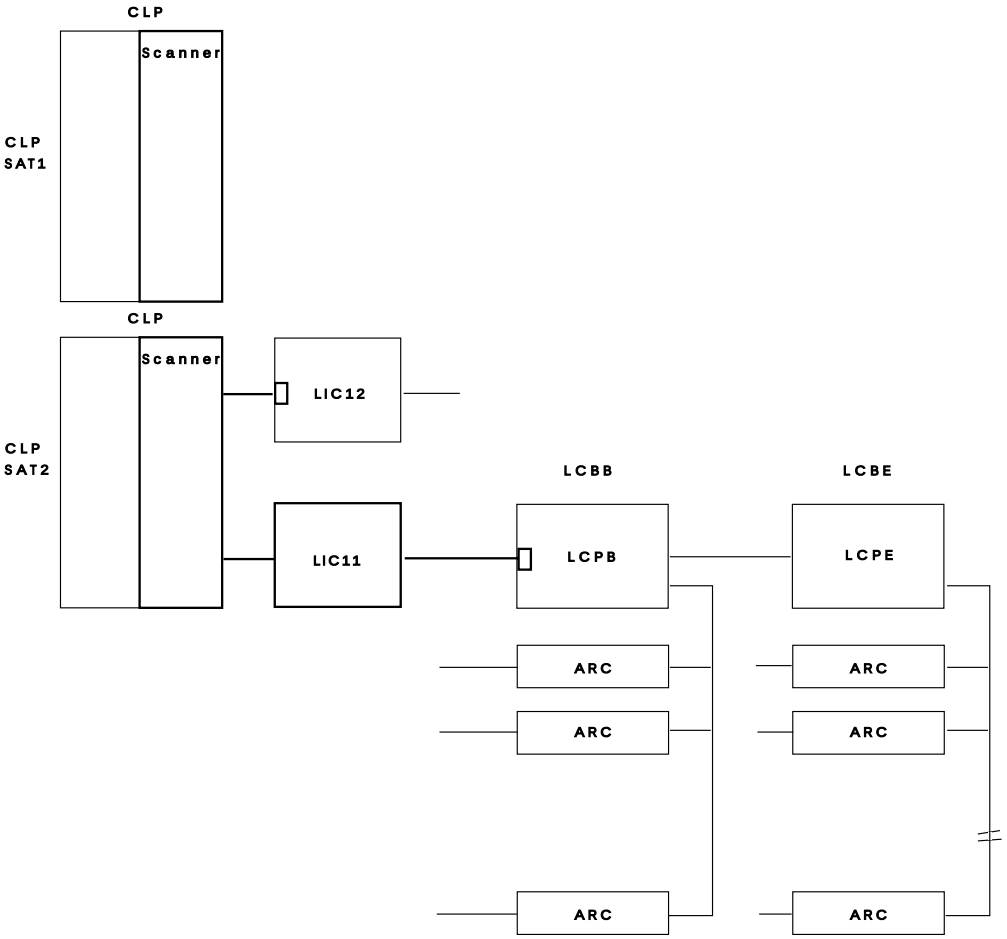


Figure 3-2. Parts of 3746-900 Tested by CLP SATs

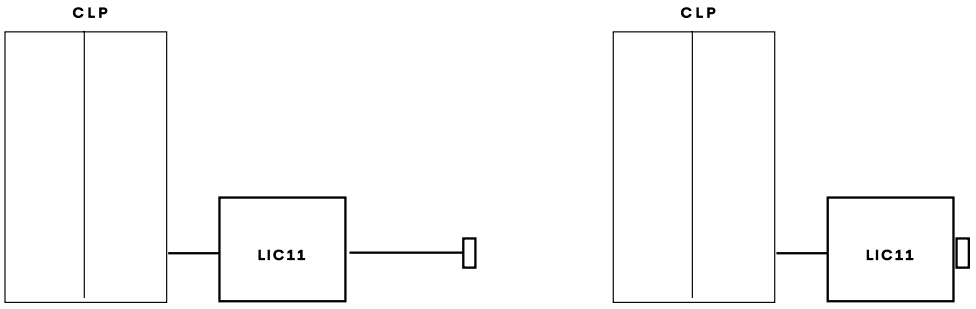


Figure 3-3. Parts of 3746-900 Tested by LIC11 MAT

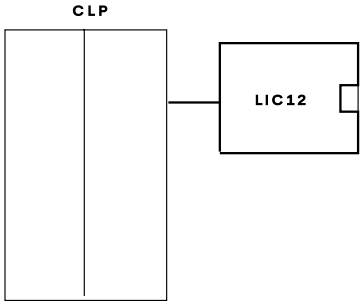


Figure 3-4. Parts of 3746-900 Tested by LIC12 SAT

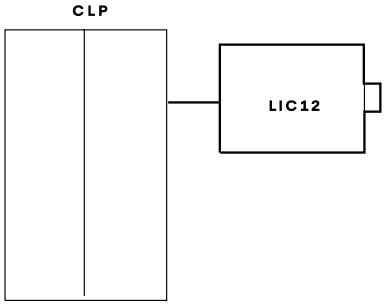


Figure 3-5. Parts of 3746-900 Tested by LIC12 MAT

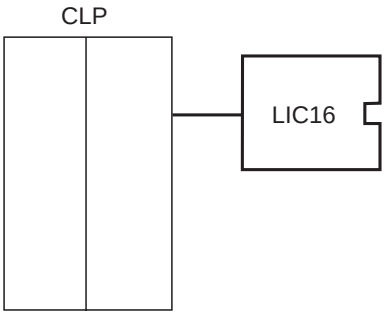


Figure 3-6. Parts of 3746-900 Tested by LIC16 SAT

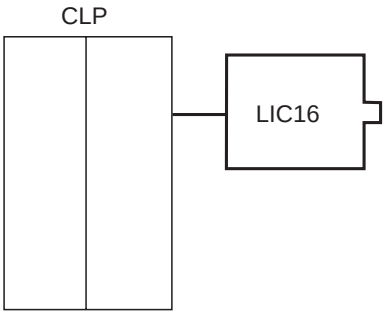


Figure 3-7. Parts of 3746-900 Tested by LIC16 MAT

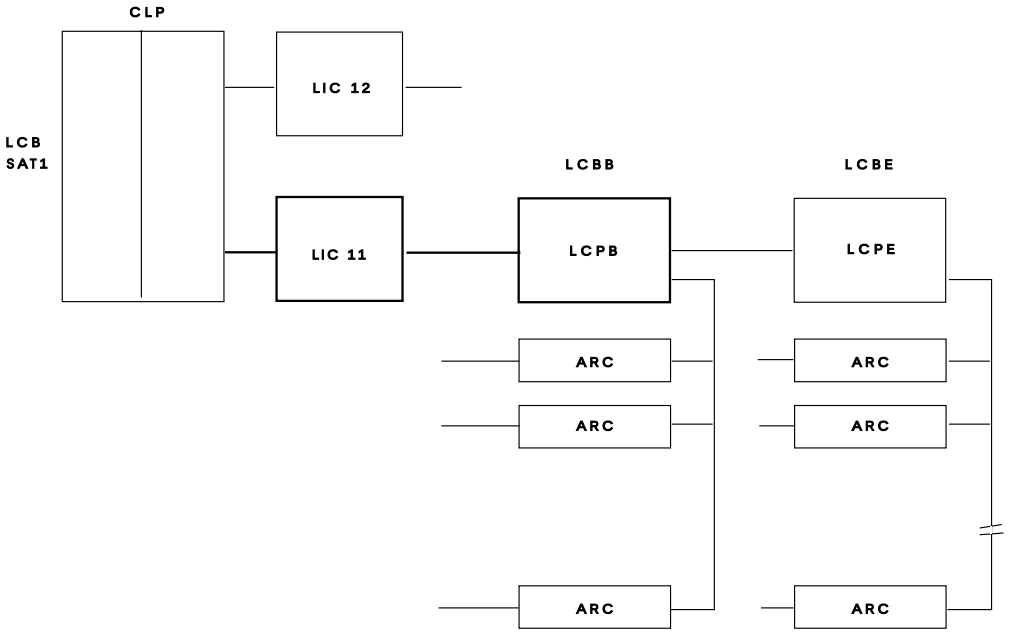


Figure 3-8. Parts of 3746-900 Tested by LCBB SAT1

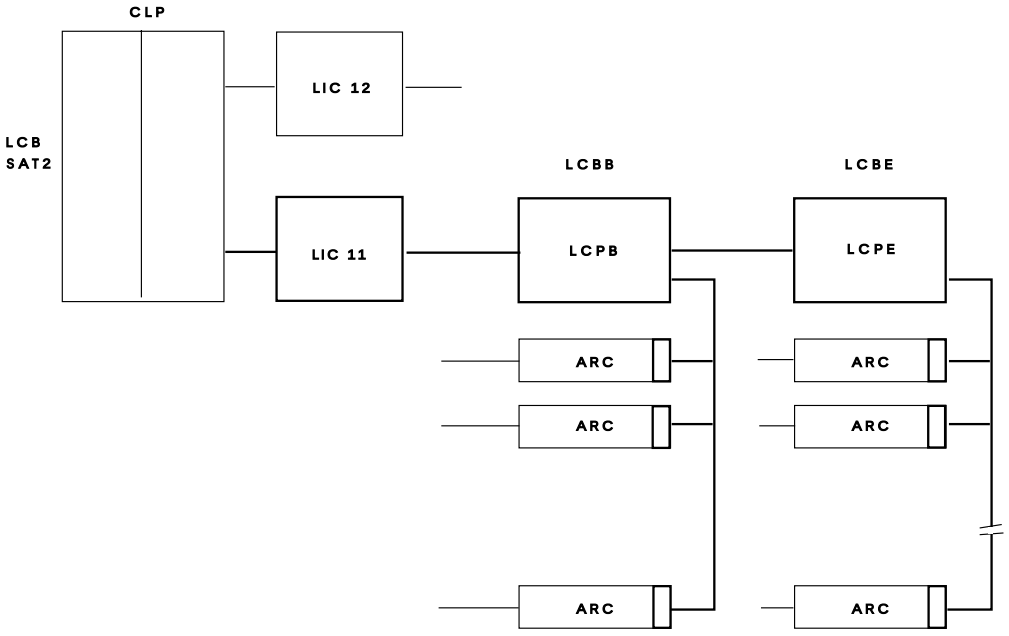


Figure 3-9. Parts of 3746-900 Tested by LCBB SAT2

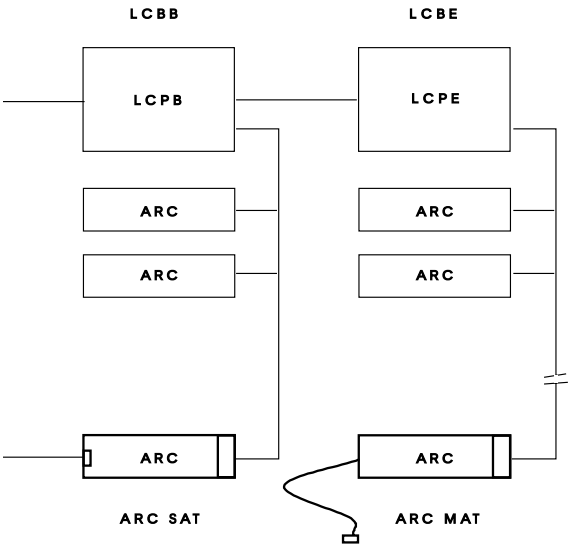


Figure 3-10. Parts of 3746-900 Tested by ARC SAT and ARC MAT

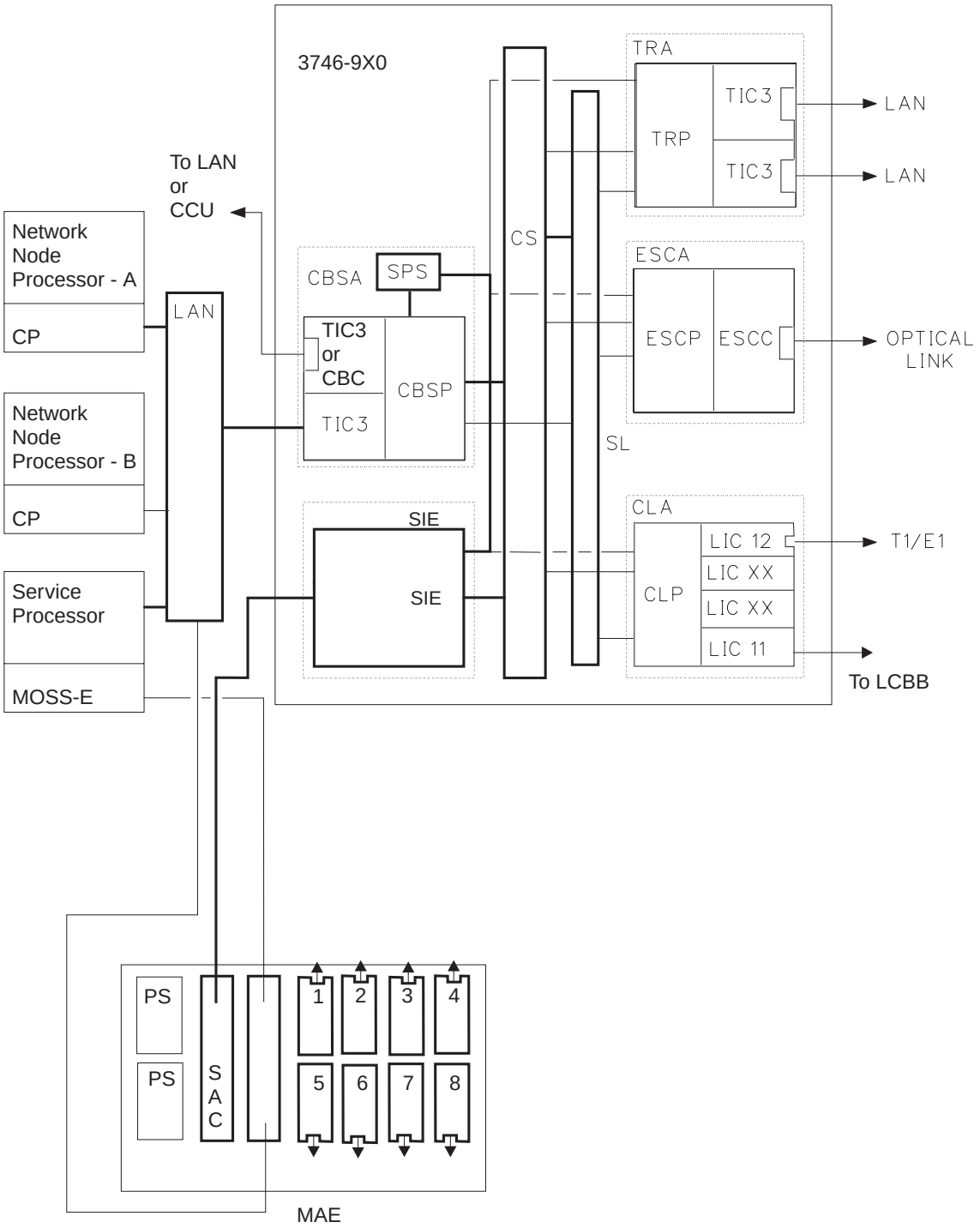


Figure 3-11. Parts of 3746-900 and MAE Tested by MAE Selective IML

CBSA IML With Diagnostics

- Reset CBSP.
- BATs test the CBSP, SPS, OP Panel and TIC3 and the connection to the service processor.
- IML the CPSP from the service processor
- Run the loaded BATs
- Load the CBSP environment from the service processor
- From the service processor load and run the SATs on the CBC.

The 3746-900 is now in standby.

Other Adapter IML With Diagnostics

- Reset the adapter.
- BATS are run on the processor of the selected adapter and initialized.
- When the processor is initialized, it sends its VPD via the CS.
- The operational code is loaded in the processor. Then the VPD of the attached coupler is sent to the CBSP and resource status table (RST), and the configuration data file extended (CDF-E) is updated.
- SATs are loaded and run on couplers.
- Operational code is loaded in each coupler.
- IML ends.

Online Tests (OLTs): The online tests (OLTs) for the ESCA are not supported and they are replaced by the normal use of the link level protocol of the serial I/O architecture.

3745/3746-900 Model 900 Diagnostics: In order to test the interface between the 3745 and the 3746-900, the MOSS-Extended DMA bus test and IOC bus test are invoked from the 3745 MOSS. In addition, the 3745 IPL diagnostic checks the level 1 level 2 interrupt mechanism of the 3746-900.

3746-900 Concurrent Maintenance

The 3746-900 allows concurrent maintenance. Concurrent maintenance lets you isolate a resource from a system while the system is operating, without impacting the operations of the other resources. After the resource has been isolated from the rest of the system, it can be tested and replaced if necessary. When the problem is corrected the resource is given back to the system. Concurrent maintenance is initiated by the operator and has two aspects: concurrent diagnostics and concurrent repair.

Concurrent Diagnostics

Product characteristics which allow you to run concurrent diagnostics are as follow:

- The distributed structure of the processors and couplers with the capability of a selective re-IML or selective resource.
- The service bus circulating from the CBSA to the processors, and the CS which allows you to collect test results.

Concurrent Repair

Concurrent repair is made possible by the hot-pluggable capability of 3746-900 FRUs: processors, couplers, and the SPS. The hot-pluggability is made possible by the following characteristics:

- The cassette pins are of variable length; the longer pins being used for the ground.
- The vendor technology logic (VTL) layer as a protection between the CMOS-2 and the external signals.
- The ability of the 'coupler presence' signal to de-gate the bus drivers on the processor and to control the coupler power via the processor microcode.
- In addition, the state of any 3746-900 resource reflected in the CDF-E includes the 'present' or 'not present' state. When the resource is present the status 'available' or 'unavailable' is given. The resource is set to not available when it is in concurrent maintenance.

Concurrent Mode Activation Procedure

The procedure to put a processor in 'concurrent' mode for maintenance is given here as an example. A similar procedure applies for the other FRUs:

- The lines controlled by the processor are deactivated from the host.
- From the service processor, the 'concurrent' mode is entered for the processor. The monitoring of the processor via the 'sanity frames' is stopped. At the same time, the processor is checked for no active lines (a processor is only accepted in 'concurrent' if no lines are active).

  When a processor is set to 'concurrent' mode, all the associated underlying resources (example: couplers) are also set to 'concurrent' mode, except if the processor has a backup (since the backup processor continues to work with these resources).
- Unplug the cassette processor.

  The processor- presence monitoring task in the CBSP detects that the processor is unplugged and an alarm is displayed on the service processor console.
- Plug the new processor in.

  The processor-presence monitoring task in CBSP detects the processor being plugged in. The processor VPDs are read and an alarm is displayed. The processor state in the CDF-E is set to 'concurrent' mode.
- According to the type of processor, the diagnostics for that processor must be run.
- The resource is initialized (IMLed).
- From the service processor console, the command, quit 'concurrent' mode,is given for the processor.
- The lines are reactivated from the host.

How to Run the 3746-900 Control Panel Test

This test can be run without stopping the customer's application.

It is not a sequential test and can be cancelled at any time by pressing the 'Exit' key.

Notes:

1. Any inactivity lasting about 60 seconds during the control panel test results in the test being automatically cancelled. The panel returns to operational mode.
2. During this test the control panel's audible alarm sounds for each action.

'special character': Can be described as when every possible segment of the window is lit.

1. Set power to local:
   a. Press the 'Power Control' key until '3' is displayed in the power control window.
   b. Press the 'Validate' key.

      If the above action cannot be performed, go to step 11.
2. Set service mode to maintenance.
   a. Press the 'Service mode' key until the number '**1**' is displayed in the service window.
   b. Press the 'Validate' key.

      If the above action cannot be performed go to step 11.
3. Set 'Function' to panel test:
   a. Press the 'Function' key until '**5**' is displayed in the function window.
   b. Press the 'Validate' key.

      If the above action cannot be performed go to step 11.

   On the display, All 10 'special character' is displayed.

   If the pattern is not identical for each of the 10 special characters, go to step 11.

   Note: If the panel test code detects an error the SRC is stacked but not displayed on the panel. Therefore, if the link with the service processor is operational, the SRC will be sent to the MOSS-E.
4. Press the 'Function' key.

   On the display, the 'Function' window 'special character' will be displayed. Repetitive action will scroll through the 'Function' and 'Code' windows sequentially and wrap around.

   If this does not occur, go to step 11.
5. Press the 'Service mode' key.

   On the display, the 'Service mode' window 'special character' is displayed. Repetitive action will scroll through the 'Service mode' and 'Power Control' windows and wrap around.

   If this does not occur, go to step 11.
6. Press the 'Power Control' key.

   On the display, the 'Service processor not accessible' window 'special character' is displayed. Repetitive action will scroll through the 'All channels disabled' 'Service processor not accessible' windows sequentially and wrap around.

   If this does not occur, go to step 11.
7. Press the 'Start' key.

   On the display, '**8**' is displayed in the 'Function' window, and the ready or standby LEDs will light if not already ON. (ready and standby LEDs can not be ON at the same time).

   If this does not occur, go to step 11.
8. Press the 'Standby' key.

   The display is completely blank.

   If this does not occur, go to step 11.
9. Press the 'Exit' key.

   On the display, the 'Power Control' (3) and 'Service Mode' (1) are displayed indicating that the test is complete, and that the control panel has returned to operational mode.

   If this does not occur, go to step 11.
10. **The control panel test is complete. No error has been detected. Ignore step 11**
11. Go to “MAP 2620: 3746-900 Control Panel Problem” on page 2-43.

How to run the 3746-900 Service Processor Link Restart

1. Set the 'service mode' to 'maintenance':
   a. Press the 'Service mode' key until the number '**1**' is displayed in the service window.
   b. Press the 'validate' key.
2. Start the test as follows:
   a. Press the 'Function' key until the number '**6**' is displayed in the function window.
   b. Press the 'validate' key.
3. Observe the display and note the value of the SRC displayed:

   .
   a. **05B0B0FD**: Request sent
   b. **05B0B0FE**: Request rejected (TIC3 resource already actives, operator error)
   c. **05B0B0FF**: Request not received (time out, CBSP failure).
4. On the display, note the value of the 'Service processor not accessible' window.

   The value can be:
   - ' ': Console accessible, the link is established
   - '*****': Physical link not active
   - '**$**': Disconnected at SSA level
   - '**A**': 'OK' frame received on 'Hello' frame
   - '**B**': Permanent beaconing
   - '**C**': Connected at DLC level
   - '**D**': Disconnected
   - '**E**': Internal error
   - '**F**': 'Hello' frame sent
   - '**G**': Ring failure
   - '**H**': Hardware error
   - '**I**': Inserted
   - '**L**': Lobe wire fault or Lobe media fault
   - '**N**': Inserting on LANor retrying insertion
   - '**R**': Link reset
   - '**T**': Time out retries exhausted
   - '**U**': TIC3 unplugged.
   - '**5**': Congestion of CBSP during general IML (transient problem)
5. If the 'Service processor not accessible' window is not blank, note the control panel code displayed on the 3746-900 front panel (if one appears). Then go to “3746-900 Control Panel Codes” on page 1-15 and follow the procedure, or go to “MAP 2750: 3746-900 Permanent Service Processor Link Problem” on page 2-94
6. Press the 'exit' key to quit this function.

MAP 6000: How to run 3746-900 Diagnostic in Concurrent Mode

Only diagnostic on **processor, coupler, LICxx, LCPx, LCEx, or ARCxx** can be run in concurrent mode.

Note

When an multiaccess enclosure (MAE) is connected to the 3746-900 via an SIE/SAC cable an MAE selective IML can be performed in concurrent mode using the procedure described in “MAP 6030: How to Run the Selective IML on the Multiaccess Enclosure” on page 3-51.

Important

There is no diagnostic for the TIC3 of the CBSP, and for the SIE.

001

- You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- On the "MOSS-E View" window, double click on the 3746-900 icon.
- On the "3746-900 menu", click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window select the "Via the active CDF-E" and click on "OK".
- Go to Step 002.

002

In the following table, find the FRU you want to test and go to the step indicated.

Select FRU	Go to
ARC	Step 059 on page 3-26
CBC	Step 003
CBSP/CBSP2/CBSP3	Step 006 on page 3-18
CLP/CLP3	Step 081 on page 3-30
ESCC/ESCC2	Step 010 on page 3-19
ESCP/ESCP2/ESCP3	Step 024 on page 3-21
LCEB	Step 131 on page 3-40
LCEE	Step 131 on page 3-40
LCPB	Step 131 on page 3-40
LCPE	Step 131 on page 3-40
LIC11	Step 099 on page 3-35
LIC12	Step 115 on page 3-38
LIC16	Step 124 on page 3-39
TIC3	Step 037 on page 3-23
TRP/TRP2/TRP3	Step 045 on page 3-24

003

- Using the location of the suspected CBC identify the 3745 CCU on which it is connected.

  CBC Location **3745 CCU**

  07N-A1-E CCU A

  07N-A1-G CCU B

(Step **003** continues)

003 (continued)

- Ask your customer to stop the traffic on the 3745 CCU-A or CCU B (if this has not already been done).
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- To set the CBC in concurrent mode, make sure that there is no traffic on the CBC by performing a permanent reset of the CBC. To do so follow these steps:
  - Return to the "problem management"panel.
  - Select "change resource status".
  - On "Resource selector" window, select the "CBSP" or the "TRP" associated with the CBC you want to test.
  - On the following "Resource selector" window, select the "CBC"
  - On the "Resource Status Change-Selector" window, select "permanent reset" and click on "OK".
- Return to the "3746-9x0 Menu".
- Select the "Perform Maintenance" option.
- On the "Resource Selector" window(s), select the CBC and click on "OK".
- A "Confirmation" window is displayed.
- Click on "OK".
- Once the resource is set in concurrent mode a "Maintenance Options" window is displayed.
- On this panel, select the "Perform Diagnostics on the resource" option and click on "OK".
- On the following panels, select "Run diagnostics for a specific hardware resource" and click on "OK".
- On the "Resource Selector" window(s), select the CBC and click on "OK".
- Select "CBC SAT" and click on "OK".

Is the diagnostic error-free ?

Yes **No**

004

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for CBC replacement.

005

Go to Step 138 on page 3-41.

006

- Ask your customer to stop the traffic on the 3745 CCU-A.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- In order to allow setting the CBSP to concurrent mode, we must make sure there is no traffic on the CBSP. So we do a permanent reset of the attached CBC.
  - Return to the "Problem Management" window.
  - Select "Change Resource Status".
  - On the "Resource Selector" window, select the "CBSP".
  - On the following "Resource Selector" window, select the "CBC" then click on "OK".
  - On the "Resource Status Change-Selection" window, select "Permanent Reset" and click on "OK".
  - If you obtain a message saying there is no connection possible with the resource, go to Step 007, otherwise continue.
  - On the "Warning" window with "Your request has been successfully completed", click on "OK" and continue with Step 007.

007

- Using the "Cancel" key, return to the "3746-9x0 Menu".
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the three following "Resource Selector" windows, select the CBSP and click on "OK".

(Step **007** continues)

007 (continued)

- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the "CBSP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?

Yes **No**

008

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

009

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

010

- On the next three "Resource Selector" windows, select the ESCC and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window displayed?

Yes **No**

011

Go to Step 013

012

Go to Step 018 on page 3-20

013

- Check that the customer stopped the traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Perform the following steps to disable the ESCC:
  - Return to the "3746-9x0 Menu".
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "disable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" window informs you that the ESCP configuration is saved. Click on "OK".
  - Click on "Refresh"(in the action bar). Then select "Permanent Refresh" (no further action is possible from this screen).
  - When the "disable" is complete the "ESCC x Status" line should display: DISABLED. It should **not** display: ENABLED.

(Step **013** continues)

013 (continued)
Is the "ESCC x Status" line displaying: ENABLED?
Yes **No**

014

- Click on "Refresh"(in the action bar). Then select "Stop permanent refresh".
- Click on the "Options" (in the action bar). Then select the "Return" option.
- On the "ESCON Configuration lines" window, click on "Options" and on "Exit".
- On the "Confirmation" window click on "OK".
- On the "ESCP Management Resource Selector" window, click on "Cancel".
- The "3746-Menu" is displayed.
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- On the next three "Resource Selector" windows, select the ESCC and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

015

Call you support for assistance.

016

Go to Step 018

017

- The state of the ESCC or ESCP does not allow you to set the ESCC in concurrent mode to test it.
- Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for ESCC or ESCP replacement.

018

Do you want to run MAT diagnostics (Diagnostics with WRAP plug)?
Yes **No**

019

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "ESCC SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 021 on page 3-21.

020

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "ESCC SAT" preselected.
- Select the "ESCC MAT" option and click on "OK".
- When the "Information Required" window is displayed, remove the optical fiber cable and install the wrap plug PN 5605670. Refer to “Exchange an ESCC/ESCC2” on page 4-32 to unplug the fiber optic cable.
- Enter "YES" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".

(Step **020** continues)

020 (continued)
- On the ESCC coupler remove the wrap plug that you have installed and reconnect the fiber optic cable previously removed.
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 021.

021

Is the diagnostic error-free ?

Yes **No**

022

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for ESCC replacement.

023

Go to Step 054 on page 3-25.

024

- On the next three "Resource Selector" windows, select the ESCP and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?

Yes **No**

025

Go to Step 027.

026

Go to Step 034 on page 3-22.

027

- Check that the customer stopped the traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Perform the following steps to disable the ESCC:
  - Return to the "3746-9x0 Menu".
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar), then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "disable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.
  - A "confirmation" window is displayed. Click on "OK".
  - A "Warning" window informs you that the ESCP configuration is saved, click on "OK".
  - Click on "Refresh"(in the action bar). Then select "Permanent Refresh" (no further action is possible from this screen).
  - When the "disable" is complete the "ESCC x Status" line should display: DISABLED. It should **not** display: ENABLED.

(Step **027** continues)

027 (continued)
Is the "ESCC x Status" line displaying: ENABLED?
Yes **No**

028

- Click on "Refresh"(in the action bar). Then select "Stop permanent refresh".
- Click on the "Options" (in the action bar). Then select the "Return" option.
- On the "ESCON Configuration lines" window, click on "Options" and on "Exit".
- On the "Confirmation" window, click on "OK".
- On the "ESCP Management Resource Selector" window, click on "Cancel".
- The "3746-Menu" is displayed.
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option.
- On the "Resource selection options for maintenance" window, select the "Via the active CDF-E" option, then click on "OK".
- On the next three "Resource Selector" windows, select the ESCP and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

029

Call your support for assistance.

030

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free ?
Yes **No**

031

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

032

Go to Step 054 on page 3-25.

033

- The state of the ESCC or ESCP does not allow you to set the ESCP in concurrent mode to test it.
- Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for ESCC or ESCP replacement.

034

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

(Step **034** continues)

034 (continued)
Is the diagnostic error-free ?
Yes **No**

035

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

036

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

037

- On the "Resource Selector" window, select the coupler for concurrent maintenance and click on "OK".
- On the next two "Resource Selector" windows, select the coupler and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

038

- Check that the customer stopped the traffic on the suspected coupler.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- Go to Step 037.

039

Do you want to run MAT diagnostics (Diagnostics with WRAP plug)?
Yes **No**

040

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "TIC3 SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 042 on page 3-24

041

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "TIC3 SAT" preselected.
- Select the "TIC3 MAT" option and click on "OK".
- When the "Information Required" window is displayed, remove the LAN cable on the suspected TIC3 and install the wrap plug PN 6165899.
- Enter "W" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".

(Step **041** continues)

041 (continued)
- On the TIC3 coupler, remove the wrap plug that you have installed and reconnect the LAN cable previously removed.
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 042

042

Is the diagnostic error-free ?

