

H9657-EU Installation Guide

Order Number EK-VBIEU-IN-003

August 1990

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This document was prepared and published by Educational Services Development and Publishing, Digital Equipment Corporation.

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INTRODUCTION

1.1 SCOPE

This manual provides the procedures for installing the H9657-EU upgrade kit in an existing H9657-E VAXBI expander cabinet. Use this manual with the *VAXBI Expander Cabinet Installation Guide* (EK-VBIEA-IN).

Installing the H9657-EU upgrade provides six additional slots for VAXBI options. The flexible backplane extender (FBE) cable may be used to expand an existing channel by six slots. If the installation adds another VAXBI channel, the VAXBI channel adapter module must be inserted in slot J1, leaving five slots available for VAXBI options. The VAXBI channel adapter modules and bus cables must be ordered separately, depending on the VAX system requirements.

The VAXBI tool kit (P/N A2-M1094-10) must be used when installing the VAXBI bus terminators or flexible backplane extender (FBE). This tool kit must be ordered separately.

1.2 MAINTENANCE DOCUMENTS

The following Field Service maintenance print sets are available:

- *VAXBI Expander Cabinet* (MP 01843-01)
- *H9657-EU Upgrade Kit* (MP 01844-01)

For information on the various VAXBI options, refer to the appropriate documentation for each option.

1.3 ELECTROSTATIC DISCHARGE, SAFETY, AND POWER PRECAUTIONS

Observe all necessary precautions when working inside the VAXBI cabinet or when servicing, replacing, or installing modules.

WARNING

Only qualified personnel familiar with electrostatic discharge (ESD) procedures, safety procedures for electrical equipment, the specific VAX system, and the VAXBI cabinet should have access to the inside of the system cabinets.

Modular power supply (MPS) regulator outputs can be switched off separately. Use caution if you turn off an MPS regulator for any reason since 300 Vdc remains on the bus bars to the regulators.

Remove all power to the cabinet before removing or inserting an MPS regulator. All MPS and power indicators must be off to ensure that power has bled down.

1-2 INTRODUCTION

1.3.1 ESD Procedures

Modules that are removed from or added to the VAXBI cabinet may be damaged by electrostatic discharges.

CAUTION

STATIC SENSITIVE DEVICES — ESD grounding cords attached to the cabinet frame are located behind the cabinet doors. ESD wrist straps must be worn and the clip must be attached to the conductive module case before servicing, replacing, or installing any logic or power modules.

1.3.2 Safety Precautions

Observe the following precautions when working around or inside a system cabinet:

- Do not move cabinets that are connected.
- Do not extend expander boxes from any cabinet that is not bolted to the system. Extend the safety foot if the system is so equipped.
- Remove watches and jewelry when working inside a cabinet. Keep fingers and tools away from high-voltage areas (300 Vdc bus bars).
- Avoid contact with the rotating blowers. Do not place your hands or arms in the blower inlet area above the MPS regulator modules. This area is accessible when an MPS regulator module is removed.
- Replace fuses or circuit breakers with a Digital part of the same type and current rating to prevent damage to the power system or computer logic.

1.3.3 Power Procedures

Use the following procedures when shutting down or preparing a VAX system for service or installation.

WARNING

Some VAX systems store a high-voltage charge for a period of time after disconnecting primary power. These procedures are recommended to avoid module damage or contact with stored high voltages.

1. Do an orderly system shutdown at the console and then power down the system using the POWER OFF command and the correct power-down procedures.
2. In VAX systems with a battery backup unit (BBU), switch off the MAIN SYSTEM circuit breaker to inhibit BBU operation. Otherwise, 300 Vdc may still be present on the bus bars, even during loss of utility power or when the main power cable is disconnected.
3. Before working in the lower portion of any VAX system cabinet, unplug the cabinet power cable. Live voltages are present on circuit breaker terminals even with the circuit breaker in the OFF position.
4. Before working inside a VAXBI expander cabinet, switch off the circuit breakers on the H7176 power bulk box and the H405 power input box. Unplug the power cable as an additional precaution.

CAUTION

The MPS regulator outputs can be separately switched off at the H7066 system logic module (SLM). Before removing or inserting any MPS regulator, remove all cabinet power and ensure that all power indicators are OFF to ensure that power has fully discharged. Otherwise, high surge currents may cause damage to the MPS regulator components.

Wait at least 5 minutes for capacitor-stored voltages to decay, then check that all MPS regulator indicators are OFF. In the VAXBI expander cabinet, and in some VAX systems, a high dc potential exists between the MPS power bus bars and chassis ground when the H7176 circuit breaker is ON.