Yes **No**

043

Go to “3746-900 Maintenance Using a FRU list” on page 1-28 for TIC3 replacement.

044

- Click on "Cancel" to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

045

Is there a CBC attached to the TRP you want to test?

Yes **No**

046

- On the next three "Resource Selector" windows, select the TRP and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?

Yes **No**

047

- Check that the customer stopped the traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- Go to Step 046.

048

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected, then click on the "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free ?

Yes **No**

049

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

050

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

051

- Ask your customer to stop the traffic on the 3745 CCU-B.
- To set the TRP to concurrent mode, make sure there is no traffic on the TRP by performing a permanent reset of the attached CBC. To do so, follow these steps:
  - Return to the "Problem Management" window.
  - Select "Change Resource Status".
  - On the "Resource Selector" window, select the "TRP".
  - On the following "Resource Selector" window, select the "CBC" and click on "OK".
  - On the "Resource Status Change-Selection" window, select "Permanent Reset" and click on "OK".
  - On the "Confirmation" window, click on "OK".
  - On the "Warning" window with "Successfully completed", click on "OK".
- Return to the "3746-9x0 Menu".
- Select the "Perform Maintenance" option.
- On the next three "Resource Selector" windows, select the TRP and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the "TRP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostics error-free ?
Yes No

052

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

053

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

054

- Return to the "Maintenance Options" window using the "Cancel" key.
- Select "Initialize the resource" option click on "OK".
- On the "Warning" window, click on "OK".
- Enable the ESCC.
  - Simultaneously press the Ctrl/Esc keys.
  - On the "Window List" window, double click on the "3746-9x0 Menu" option.
  - Click on the "Configuration Management" option.
  - Double click on the "Manage ESCON Processors" option.
  - On the "ESCP Management Resource Selector" window, select the desired ESCP and click on "OK".
  - The "ESCON Configuration Lines" window is displayed.
  - Click on the "Options" (in the action bar). Then select the "Manage ESCC Status" option.
  - The "ESCC Status Management" window is displayed.
  - Select the "enable" option.
  - Click on the "Options" (in the action bar). Then select the "Send request and save" option.

(Step **054** continues)

054 (continued)
- A "confirmation" window is displayed, click on "OK".
- A "Warning" window informs you that the ESCP configuration is saved, click on "OK".
- Click on the "Options" (in action bar). Then select the "Return" option.
- On the "ESCON Configuration lines" window, click on "Options" and on "Exit".
- On the "Confirmation" window, click on "OK".
- On the "ESCP Management Resource Selector" window, click on "Cancel".
- The "3746-9x0 Menu" is displayed.

- Return to the "Maintenance Options" window.
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel.
- The "Resource Selection Options for Maintenance" is displayed.

Have you another resource to test?
Yes **No**

055

The diagnostic runs error-free. If you ran the test to diagnose a problem, go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139 before you return the machine to the customer. Then call your support.

056

Is the next resource a processor, coupler, LICxx, LCPx, LCEx, or ARCxx?
Yes **No**

057

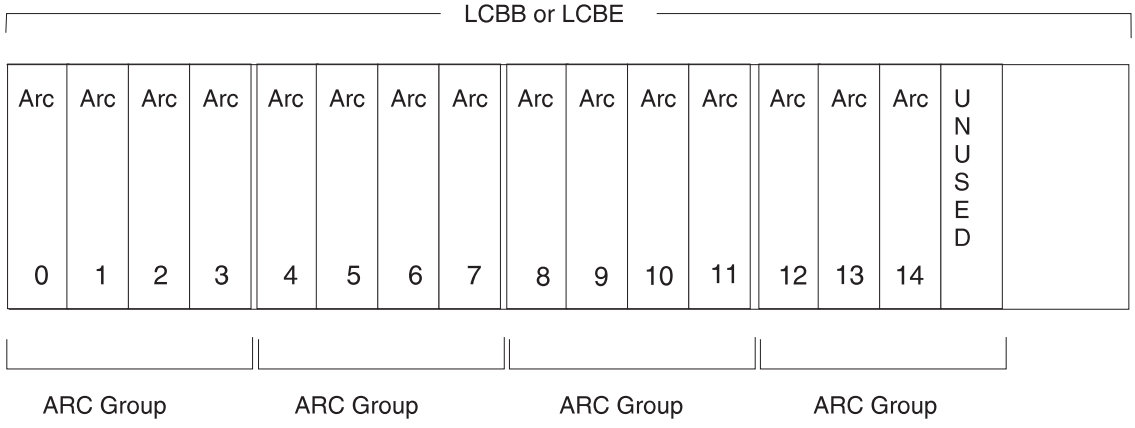
Go to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.

058

- Return to the "3746-900 menu" using the "Cancel" key.
- On the "3746-900 menu" click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".

Go to Step 002 on page 3-17.

059



(Step **059** continues)

059 (continued)
Do you want to run MAT diagnostics (Diagnostics with WRAP plug)?
Yes No

060

- On the "Resource Selector" window, select the LIC11 (address range) associated with the ARC that you want to test and click on "OK".
- On the next "Resource Selector" windows select the "ARCs" corresponding to the address range and click on "OK".

Is the ARC that you want to test is alone in its ARC group?
Yes No

061

Check with your customer the lines speed connected to the ARCs of this ARC group. If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
Is there a line speed higher than 64 Kbps?
Yes No

062

Go to Step 064.

063

- Ask your customer to deactivate **all** the lines of this ARC group.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When **all** the lines have been deactivated go to Step 064.

064

.

- On the next two "Resource Selector" windows, select the suspected ARC and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes No

065

- Check that the customer stopped traffic on the suspected ARC.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 064

066

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "ARC SAT" preselected. Click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".

(Step **066** continues)

066 (continued)
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 074 on page 3-29

067

- On the "Resource Selector" window, select the LIC11 (address range) associated with the ARC that you want to test and click on "OK".
- On the next "Resource Selector" windows, select the "ARCs" corresponding to the address range and click on "OK".

Is the ARC that you want to test is alone in its ARC group?
Yes **No**

068

Check with your customer the lines speed connected to the ARCs of this ARC group.
Is there a line speed higher than 64 Kbps?
Yes **No**

069

Go to Step 071.

070

- Ask your customer to deactivate **all** the lines of this ARC group.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When **all** the lines have been deactivated go to Step 071.

071

- On the next two "Resource Selector" windows select the suspected ARC and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

072

- Check that the customer stopped traffic on the suspected ARC.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- Go to Step 071

073

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed with "ARC SAT" preselected.
- Select the "ARC MAT" option and click on "OK".
- When the "Information Required" window is displayed, disconnect the ARC cable, from the DTE or DCE. At the end of the ARC cable, install the wrap plug according to the ARC type (see “Shipping Group Tools” on page A-2).
- Enter "Yes" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".

(Step **073** continues)

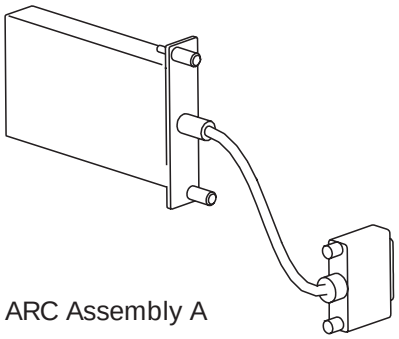
073 (continued)
- A "Diagnostic Warning" window prompts you to remove the wrap plug from the ARC cable and reconnect the ARC cable previously removed. Click on "OK" when it is done.
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 074

074

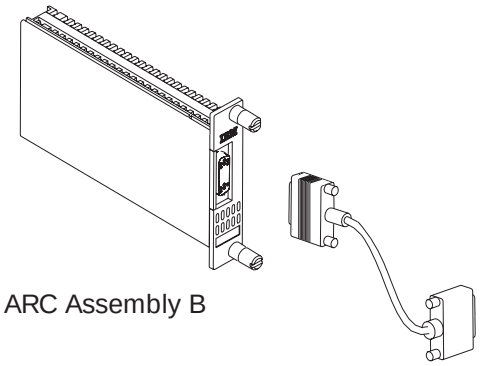
Is the diagnostic error-free ?
Yes No

075

Is the ARC you tested an ARC assembly B (with a detachable cable at the rear)?



ARC Assembly A



ARC Assembly B

Yes No

076

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154 for procedure).
- Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

077

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "ARC MAT", then click on "OK".
- When the "Information Required" window is displayed, disconnect the cable at the rear of the ARC and install the wrap plug according to the ARC type you are testing (see “Shipping Group Tools” on page A-2).
- Enter "YES" and click on "OK".
- The "Diagnostic Active Status" window is displayed, and when the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap from the ARC cable, and reconnect the cable previously removed at the rear of the ARC. Click on "OK" when it is done.
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes No

078

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154 for procedure).

(Step **078** continues)

078 (continued)
- Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

079

- The cable at the rear of the ARC is defective.
- Order a new cable and change it.

080

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

081

Ask your customer to stop the traffic on the suspected CLP. If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.

Have you more than one CLP on the 3746-900?

Yes **No**

082

Go to Step 094 on page 3-34.

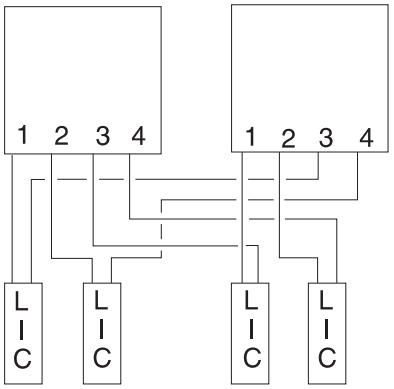
083

The hardware can connect four adjacent LICs to two adjacents CLPs. This hardware connection allows the CLPs to operate in standard mode or backup mode depending upon the option defined in the MOSS-E table.

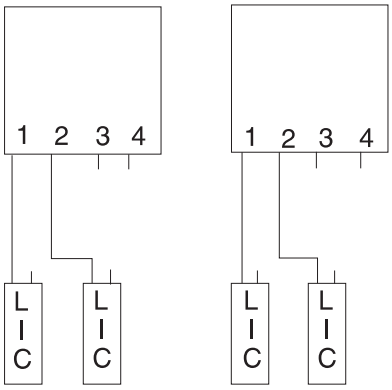
The Backup Mode is only possible between two adjacents positions

CLP Position	Line Addresses	Attached LIC Position	CLP Backup Position
07G-A1-H	2112-2175	07N-A1 G and H	07G-A1 K
07G-A1-K	2176-2239	07N-A1 J and K	07G-A1 H
07G-A1-M	2240-2303	07N-A1 L and M	07G-A1-P
07G-A1-P	2304-2367	07N-A1 N and P	07G-A1-M
07E-A1-D	2368-2431	07M-A1 C and D	07E-A1-F
07E-A1-F	2432-2495	07M-A1 E and F	07E-A1-D
07E-A1-H	2496-2559	07M-A1 G and H	07E-A1-K
07E-A1-K	2560-2623	07M-A1 J and K	07E-A1-H
07E-A1-M	2624-2687	07M-A1 L and M	07E-A1-P
07E-A1-P	2688-2751	07M-A1 N and P	07E-A1-M
07D-A1-D	2752-2815	07L-A1 C and D	07D-A1-F
07D-A1-F	2816-2879	07L-A1 E and F	07D-A1-D
07D-A1-H	2880-2943	07L-A1 G and H	07D-A1-K
07D-A1-K	2944-3007	07L-A1 J and K	07D-A1-H
07D-A1-M	3008-3071	07L-A1 L and M	07D-A1-P
07D-A1-P	3072-3135	07L-A1 N and P	07D-A1-M

CLP in Backup Mode



CLP in Standard Mode



Continue with Step 084.

084

- Before continuing it is necessary to check if the suspected CLP has a backup CLP and if the LICs normally under the control of the suspected suspected CLP are now under the control of the backup CLP.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Configuration Management" option.
  - Double click on the "Define Backup CLP" option.
  - The following "CLP Backup" window is displayed.

Processor Backup

Select a processor:

Processor Type	Primary Processor	Backup Processor	Automatic Fallback	Fallback State	Switchback Requested	
CLP	2112	2176	no	no	no	1
CLP	2176	2112	no	yes	no	2
CLP	2240		no	no	no	3
CLP	2304		no	no	no	3

Change Data | Fallback | Switchback | Cancel | Help

Notes:

1. 1 and 2 These lines indicate that the CLP line addresses range from 2112 and from 2176 can be backup for each other.
2. 2 This line with a "yes" in the fallback state column indicates that the primary processor (2176) is controlling the LICs of the backup processor (2112).
3. 3 These lines indicate that the CLPs have no backup.

- Note if the suspected CLP is backuped by another one, then click on the "Cancel" key.

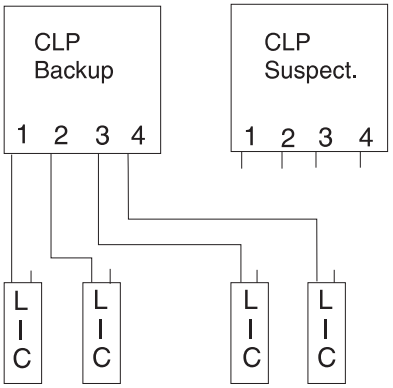
Does the suspected primary CLP have a backup CLP with a "Yes" in the fallback column?
Yes **No**

085

Go to Step 093 on page 3-34.

086

The resources of the suspected CLP are under the control of the backup CLP.



Test of the suspected CLP without its LIC(s) attached

- Using the "Cancel" key, return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.

(Step **086** continues)

086 (continued)

- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- On the "Resource Selector" window, select the processor for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?

Yes **No**

087

- Check that the customer stopped traffic on the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Go to Step 086 on page 3-32.

088

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?

Yes **No**

089

- Display the list of suspected FRUs (see “Display the FRU List After a Diagnostic Failure” on page 1-154 for procedure).
- Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

090

- Using the "Cancel" key return to the "Maintenance Options" window.
- Select the "Initialize the resource" option to reinitialize the FRU and click on "OK".
- Follow the instructions on the "Warning" window and click on "OK" when prompted.
- The "Maintenance options" window is displayed.
- Select "Remove the resource from the concurrent mode" option and click on "OK".
- On the "Warning" window, click on "OK".
- On the "Resource selector" window, click on "Cancel".
- Return to the "3746-9x0 Menu" window.

Now you must test the CLP with its attached LIC(s).

- Ask the customer to stop traffic on the LIC(s) associated with the suspected processor.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- When the traffic is stopped, click on the "Configuration Management" option on the "3746-9x0 Menu" window.
- Double click on the "Define Backup CLP" option.
- The "CLP Backup" window is displayed.
- Select the suspected CLP and click on the "Switchback" key.
- On the "Confirmation" window, click on "OK".
- Wait for alarm "Switchback successfull" and click on "OK".

(Step **090** continues)

090 (continued)

- Click on "cancel" to return to the "3746-9x0 Menu" window.
- Select the "problem Management" option.
- Double click on the "Perform maintenance" option.
- On the next "Resource Selector" windows, select the suspected CLP for concurrent maintenance, by clicking on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on "Start".
- A "Specific Adapter" window is displayed. Select the processor and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration.
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostic error-free ?

Yes **No**

091

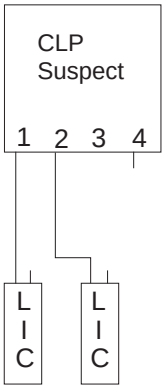
- Display the list of suspected FRUs. See “Display the FRU List After a Diagnostic Failure” on page 1-154.
- Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

092

- The suspected CLP has been tested with its attached LICs. It is error free.
- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

093

The suspected CLP has no CLP backup.



- Click on the "Cancel" key. You return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 094.

094

(Step **094** continues)

094 (continued)
- On each of the three "Resource Selector" windows, select the processor for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

095

- Check that the customer stopped traffic on the suspected CLP.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".
- Go to Step 081 on page 3-30

096

- Select the "Perform Diagnostics on the resource" option and click on "OK".
- A "Diagnostics" window is displayed. Check that the "Specific Adapter" and "no wrap" options are selected. Then click on the "Start".
- A "Specific Adapter" window is displayed. Select the "CLP" and click on "OK".
- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration. (This diagnostic testing for the CLP and the attached LIC(s), LCBB(s), LCBE(s) and ARC(s) can take up to one hour depending on the 3746-900 configuration).
- At the end of the test, the number of errors is indicated by an arrow.

Is the diagnostics error-free ?
Yes **No**

097

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

098

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

099

- On the "Resource Selector" windows, select the LIC11 for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

100

- Check that the customer stopped the traffic on the suspected LIC11.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" and click on "OK".

(Step **100** continues)

100 (continued)
- Go to Step 099 on page 3-35

101

- On the window displayed select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" then, click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LIC11.
- Unfasten the screws which maintain the cable coming from the LCBB on the rear of the LIC11 and unplug the cable.
- On the rear of the LIC11 install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

102

Go to Step 112 on page 3-37.

103

- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

104

Go to Step 113 on page 3-37.

105

- Click on "Cancel".
- Replug the cable coming from the LCBB on the rear of the LIC11 and secure it.
- On the "Maintenance Options" window select the "Perform Diagnostics on the resource" option, and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC11 MAT" then, click on "OK".
- An "Information Required" window is displayed prompting you to install a wrap plug.
- Locate the LCBB.
- Unfasten the screws which maintain the cable on the LCBB and unplug this cable from the LCBB.
- On the end of the cable install the wrap plug PN 58G9425.
- Check if the both LEDs are ON.

Are the both LEDs of wrap plug ON?
Yes **No**

106

Go to Step 110 on page 3-37.

107

(Step **107** continues)

107 (continued)
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed, then when the test is complete an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

108
Go to Step 111.

109
Go to Step 114.

110

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 111.

111
The cable between the LIC11 and the LCBB is faulty. Order a new one, exchange it, and when it is done go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139.

112

- Enter "No" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed few seconds, then the "Information Required" window informs you that the wrap test is not running. Click on "OK".
- The "Diagnostic Active Status" window is displayed, then an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window remind you to remove the wrap plug.
- Unplug the wrap plug if not already done and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.
- Go to Step 113.

113
.
Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

114

- Reconnect and secure the cable to the LCBB.

(Step **114** continues)

114 (continued)
- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

115

- On the "Resource Selector" window, select the LIC12 for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

116

- Check that the customer stopped the traffic on the suspected LIC12.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 115

117

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

118

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

119

- Using the "Cancel" key, return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC12 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC12 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC12 and unplug the cable from the LIC12.
- At the rear of the LIC12 install the wrap plug according to the type of connection that you have.
  - Wrap plug PN 58X9354 for X.21
  - Wrap plug PN 58X9349 for V.35

  (If you do not know which kind of connection you have, install either one of these wraps).
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap plug.

(Step **119** continues)

119 (continued)
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

120

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

121

- If you have installed the wrap plug according to the type of connection continue with Step 123.
- Otherwise continue this procedure.

Did you run the LIC12 MAT diagnostic using the two wraps plugs?
Yes **No**

122

Go to Step 119 on page 3-38 to run the diagnostic again using the other wrap plug.

123

- Reconnect and secure the cable at the rear of LIC12.
- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

124

- On the "Resource Selector" window, select the LIC16 for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

Is the "Maintenance Options" window is displayed?
Yes **No**

125

- Check that the customer stopped the traffic on the suspected LIC16.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 124

126

- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 SAT" option and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

127

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

128

- Using the "Cancel" key, return to the "Maintenance Options" window.
- On this window, select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LIC16 MAT" option and click on "OK".
- A "Diagnostic Active Status" window is displayed then an "Information Required" window prompts you to install a wrap plug.
- Locate the LIC16 that you want tested on the 3746-900.
- Unfasten the screws which maintain the cable at the rear of LIC16 and unplug the cable from the LIC16.
- At the rear of the LIC16 install the wrap plug PN 57G8097.
- Enter "Yes" on the "Information Required" window and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete, an "Information Message" gives the test result. Click on "OK".
- A "Diagnostic Warning" window prompts you to remove the wrap plug.
- Unplug the wrap plug and click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

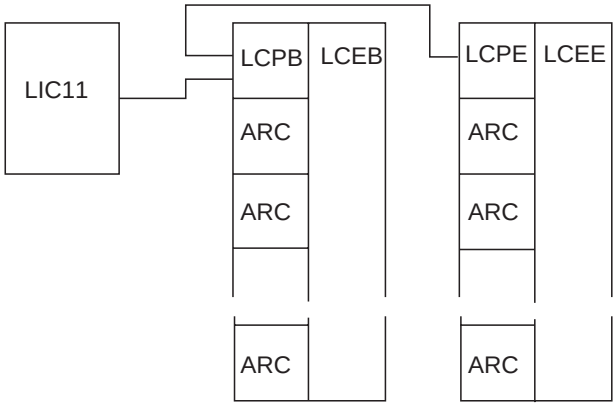
129

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

130

- Reconnect and secure the cable at the rear of LIC12.
- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138 on page 3-41.

131



To test the LCPB, LCEB, LCPE, or LCEE select the LCBB associated

- On the "Resource Selector" window, select the LCBB for concurrent maintenance and click on "OK".
- Once the resource is set to concurrent mode, a "Maintenance Options" window is displayed.

(Step **131** continues)

131 (continued)
Is the "Maintenance Options" window is displayed?
Yes **No**

132

- Check that the customer stopped the traffic on the suspected LIC11.
- If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.
- Return to the "3746-9x0 Menu".
- Select the "Problem Management" option.
- Double click on the "Perform Maintenance" option.
- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".
- Go to Step 131 on page 3-40.

133

- Return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT1" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

134

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

135

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Select the "Perform Diagnostics on the resource" option and click on "OK".
- The "Test and Running Option Selection" window is displayed.
- Select the "LCBB SAT2" and click on "OK".
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free ?
Yes **No**

136

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

137

- Click on the "Cancel" key to return to the "Maintenance Options" window.
- Go to Step 138.

138

- If you have run a test using a WRAP plug, remove the WRAP and reconnect the cable (if not already done).

(Step **138** continues)

138 (continued)

- Select "Initialize the resource" option and click on "OK".
- On the "Warning" window, click on "OK".
- Select "Remove the resource from the concurrent mode" and click on "OK".
- On the "Resource selector" window, click on "Cancel.
- The "Resource Selection Options for Maintenance" is displayed.

Have you another resource to test?

Yes **No**

139

The diagnostic runs error-free. If you ran the test to diagnose a problem, either go to “MAP: 3746-900 Ending Procedure in Concurrent Mode” on page 1-139 before you return the machine to the customer or call your support.

140

Is the next resource a processor, coupler, LICxx, LCPx, LCEx, or ARCxx?

Yes **No**

141

Go to “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.

142

- On the "Resource Selection Options for Maintenance" window, select the "Via the active CDF-E" option and click on "OK".

Go to Step 002 on page 3-17.

MAP 6010: How to run 3746-900 Diagnostic in Offline Mode

Ask the customer to stop all the traffic on the 3746-900. If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here.

When the 3746-900 is set in Offline Mode, it is faster to start all the diagnostics than to start a selected diagnostic on a specific resource. Nevertheless, do not forget that when the 3746-900 has a CLP with an LIC11 attached test duration time can increase up to one hour according to the number of ARCs installed.

001

Have you more than one CLP installed on the 3746-900?
Yes No

002

Go to Step 004.

003

Before starting this procedure see if CLP(s) are set in standard or backup mode in order to know what will be tested during the Offline procedure. Go to “MAP: 3746-900 CLP Backup or Standard Mode Setting” on page 1-146 to check the CLP status and change it if necessary. Then return here to continue with Step 004.

004

- You should be logged ON on the service processor console. If not go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- Set the 3746-900 in Offline mode (if it is not already) as follows:
  - Double click on the 3746-900 icon.
  - The "3746-9x0 Menu" is displayed.
  - Click on the "Problem Management" option.
  - Double click on "Set 3746-9x0 Online/Offline option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - on the next "Set 3746-9x0 Online/Offline" window, click on "OK".
- If you set the 3746-900 in Offline mode in the previous step perform a general IML. Otherwise go to Step 006.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Operation Management" option.
  - Double click on the "Perform General IML" option.
  - A "Perform General IML" is displayed, click on "OK".
  - On the next "Perform General IML", click on "YES" to perform an IML without diagnostics.
  - A normal 3746-900 IML is terminated when 00000000 is displayed on the control panel and the ready LED is ON. In case of a problem during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Does the ready LED come ON?
Yes No

005

Record the code displayed on the control panel and go to “3746-900 Control Panel Codes” on page 1-15.

006

- Return to the "3746-9x0 Menu" window.
- Click on the "Problem Management" option.
- Double click on "Perform Offline Diagnostics" option.
- The "Diagnostics" window is displayed. Select the "Whole 3746-900" and the "No wrap" options and click on "Start".

(Step **006** continues)

006 (continued)

- The "Diagnostics" window is displayed again and the "Elapsed time" is incremented during test duration (see “Note:”).
- At the end of the test the number of errors is indicated by an arrow.

Is the diagnostic error-free?

Yes **No**

No: **007**

Go to “Display the FRU List After a Diagnostic Failure” on page 1-154. Once you have the FRU list, go to “3746-900 Maintenance Using a FRU list” on page 1-28 for FRU replacement.

Yes: **008**

- No error detected. Set the 3746-900 in Online mode.
  - Return to the "3746-9x0 Menu" window using the "Cancel" key.
  - Click on the "Problem Management" option.
  - Double click on "Set 3746-9x0 Online/Offline option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
- Start a general IML.
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Operation Management" option.
  - Double click on the "Perform General IML" option.
  - When the 3746-900 has terminated its IML and the ready LED is ON, continue with the next bullet.
- Return to the "MOSS-E View" window.

Go to “CE Leaving Procedure” on page 4-55 to return the machine to the customer. If the problem persists contact your support.

Note: If a diagnostic timeout occurs when you have started the diagnostic on the "Whole 3746-900" with "No wrap" option, restart once the diagnostic. If diagnostic timeout is again displayed contact your support.

MAP 6020: How to Run 3746-900 Specific Diagnostics

Ask the customer to stop all the traffic on the 3746-900. If APPN/IP is installed, deactivate the ports concerned (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150), then continue the procedure from here. These diagnostics must be run in **Offline Mode**.

This MAP only allows you to run either the **MAT diagnostic on a specific coupler (ESCC, TIC3) or diagnostics on the service logic (SAS Bus).**

For all other diagnostics, use the “MAP 6010: How to run 3746-900 Diagnostic in Offline Mode” on page 3-43.

001

- You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- Set the 3746-900 in Offline mode (if it is not already) as follows:
  - Double click on the 3746-900 icon.
  - The "3746-9x0 Menu" is displayed.
  - Click on the "Problem Management" option.
  - Double click on the "Set 3746-9x0 Online/Offline Option".
  - On the "Set 3746-9x0 Online/Offline" window, click on "YES" or "NO" according to the current setting.
  - On the next "Set 3746-9x0 Online/Offline" window, click on "OK".
- If you set the 3746-900 in Offline mode in the previous step perform a general IML. Otherwise go to Step 003
  - Return to the "3746-9x0 Menu" window.
  - Click on the "Operation Management" option.
  - Double click on the "Perform General IML" option.
  - A "Perform General IML", click on "YES" to perform an IML without diagnostics.
  - A normal 3746-900 IML is terminated when 00000000 is displayed on the control panel and the ready LED is ON. In case of problem during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking.

Is the ready LED come ON?
Yes **No**

002

Record the code displayed on the control panel and go to “3746-900 Control Panel Codes” on page 1-15.

003

- Return to the "3746-9x0 Menu.
- Click on the "Problem Management" option.
- Double click on the "Perform Specific Diagnostics" option.
- On the "Diagnostic Control Monitor" window, select the option that you want.
  - If you select "Run diagnostics for a specific hardware resource", go to Step 004.
  - If you select "Run diagnostics for the Service Bus", go to Step 007 on page 3-46.

004

- On the "Resource Selector" window, select the resource and click on "OK".
- On the next "Resource Selector" window, select the resource again.
- On the "Test and Running Option Selection" the selected resource is displayed with "MAT" (Manual Assurance Test) preselected. Click on "OK".
- A "Diagnostic Active Status" window is temporary displayed.
- When the "Information Required" window is displayed:
  - Remove the cable at the rear of the ESCC or TIC3.
  - Install the wrap plug on the rear of the coupler (PN 6165899 for TIC3 and PN 5605670 for ESCC).

(Step **004** continues)

004 (continued)
  – Press "W" and click on "OK".
- Click on the "Cancel" key to return to the "Maintenance Options" window.
- The "Diagnostic Active Status" window is displayed. When the test is complete an "Information Message" gives the test result. Click on "OK".
- On the coupler, remove the wrap plug that you have installed and reconnect the cable previously removed.
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error-free?
Yes **No**

005

Go to “MAP: 3746-900 in Offline Mode” on page 1-124 for FRU exchange.

006

You suspected a problem on a coupler and the diagnostic is error free. Call your support for assistance.

007

- The "Service Bus Group Selection" window is displayed.
- Select the "PRC SL" option, then click on "OK".
- On the "Resource Option Selection" window, select the "All Resources" option and click on "OK".
- On the "Test and Running Options Selection" window, select the "SAS BUS SAT" option, then click on "OK".
- A "Diagnostic Active Status" window is displayed.
- When the test end, an "Information Message" window is displayed. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error free?
Yes **No**

008

- Click on "Cancel" to return to the "Diagnostic Control Monitor" window.
- Select the "Run diagnostics for the Service Bus" option, then click on "OK".
- The "Service Bus Group Selection" window is displayed.
- Select the "PRC SL" option, then click on "OK".
- On the "Resource Option Selection" window, select the "All Resources" option and click on "OK".
- On the "Test and Running Options Selection" window, select the "SAS BUS MAT" option, then click on "OK".
- A "Diagnostic Active Status" window is displayed briefly. Then the first "Information required" window is displayed, prompting you to perform tasks on the 3746-900. Perform all the tasks following the prompts. Refer to “3746-900 Service Logic Cabling” on page 3-48 to locate the different components.

Is the diagnostic error free?
Yes **No**

009

- If the problem is a connectic problem correct it or exchange the suspected FRU. Go to “MAP: 3746-900 in Offline Mode” on page 1-124 for FRU exchange.

010

Go to Step 011.

011

(Step **011** continues)

011 (continued)

- Click on "Cancel" to return to the "Diagnostic Control Monitor" window.
- Select the "Run diagnostics for the Service Bus" option, then click on "OK".
- The "Service Bus Group Selection" window is displayed.
- Select the "CS SL" option, then click on "OK".
- On the "Resource option Selection" window, select the "All Resources" option, then click on "OK".
- The "Test and Running Option Selection" window is displayed with the "CS SERVICE BUS SAT" option preselected. Click on "OK".
- A "Diagnostic Active Status" window is displayed.
- When the test end an "Information Message" window is displayed, click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error free?

Yes **No**

012

- Go to “Display the FRU List After a Diagnostic Failure” on page 1-154.
- Once you have the FRU list go to “MAP: 3746-900 in Offline Mode” on page 1-124 to exchange the faulty FRU.

013

- Click on "Cancel" to return to the "Diagnostic Control Monitor" window.
- Select the "Run diagnostics for the Service Bus" option, then click on "OK".
- The "Service Bus Group Selection" window is displayed.
- Select the "PRC SL" option, then click on "OK".
- On the "Resource Option Selection" window, select the "Specific Resource" option and click on "OK".
- A "Resource Selection" window is displayed, with all the processors.
- Select a processor of the resource list (except the CBSP) not yet tested, then click on "OK".
- The "Test and Running Option Selection" window is displayed with the "PROC. SVRC. BUS SAT" option preselected. Click on "OK".
- A "Diagnostic Active Status" window is displayed.
- When the test end, an "Information Message" window is displayed. Click on "OK".
- The "Diagnostic Active Status" window is displayed with the number of errors.

Is the diagnostic error free?

Yes **No**

014

Go to Step 012.

015

Have you tested all the processors of your machine?

Yes **No**

016

Go to Step 013.

017

- Using the "Cancel" key return to the "3746-9x0 Menu".
- You suspected a problem in the service logic and the diagnostics are error free. Call you support for assistance

3746-900 Service Logic Cabling

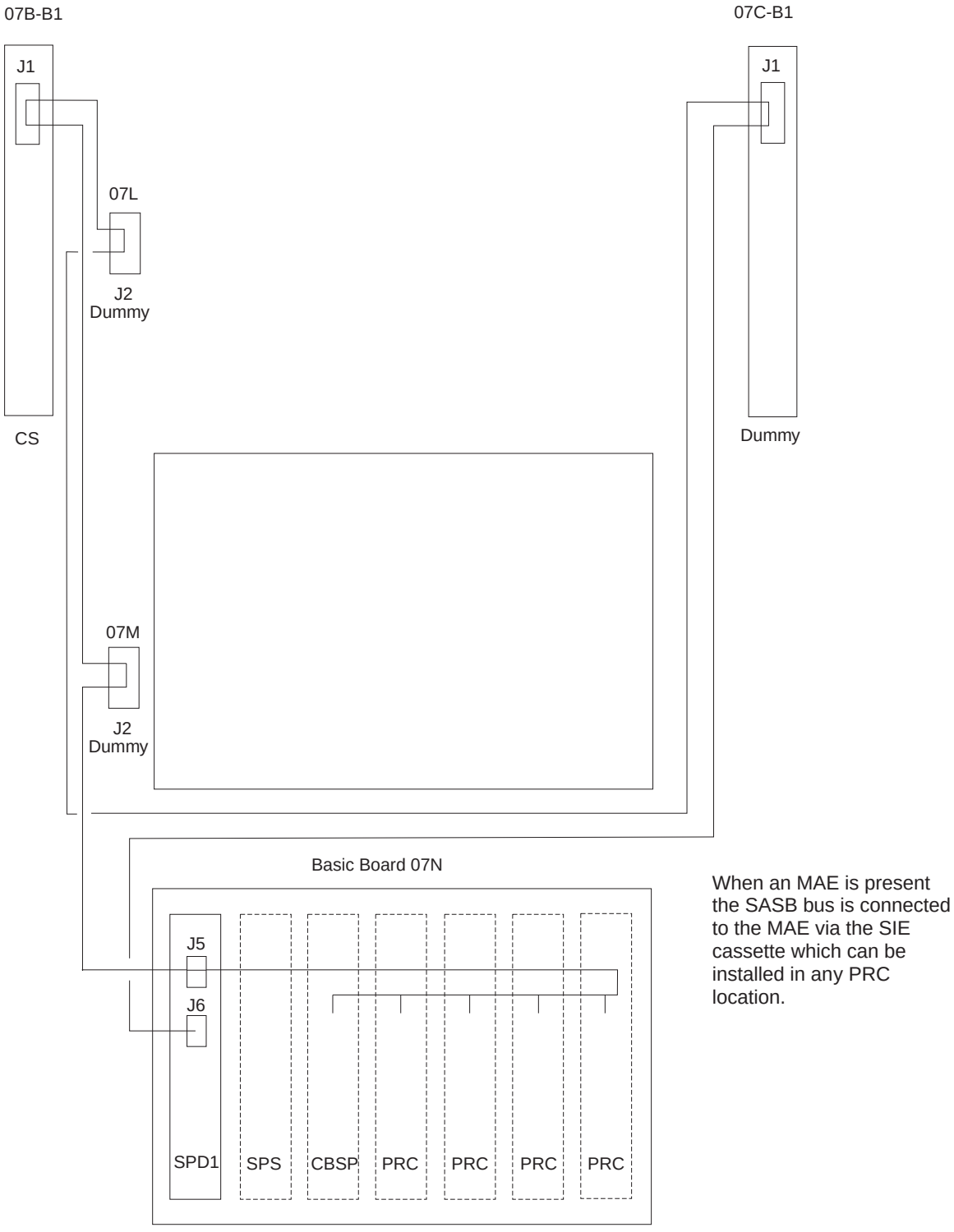


Figure 3-12. Stand Alone Service Bus (SASB) Routing with Basic Board Only

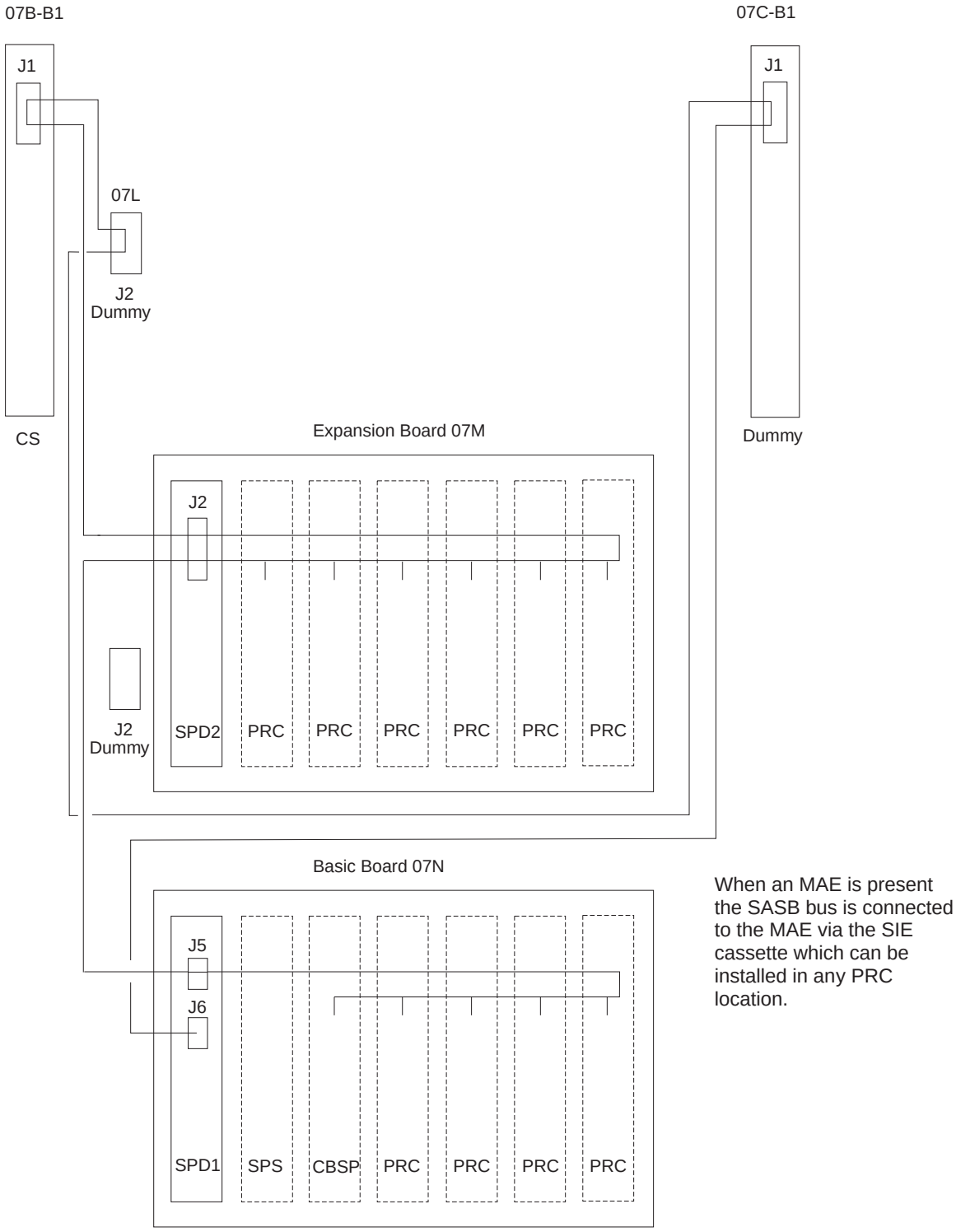


Figure 3-13. Stand Alone Service Bus (SASB) Routing with one Expansion Board

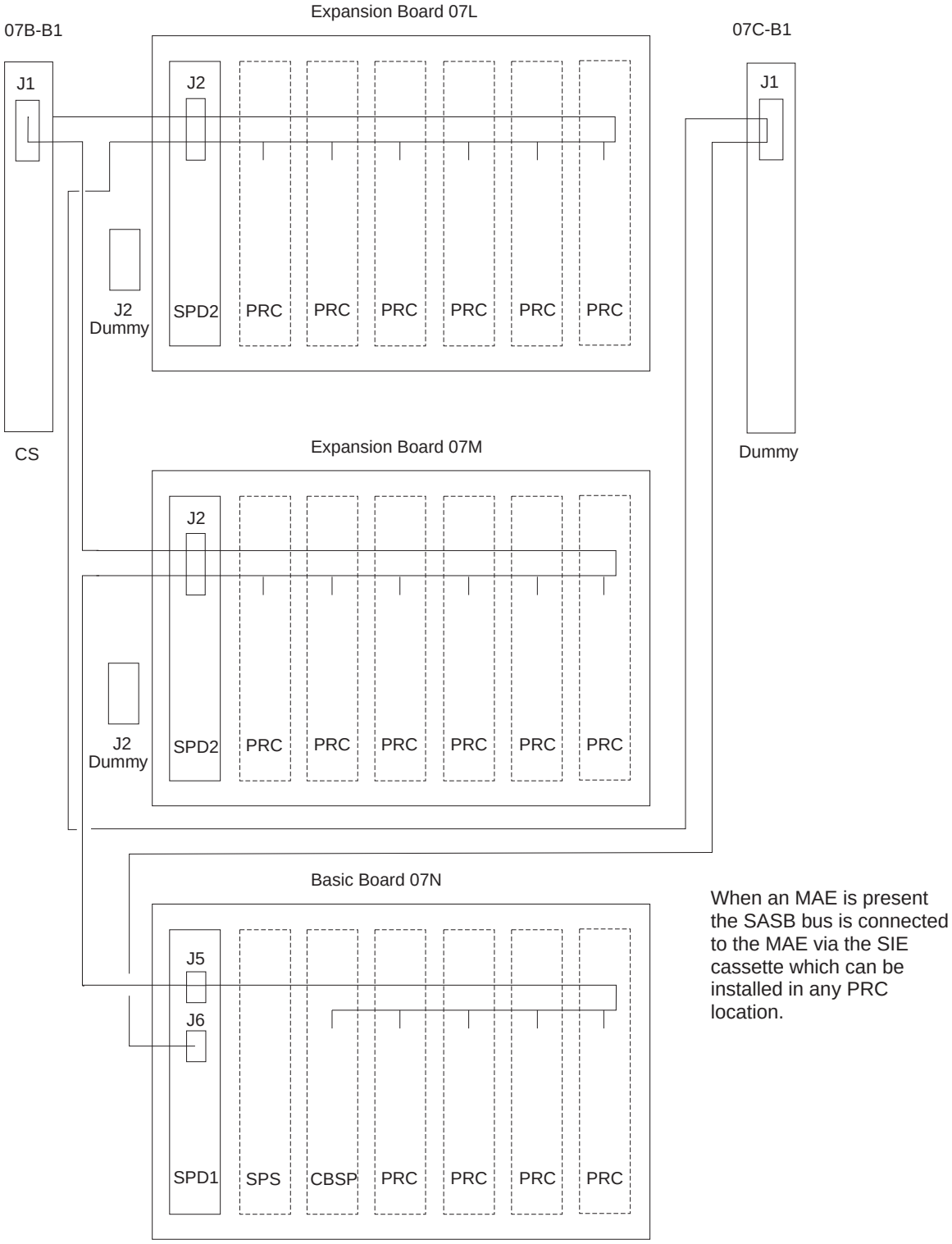


Figure 3-14. Stand Alone Service Bus (SASB) Routing with two Expansion Boards

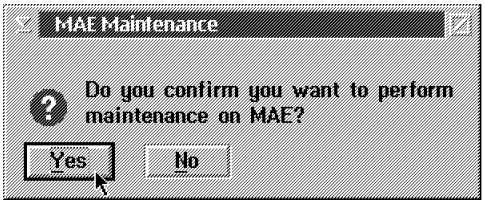
MAP 6030: How to Run the Selective IML on the Multiaccess Enclosure

Important

For specific device diagnostic of the device of the multiaccess enclosure refer to the *Multiaccess Enclosure Installation and Maintenance*, manual manual.

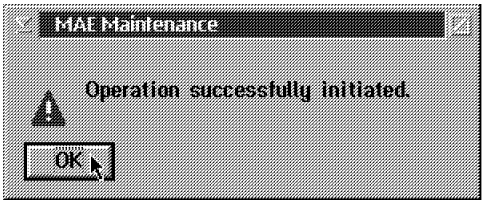
001

- You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
- Ask the customer to stop the traffic on "all" the Multiaccess Enclosure.
- Be sure that all the MAE resources has been deactivated using CCM (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150).
- On the Service Processor select the "3746/9x0 Menu".
- Click on the "Multiaccess Enclosure (MAE) Management".
- Double click on the "Perform Maintenance on MAE".
- The following window is displayed:



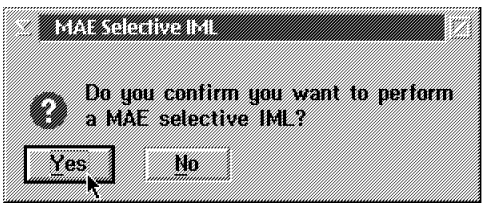
Click on "Yes".

- The following window is displayed:



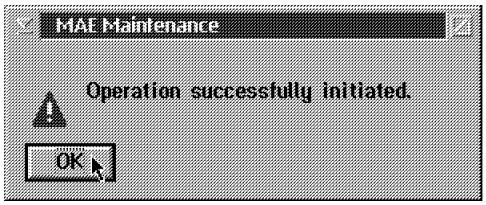
Click on "OK".

- You should first received an alarm message saying: "MAE Concurrent Maintenance in Progress".
- Click on "OK".
- Wait until the "MAE Link" icon is red.
- Return to the "Multiaccess Enclosure (MAE) Management" window.
- Double click on the "Selective IML on MAE".
- The following window is displayed:



Click on "Yes".

- The following window is displayed:



Click on "OK".

- You should first received an alarm message saying: "MAE Selective IML in Progress".
- Click on "OK".
- Wait until you received an alarm message saying: "MAE IML Complete", then click on "OK". The icon "MAE Link" should be green.

Did you receive "MAE IML complete"?

Yes **No**

002

There is a problem on the MAE or the link between the 3746-900 and the MAE. Refer to the *Multiaccess Enclosure Installation and Maintenance*, manual to start problem determination.

003

No problem detected.

Chapter 4. 3746-900 FRU Exchange

Use this chapter once you know what FRU to exchange. You should use all its sections, from front to back, to learn:

- Where the FRU is physically located
- How to exchange FRUs properly

Exchange Precautions

1. Most of the 3746-900 FRUs can be exchanged in concurrent maintenance. Thus, it is **VERY IMPORTANT** that these procedures be followed when replacing any FRU in the machine.
2. The control panel has voltage present even with the machine 'Power OFF'.
3. Be sure that the 3746-900 is 'power OFF' before replacing any FRUs, except for hot-pluggable FRUs.
4. **Before starting FRU exchange, make sure the involved area has been disabled by the customer.**
5. The 3746-900 contains cards that are sensitive to electrostatic discharge (ESD). Use the ESD kit and store all cards in their protective packaging when you are not actually exchanging them.
6. Procedures for exchanging FRUs are listed on the next pages, use the list in alphabetical order leading to the correct page. **Important. Do not disassemble or attempt to remove FRUs from the 3746 until you have read “General and Product Safety Information” on page xxi.**

VERY IMPORTANT

BEFORE ANY FRU EXCHANGE

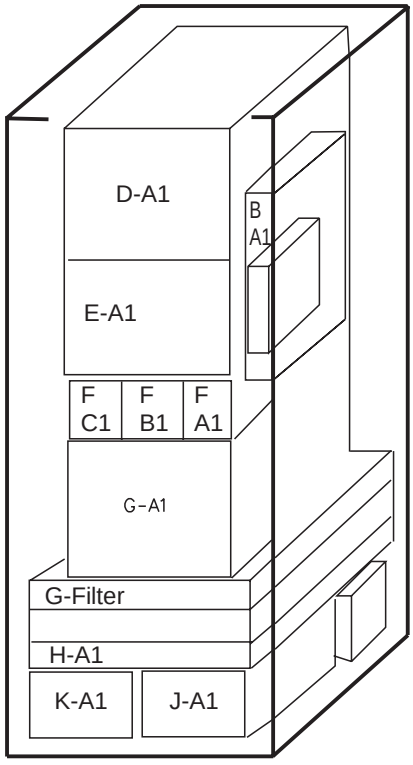
BE SURE THAT THE REQUIRED AREA HAS BEEN DISABLED

IF NOT, GO TO START PAGE AND FOLLOW THE APPROPRIATE PROCEDURE

List of 3746-900 FRUs

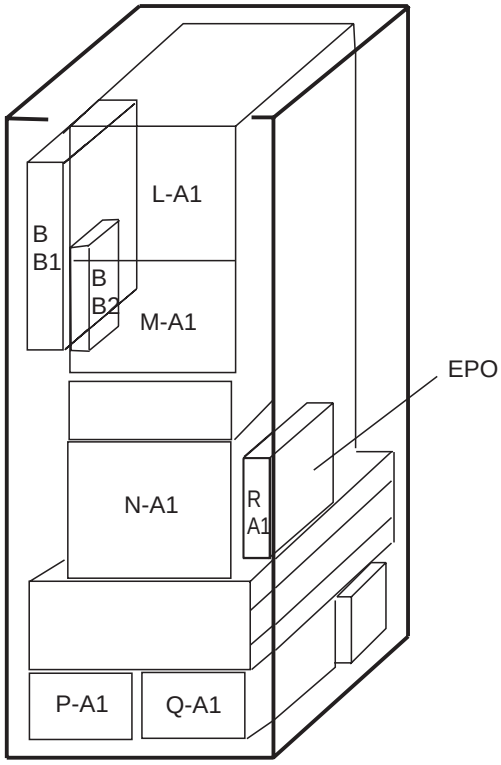
ACPW	Use “Exchange an ACPW” on page 4-11.
Air Filter	Use “Exchange an Air Filter” on page 4-10.
ARC	Use “Exchange an ARC” on page 4-13
Board	Use “Exchange a Board” on page 4-15.
CBC	Use “Exchange a CBC Cassette” on page 4-16.
CBSP/CBSP2/CBSP3	Use “Exchange a CBSP/CBSP2/CBSP3” on page 4-17.
CLP/CLP3	Use “Exchange a Processor Other than the CBSP (CLP/CLP3, ESCP/ESCP2/ESCP3 or TRP/TRP2/TRP3)” on page 4-34
Control Panel	Use “Exchange the Control Panel” on page 4-19.
CS	Use “Exchange a Connectivity Switch” on page 4-20.
CSCE	Use “Exchange a CSCE” on page 4-22.
DCDC for Processor	Use “Exchange DCDC of Processor” on page 4-23.
DCSW	Use “Exchange a Connectivity Switch DCDC” on page 4-24.
DCDP	Use “Exchange the Power Distribution DCDP” on page 4-26.
DCPW	Use “Exchange a DCPW” on page 4-28.
Enclosure	Use “Exchange an Enclosure (Basic or Expansion)” on page 4-30.
ESCC/ESCC2	Use “Exchange an ESCC/ESCC2” on page 4-32.
ESCP/ESCP2/ESCP3	Use “Exchange a Processor Other than the CBSP (CLP/CLP3, ESCP/ESCP2/ESCP3 or TRP/TRP2/TRP3)” on page 4-34.
Fan Drawer	Use “Exchange a Fan Drawer” on page 4-33.
LCEE	Use “Exchange a LCEE” on page 4-35.
LCEB	Use “Exchange a LCEB” on page 4-37.
LCPB	Use “Exchange a LCPB” on page 4-39.
LCPE	Use “Exchange a LCPE” on page 4-41.
LIC (11, 12, or 16)	Use “Exchange a LIC (Type 11, 12, or 16)” on page 4-43.
SIE	Use “Exchange an SIE” on page 4-45.
SPD1	Use “Exchange an SPD1” on page 4-46.
SPD2	Use “Exchange an SPD2” on page 4-47.
SPS	Use “Exchange an SPS” on page 4-48.
TIC3	Use “Exchange a TIC3” on page 4-51.
TIC3 of CBSP	Use “Exchange a TIC3 associated With the CBSP” on page 4-49.
Transformer	Use “Exchange a Transformer” on page 4-52.
TRP/TRP2/TRP3	Use “Exchange a Processor Other than the CBSP (CLP/CLP3, ESCP/ESCP2/ESCP3 or TRP/TRP2/TRP3)” on page 4-34.

3746-900 FRU Physical Locations



FRONT View

Figure 4-1. 3746 Model 900



REAR View

Figure 4-2. 3746 Model 900

B-A1 Connectivity switch
E Processors
F Fans
G Processors and SPS
H Power Distribution DCDP
J Backup ACPW or DCPW
K Basic ACPW

B-B1 Connectivity switch
B-B2 Connectivity switch DC/DC
M Couplers and SPD2
N Couplers and SPD1
P Transformer if backup ACPW installed
Q Transformer
R EPO

3746-900 Basic Board Locations

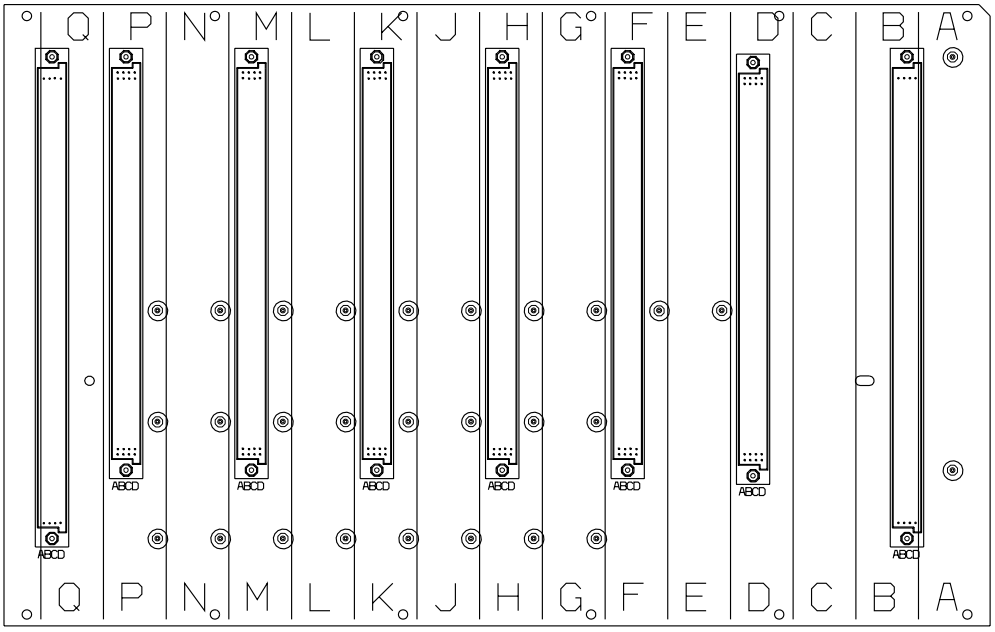


Figure 4-3. Basic Board O7G-A1 Locations (Processor side)

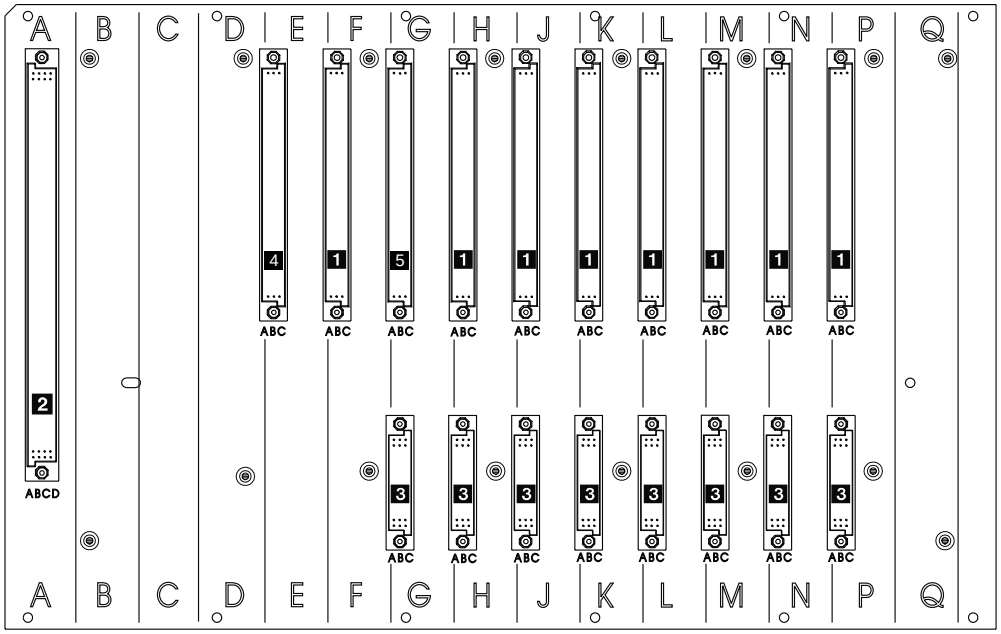


Figure 4-4. Basic Board O7N-A1 Locations (Coupler side)

- **1** TIC3 or ESCC/ESCC2 sockets
- **2** SPD1 location
- **3** LIC11 or LIC12 sockets
- **4** CBC
- **5** CBC, TIC3 or ESCC/ESCC2, sockets

Basic Enclosure

PRC Side Location Board 07G		Coupler Side Location Board 07N	
		SPD1	A1-A
CSCE	A1-B		
SPS	A1-D		
		CBC	A1-E
CBSP2	A1-F	TIC3	A1-F
		Coupler (4)	A1-G
Processor (1)	A1-H	Coupler (3)	A1-H
		Coupler (2)	A1-J
Processor (1)	A1-K	Coupler (3)	A1-K
		Coupler (2)	A1-L
Processor (1)	A1-M	Coupler (3)	A1-M
		Coupler (2)	A1-N
Processor (1)	A1-P	Coupler (3)	A1-P
Dummy	A1-Q	Not Used	A1-Q

Figure 4-5. Basic board component location

Notes:

1. (1) Processor CLP/CLP3, TRP/TRP2/TRP3, ESCP/ESCP2/ESCP3, or SIE
2. (2) LIC11, LIC12, LIC16, TIC3 or ESCC/ESCC2
3. (3) LIC11, LIC12, LIC16, or TIC3
4. (4) CBC, LIC11, LIC12, LIC16, TIC3 or ESCC/ESCC2

3746-900 Expansion Board Locations

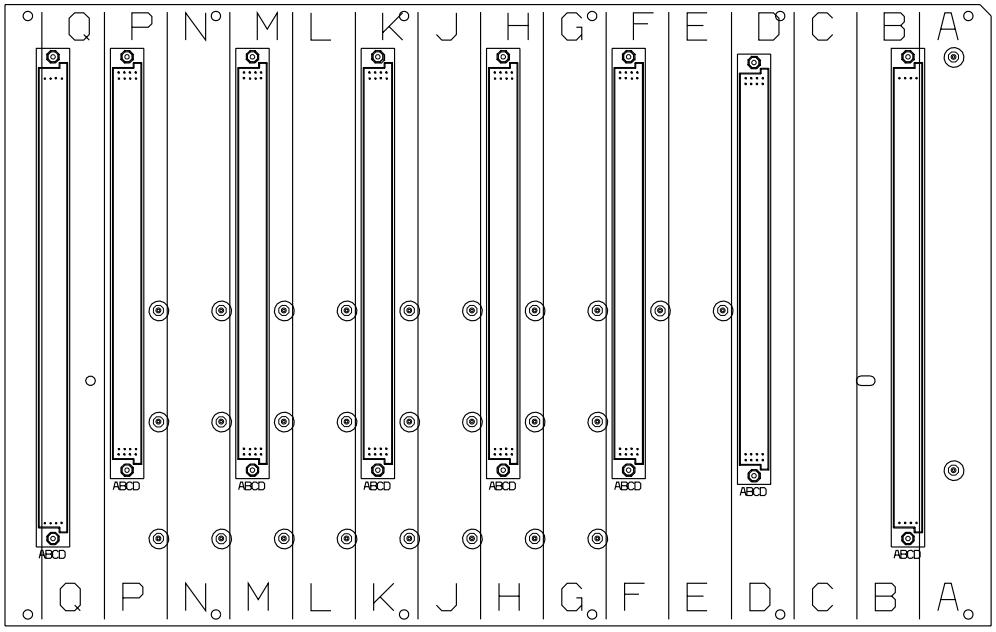


Figure 4-6. Expansion Board 07D-A1 or O7E-A1 Locations (Processor side)

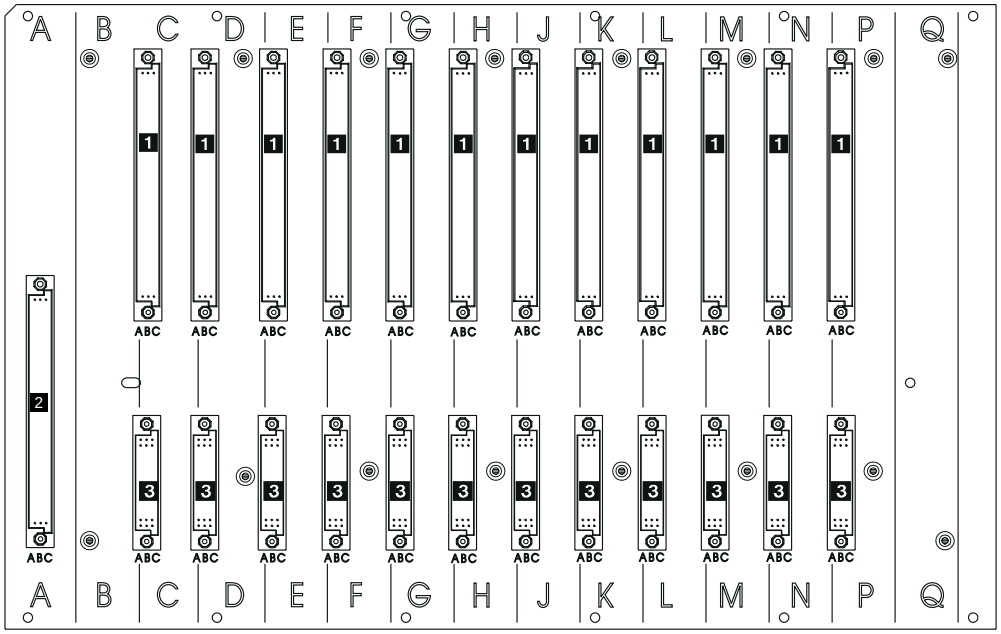


Figure 4-7. Expansion Board 07L-A1 or O7M-A1 Locations (Coupler side)

- **1** TIC3 or ESCC/ESCC2 sockets
- **2** SPD2 location
- **3** LIC11 or LIC12 sockets

Expansion Enclosure 1

PRC Side Location Board 07E		Coupler Side Location Board 07M	
		SPD2	A1-A
CSCE	A1-B		
		Coupler (2)	A1-C
Processor (1)	A1-D	Coupler (3)	A1-D
		Coupler (2)	A1-E
Processor (1)	A1-F	Coupler (3)	A1-F
		Coupler (2)	A1-G
Processor (1)	A1-H	Coupler (3)	A1-H
		Coupler (2)	A1-J
Processor (1)	A1-K	Coupler (3)	A1-K
		Coupler (2)	A1-L
Processor (1)	A1-M	Coupler (3)	A1-M
		Coupler (2)	A1-N
Processor (1)	A1-P	Coupler (3)	A1-P
Dummy	A1-Q	Not Used	A1-Q

Expansion Enclosure 2

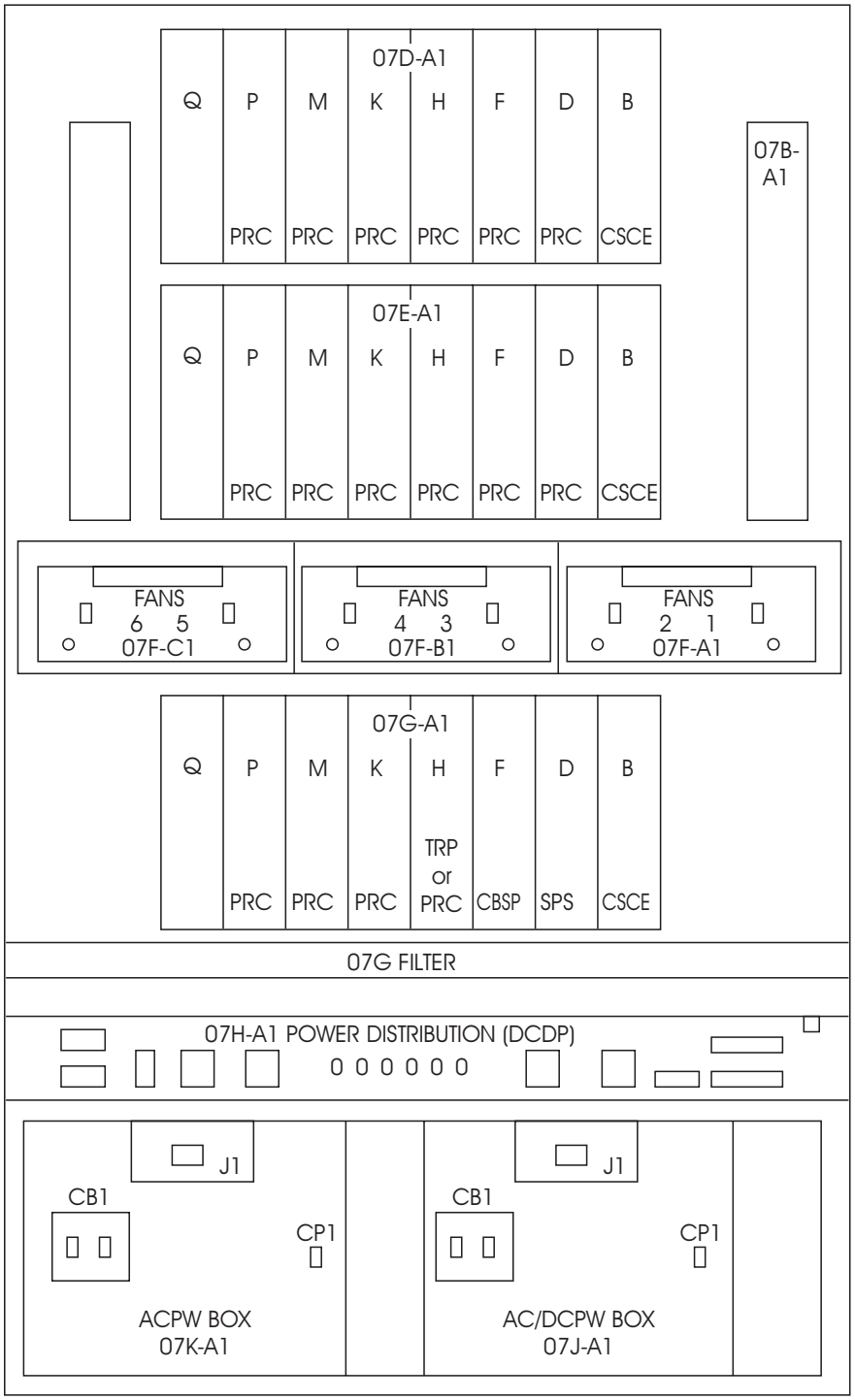
PRC Side Location Board 07D		Coupler Side Location Board 07L	
		SPD2	A1-A
CSCE	A1-B		
		Coupler (2)	A1-C
Processor (1)	A1-D	Coupler (3)	A1-D
		Coupler (2)	A1-E
Processor (1)	A1-F	Coupler (3)	A1-F
		Coupler (2)	A1-G
Processor (1)	A1-H	Coupler (3)	A1-H
		Coupler (2)	A1-J
Processor (1)	A1-K	Coupler (3)	A1-K
		Coupler (2)	A1-L
Processor (1)	A1-M	Coupler (3)	A1-M
		Coupler (2)	A1-N
Processor (1)	A1-P	Coupler (3)	A1-P
Dummy	A1-Q	Not Used	A1-Q

Figure 4-8. Expansion Board Component Location

Notes:

1. (1) Processor CLP/CLP3, TRP/TRP2/TRP3, ESCP/ESCP2/ESCP3, or SIE
2. (2) LIC11, LIC12, LIC16, TIC3, or ESCC/ESCC2
3. (3) LIC11, LIC12, LIC16, or TIC3

3746-900 Front Side Details

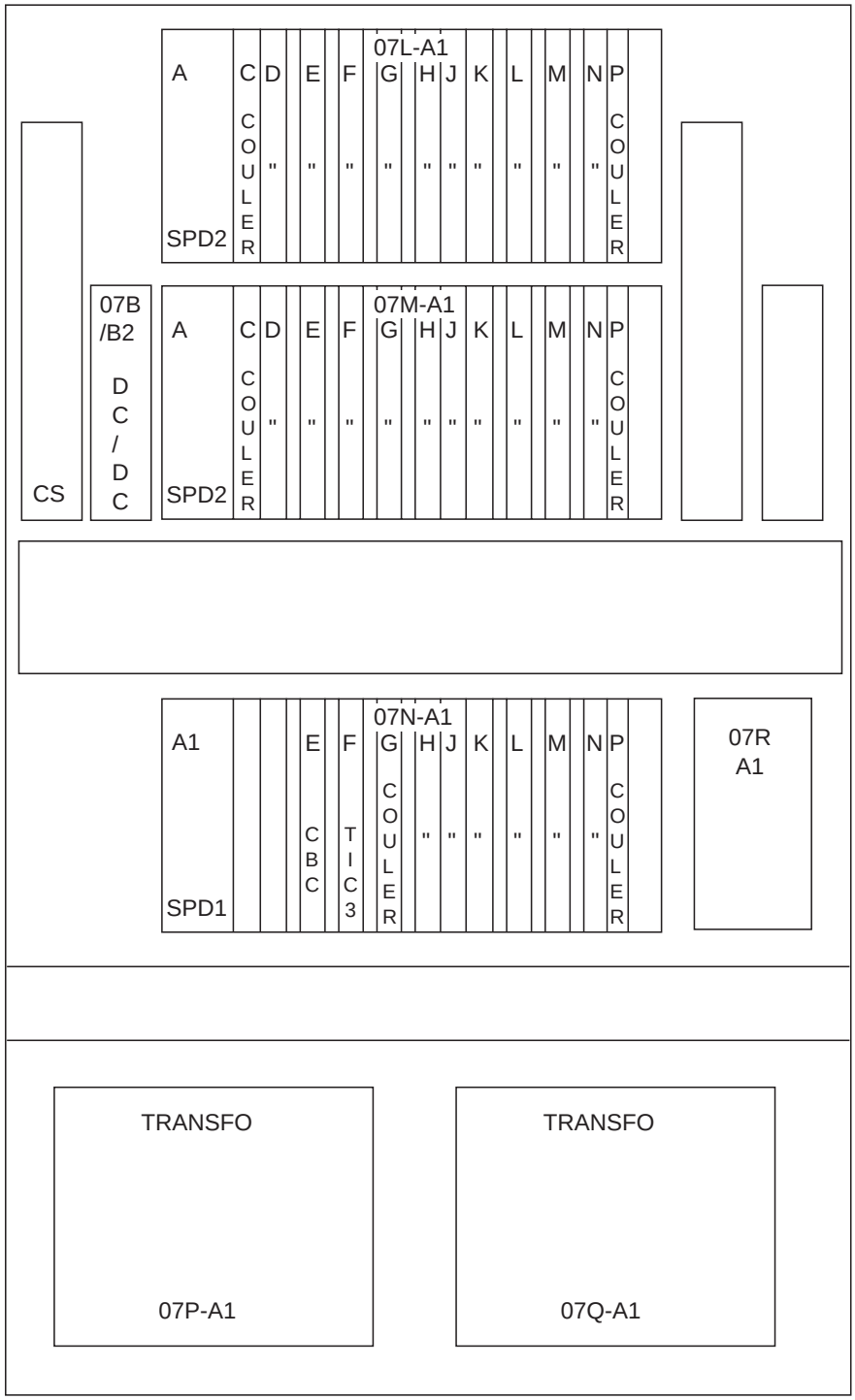


Board		
LOC	07E-A1 Addresses Range	07D-A1 Addresses Range
D	2368-2431	2752-2815
F	2432-2495	2816-2879
H	2496-2559	2880-2943
K	2560-2623	2944-3007
M	2624-2687	3008-3071
P	2688-2751	3072-3135

Board 07G-A1	
Processor Location	Addresses Range
F	2048-2111
H	2112-2175
K	2176-2239
M	2240-2303
P	2304-2367

Figure 4-9. 3746-900 Front Side

3746-900 Rear Side Details



Board		
LOC	07E-A1 Addresses Range	07D-A1 Addresses Range
C	2368-2399	2752-2783
D	2400-2431	2784-2815
E	2432-2463	2816-2847
F	2464-2495	2848-2879
G	2496-2527	2880-2911
H	2528-2559	2912-2943
J	2560-2591	2944-2975
K	2592-2623	2976-3007
L	2624-2655	3008-3039
M	2656-2687	3040-3071
N	2688-2719	3072-3103
P	2720-2751	3104-3135

Board 07N-A1	
Coupler Location	Addresses Range
E	2048-2079
F	2080-2111
G	2112-2143
H	2144-2175
J	2176-2207
K	2208-2239
L	2240-2271
M	2272-2303
N	2304-2335
P	2336-2367

Figure 4-10. 3746-900 Rear Side

Exchange an Air Filter

No special precautions are needed to exchange an air filter.

1. Locate the air filter **1** at the front of the machine using Figure 4-9 on page 4-8.
2. Push the air filter through the holes of the cover **2** and remove it.
3. Insert the new air filter with the arrow pointing up.
4. Return to the step in the MAP you were performing.

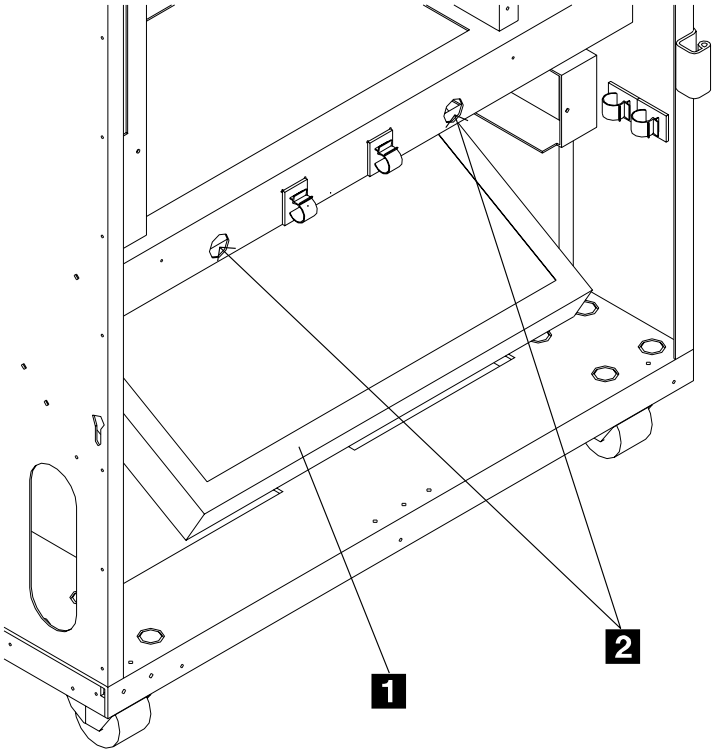


Figure 4-11. 3746-900 Air Filter Replacement

Exchange an ACPW

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

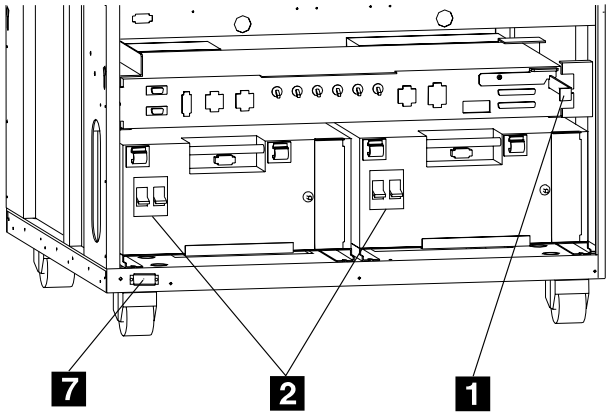
If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

Note

When the basic ACPW is disconnected, the 3746-900 power ON is no longer possible even if the backup ACPW/DCPW is connected.

1. Locate the ACPW that you have to exchange using Figure 4-9 on page 4-8.
2. If the machine has its:
   - **Ready LED ON**, go to step 3.
   - **Otherwise**, go to step 7.
3. Check if there is **another** ACPW or DCPW in your 3746-900. If yes, go to step 5.
   If not, proceed with the next step.
4. The machine has its **Ready LED ON** and does not have **another** ACPW or DCPW.
   a. Press the 'standby' key on the control panel to put the machine in standby mode.
   b. Go to step 7.
5. There is **another** ACPW or DCPW in your 3746-900.
6. Activate the maintenance switch.
   a. Open the front cover and locate the lever of the maintenance switch on the DCDP. **1**
   b. Pull the lever outwards.

   This will prevent the main -48v dropping and stop the power monitoring.
7. If not already done, switch the main circuit breaker CB1 OFF, on the ACPW that you exchange. **2**



8. Unplug the J1 connector from that ACPW.
9. At the rear of the machine loosen the four screws which secure the transformer cover plate.
10. Remove the transformer cover plate.
11. Unplug the power cord from the J2 connector of the ACPW that you want to remove. **3**
12. Check that on the transformer there is no voltage between TB1 position 1 and TB1 positions 2, 3, or 4.
13. On TB1 and TB2 disconnect all wires coming from the ACPW **4** and note their position.

TB1 Position	Voltage
1	
2	200 V
3	220 V
4	240 V

14. **If** you exchange the basic ACPW, unplug connectors J11 and J12 from the rear of the DCDP.

    Or for the backup ACPW, unplug connectors J9 and J10 from the rear of the DCDP.
15. Remove the screw holding the ACPW. **5**
16. Disconnect the two ground straps coming from the ACPW. **6**
17. At the front of the machine, remove the two screws holding the power box. Slide the ACPW out.

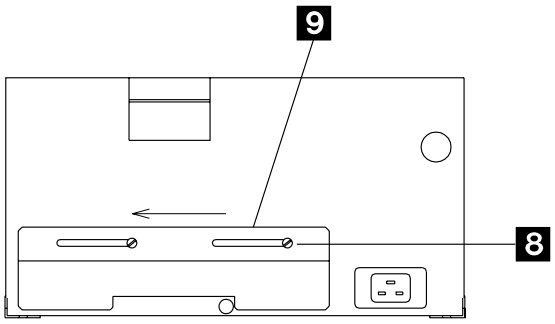
    Note

    When you remove the basic ACPW, if the backup ACPW is installed, you have to remove the bracket. **7**

To install the new ACPW:

- On the rear of the new ACPW, check that connector J2 is accessible.

  This connector must be on the left if you install a basic ACPW, and on the right if you install a backup ACPW.
- Using the screw 8 move the plate 9 to the right if you install a basic ACPW, and to the left if you install a backup ACPW.



- Perform steps 17 to 6 in reverse order.
- Return to the step in the MAP you were performing.

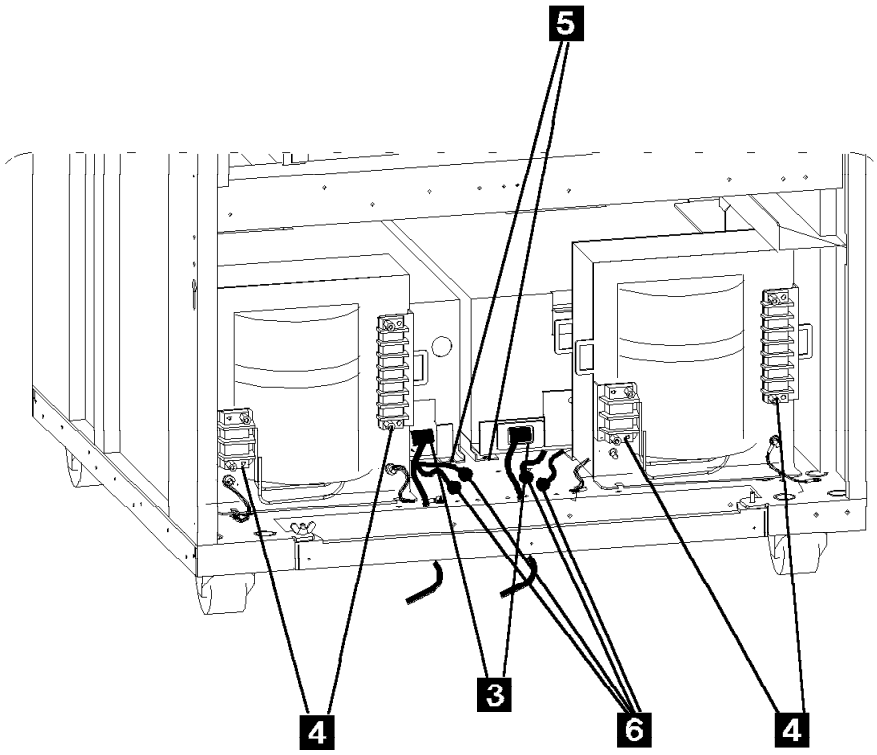


Figure 4-12. Rear of the 3746-900

Exchange an ARC

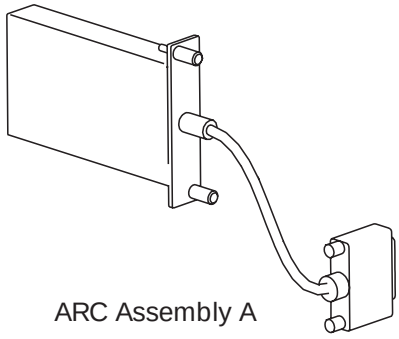
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

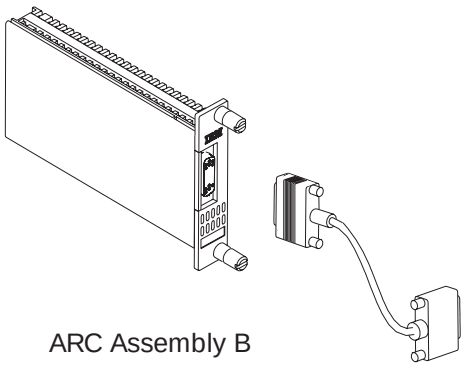
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the ARC that you have to exchange.
2. Identify which ARC assembly that you have to exchange see Figure 4-13.



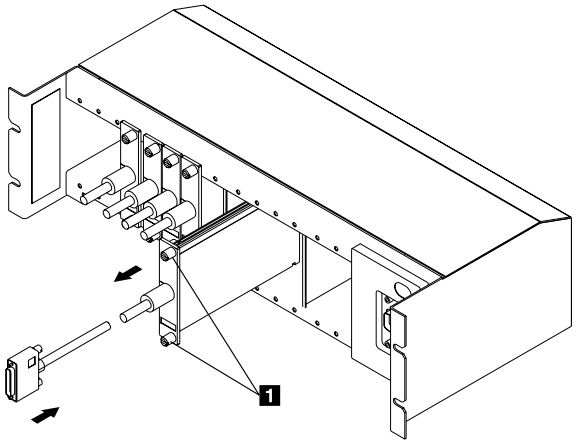
ARC Assembly A



ARC Assembly B

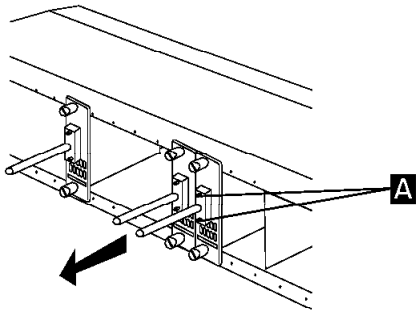
Figure 4-13. ARC Assembly Identification

3. For an ARC assembly A continue with step 4, for an ARC assembly B go to step 8 on page 4-14
4. Loosen the two knobs **1** which secure the ARC in the line connection box (LCB).

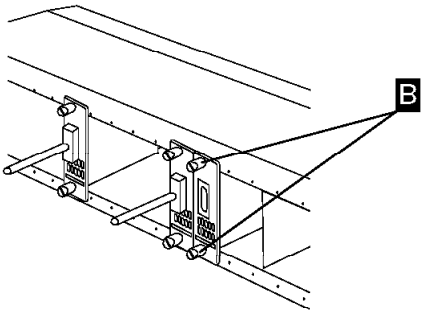


5. Remove the ARC from the line connection box.
6. Unplug the ARC cable:
   - From the DTE or DCE or from a DTE or DCE cable if it is an ARC type ARC1C, ARC1D, ARC3C, or ARC3D.
7. **Install the new ARC:**
   a. Perform the previous steps, 6 to 4 in reverse order.
   b. Return to the step in the MAP you were performing.

8. Loosen the two screws **A** which secure the the ARC cable on the ARC.



9. Loosen the two knobs **B** which secure the ARC in the line connection box (LCB).



10. Remove the ARC from the line connection box.
11. **Install the new ARC:**
    a. Perform the previous steps, 10 to 8in reverse order.
    b. Return to the step in the MAP you were performing.

Exchange a Board

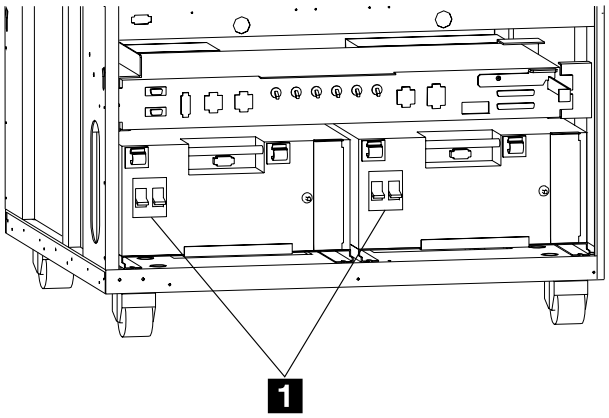
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

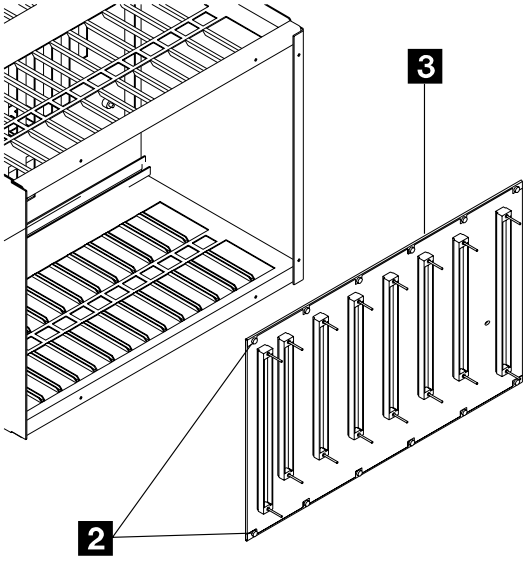
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **Standby LED ON** go to the next step.
4. Switch OFF the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.



5. Locate the enclosure where you have to exchange the board using Figure 4-9 on page 4-8.
6. From the front of the machine, remove the internal covers to gain access to the CSCE cassette.
7. **WARNING: Use the ESD kit and procedures.**
8. Remove CSCE and all the PRC cassettes (plus SPS cassette for the basic board) from the enclosure. (See the CSCE, SPS and PRCs exchange procedure for details).
9. From the rear of the machine, remove the internal cover to gain access to the SPD1 or SPD2 cassette according to the board enclosure that you want removed.
10. Unplug the SPD1 or SPD2 and all coupler cassettes, but do not remove them from the enclosure. (See the SPD1 or SPD2 and coupler exchange procedure for details).
11. Remove the screws holding the board on the enclosure. **2**
12. Remove the board. **3**



13. Install the new board using the screws previously removed.
14. Insert the PRCs, CSCE cassettes, and SPS cassette for basic board, previously removed in the enclosure. Slide them firmly in until they stop clicking.
15. From the rear of the machine, slide SPD1 or SPD2 and all the couplers firmly in until they stop clicking.
16. Switch ON the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.
17. Return to the step in the MAP you were performing.

Exchange a CBC Cassette

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the CBC cassette using Figure 4-10 on page 4-9.
2. Remove the internal cover. **1**
3. **WARNING: Use the ESD kit and procedures.**
4. Using the labels on the doors for reference, loosen the nuts **2** of the CBC cassette that you want exchanged.
5. Unplug the cables assembly, **3** and **4** (see note).

   Note

   Cables and terminators must not be separated.

6. Press the two unlocking buttons and pull out the cassette.
7. Insert the new CBC cassette into the enclosure and slide it firmly in until it clicks (locks in).
8. Plug the cables previously removed, **4** and **3** .
9. Secure the cables with screws. **2**
10. Install the internal cover. **1**
11. Return to the step in the MAP you were performing.

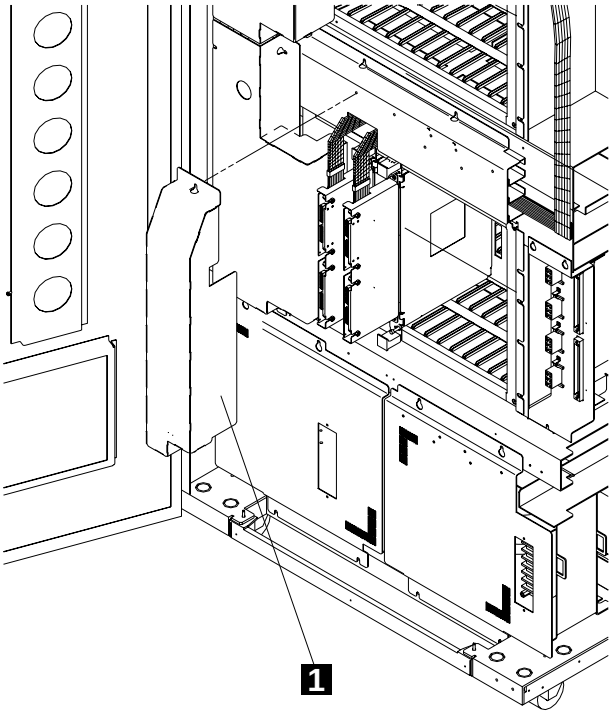


Figure 4-14. 3746 Model 900 CBC Cover

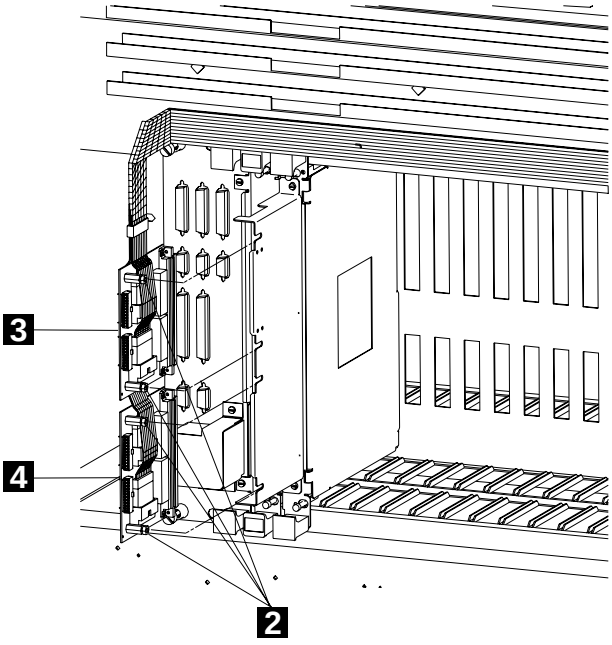


Figure 4-15. 3746 Model 900 CBC Cassette

Exchange a CBSP/CBSP2/CBSP3

In this manual CBSP is the generic name for CBSP, CBSP2, or CBSP3.

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. From the service processor, return to the "MOSS-E VIEW" window and double click on the service processor icon.
2. On the "Service Processor Menu" window, click on the "Configuration Management" option. Then double click on the "Manage 3745/3746-9x0 Installation/removal" option.
3. On the "Controller Installation" window, select the machine by clicking on the serial number of the machine for which you are called and click on "repair".
4. On the "Repair Actions for 3746-9x0" window, select the "Change 3746-9x0 CBSP" option and click on "OK".
5. The "Controller Repair Message" window is displayed. Perform the following steps before clicking on "OK".
6. Locate the CBSP cassette using Figure 4-9 on page 4-8.
7. **WARNING: Use the ESD kit and procedures.**
8. If there is a cable plugged in the front of the CBSP, remove the bracket, and unplug the cable.
9. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
10. Exchange the FRU suspected:
    - If the FRU is the complete processor cassette, exchange it and continue with the next step.
    - If the FRU is the DCDC of the processor refer to “Exchange DCDC of Processor” on page 4-23 to exchange it. Then continue on next step.
11. Insert the CBSP into the enclosure and slide it firmly in until it clicks (locks in).
12. If there was a cable in front of the CBSP, plug it again and secure it with the bracket previously removed.
13. Normally after CBSP insertion, an CBSP hardware initialization phase is started which should terminate with **05282805** displayed at the 3746-9x0 control panel. In case a problem occurs during this phase, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds).
    - If **05282805** is displayed:
      a. Return to the "Controller Repair Message" window and click on "OK".
      b. Continue with the displayed instruction of the "Controller Repair Message".
      c. If the **standby LED** is **ON**, press the 'start' key on the 3746-9x0 control panel to continue. An IML is started. A normal IML is terminated by **00000000** displayed on the 3746-9x0 control panel. In case a problem occurs during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds).
      – If **00000000** is displayed:
        a. Return to the "Controller Repair Message" window and click on "OK".
        b. Continue with the displayed instruction of the "Controller Repair Message".
        c. Return to the step in the MAP you were performing.
      – If you do not obtain **00000000**
        a. Suspect a problem in other part of the machine.
        b. Remove the CBSP that you have installed and reinstall the previous CBSP (using the previous steps 7 to 11)
        c. Return to the "Controller Repair Message" window and click on "OK".
        d. Return to the step in the MAP you were performing.
    - If **05282805** is not displayed:
      a. Record the displayed control panel code.
      b. Remove the CBSP that you have installed and reinstall the previous CBSP (using the previous steps 8 to 12), and return to the step in the MAP you were performing.

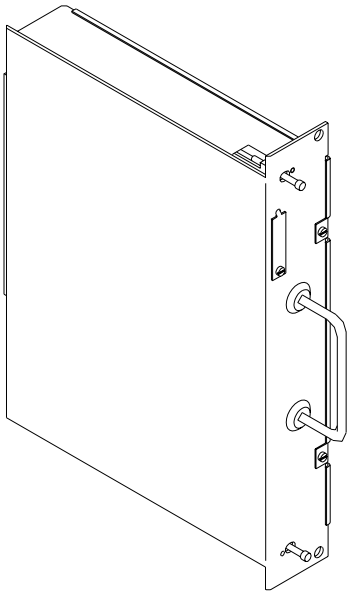


Figure 4-16. 3746 Model 9x0 CBSP Cassette

Exchange the Control Panel

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Open the control panel gate
2. Loosen the 4 screws of the control panel cover. **1**
3. **WARNING: Use the ESD kit and procedures.**
4. If you exchange:
   - The operator panel **2** : Go to step 5.
   - The keyboard display card **6** : Go to step 6.
5. Operator panel:
   a. Disconnect connectors **3** and **4** .

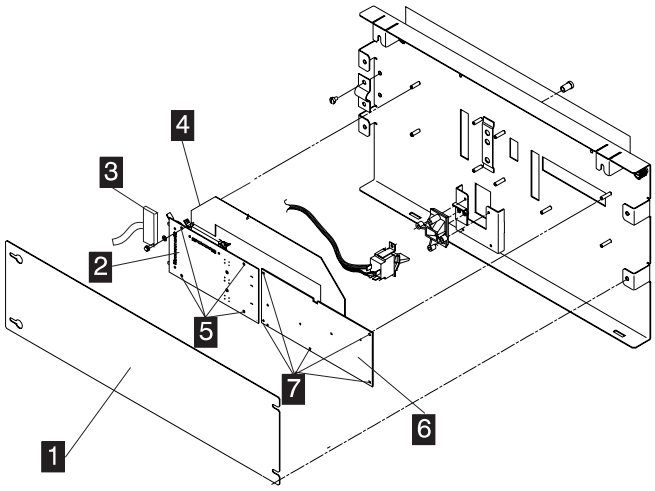


Figure 4-17. 3746-900 Control Panel Cards

   b. Remove the 4 screws **5** and the operator panel.
   c. To install the new operator panel, perform this procedure in reverse order.
   d. From the 3746-900 control panel, run the 3746-900 control panel test (see “How to Run the 3746-900 Control Panel Test” on page 3-15).
   e. Do not forget to put the 3746-900 in its initial power control mode (remote or local) if you have modified it.
6. Keyboard display card:
   a. Disconnect connectors **4** .
   b. Remove the five screws **7** and the keyboard display card.
   c. To install the new keyboard display card, perform this procedure in reverse order.
7. From the 3746-900 control panel, run the 3746-900 control panel test (see “How to Run the 3746-900 Control Panel Test” on page 3-15).
8. Return to the step in the MAP you were performing.

Exchange a Connectivity Switch

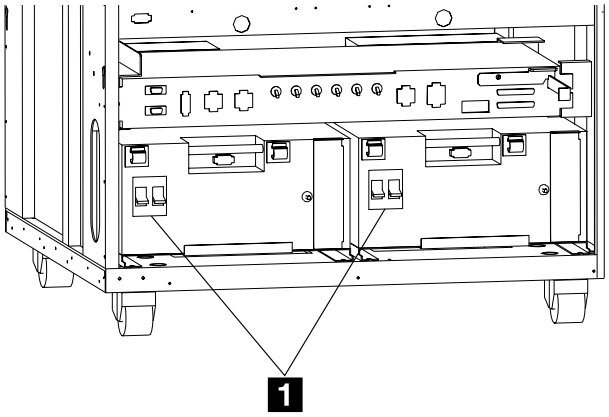
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

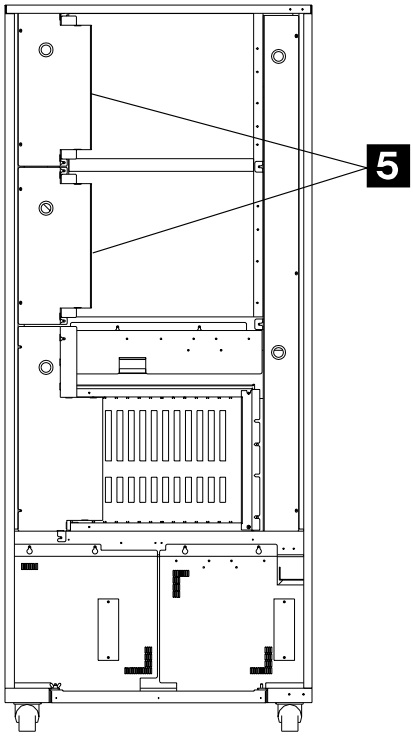
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

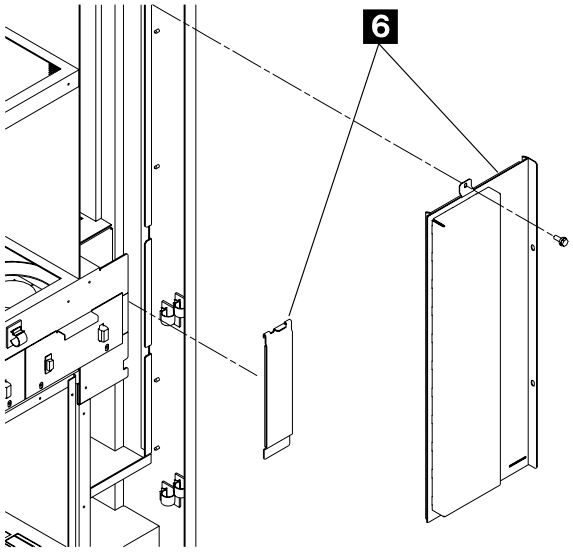
1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **standby LED ON**, go to step 4.



4. Locate the connectivity switch using Figure 4-10 on page 4-9.
5. At the rear of the machine remove the two internal covers 5 to gain access to the CS. (Left side)



6. Unplug connectors, from the back of the CS in the following order, J01, J03 and J04. 2
7. At the front of the machine, remove the two internal covers 6 to have access to the CS (right side).



8. **WARNING: Use the ESD kit and procedures.**
9. Unplug the processor cables (number depending on the configuration). 3
10. Remove the two screws holding the CS. 4

11. Pull the CS out of the machine (be careful not to damage the cables).
12. Install the new CS and secure it with the screws. **4**
13. Plug the processor cables previously removed. **3**
14. Install the covers previously removed **6** .
15. At the rear of the machine, reconnect the cables in the following order:
    - The power cable J04
    - The service bus J01
    - The control cable J03. **2**
16. Install the covers previously removed **5** .
17. Return to the step in the MAP you were performing.

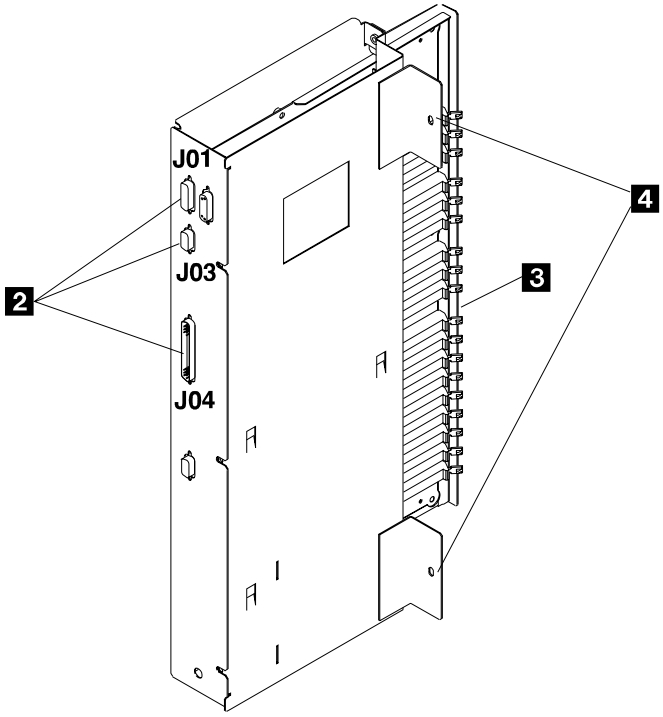


Figure 4-18. 3746-900 Connectivity Switch

Exchange a CSCE

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise** go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **Standby LED ON**, go to the next step.
4. Switch OFF the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.
5. Locate the CSCE using Figure 4-9 on page 4-8.
6. Remove the internal cover (2 screws) to have access to the CSCE. **1**
7. **WARNING: Use the ESD kit and procedures.**
8. Unfasten the top and bottom screws holding the CSCE cassette in the enclosure, but do not pull the CSCE cassette out of the enclosure.
9. Remove the two internal covers **2** to have access to the CS.
10. Unplug the processor cables coming from the CSCE cassette from the CS. **3**
11. Pull the CSCE out of the enclosure.
12. To install the new CSCE cassette , perform this procedure in reverse order.
13. Switch the main circuit breaker(s) CB1 ON.
14. Return to the step in the MAP you were performing.

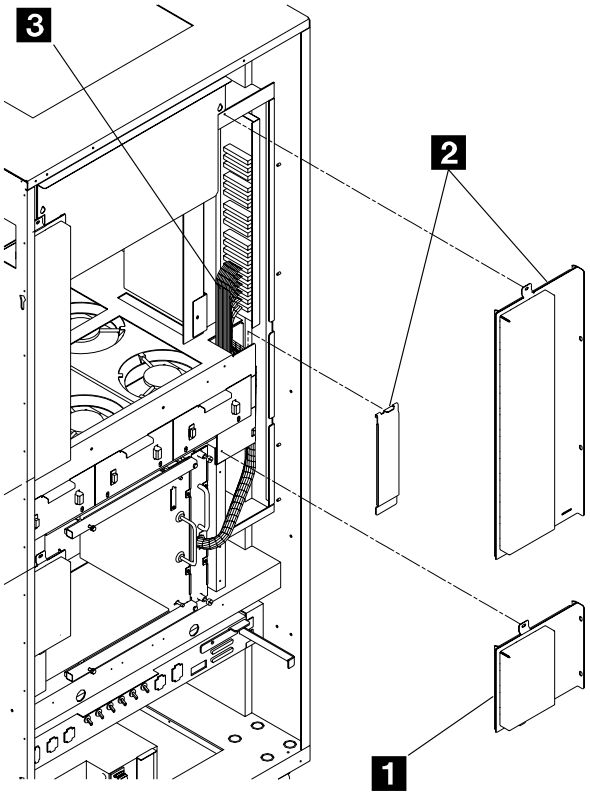


Figure 4-19. 3746-900 CSCE Cable Connection to the Connectivity Switch (CS)

Exchange DCDC of Processor

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Once you have removed the processor cassette perform the following steps.
2. Remove the two screws on the cassette cover and open it. 1
3. Remove the two screws fixing the DC/DC on the cover. 2
4. Unlatch the DC/DC cable connector and unplug it. 3
5. Exchange the DC/DC
6. Fix the new DC/DC on the PRC cassette cover using the screws 2 , plug its cable connector 3 , and close the cassette with screws. 1
7. Insert the new PRC into the enclosure and slide it firmly in until it clicks (locks in).
8. Return to:

   “Exchange a CBSP/CBSP2/CBSP3” on page 4-17
   or to “Exchange a Processor Other than the CBSP (CLP/CLP3, ESCP/ESCP2/ESCP3 or TRP/TRP2/TRP3)” on page 4-34 in order to reinstall the processor.

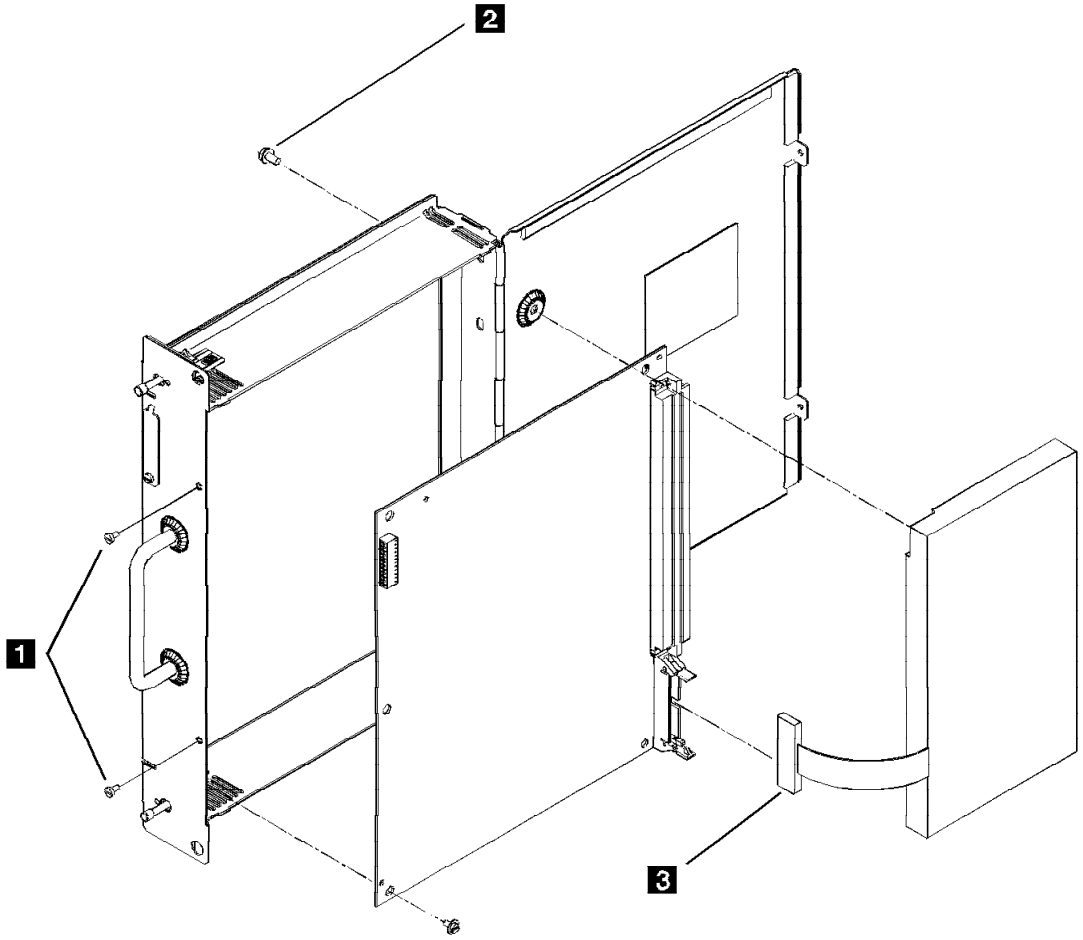


Figure 4-20. 3746-900 Processor DC/DC

Exchange a Connectivity Switch DCDC

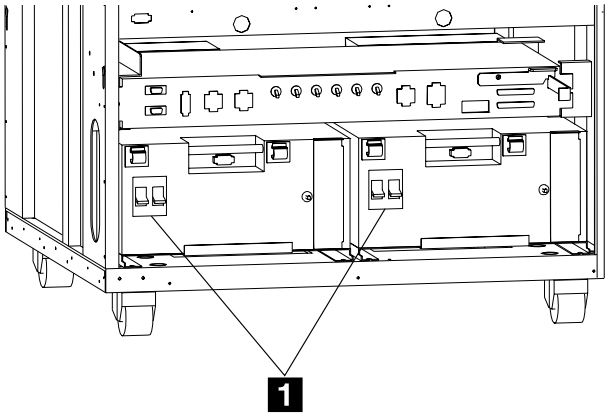
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

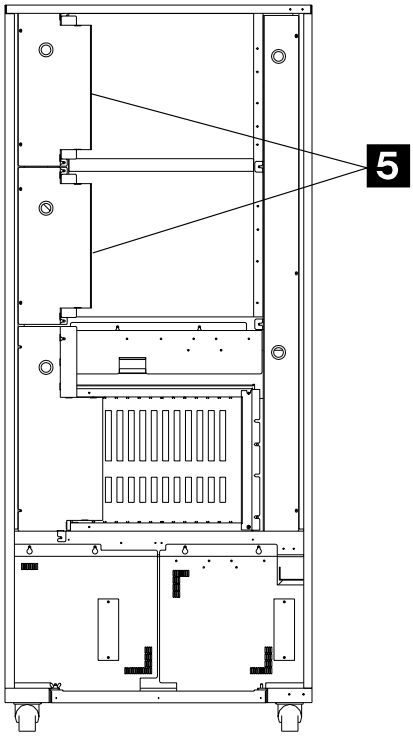
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **standby LED ON**, go to step 4.



4. Locate the connectivity switch DCDC using Figure 4-10 on page 4-9.
5. From the rear of the machine remove the two internal covers 5 to have access to the CS (left side).



6. **WARNING: Use the ESD kit and procedures.**
7. Unplug the DCDC cable from J4 on the back of the CS. 2
8. Unplug the power connector J1 from the DCDC. 3
9. Remove the two screws maintaining the DCDC. 4
10. Pull the DCDC out of the machine.
11. Install the new DCDC and secure it with the two screws. 4
12. Plug the DCDC cable into the J4 connector of the CS.
13. Plug the power connector into J1 on the DCDC.
14. Install the covers previously removed 5 .
15. Return to the step in the MAP you were performing.

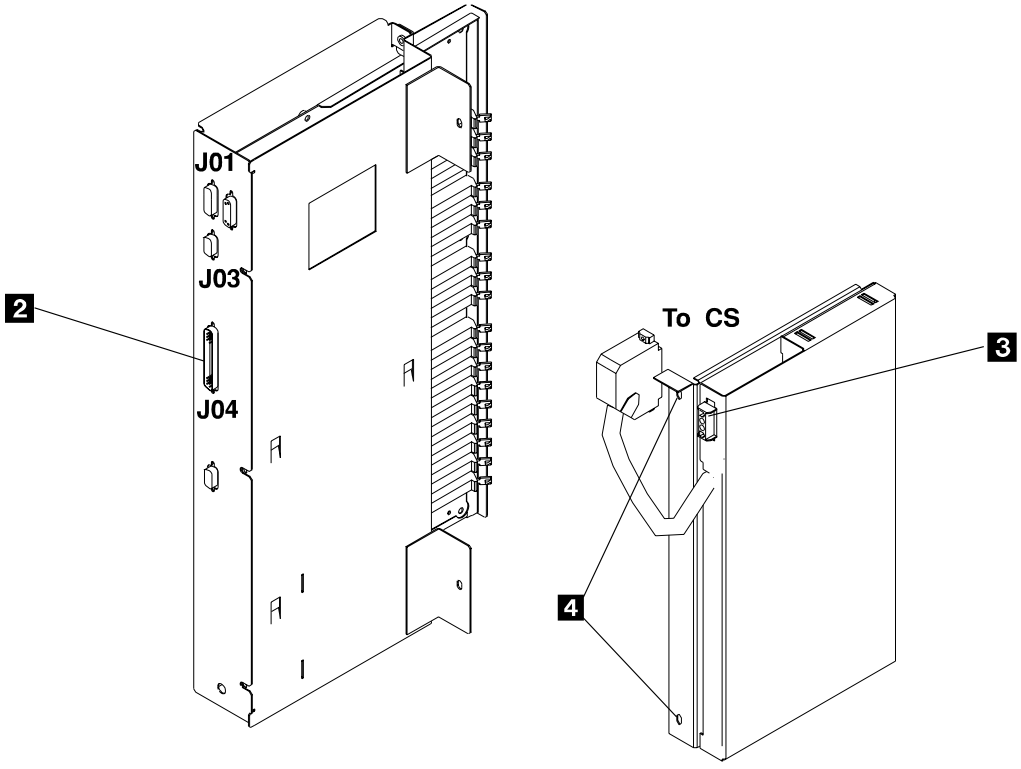


Figure 4-21. 3746-900 Connectivity Switch and DCDC

Exchange the Power Distribution DCDP

Important

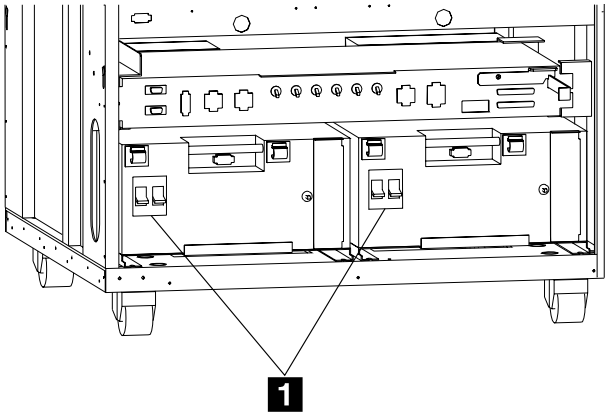
Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 4.

   .
2. Press the 'Standby' key.
3. When the machine is in standby mode with its **Standby LED ON**, go to the next step.
4. Switch OFF the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.



5. Locate the DCDP using Figure 4-9 on page 4-8.
6. At the rear of the machine, loosen the screws which secure the transformer cover plates.
7. Remove the transformer cover plates.
8. Unplug all the cables present from the DCDP connectors labeled (J8, J9, J10, J11, J12).
9. At the front of the machine, unplug all the cables present from the DCDP connectors labeled (3745, J1, J2, J3, J4, J5, J6, J7).
10. Disconnect the two ground straps located on the left side from the DCDP.
11. Remove the two screws holding the DCDP. **4**
12. Pull the DCDP out of the machine.
13. Return to the step in the MAP you were performing.

To install the new DCDP:

1. Perform this procedure (steps 10 to 5) in the reverse order.
2. Return to the step in the MAP you were performing.

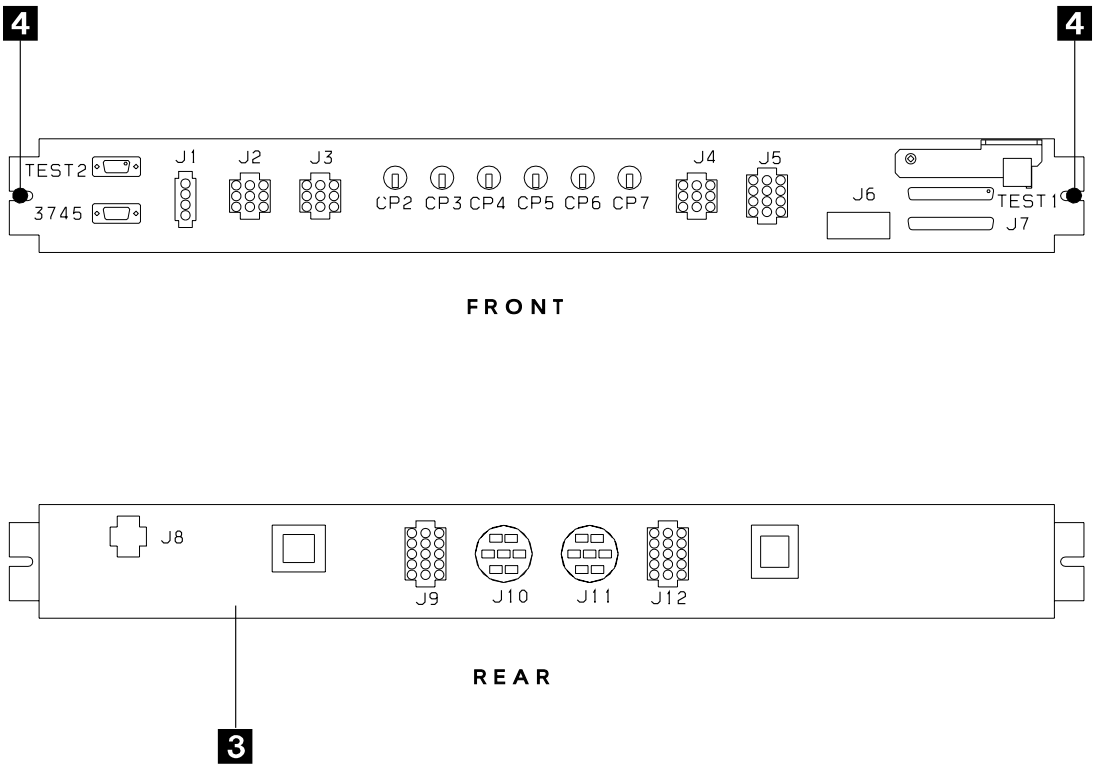


Figure 4-22. 3746-900 Power Distribution Box DCDP Front and Rear View

Exchange a DCPW

Important

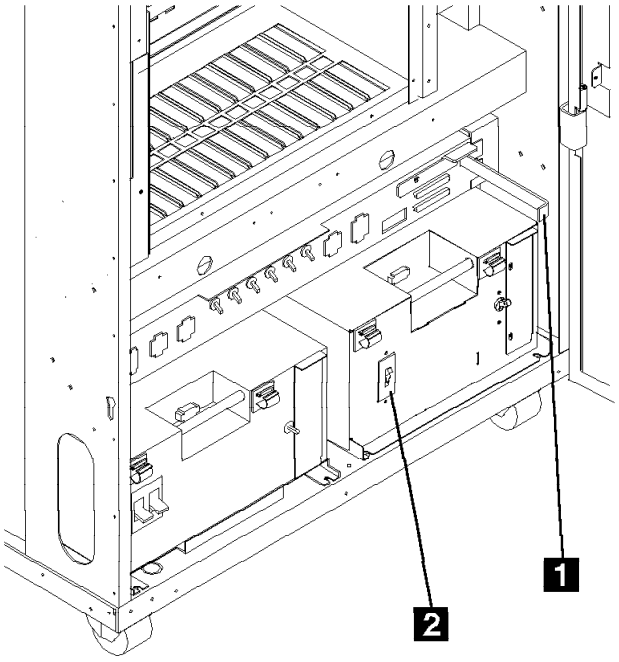
Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 3.
2. Activate the maintenance switch.
   a. Open the front cover and locate the lever of the maintenance switch on the DCDP. **1**
   b. Pull the lever outwards.

   This will prevent the main -48v from dropping and will stop the power monitoring.
3. Locate the DCPW that you have to exchange using Figure 4-9 on page 4-8.



4. Switch the main circuit breaker CB1 OFF at the DCPW. **2**
5. Switch the -48 Volts DC source circuit breaker OFF or ask the customer to do so..
6. Attach a warning label directly to the circuit breaker indicating that "power must not be applied".
7. Disconnect the power supply cable from the customer junction box.
8. At the rear of the machine, loosen the four screws which secure the cover plate.
9. Remove the cover plate.
10. Check that on the rear TB of the DCPW there is no voltage **3** between the black and red wire.
11. Disconnect the black and the red wire from the DCPW. **3**
12. Unplug connectors J9 and J10 from the rear of the DCDP.
13. Remove the screw holding the DCPW. **4**
14. At the front of the machine, unplug the J1 connector and remove the two screws holding the power box. Slide the DCPW out.

To install the new DCPW, perform this procedure in the reverse order.

- Return to the step in the MAP you were performing.

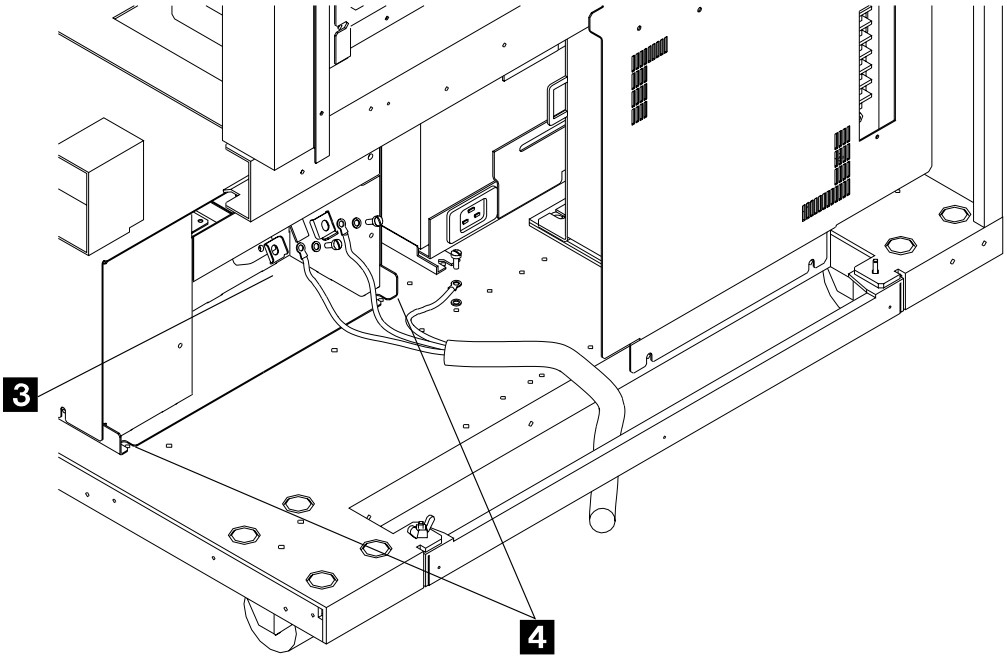


Figure 4-23. 3746-900, Rear of DC Power Box

Exchange an Enclosure (Basic or Expansion)

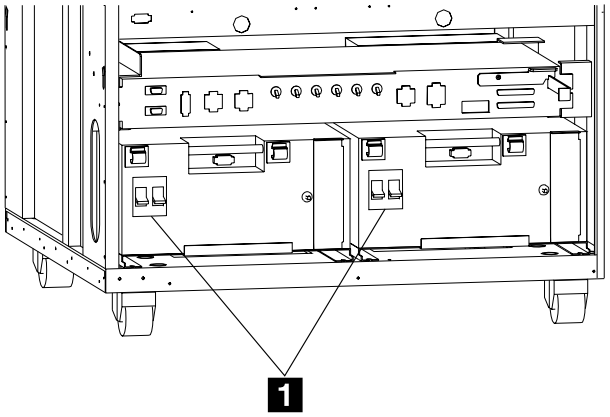
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

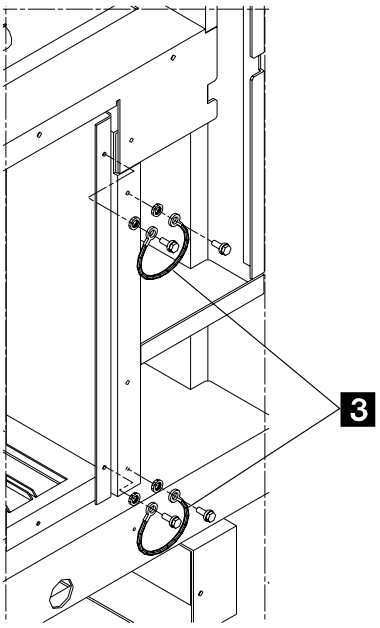
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise** go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **Standby LED ON**, go to the next step.
4. Switch OFF the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.



5. Locate the enclosure that you want removed using Figure 4-9 on page 4-8.
6. From the front machine:
   a. Remove the internal covers to have access to the CSCE cassette.
   b. **WARNING: Use the ESD kit and procedures.**
   c. Remove the CSCE, SPS, and all the PRC cassettes from the enclosure.(See the CSCE, SPS and PRCs exchange procedure for details).
   d. Disconnect the two ground straps from the enclosure. **3**



Front View

7. From the rear of the machine:
   a. Remove the internal cover to gain access, to the SPD1 cassette if you change the basic enclosure, or to the SPD2 cassette if you exchange the expansion enclosure.
   b. Unplug all the cables from the SPD1 or SPD2 cassette.
   c. Unplug all cables from the coupler cassettes. (See “Exchange an ESCC/ESCC2” on page 4-32 and “Exchange a TIC3” on page 4-51)
   d. If you exchange the basic enclosure: remove the SPD1 and all the coupler cassettes from the enclosure (see the SPD1 and coupler exchange procedure for details).

      If you exchange the expansion enclosure: Remove the SPD2 and all the coupler cassettes from the enclosure (see SPD2 and coupler exchange procedure for details).
   e. Remove the 8 screws which secure the enclosure. **4**
8. Pull the enclosure out from the machine.

Installation Procedure

1. From the rear of the machine:
   a. Insert the new enclosure in the machine.
   b. Secure it with screws previously removed. **4**
   c. Connect the two ground wires to the enclosure. **3**
   d. Insert the SPD1 or the SPD2 and all the coupler cassettes previously removed and slide them firmly in until they stop clicking.
   e. Reconnect the cable on SPD1 or SPD2 cassette and on each coupler cassette.
   f. Reinstall the internal covers.
2. From the front of the machine:
   a. Reconnect the cable on the enclosure board.
   b. Insert the PRCs , the SPS and the CSCE cassettes previously removed and slide them firmly in until they stop clicking.
   c. Reconnect the CSCE cable to the CS.
   d. Reinstall the internal covers.
3. Switch ON the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.
4. Check that the **Standby LED** comes **ON**, without any alarm.
5. Return to the step in the MAP you were performing.

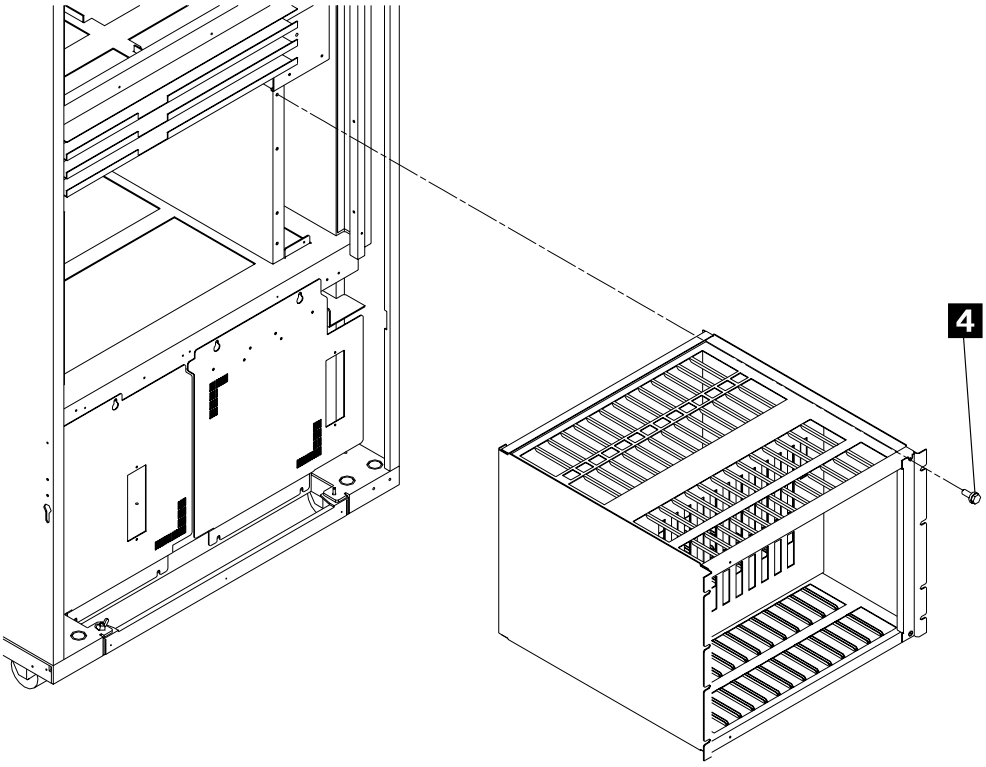


Figure 4-24. 3746-900 Enclosure Installation

Exchange an ESCC/ESCC2

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

Note

Exchange ESCC **only** by ESCC and ESCC2 **only** by ESCC2.

1. Locate the coupler cassette using Figure 4-10 on page 4-9.
2. Remove the cable located on the ESCC/ESCC2 using the following procedure.
   - **WARNING: Use the ESD kit and procedures.**
   - Loosen the screws 1
   - Remove the cover 2
   - Loosen the screws 3
   - Slide the bracket 4 upwards, and
   - Unplug the ESCA cable 5
3. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
4. Exchange the coupler cassette.
5. Insert the new coupler cassette into the enclosure and slide it firmly in until it clicks (locks in).
6. Remove the protection of the ESCC/ESCC2 light.
7. Replace the removed cable.
   - Plug the ESCA cable 5 into the cassette.
   - Slide the bracket 4 downwards
   - Secure the screws 3
   - Install the removed cover 2 and secure it with screws 1 .
8. Return to the step in the MAP you were performing.

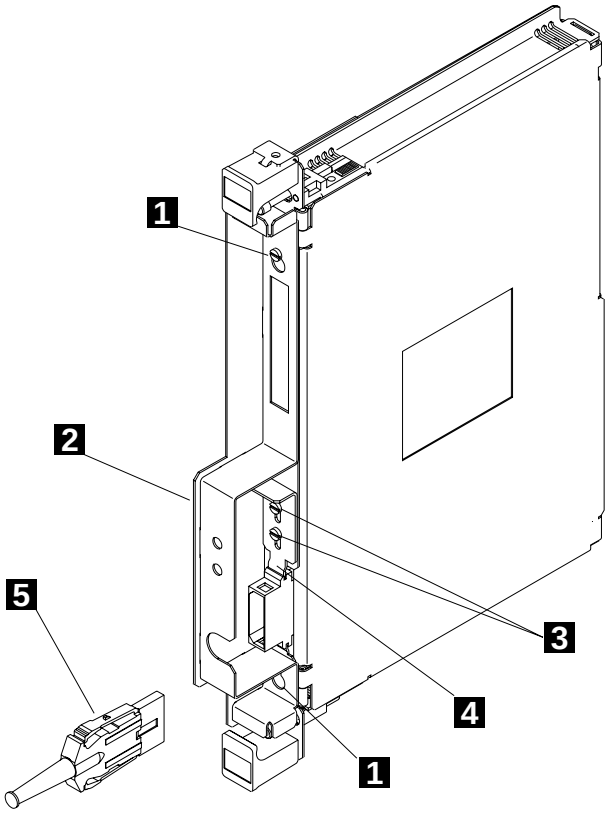


Figure 4-25. 3746-900 ESCC Coupler

Exchange a Fan Drawer

Warning

You have only two minutes to exchange a fan drawer

Do not forget that the drawer assembly contains 2 fans. If the fan monitor detects a multiple fan error, the 3746-900 is automatically powered OFF after two minutes.

1. Locate the fan drawer you have to exchange using Figure 4-9 on page 4-8.
2. Unfasten the two screws holding the drawer. 1
3. Remove the connectors from the drawer. 2
4. Exchange the drawer and reconnect the connectors
5. Fasten the two screws holding the drawer
6. Return to the step in the MAP you were performing.

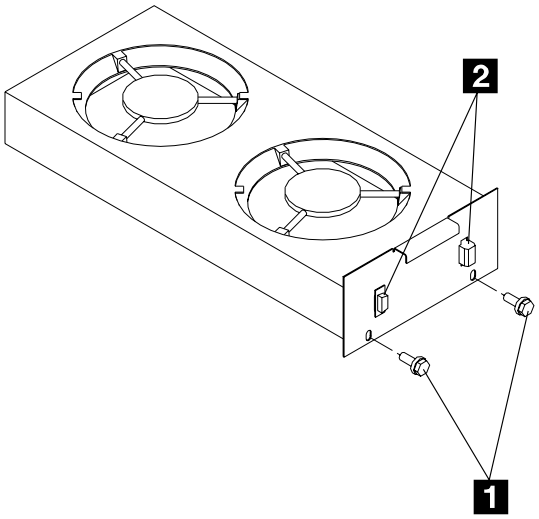


Figure 4-26. 3746-900 Cooling Units

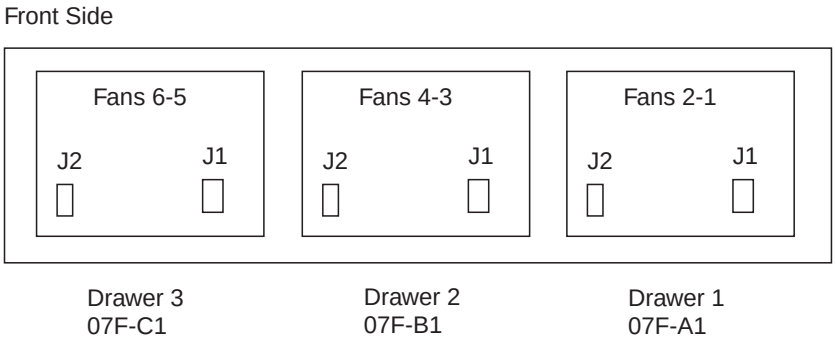


Figure 4-27. 3746-900 Fan Drawers Location

Exchange a Processor Other than the CBSP (CLP/CLP3, ESCP/ESCP2/ESCP3 or TRP/TRP2/TRP3)

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

Note

Exchange ESCP **only** by ESCP, ESCP2 **only** by ESCP2, and ESCP3 **only** by ESCP3.

Exchange CLP **only** by CLP, and CLP3 **only** by CLP3.

Exchange TRP **only** by TRP, TRP2 **only** by TRP2, and TRP3 **only** by TRP3.

1. Locate the PRC cassette (CLP, ESCP/ESCP2 or TRP/TRP2) using Figure 4-9 on page 4-8.
2. **WARNING: Use the ESD kit and procedures.**
3. If you change a TRP, and if there is a cable plugged in the front of the TRP, remove the bracket and unplug the cable.
4. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
5. Exchange the FRU suspected:
   - If the FRU is the complete processor cassette, exchange it and continue with the next step.
   - If the FRU is the DCDC of the processor, refer to “Exchange DCDC of Processor” on page 4-23 to exchange it then continue on next step.
6. Insert the PRC into the enclosure and slide it firmly in until it clicks (locks in).
7. If you changed a TRP and if there was a cable in front of the TRP, plug it again and secure it with the bracket previously removed.
8. Return to the step in the MAP you were performing.

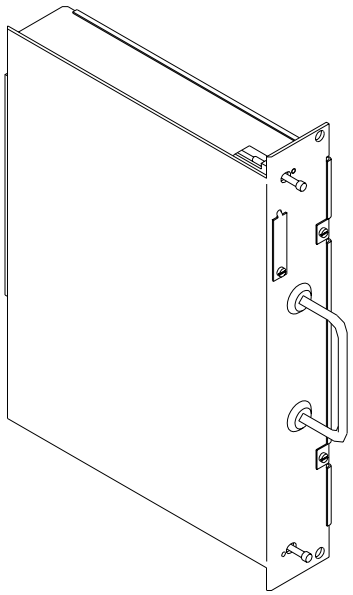


Figure 4-28. 3746-900 Cassette Processor

Exchange a LCEE

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the line connection box.
2. Loosen the screws which secure the cable to the line connection box base (LCBB) **2** .
3. Remove the cable
4. Loosen the screws which secure all the ARC(s) into the LCEE.
5. Remove the ARC(s) and note their position in the LCEE.

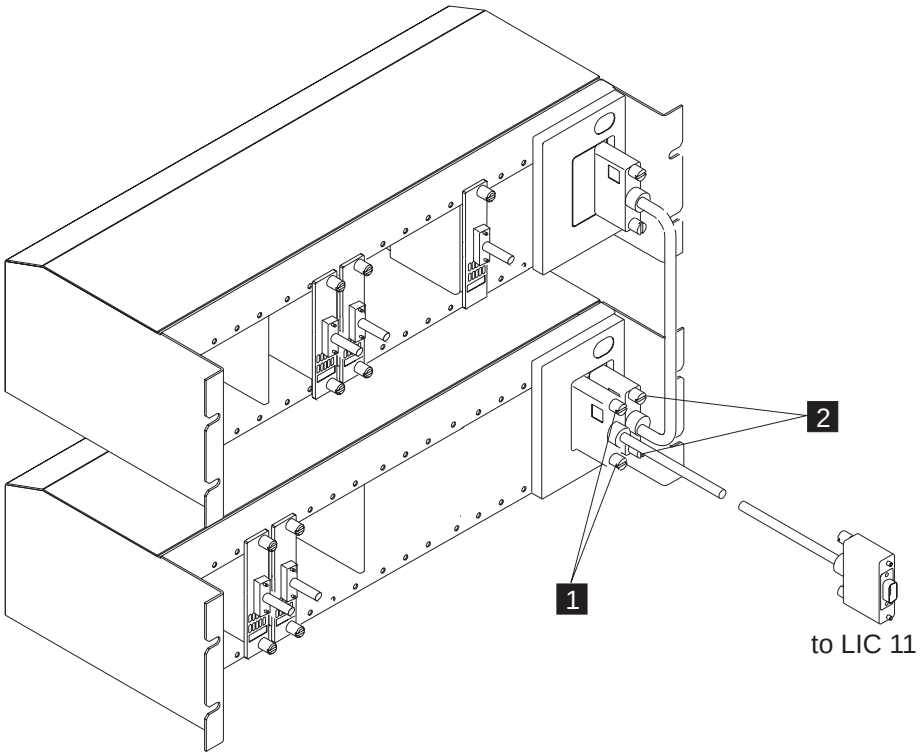
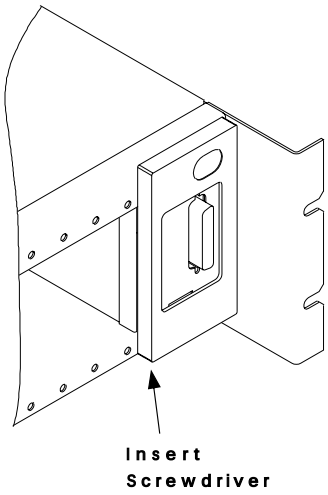


Figure 4-29. Line Connection Enclosure Base (LCEB) and Line Connection Enclosure Expansion (LCEE)



6. Insert a screwdriver under the panel of the LCPE to remove it.
7. Loosen the 4 screws **3** which secure the LCPE **4** into the line connection enclosure expansion (LCEE).
8. Remove the LCPE from the LCEE.
9. Loosen the 4 screws which secure the LCEE **5** .
10. Remove the LCEE.
11. Install the new LCEE using the screw previously removed **5** .
12. Install the LCPE previously removed **4** .
13. Secure it using the 4 screws **3** .
14. Install the cover.
15. Plug the cable to the line connection box base and secure it **2** .
16. Reinstall all the ARC(s) in their previous positions and secure them.
17. Return to the step in the MAP you were performing.

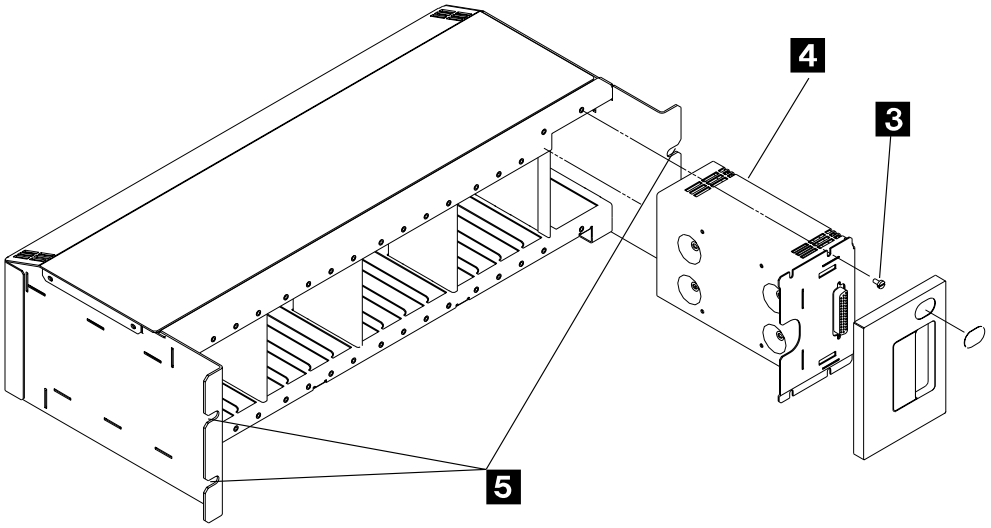


Figure 4-30. LCPE into the LCEE

Exchange a LCEB

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the line connection box.
2. If there is a line connection box expansion:
   - Loosen the screws which secure the cable coming from the line connection box expansion **2**
   - Remove the cable.
3. Loosen the screws which secure the cable coming from the LIC **1** .
4. Remove the cable
5. Loosen the screws which secure all the ARC(s) into the LCEB.
6. Remove the ARC(s) and note their position in the LCEB.

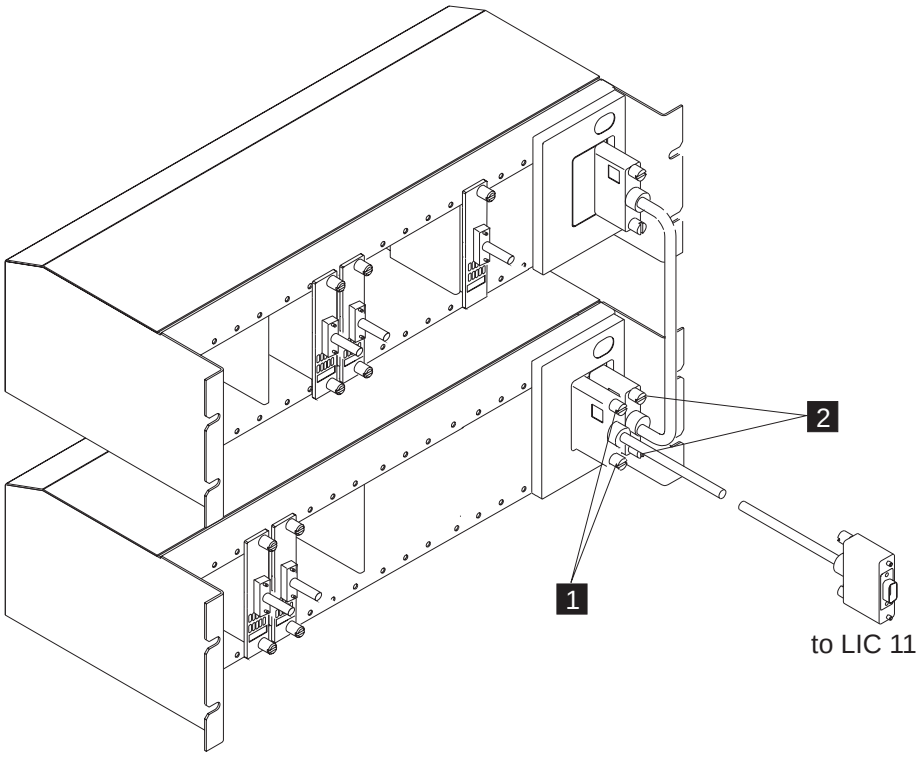
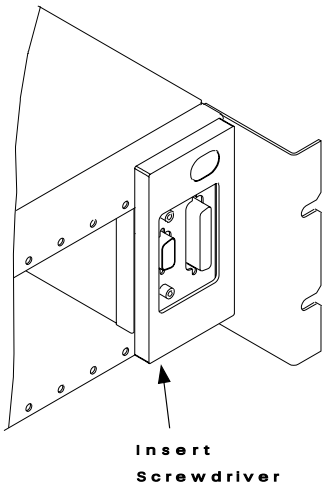


Figure 4-31. Line Connection Enclosure Base (LCEB) and Line Connection Enclosure Expansion (LCEE)



7. Insert a screwdriver under the panel of the LCPB to remove it.
8. Loosen the 4 screws 3 which secure the LCPB 4 into the line connection enclosure base (LCEB).
9. Remove the LCPB from the LCEB.
10. Loosen the 4 screws which secure the LCEB 5 .
11. Remove the LCEB.
12. Install the new LCEB using the screw previously removed 5 .
13. Install the LCPB previously removed 4 .
14. Secure it using the 4 screws 3 .
15. Install the cover.
16. Plug the cable coming from the LIC and secure it 1 .
17. Plug the cable coming from the line connection box expansion and secure it (if present) 2 .
18. Reinstall all the ARC(s) in their previous position and secure them.
19. Return to the step in the MAP you were performing.

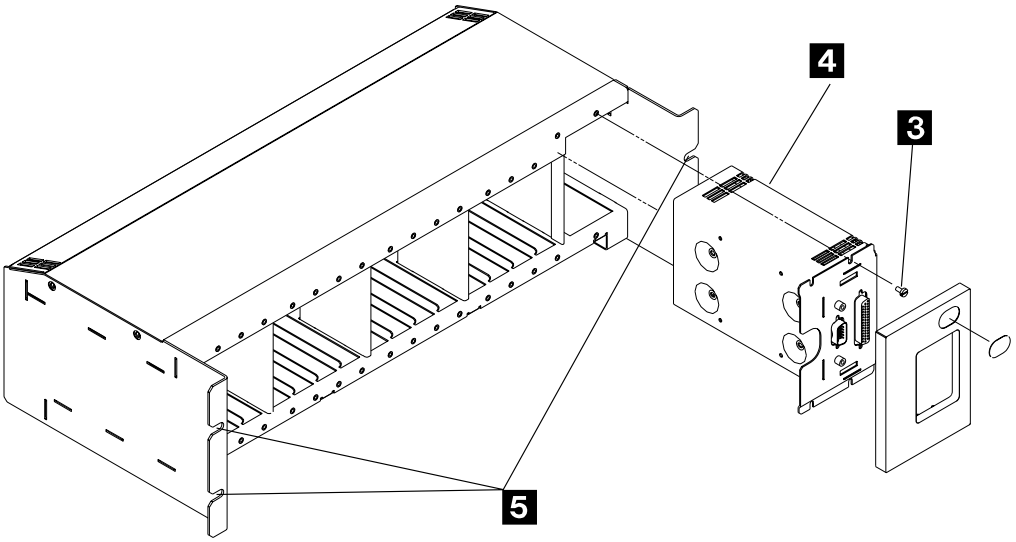


Figure 4-32. LCPB into the LCEB

Exchange a LCPB

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the line connection box.
2. Loosen the screws which secure the cable coming from the LIC **1** .
3. Remove the cable.
4. If there is a line connection box expansion:
   - Loosen the screws **2** which secure the cable coming from the line connection box expansion
   - Remove the cable

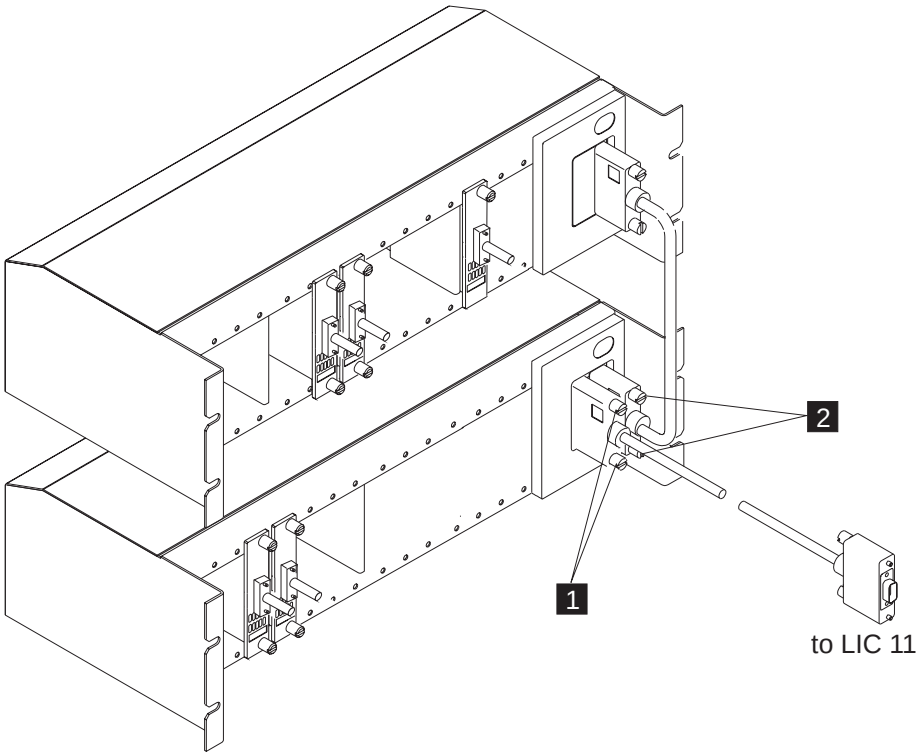
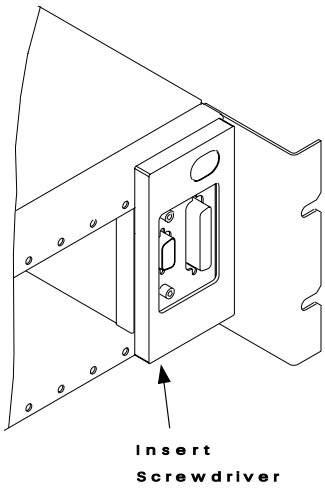


Figure 4-33. Line Connection Enclosure Base (LCEB) and Line Connection Enclosure Expansion (LCEE)



5. Insert a screwdriver under the panel of the LCPB to remove it.
6. Loosen the 4 screws **3** which secure the LCPB **4** into the line connection box base (LCBB).
7. Remove the LCPB from the LCBB.
8. Insert the new LCPB **4** into the LCBB.
9. Secure it using the 4 screws previously removed **3** .
10. Install the new cover provided with the LCPB.
11. Stick the new IBM logo on the new cover.
12. Plug the cable coming from the LIC and secure it **1** .
13. Plug the cable coming from the line connection box expansion (if present) and secure it **2** .
14. Return to the step in the MAP you were performing.

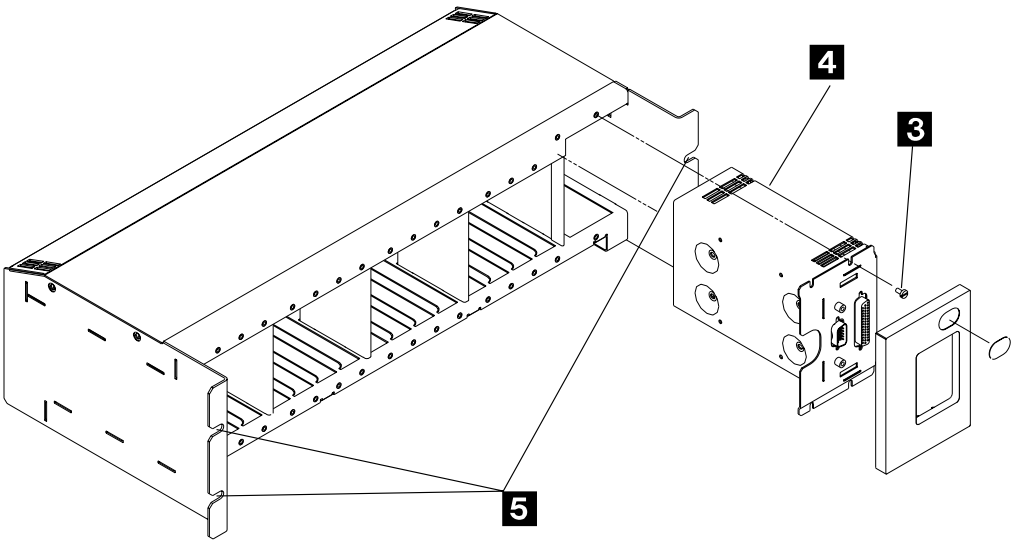


Figure 4-34. LCPB into the LCEB

Exchange a LCPE

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

Note

The LCPE that you received is shipped with a new cable. You **must** exchange them both at the same time.

1. Locate the line connection box.
2. Loosen the screws **2** which secure the cable coming from the LCPE to the LCPB.
3. Remove the cable

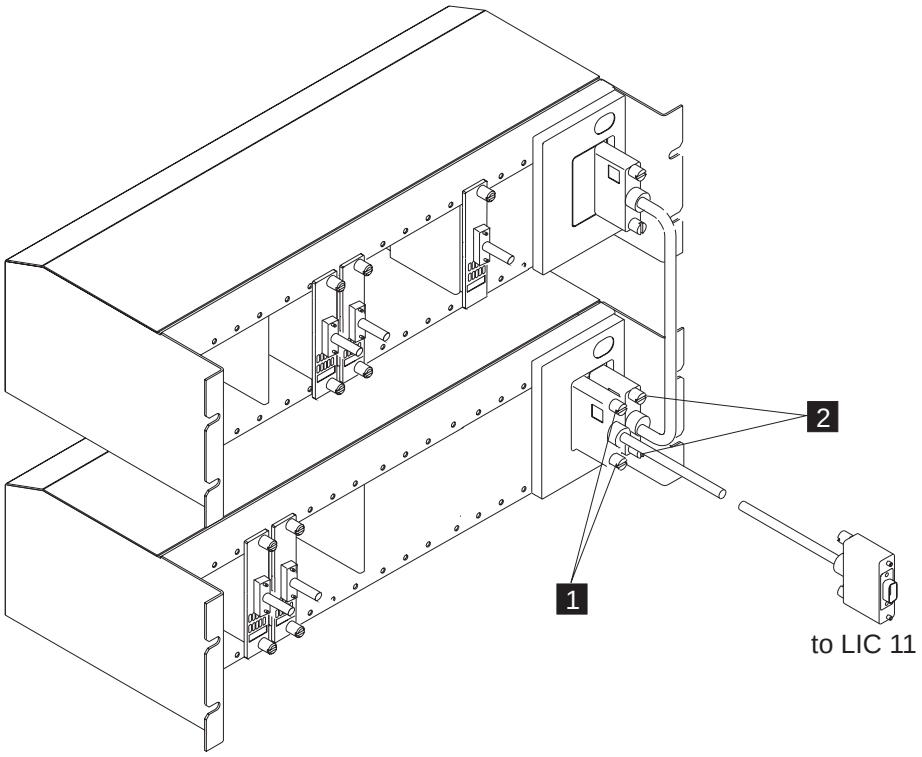
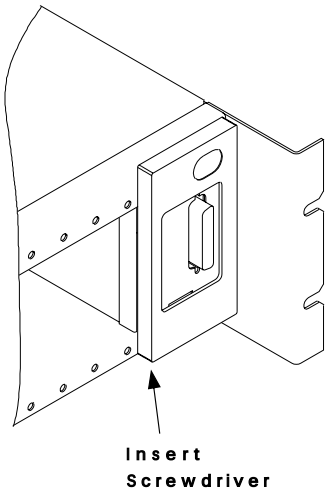


Figure 4-35. Line Connection Enclosure Base (LCEB) and Line Connection Enclosure Expansion (LCEE)



4. Insert a screwdriver under the panel of the LCPE to remove it.
5. Loosen the 4 screws **3** which secure the LCPE **4** into the line connection enclosure expansion (LCEE).
6. Remove the LCPE from the LCEE.
7. Insert the new LCPE **4** into the LCEE.
8. Secure it using the 4 screws previously removed **3** .
9. Install the new cover provided with the LCPE.
10. Stick the new IBM logo on the new cover.
11. Install the new cable provided between the LCPE and LCPB and secure it using the screws **2** .
12. Return to the step in the MAP you were performing.

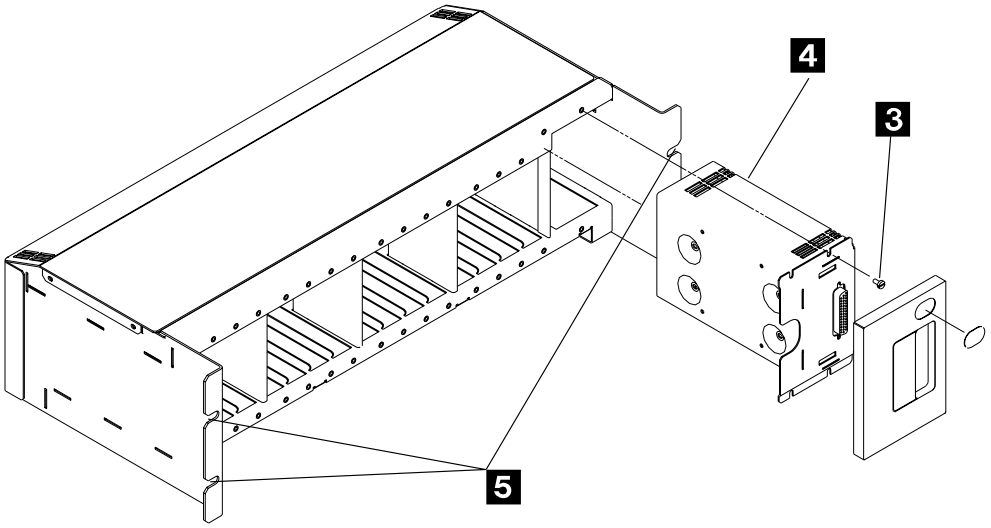


Figure 4-36. LCPE into the LCEE

Exchange a LIC (Type 11, 12, or 16)

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the LIC cassette using Figure 4-10 on page 4-9.
2. **WARNING: Use the ESD kit and procedures.**
3. Loosen the screws which secure the cable.
4. Remove the cable.
5. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
6. Exchange the LIC cassette.
7. Insert the new LIC cassette into the enclosure and slide it firmly in until it clicks (locks in).
8. Replace the removed cable, then tighten the screws.
9. Return to the step in the MAP you were performing.

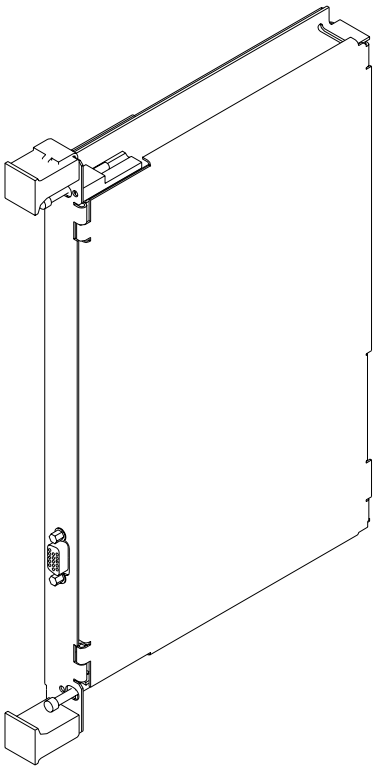


Figure 4-37. 3746-900 LIC11 Coupler

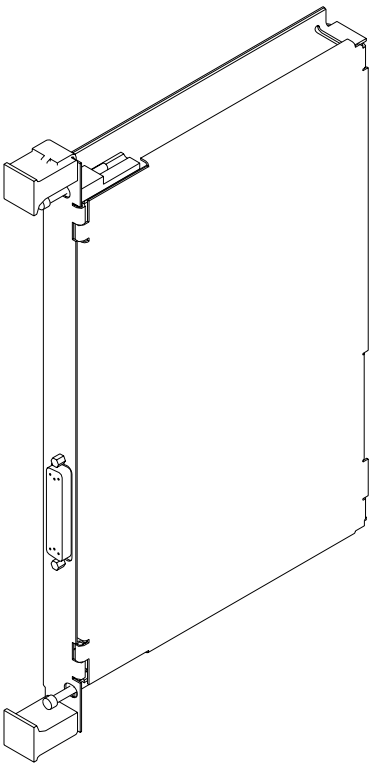


Figure 4-38. 3746-900 LIC12 Coupler

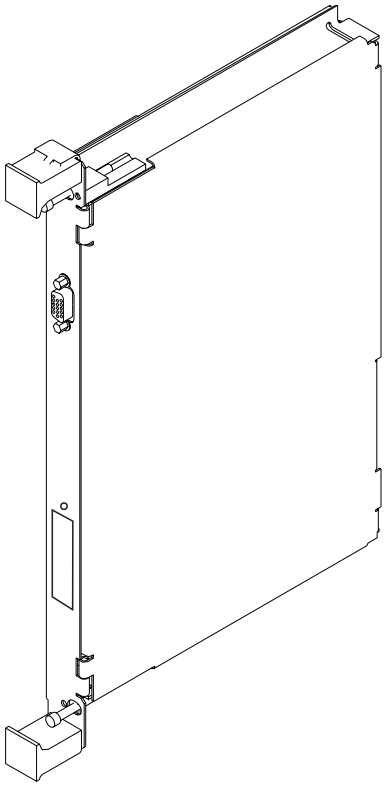


Figure 4-39. 3746-900 LIC16 Coupler

Exchange an SIE

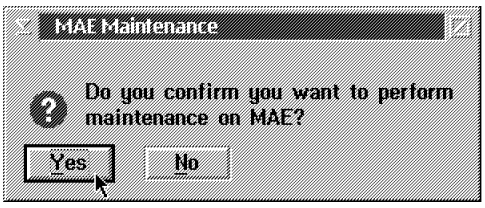
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

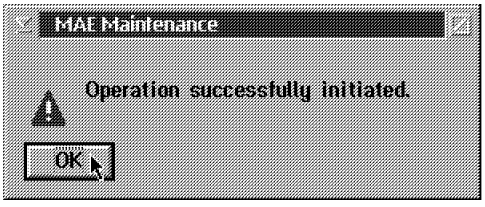
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. You should be logged ON on the service processor console. If not, go to “Console Use for maintenance” on page 1-1 for logging ON and return here.
2. Ask the customer to stop the traffic on "all" the Multiaccess Enclosure.
3. Be sure that all the MAE resources has been deactivated using CCM (refer to “Activate/Deactivate a Resource Via CCM” on page 1-150).
4. On the Service Processor select the "3746/9x0 Menu".
5. Click on the "Multiaccess Enclosure (MAE) Management".
6. Double click on the "Perform Maintenance on MAE".
7. The following window is displayed:



   Click on "Yes".
8. The following window is displayed:



   Click on "OK".
9. You should first received an alarm message saying: "MAE Concurrent Maintenance in Progress".
10. Click on "OK".
11. Wait until the "MAE Link" icon is red.
12. Power OFF the MAE.
13. Locate the SIE cassette using Figure 4-9 on page 4-8. The SIE cassette can be in any processor (PRC) position.
14. **WARNING: Use the ESD kit and procedures.**
15. Loosen the screws which secure the cable.
16. Unplug the cable.
17. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
18. Exchange the FRU suspected.
19. Insert the SIE cassette into the enclosure and slide it firmly in until it clicks (locks in).
20. Plug the cable previously removed.
21. Secure the cable with the screws.
22. Power ON the MAE.
23. Return to the step in the MAP you were performing.

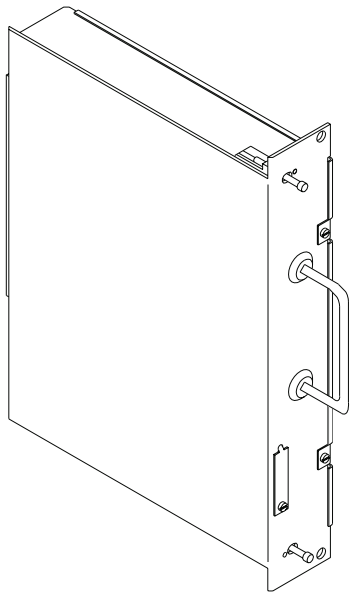


Figure 4-40. 3746-900 SIE Cassette

Exchange an SPD1

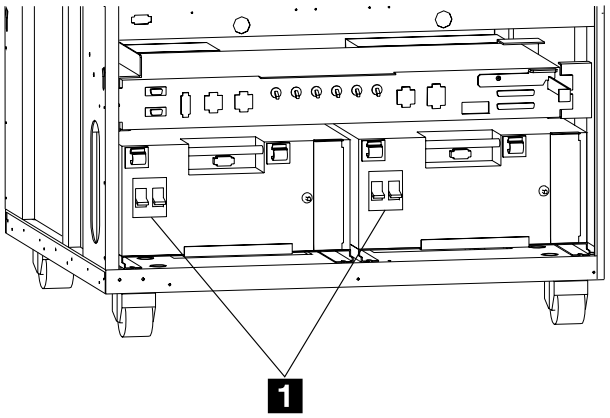
Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise** go to step 4.
2. Press the 'standby' key.
3. When the machine is in standby mode with its **Standby LED ON** go to the next step.
4. Switch OFF the main circuit breaker CB1 **1** of the ACPW and, if installed, of the second ACPW/DCPW.



5. Locate the SPD1 cassette that you have to exchange using Figure 4-10 on page 4-9.
6. Remove the internal cover plate (4 screws) to have access to the SPD1.
7. **WARNING: Use the ESD kit and procedures.**
8. Unplug all the cables from the front of the SPD1 cassette.
9. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
10. Exchange the SPD1 cassette.
11. Insert the new SPD1 cassette in the enclosure and slide it firmly in until it clicks (locks in).
12. Plug in the cables previously removed.
13. Install the cover plate previously removed in step 5.
14. Return to the step in the MAP you were performing.

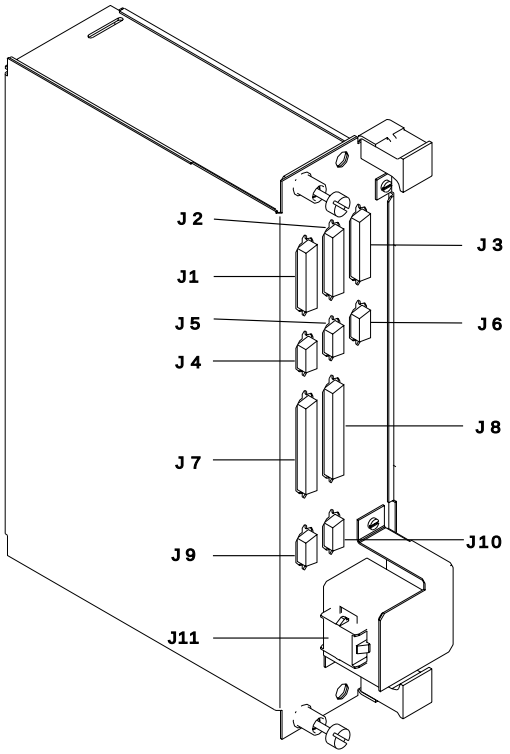


Figure 4-41. 3746-900 SPD1 Cassette

Exchange an SPD2

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the SPD2 cassette that you have to exchange using Figure 4-10 on page 4-9.
2. Remove the internal cover plate (4 screws) to have access to the SPD2.
3. **WARNING: Use the ESD kit and procedures.**
4. Unplug cables (in this order: J1, J2 and J5) from the front of the SPD2 cassette.
5. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
6. Exchange the SPD2 cassette.
7. Insert the new SPD2 cassette in the enclosure and slide it firmly in until it clicks (locks in).
8. Plug in the cables (in this order J5, J2 and J1) previously removed.
9. Install the cover plate previously removed in step 5.
10. Return to the step in the MAP you were performing.

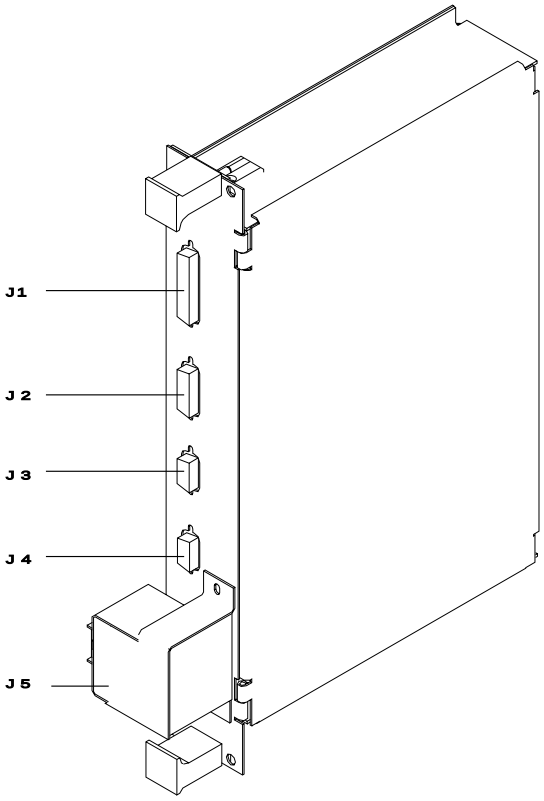


Figure 4-42. 3746-900 SPD2 Cassette

Exchange an SPS

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

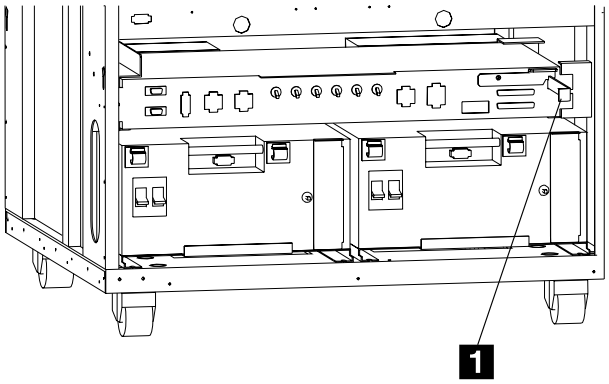
- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Ready LED ON**, go to step 2.
   - **Otherwise**, go to step 3.

   .
2. The **ready LED** is **ON**.
   a. Activate the maintenance switch if not already done.
      - Open the front cover and locate the lever of the maintenance switch on the primary power box. **1**
      - Pull the lever outwards.

        This will prevent the main 48v from dropping and will stop the power monitoring.



   b. Locate the SPS cassette on the basic board using Figure 4-9 on page 4-8.
   c. **WARNING: Use the ESD kit and procedures.**
   d. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
   e. Insert the new SPS into the enclosure and slide it firmly in until it clicks (locks in).
   f. Return to the step in the MAP you were performing.
3. The **Ready LED** is **NOT ON**.
   a. Locate the SPS cassette on the basic board using Figure 4-9 on page 4-8.
   b. **WARNING: Use the ESD kit and procedures.**
   c. Using the labels on the doors for reference, press the two unlocking buttons and pull the cassette out.
   d. Insert the new SPS into the enclosure and slide it firmly in until it clicks (locks in).
   e. Return to the step in the MAP you were performing.

Exchange a TIC3 associated With the CBSP

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. If the machine has its:
   - **Standby LED blinking**, go to step 3.
   - **Standby LED ON**, press the 'Start' key on the 3746-900 control panel and continue according to the **Ready LED** status.
   - **Ready LED ON**, go to step 2.
   - **Ready LED blinking**, go to step 3.

   .
2. The **Ready LED** is **ON**.
   a. From the service processor, return to the "MOSS-E VIEW" window and double click on the service processor icon.
   b. On the "Service Processor Menu" window, click on the "Configuration Management" option. Then double click on the "Manage 3745/3746-900 Installation/Removal" option.
   c. On the "Controller Installation" window, select the machine by clicking on the serial number of the machine for which you are called and click on "repair".
   d. On the "Repair Actions for 3746-900" window, select the "Change 3746-900 CBSA TIC3" option and click on "OK".
   e. The "Controller Repair Message" window is displayed. Perform the following steps before clicking on "OK".
   f. Locate the TIC3 cassette using Figure 4-10 on page 4-9.
   g. **WARNING: Use the ESD kit and procedures.**
   h. Using the labels on the doors for reference, loosen the screws which secure the cable.
   i. Remove the cable.
   j. Press the two unlocking buttons and pull the cassette out.
   k. Exchange the TIC3 cassette.
   l. Insert the new TIC3 into the enclosure and slide it firmly until it clicks (locks in).
   m. Replace the removed cable, then tighten the screws.
   n. Do a service processor link restart from the 3746-900 control panel.
      - Select function 6.
      - Press the 'Validate' key.
      - If you are not able to perform the preceding two steps, the problem is not in the TIC3. Remove the TIC3 that you have installed and reinstall the previous TIC3 (using the previous steps h to i). Then return to the step in the MAP you were performing.
      - If you are able to start the service processor link restart check the control panel code and perform the specified action:

Panel code	Action
05B0B0FD	Return to the "Controller Repair Message" window and click on "OK". Then go to the next bullet.
05B0B0FE	Suspect a microcode problem. Call your support.
05B0B0FF	Suspect a microcode problem. Call your support.
Other Code	Suspect a problem in other part of the machine. Remove the TIC3 that you have installed and reinstall the previous TIC3 (using the previous steps h to m). Return to the "Controller Repair Message" window and click on "Cancel". Then return to the step in the MAP you were performing.

      - On the "Controller Installation" window, click on "Save".
      - A new window prompts you to install the installation diskette in the service processor. When it is done click on "OK".
      - A "Controller Saving Message" is displayed. Remove the diskette and click on "OK".
      - The "Controller Installation" window is again displayed. Click on "Cancel".

- Return to the step in the MAP you were performing.

3. The **Standby LED** or the **Ready LED** is **blinking**
   a. From the service processor, return to the "MOSS-E VIEW" window and double click on the service processor icon.
   b. On the "Service Processor Menu" window, click on the "Configuration Management" option. Then double click on the "Manage 3745/3746-900 Installation/Removal" option.
   c. On the "Controller Installation" window, select the machine by clicking on the serial number of the machine for which you are called and click on "repair".
   d. On the "Repair Actions for 3746-900" window, select the "Change 3746-900 CBSA TIC3" option and click on "OK".
   e. The "Controller Repair Message" window is displayed. Perform the following steps before clicking on "OK".
   f. Locate the TIC3 cassette using Figure 4-10 on page 4-9.
   g. **WARNING: Use the ESD kit and procedures.**
   h. Using the labels on the doors for reference, loosen the screws which secure the cable.
   i. Remove the cable.
   j. Press the two unlocking buttons and pull the cassette out.
   k. Exchange the TIC3 cassette.
   l. Insert the new TIC3 into the enclosure and slide it firmly until it clicks (locks in).
   m. Replace the removed cable, then tighten the screws.
   n. Do a service processor link restart from the 3746-900 control panel.
      - Select function 6.
      - Press the 'Validate' key.
      - If you are not able to perform the preceding two steps, the problem is not in the TIC3. Remove the TIC3 that you have installed and reinstall the previous TIC3 (using the previous steps h to m). Then return to the step in the MAP you were performing.
      - If you are able to start the service processor link restart, a general IML is started. A normal IML must be terminated by 00000000 displayed on the control panel and the ready LED ON after about 3 minutes. If the **standby LED** is **ON**, press the 'start' key to end the IML. In case a problem occurs during IML, a code is displayed on the control panel. This code can be flashing or steady (more than 60 seconds) while the ready LED is blinking. According to the control panel code displayed perform the specified action:

Panel code	Action
00000000	Return to the "Controller Repair Message" window and click on "OK". Then go to the next bullet.
Other code	Suspect a problem in other part of the machine. Remove the TIC3 that you have installed and reinstall the previous TIC3 (using the previous steps h to i). Return to the "Controller Repair Message" window and click on "Cancel". Then return to the step in the MAP you were performing.

      - On the "Controller Installation" window, click on "Save".
      - A new window prompts you to install the installation diskette in the service processor. When it is done click on "OK".
      - A "Controller Saving Message" is displayed. Remove the diskette and click on "OK".
      - The "Controller Installation" window is again displayed, click on "Cancel".
      - Return to the step in the MAP you were performing.

Exchange a TIC3

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

1. Locate the coupler cassette using Figure 4-10 on page 4-9.
2. **WARNING: Use the ESD kit and procedures.**
3. Loosen the screws which secure the cable.
4. Remove the cable.
5. Using the labels on the doors for reference, press the two unlocking buttons and pull out the cassette.
6. Exchange the TIC3 cassette.
7. Insert the new TIC3 cassette into the enclosure and slide it firmly in until it clicks (locks in).
8. Replace the removed cable, then tighten the screws.
9. Return to the step in the MAP you were performing.

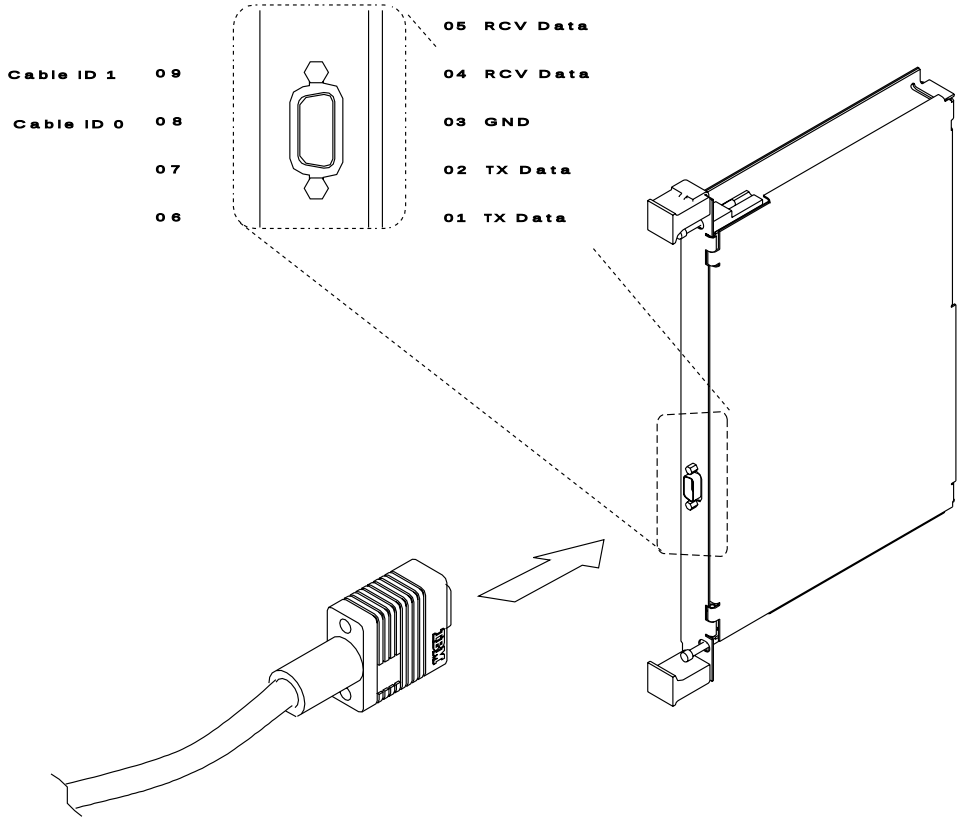


Figure 4-43. 3746-900 TIC3 Coupler

Exchange a Transformer

Important

Check that the 'Power Control' display is set to local (3) on the control panel.
If not, do the following:

- Press the 'Power Control' key until (3) is displayed in the power control window.
- Press the 'Validate' key.

If the state of the machine does not allow you to display or to change the 'Power control' mode, continue with the following procedure.

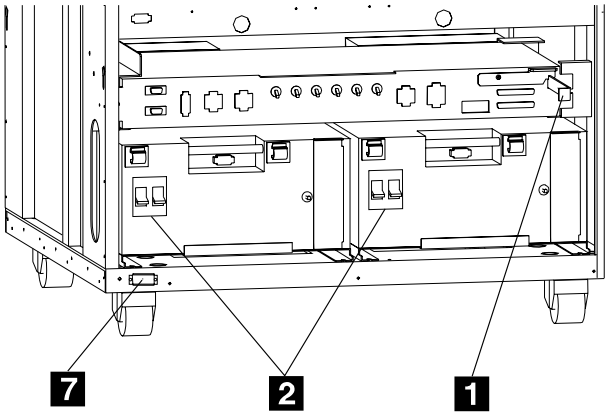
Note

Two persons are necessary to move a transformer.

To exchange a transformer, you must first remove its associated ACPW.

1. Locate the transformer that you have to exchange and its associated ACPW, using Figure 4-9 on page 4-8 and Figure 4-10 on page 4-9.
2. If the machine has its:
   - **Ready LED ON**, go to step 3.
   - **Otherwise**, go to step 7.
3. Check if there is **another** ACPW or DCPW in your 3746-900.
   If yes, go to step 6.
   If not, proceed with the next step.
4. Press the 'Stand-by' key.
5. When the machine is in standby mode with its **Standby LED ON**, go to step 7.
6. Activate the maintenance switch.
   a. Open the front cover and locate the lever of the maintenance switch on the DCDP. **1**
   b. Pull the lever outwards.

      This will prevent the main -48v from dropping and will stop the power monitoring.



7. Switch the main circuit breaker CB1 OFF at the 3746-900 primary power box **associated** with the transformer that you exchange. **2**
8. Unplug the J1 connector from the ACPW.
9. At the rear of the machine loosen the four screws which secure the transformer cover plate.
10. Remove the transformer cover plate.
11. Unplug the power cord from the J2 connector of the ACPW associated with the transformer that you want to remove. **3**
12. Check that on the transformer there is no voltage between TB1 position 1 and TB1 position 2, 3, or 4.
13. On TB1 and TB2, disconnect all wires coming from the ACPW **4** and note their position.
14. **If** you are exchanging the transformer of the basic ACPW, unplug connectors J11 and J12 from the rear of the DCDP.

    For the backup ACPW, unplug connectors J9 and J10 from the rear of the DCDP.
15. Remove the screw holding the ACPW. **5**
16. Disconnect the two ground straps coming from the ACPW. **6**
17. At the front of the machine, remove the two screws holding the power box. Slide the ACPW out.

    Note

    When you remove the basic ACPW, if the backup ACPW is installed, you have to remove the bracket. **7**
18. Unscrew the two screws which secure the transformer to the frame.
19. At the rear of the machine, disconnect the two ground wires from the transformer.

20. Remove the two screws securing the transformer.
21. At the front of the machine, slide the two bars **8** shipped with the new transformer into the brackets of the transformer that you want to remove.
22. Install the other two bars **9** using the U-brackets **10** and secure them with screws and nuts as shown.
23. At the rear of the machine, install the two latches **11** over the brackets of the transformer.
24. Secure the latches with screws and nuts.
25. Slide the transformer out (weight 34 kgs) to the rear of the machine.

To install the new transformer,

1. Perform steps 21 to 24 to install the new transformer on the bars.
2. Slide the transformer into the machine (from the rear to the front).
3. Perform steps 20 to 6 of the procedure in reverse order.
4. Return to the step in the MAP you were performing.

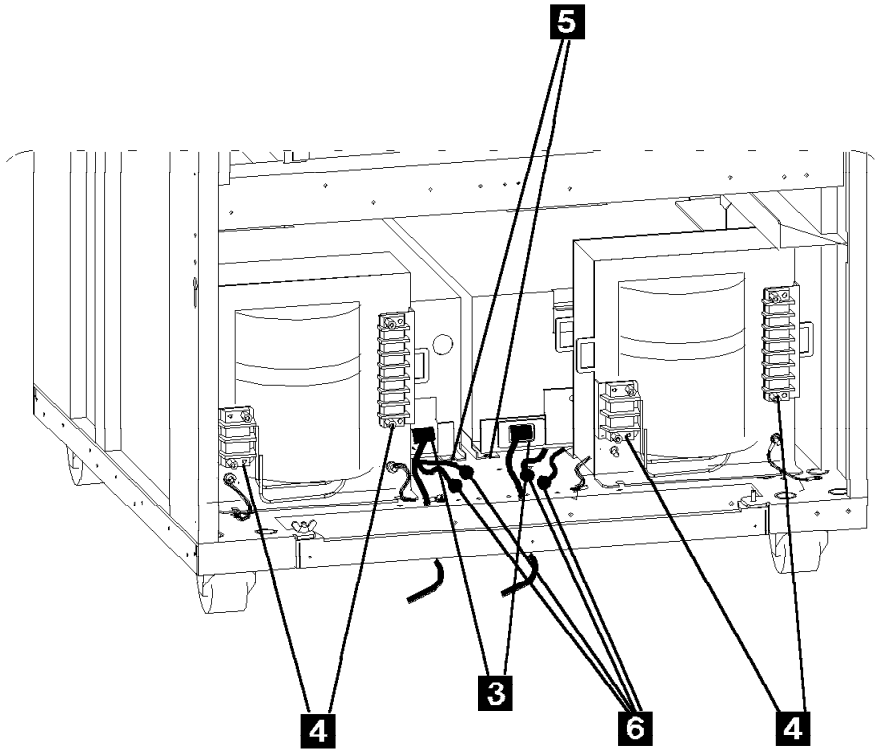


Figure 4-44. 3746-900 Transformers

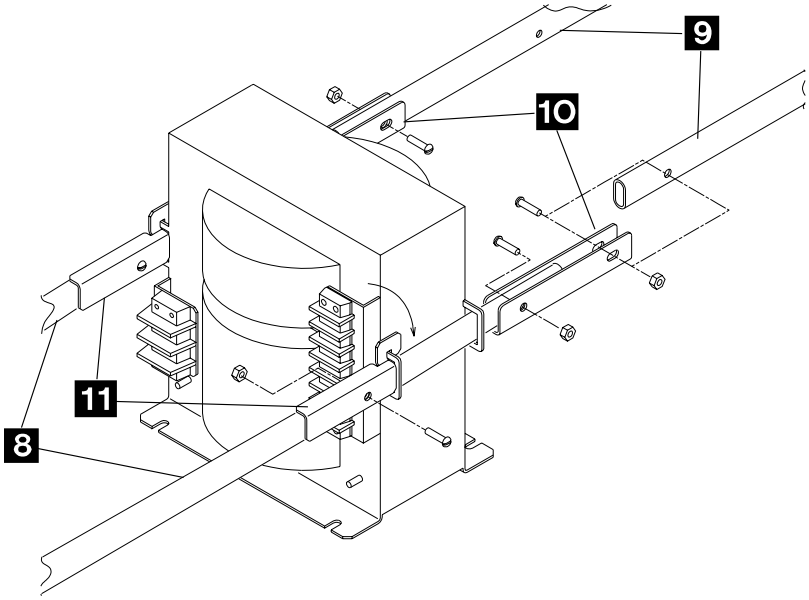


Figure 4-45. 3746-900 Transformer Handling

CE Leaving Procedure

The maintenance package has determined that the 3746-900 is ready to be returned to normal operation.

- On the "MOSS-E VIEW" window, double click on the service processor icon.
- The "Service Processor Menu" window is displayed.
- Click on the "Configuration Management" option.
- Double click on the "Manage Remote Operations" option.
- On the "Remote Operation Management" window, select the "Remote operations authorization" option and click on "OK".
- On the "Remote Support Facility" window, select the two following options:
  - "Enable Remote Support Facility"
  - "Generate alerts"

  and click on "OK".
- Click on "Cancel" to return to "Service Processor Menu", then click on "Function" and "Exit" to return to the "MOSS-E View" window.
- On the "MOSS-E VIEW" window, click on "Program" in the action bar.
- Click on "Log off MOSS-E".

You should use the following list to ensure that the machine is in suitable condition for customer operation and that call information is recorded.

1. Replace any cables removed.
2. Do all actions that apply in the following list:

If You Have	What You Should Do
Put the 3746-900 offline	Put the 3746-900 to online mode.
Been working on the 3746-900 in concurrent maintenance mode on processors, couplers	Use CDF-E display function to check that the replaced/tested FRUs are available or active.
Been working on the attached 3745	Refer to the appropriate 3745 MIP. Use the following MIP according to the 3745 model on which the 3746-900 is attached. • *IBM 3745 Communication Controller Models 130 to 17A, Maintenance Information Procedures*, SY33-2070 for 3745 model 17A • *IBM 3745 Communication Controller Models 210 to 61A, Maintenance Information Procedures*, SY33-2054 for 3745 model 21A to 61A.

7. Ensure that all latches holding the internal covers are in the vertical position. This is to prevent the ESD door rubbers from being damaged, and to ensure a proper contact with the machine frame.
8. Replace all covers.
9. Leave the machine in a **safe** condition.
10. Record the actions taken and the FRUs replaced during the call. If the origin of the intervention was an alarm A5 or AA, report as preventive maintenance (Service Code 08).
11. Update the PMH record for this call.
12. Return parts to the stock room.

Appendix A. Maintenance Aids

Special Tools

Maintaining the 3746-900 requires using tools in addition to those in the IBM service representative's tool kit. The tools needed include:

General Purpose Tools

Tool	Qty	Part Nbr.
PT2-220 V	1	1749268
or		
PT2-110 V	1	1749269
PT3-220 V	1	6406001
or		
PT3-110 V	1	6406000
PT3-TPAM Acc. kit	1	83X9300
TPLM	1	1749290
Display	1	1749270
Digital voltmeter	1	8309874
	or	8496278
EIA breakout panel	1	453637
Oscilloscope	1	
either		
Tektronix 454**	459559	
Tektronix 475**	453215	
Tektronix 2235**	6428880	
Tektronix 2465 A**	8309847	
High voltage probes	2	453698

ESD kit

Part Name	Part Nbr.
ESD kit	6428316
This kit contains:	
ESD mat	6428274
Wristband (small size)	6428167
(large size)	6428169
ESD ground cord	6428166

Shipping Group Tools

3746-900 Shipping Group Tools

The following tools are shipped with the 3746-900:

Tool	Qty	Part Nbr.
ESCON Wrap Plug	1	5605670
TIC-3 Wrap Plug	1	6165899
Filler (dummy card)	1	2733278
LIC11 Wrap Plug	1	58G9425
LIC12 Wrap Plug for X.21	1	58X9354
LIC12 Wrap Plug for V.35	1	58X9349
Wrap plugs for testing ARCs and cables (These wrap plugs must be installed on ARC cables)		
ARC V.35 DTE Wrap Plug	1	61F4527
ARC V.35 DCE Wrap Plug	1	61F4526
ARC V.24 DTE Wrap Plug	1	61F4523
ARC V.24 DCE Wrap Plug	1	61F4522
ARC V.24 DCE/DTE 3745 Wrap Plug	1	61F4525
ARC V.35 DCE 3745 Wrap Plug	1	61F4528
ARC V.35 DTE 3745 Wrap Plug	1	61F4578
ARC X.21 DTE Wrap Plug	1	61F4530
ARC X.21 DCE Wrap Plug	1	61F4529
ARC X.21 DCE/DTE 3745 Wrap Plug	1	65X8927
ARC Wrap plug for ARC assembly B (These wrap plugs must be installed at the rear of the ARCs)		
ARC V.24 Wrap Plug	1	58G5660
ARC V.35 Non 3745 Wrap Plug	1	58G5661
ARC V.35 DTE 3745 Wrap Plug	1	58G5658
ARC V.35 DCE 3745 Wrap Plug	1	58G5659
ARC X.21 Wrap Plug	1	58G5662
Parts for connection to 3745		
DICO cards	2	17G6080
Active bypass cards ABP1	2	58G2308
Active bypass cards ABP2	2	58G2309
Passive bypass cards BPC1	18	03F4372
Cables	2	76F9338
Cables	2	76F9339
Intermix brackets	18	1953110
Extenders	18	1953093
Dummy cards	4	398482
Holders	4	1953172

Controller Expansion Group Tools:

The following tool is shipped with the IBM controller rack containing the service processor and/or the network node processor

Tool	Qty	Part Nbr.
Spare fuse	2	58G5782

Service Processor Group Tools:

The following tool is shipped with the service processor which has an integrated modem installed:

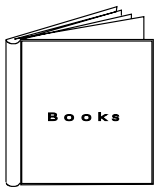
Tool	Qty	Part Nbr.
Integrated modem Wrap Plug	1	74F4508

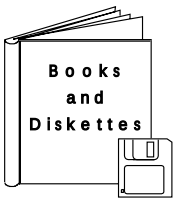
Appendix B. 3746-900 Bibliography

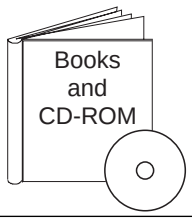
Customer Documentation for the 3745 (All Models), and 3746 (Model 900)

Table B-1 (Page 1 of 5). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

This customer documentation has the following formats:





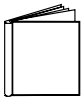


Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Evaluating and Configuring



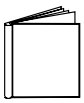
GA33-0092

IBM 3745 Communication Controller
Models 210, 310, 410, and 610

Introduction

Gives an introduction of the IBM Models 210 to 610 capabilities.

For Models A, refer to the *Overview*, GA33-0180.

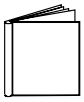


GA33-0180

IBM 3745 Communication Controller Models A and 170[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Overview

Gives an overview of connectivity capabilities within SNA, APPN, and IP networking.



GA27-4234

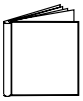
IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Overview, Installation, and Integration

Provides information for:

- Overall 3746 planning
- Installation and upgrade scenarios
- Controller and service processor network integration
- Related MOSS-E and CCM worksheets for these tasks.

Table B-1 (Page 2 of 5). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900



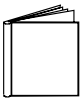
GA27-4235

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Serial Line Adapters

Provides information for:

- Serial line adapter descriptions
- Serial line adapter line weights and connectivity
- Types of SDLC support
- Configuring X.25 lines
- Performance tuning for frame-relay, PPP, X.25, and NCP lines.
- ISDN adapter description and configuration.



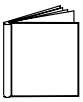
GA27-4236

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Token Ring and Ethernet

Provides information for:

- Token-ring adapter description and configuration
- Ethernet adapter desription and configuration.



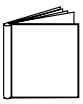
GA27-4237

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
ESCON Channels

Provides information for:

- ESCON adapter descriptions
- ESCON configuration and tuning information
- ESCON configuration examples.



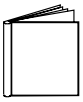
GA27-4238

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Physical Planning

Provides information for:

- 3746 and MAE physical planning details
- 3746 and MAE cable information
- Explanation of installation sheets
- 3746 plugging sheets.



GA27-4239

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Management Planning

Provides information for:

- Overview for 3746
- 3746 APPN/HPR, IP router, and X.25
- NetView Performance Monitor (NPM), remote consoles, and RSF
- MAE APPN/HPR management.

Table B-1 (Page 3 of 5). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

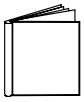
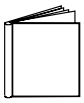
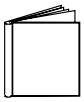
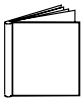
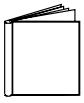
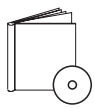
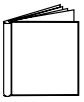
	GA27-4240	***IBM 3745 Communication Controller Models A[2]*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Multiaccess Enclosure Planning*** Provides information for: • MAE adapters details • MAE ESCON planning and configuration • ATM and ISDN support.
	GA27-4241	***IBM 3745 Communication Controller Models A[2]*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Protocols Description*** Provides information for: • Overview and details about APPN/HPR and IP.
	On-line information	***IBM 3745 Communication Controller Models A[2]*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Controller Configuration and Management Worksheets*** Provides planning worksheets for ESCON, Multiaccess Enclosure, serial line, and token-ring definitions.
Preparing Your Site		
	GC22-7064	***IBM System/360™, System/370™, 4300 Processor*** ***Input/Output Equipment Installation Manual-Physical Planning*** (Including Technical News Letter GN22-5490) Provides information for physical installation for the 3745 Models 130 to 610. For 3745 Models A and 3746 Model 900, refer to the *Planning Guide*, GA33-0457.
	GA33-0127	***IBM 3745 Communication Controller*** ***Models 210, 310, 410, and 610*** ***Preparing for Connection*** Helps for preparing the 3745 Models 210 to 610 cable installation. For 3745 Models A refer to the *Connection and Integration Guide*, SA33-0129.
Preparing for Operation		
	GA33-0400	***IBM 3745 Communication Controller All Models[3]*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Safety Information[1]*** Provides general safety guidelines.
	SA33-0129	***IBM 3745 Communication Controller All Models[3]*** ***IBM 3746 Nways Multiprotocol Controller Model 900*** ***Connection and Integration Guide[1]*** Contains information for connecting hardware and integrating network of the 3745 and 3746-900 after installation.

Table B-1 (Page 4 of 5). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

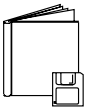


SA33-0416

Line Interface Coupler Type 5 and Type 6
Portable Keypad Display

Migration and Integration Guide

Contains information for moving and testing LIC types 5 and 6.



SA33-0158

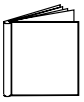
IBM 3745 Communication Controller All Models[3]
IBM 3746 Nways Multiprotocol Controller Model 900

Console Setup Guide[1]

Provides information for:

- Installing local, alternate, or remote consoles for 3745 Models 130 to 610
- Configuring user workstations to remotely control the service processor for 3745 Models A and 3746 Model 900 using:
  - DCAF program
  - Telnet Client program
  - Java Console support.

Customizing Your Control Program



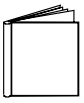
SA33-0178

Guide to Timed IPL and Rename Load Module

Provides VTAM procedures for:

- Scheduling an automatic reload of the 3745
- Getting 3745 load module changes transparent to the operations staff.

Operating and Testing

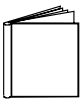


SA33-0098

IBM 3745 Communication Controller
All Models[4]

Basic Operations Guide[1]

Provides instructions for daily routine operations on the 3745 Models 130 to 610.

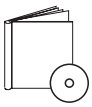


SA33-0177

IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller Model 900

Basic Operations Guide[1]

Provides instructions for daily routine operations on the 3745 Models 17A to 61A, and 3746 Model 900 operating as an SNA node (using NCP), APPN/HPR Network Node, and IP Router.



SA33-0097

IBM 3745 Communication Controller
All Models[3]

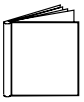
Advanced Operations Guide[1]

Provides instructions for advanced operations and testing, using the 3745 MOSS console.

On-line Information

Controller Configuration and Management Application

Provides a graphical user interface for configuring and managing a 3746 APPN/HPR Network Node and IP Router, and its resources.
It is also available as a stand-alone application, using an OS/2 workstation.
Defines and explains all the 3746 Network Node and IP Router configuration parameters through its online help.



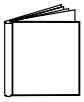
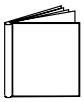
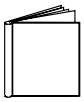
SH11-3081

IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Controller Configuration and Management: User's Guide[5]

Explains how to use CCM and gives examples of the configuration process.

Table B-1 (Page 5 of 5). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

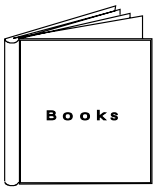
	GA33-0479	***IBM 3745 Communication Controller Models A*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***NetView Console*** ***APPN Command Reference Guide*** Explains how to use the RUN COMMAND from the NetView S/390 Program and gives examples.
Managing Problems		
	SA33-0096	***IBM 3745 Communication Controller*** ***All Models***[3] ***Problem Determination Guide***[1] A guide to perform problem determination on the 3745 Models 130 to 61A.
	On-line Information	***Problem Analysis Guide*** An online guide to analyze alarms, events, and control panel codes on: • IBM 3745 Communication Controller Models A[2] • IBM 3746 Nways Multiprotocol Controller Models 900 and 950.
	SA33-0175	***IBM 3745 Communication Controller Models A***[2] ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Alert Reference Guide*** Provides information about events or errors reported by alerts for: • IBM 3745 Communication Controller Models A[2] • IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

[1] Documentation shipped with the 3745.
[2] 3745 Models 17A to 61A.
[3] 3745 Models 130 to 61A.
[4] Except 3745 Models A.
[5] Documentation shipped with the 3746-900.

Additional Customer Documentation for the 3745 Models 130, 150, 160, 170, and 17A

Table B-2. Additional Customer Documentation for the 3745 Models 130 to 17A

This customer documentation has the following format:

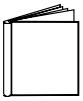


Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Evaluating and Configuring



GA33-0138

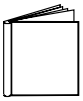
IBM 3745 Communication Controller Models 130, 150, 160, and 170

Introduction

Gives an introduction about the IBM Models 130 to 170 capabilities, including Model 160.

For Model 17A refer to the *Overview*, GA33-0180.

Preparing Your Site



GA33-0140

IBM 3745 Communication Controller Models 130, 150, 160, and 170

Preparing for Connection

Helps for preparing the 3745 Models 130 to 170 cable installation.

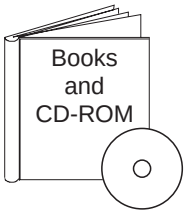
For 3745 Model 17A refer to the *Connection and Integration Guide*, SA33-0129.

[1] Documentation shipped with the 3745.

Service Documentation for the IBM 3745 (Models 210, 21A, 310, 31A, 410, 41A, 610, and 61A) and 3746 (Model 900)

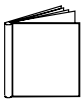
Table B-3 (Page 1 of 3). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

This service documentation has the following formats:



3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the Machine.

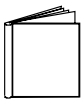


SY33-2057

IBM 3745 Communication Controller
Models 210 to 61A

Installation Guide[1]

Provides instructions for installing or relocating the IBM 3745 Models X10 and X1A.

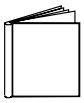


SY33-2114

IBM 3746 Nways Multiprotocol Controller
Model 900

Installation Guide[2]

Provides instructions for installing or relocating a 3746-900.

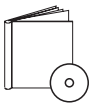


SY33-2116

IBM 3746 Nways Multiprotocol Controller
Model 900

Service Guide[2]

Provides procedures for isolating and fixing the IBM 3746-900 problems.



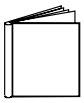
SY33-2055

IBM 3745 Communication Controller
Models 210, 310, 410, and 610

IBM 3746 Expansion Units
Models A11, A12, L13, L14, and L15

Service Functions[1]

Describes MOSS functions using the IBM 3745 Models X10 and X1A consoles.

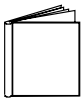


SY33-2054

IBM 3745 Communication Controller
Models 210 to 61A

Maintenance Information Procedures[1]

Provides procedures for isolating and fixing the IBM 3745 Models X10 and X1A problems.



SY33-2115

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on the 7585, 3172, 9585, or 9577)

Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, 9585, or 9577.
Can be for systems with microcode that has up to and including EC D46130 (any level) installed.

Table B-3 (Page 2 of 3). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

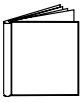
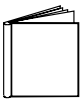
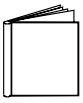
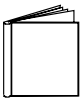
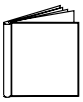
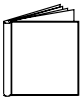
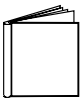
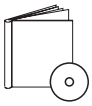
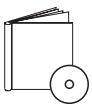
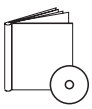
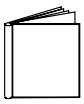
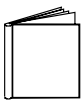
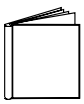
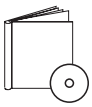
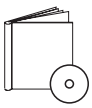
 SY33-2120	***IBM 3745 Communication Controller Models A***[3] ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Service Processor Installation and Maintenance***[4] ***(Based on the 7585, 3172, or 9585)*** Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, or 9585. Can be for systems with microcode EC F12380 or higher installed.
 SY33-2125	***IBM 3745 Communication Controller Models A***[3] ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Service Processor Installation and Maintenance***[4] ***(Based on the 6275)*** Provides information on installing and maintaining the service processor based on PS/2 Type 6275. Can be for systems with microcode EC F12380 or higher installed.
 SY33-2127	***IBM 3745 Communication Controller Models A***[3] ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Service Processor and Network Node Processor***[4] ***Service User's Guide*** Provides information on installing and maintaining the operational code on service processor, or network node processor. Can be for systems with microcode EC F12380 or higher installed.
 SY33-2118	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Multiaccess Enclosure Installation and Maintenance***[4] Provides information on installing and maintaining the Multiaccess Enclosure (MAE).
 SY33-2124	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Multiaccess Enclosure Installation and Maintenance***[4] (Starting from EC F12430 and Above) Provides information on installing and maintaining the Multiaccess Enclosure (MAE). For systems with microcode EC F12430 or higher installed.
 SY33-2112	***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Network Node Processor Installation and Maintenance***[4] ***(Based on the 7585 or 3172)*** Provides information on installing and maintaining the network node processor based on the PS/2 Type 7585 or 3172.
 SY33-2126	***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Network Node Processor Installation and Maintenance***[4] ***(Based on 6275)*** Provides information on installing and maintaining the network node processor based on the PS/2 Type 6275.

Table B-3 (Page 3 of 3). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

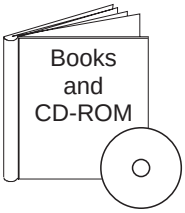
	SY33-2056	***IBM 3745 Communication Controller Models 210 to 61A*** ***Maintenance Information Reference***[1] Provides in-depth hardware reference information on the IBM 3745 Models X10 and X1A.
	SY33-2075	***IBM 3745 Communication Controller All Models***[5] ***External Cable References***[1] Provides references to console and line cables used for connecting the IBM 3745 Models 130 to 61A.
	SY33-2117	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***External Cable Reference***[6] Provides references to console and line cables used for connecting the IBM 3746 Models 900 and 950.
	S135-2015	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Parts Catalog***[6] Provides reference information for ordering parts for the IBM 3746 Models 900 and 950.
	S135-2010	***IBM 3745 Communication Controller Models 210 to 61A*** ***Parts Catalog***[1] Provides reference information for ordering IBM 3745 Models X10 and X1A parts.
	S135-2014	***IBM Controller Expansion*** ***Parts Catalog*** Provides reference information for ordering parts for the controller expansion attached to the IBM 3745 Models A[3], and 3746 Models 900 and 950.
CD-ROM Bibliography		
	ZK2T-8214	***IBM Networking Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. EMEA version.
	ZK2T-8187	***IBM Networking Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. US version.

[1] Documentation shipped with the 3745.
[2] Documentation shipped with the 3746-900.
[3] 3745 Models 17A to 61A.
[4] Documentation shipped with the processor.
[5] 3745 Models 130 to 61A.
[6] Documentation shipped with the 3746 Models 900 and 950.

Additional Service Documentation for the IBM 3745 Models 130, 150, 160, 170, and 17A

Table B-4. Additional Service Documentation for the 3745 Models 1x0 and 17A

This service documentation has the following formats:



SY33-2067	***IBM 3745 Communication Controller Models 130, 150, 160, 170, and 17A*** ***Installation Guide***[1] Provides instructions for installing or relocating the IBM 3745 Models 1X0 and 17A.
SY33-2069	***IBM 3745 Communication Controller Models 130, 150, 160, and 170*** ***Service Functions***[1] Describes MOSS functions using the IBM 3745 Models 1x0 and 17A consoles.
SY33-2070	***IBM 3745 Communication Controller Models 130 to 17A*** ***Maintenance Information Procedures***[1] Provides procedures for isolating and fixing the IBM 3745 Models 1X0 and 17A problems.
S135-2012	***IBM 3745 Communication Controller Models 130 to 17A*** ***Parts Catalog***[1] Provides reference information for ordering IBM 3745 Models 1X0 and 17A parts.
SY33-2066	***IBM 3745 Communication Controller Models 130, 150, 160, and 170*** ***Hardware Maintenance Reference***[1] Provides in-depth hardware reference information on the IBM 3745 Models 1X0 and 17A.

[1] Documentation shipped with the 3745.

Related Signal Converter Products Information

The following publications relate to IBM signal converter products and are currently available:

- *7861 Description and Planning Guide*, GA33-0122.
- *7861 Setup, User's Guide, and Problem Determination*, SA33-0123.
- *7861 Maintenance Information and Parts Catalog*, SY33-2062.
- *7868 Guide to Operation*, GA33-0134.
- *5822-10 Guide to Operation*, GA33-0118.
- *5822-18 Guide to Operation*, GA33-0136.
- *Link Problem Determination Aid*, SY33-2064.
- *Power Supply and Telecommunication Connections*, GA33-0054.
- *7855 Guide to Operation*, GA33-0160.
- *IBM 7857 Modem, Guide to Operation*, GA13-1839.
- *IBM 7858 Professional Modem Guide to Operation*, GA13-1981.
- *IBM Asynchronous/SDLC V.32 Modem/A: Installation, Operation, and Problem Determination Guide*, SA27-3955.

World Wide Web

You can access the latest news and information about IBM network products, customer service and support via the internet, at the Universal Resource Locator (URL):

http://www.networking.ibm.com

Related NCP Service Information

NCP and EP Reference Summary and Data Areas (LY30-3196 for V4R3.1 only)

NCP and EP Reference Summary and Data Areas (LY30-5603 for V5 only)

These manuals are for system programmers and IBM program service representatives. They provide quick access to often-used diagnostic and debugging information about NCP and EP in PEP environment.

NCP, SSP, and EP Diagnosis Guide (LY30-5591)

This manual is designed to help customers and IBM program service representative isolate and define problem in NCP Version 3, NCP Version 4, NCP V4 Subset, NCP Version 5, and EP in the PEP environment using SSP Version 3. The primary purpose of the manual is to help the user interact with the IBM Support Center to resolve a problem. Procedures in these manuals describe how to:

- Determine whether the problem is in NCP
- Use relevant information to describe the problem
- Gather appropriate documentation about the problem
- Report the problem to the IBM Support Center

In addition, it includes detailed descriptions of how to use the programming tools available with NCP and SSP.

NCP and EP Reference (LY30-5569 for V4R3.1 only)

NCP and EP Reference (LY30-5605 for V5 only)

These manuals contain reference material describing the internal organization and function of the NCP and the EP in PEP environment. These manuals provide information for customization and diagnosis.

Glossary

ac. alternating current

ACPW. AC power (box)

AFD. airflow detector

alarm. A message sent to the MOSS console. In case of an error a reference code identifies the nature of the error.

alert. A message sent to the host console. In case of an error a reference code identifies the nature of the error.

AMD. air moving device

APPN. advanced peer-to-peer networking

ARC. active remote connector

ARC1A1. ARC V.24 DCE attachment with 5 meter tethered cable

ARC1A2. ARC V.24 DCE attachment with 15 meter tethered cable

ARC1B. ARC V.24 DTE attachment with 15 meter tethered cable

ARC1C. ARC V.24 DCE 3745 interface with 5 meter tethered cable

ARC1D. ARC V.24 DTE 3745 interface with 5 meter tethered cable

ARC1E. ARC V.24 3174 AEA interface (1)

ARC1F. ARC V.24 3174 PCA EIA interface (1)

ARC2A. ARC V.25 autocall interface with 5 meter tethered cable

ARC2C. ARC V.25 autocall interface 3745 with 5 meter tethered cable

ARC3A1. ARC V.35 DCE attachment with 5 meter tethered cable

ARC3A2. ARC V.35 DCE attachment with 15 meter tethered cable

ARC3B. ARC V.35 DTE attachment with 15 meter tethered cable

ARC3C. ARC V.35 DCE 3745 interface with 5 meter tethered cable

ARC3D. ARC V.35 DTE 3745 interface with 5 meter tethered cable

ARC4A1. ARC X.21 DCE attachment with 5 meter tethered cable

ARC4A2. ARC X.21 DCE attachment with 15 meter tethered cable

ARC4B. ARC X.21 DTE attachment with 15 meter tethered cable

ARC4C. ARC V.21 DCE 3745 interface with 5 meter tethered cable

ARC4D. ARC V.21 DTE 3745 interface with 5 meter tethered cable

ARC5A. Reserved

ARC5B. Reserved

ARC5C. ARC RS-422 3708 interface (or RJ-11 connection) (1)

ARC5D. ARC RS-422 IBM Cabling System interface (1)

ARC6A. ARC V.25 autocall interface with 15 meter tethered cable

ARC6C. ARC V.25 autocall 3745 interface with 15 meter tethered cable

BA. basic access

BAS. basic board

BATS. basic assurance tests

BER. box event record

BLPU. basic level packaging unit

BMI. bit multiplex interface

box event record (BER). Information about an event detected by the controller. It is recorded on the disk/diskette and can be displayed on the operator console for event analysis.

bps. bits per second

BSC. binary synchronous communication

BSI. bus synchronism interface

C. Celsius

C&SM. customer and service information

CA. channel adapter

cache. A high-speed buffer storage that contains frequently accessed instructions and data; it is used to reduce access time.

CB. circuit breaker

CBA. controller bus adapter

CBC. controller bus coupler

CBR. circuit burst request

CBSA. controller bus and service adapter (CBSP+CBC+TIC3)

CBSP. controller bus and service processor

CBTRA. controller bus and token-ring adapter (TRP+CBC+TIC3)

CBTRM. cable terminator (IOC and DMA buses)

CCITT. Comite Consultatif International Telephonique et telegraphique

CCU. central control unit

CDF. configuration data file (3745)

CDF-E. configuration data file extended (37CS)

CE. customer engineer

CEPT. Comite Europeen des Postes et Telecommunications

CLA. communication line adapter (CLP+LICnn)

CLDP. controller load/dump program

clear channel. Mode of data transmission where the data passes through the DCE and network, and arrives at the receiving communication controller (for example, the IBM 3745) unchanged from the data transmitted. The DCE or network can modify the data during transmission because of certain network restrictions, but must ensure the received data stream is the same as the transmitted data stream.

CLP. communication line processor

CMIP. common management interface protocol

CNM. communication network management

CP. 1.communication processor 2.control program 3.circuit protector 4.control point

CPLR. coupler

CPN. customer problem number

CPx. FRU name of circuit protector

CRC. cyclic redundancy check character

CS. connectivity switch

CSA. common subassembly

CSB. connectivity switch bus

CSC. connectivity switch cable

CSCE. connectivity switch cable extension

CSM. centralized support module

CSP. central service point

CSS. control subsystem (3745)

CTDA. configuration target device (processor) address

dc. direct current

DCAF. Distributed Console Access Facility (licensed program)

DCCS. DC to connectivity subsystem

DCE. data circuit-terminating equipment

DCDP. DC distribution and protection (box)

DCM. diagnostic control monitor

DCPW. DC power box

DICO. DMA IOC connection card

DM. distribution manager

DMA. direct memory access

DS. data storage

DSB. data storage bus

DSI. data storage interface

DSM. data storage manager

DSS. data storage interface for SBA

DSU. data service unit (DCE-like for high-speed communication lines)

DTE. data terminal equipment

EC. engineering change

EE. extended edition

EIA. Electronic Industries Association

EPO. emergency power-off

EPROM. eraseable PROM

ESCA. ESCON adapter

ESCC. ESCON coupler

ESCON*. Enterprise Systems Connection

ESCP. ESCON processor

ESD. electrostatic discharge

EXP. expansion enclosure

EXP1. first expansion enclosure

EXP2. second expansion enclosure

FCS. frame check sequence

FRU. field-replaceable unit

HCS. Hardware Central Service

HDLC. high-level data link control

hex. hexadecimal

host processor. (1) A processor that controls all or part of a user application network. (2) In a network, the processing unit in which the access method for the network resides. (3) In an SNA network, the processing unit that contains a system services control point (SSCP). (4) A processing unit that executes the access method for attached communication controllers. Also called *host.*

HPPB. high-performance parallel bus

HSC. hardware support center

HSF. hardware service facility

Hz. Hertz

IBM service representative. An individual in IBM who performs maintenance services for IBM products or systems.

IEEE. Institute of Electrical and Electronics Engineers

IML. initial microcode load

initial microcode load (IML). The process of loading the microcode into a scanner or into MOSS.

initial program load (IPL). The initialization procedure that causes the 3745 control program to commence operation.

IO. input/output

IOC. input/output control

IOCB. input/output control bus

IPL. initial program load

IRAM. instruction random access memory

ISO. International Organization for Standardization

kbps. kilobits per second

LA. line adapter

LAN. local area network

LCB. line connection box

LED. light-emitting diode

LIC. line interface coupler

LICx. FRU name of line interface coupler type x (3745)

LLC. logical link control

LS. local storage

LSA. link service architecture

LSCT. LIM software configuration table

LSM. local storage manager

LSSD. level-sensitive scan design (total hardware latches chain collection)

LU. logical unit

MAC. medium access control

MAE. Multiaccess enclosure

MAP. maintenance analysis-procedure

MAU. multistation access unit

MB. megabyte; 1 048 576 bytes

MCF. microcode fix

MCL. microcode change level

MES. miscellaneous equipment specification

MG. motor generator

MI. maskable interrupt

microcode. A program, that is loaded in a processor (for example, the MOSS processor)

MLA. MOSS LAN adapter

MMIO. memory mapped input/output

maintenance and operator subsystem (MOSS). The part of the controller that provides operating and servicing facilities to the customer's operator and the IBM service representative.

MOSS. maintenance and operator subsystem (3745)

MOSS-E. maintenance and operator subsystem extended (37CS)

NA. network addressable

NCP. Network Control Program

NDM. netview distribution manager

NetView. An IBM licensed program used to monitor a network, manage it, and diagnose its problems.

Network Control Program (NCP). An IBM licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network capability.

NMI. non-maskable interrupt

NMVT. network management vector transport

NNP. network node processor

NODA. next origin device (processor) address

NPM. NetView performance monitor

NTDA. next target device (processor) address

OEMI. original equipment manufacturer's interface

OLT. online test

online tests. Testing of a remote data station concurrently with the execution of the user's programs (that is, with only minimal effect on the user's normal operation).

OSI. open system interconnect

PA. primary access

PBC. packet burst control

PBG. packet burst grant

PCR. 1.pico-processor command register 2.power check reset

PICA. process and intertask communication architecture

PMH. problem management hardware

PN. part number

PNL. control panel

POR. power-ON reset

PP. pico-processor

PPB. primary power box

PPC. PowerPC (system card of MAE)

PRC. processor

PRDA. packet request device (processor) address

PROM. programable read-only memory

PS. power supply

PSI. packet switch interface

PSN. public switched network

PTCE. product-trained CE

PTF. program temporary fix

PTT. Post, Telephone and Telegraph (agency)

PU. physical unit

RETAIN. Remote Technical Assistance Information Network

RNR. receiver not ready

RPL. remote program load

RPO. remote power-off

RSC. remote service center

RSF. remote support facility

RVX. stands for RS232, RS422, V.24-35, X.21-2x connections

SAC. switch adapter card

SATS. specific assurance tests

SBA. switch bus adapter

SBI. switch bus interface

SC. switch control

SDLC. synchronous data link control

SIE. switch interface extender

SL. service logic

SNA. Systems Network Architecture

SNMP. Simple network management protocol

SPD1. signal and power distribution type 1

SPD2. signal and power distribution type 2

SPDL. signal and power distribution card in LCB

SPS. service and power support

SQL. structured query language

SRC. system reference code

SSA. system service architecture

SSCP. system services control point

STCn. signal transfer card n

SSS. subsystem support service

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information through a user application network. The structure of SNA allows the users to be independent of specific telecommunication facilities.

TB. terminator block

TDM. time division multiplexing

TDR. technical data record

TERC. terminator card

TIC1. token-ring interface coupler type 1 (3745) running at speed of 4 Mbits

TIC2. token-ring interface coupler type 2 (3745) running at speed of 4 or 16 Mbits

TIC3. token-ring interface coupler type 3 (37CS) running at speed of 4 or 16 Mbits

time out. The time interval allotted for certain operations to occur.

TPS. two-processor switch

TR. token-ring

TRA. token-ring adapter (TRP+TIC3)

TRFM. transformer

TRP. token-ring processor

TRS. transmitter/receiver subassembly

UEPO. unit emergency power-off

URSF. universal remote support facility

UTP. Unshielded twisted pair cable

V. volt

V.24. CCITT V.24 recommendation

V.25. CCITT V.25 recommendation

V.28. CCITT V.28 recommendation

V.35. CCITT V.35 recommendation

VPD. vital product data

VTAM*. Virtual Telecommunications Access Method

VTL. vendor technology logic

W. watt

X.21. CCITT X.21 recommendation

X.25. CCITT X.25 recommendation

YZxxx. wiring diagram

Tell Us What You Think!

3746 Nways Multiprotocol Controller
Model 900
Service Guide

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