UNPACKING AND INSPECTING

2.1 UNPACKING AND INSPECTING

Check the following while unpacking the H9657-EU upgrade components.

CHECK FOR EXTERNAL DAMAGE

Check the shipping carton for external damage (dents, holes, crushed corners, or water marks).

CHECK THE SHIPMENT

Check that the shipment is complete and correct. Inventory the shipment against the carrier's bill of lading.

CHECK THE SHIPPING CARTON CONTENTS

Remove the packing list and all packed items. Inventory the contents of the carton against the packing list (see Table 2-1).

CHECK FOR CONCEALED DAMAGE

Remove each of the larger subassemblies from the carton and check for concealed damage.

IF THERE IS A PROBLEM

If there is a shipping problem or if there is concealed damage, list the information on the Labor Activity Reporting System (LARS) form. Include a note to clarify the extent of damage and notify the customer and responsible Field Service manager.

NOTE

Stop unpacking until the customer notifies the insurance company and gives you permission to continue with the installation. Save the carton and packing material in case it is necessary to return the upgrade kit.

2.2 H9657-EU UPGRADE COMPONENTS

Table 2-1 lists the components supplied in the upgrade kit.

A torque screwdriver and bits needed to install the VAXBI bus terminators (GIF, GOM, and FBE) are provided in the Field Service VAXBI tool kit (P/N A2-M1094-10). This tool kit must be ordered separately.

2-2 UNPACKING AND INSPECTING

Table 2-1 H9657-EU Upgrade Components

Part Number	Description	Quantity
H9400-AA	VAXBI card cage assembly	1
H7189-A	MPS regulator	1
17-01791-01	Flexible power strip	1
17-01038-01	FBE assembly	1
20-24486-01	GIF terminator	1
20-24487-01	GOM terminator	1
12-23701-17	Node ID kit	1
90-07265-00	4-40 threaded spacer, 1-inch	2
90-00062-11	6-32 truss head screw, 5/16-inch	19
90-00001-42	6-32 male/female standoff, 3/4-inch	1
12-20317-02	Number 6 flat washer, brass	1
17-01180-02	Wire harness assembly	1
70-25880-01	Cable clamp kit, BIX	1
12-25003-02	Screw, guide post	4
37-01038-01	Package, VAXBI expander upgrade	1
EK-V3IEU-IN	<i>H9657-EU Installation Guide</i>	1

INSTALLATION PROCEDURES

3.1 VAXBI CABINET AND SYSTEM PREPARATION

Review the power procedures and ESD and safety precautions given in Section 1.3 before performing any installation steps.

WARNING

With ac power turned off, the 300 Vdc power bus in the VAXBI cabinet may still carry live power unless correct procedures are observed.

Only qualified personnel familiar with ESD procedures, safety precautions for electrical equipment, and the affected VAX systems should have access to the inside of the system cabinets.

If you are adding another VAXBI channel, refer to the VAX system installation or maintenance guide for information on installing the channel adapter modules and connecting the VAXBI bus cables. If you are installing VAXBI options, refer to the installation documentation for each specific option.

BRING DOWN THE SYSTEM

When you are ready to begin installation, bring down the system that has the VAXBI channel connected to a card cage inside the cabinet. Starting at the system console:

1. Do an orderly shutdown of the VMS operating system.
2. Power down the system using the proper procedures.
3. Turn off the main system circuit breaker.

OPEN THE VAXBI CABINET

Open the VAXBI cabinet as follows:

1. Open the front and back doors using a 1/4-inch hex key wrench (P/N 12-26339-01).
2. Remove the doors to provide ease of access and to prevent damage to the finish:
 - a. Disconnect one end of the ground line from each door to the cabinet frame. Leave all grounded wrist straps attached.
 - b. Lift the doors off their hinges and place them away from the work area.

3-2 INSTALLATION PROCEDURES

PREPARE THE VAXBI CABINET FOR INSTALLATION

Figures 3-1 and 3-2 identify the following modular system components and system power control (SPC) modules:

- H9400-AA — VAXBI card cage assembly
- H7189-A — MPS regulators
- H7066-A — System logic module (SLM)
- H7176-A — Power bulk box (PBB)
- H7060-A — Control/startup power module (CSP)
- H7061-A — Interconnect logic module (ILM)
- H405-A/B — Power input box (PIB)

In the front of the cabinet (see Figure 3-1):

1. Open the system power control (SPC) panel and turn off the H7176 circuit breaker.
2. Release two top fasteners and open the panel where the H9400 card cage will be installed (K3, K2, or K1).

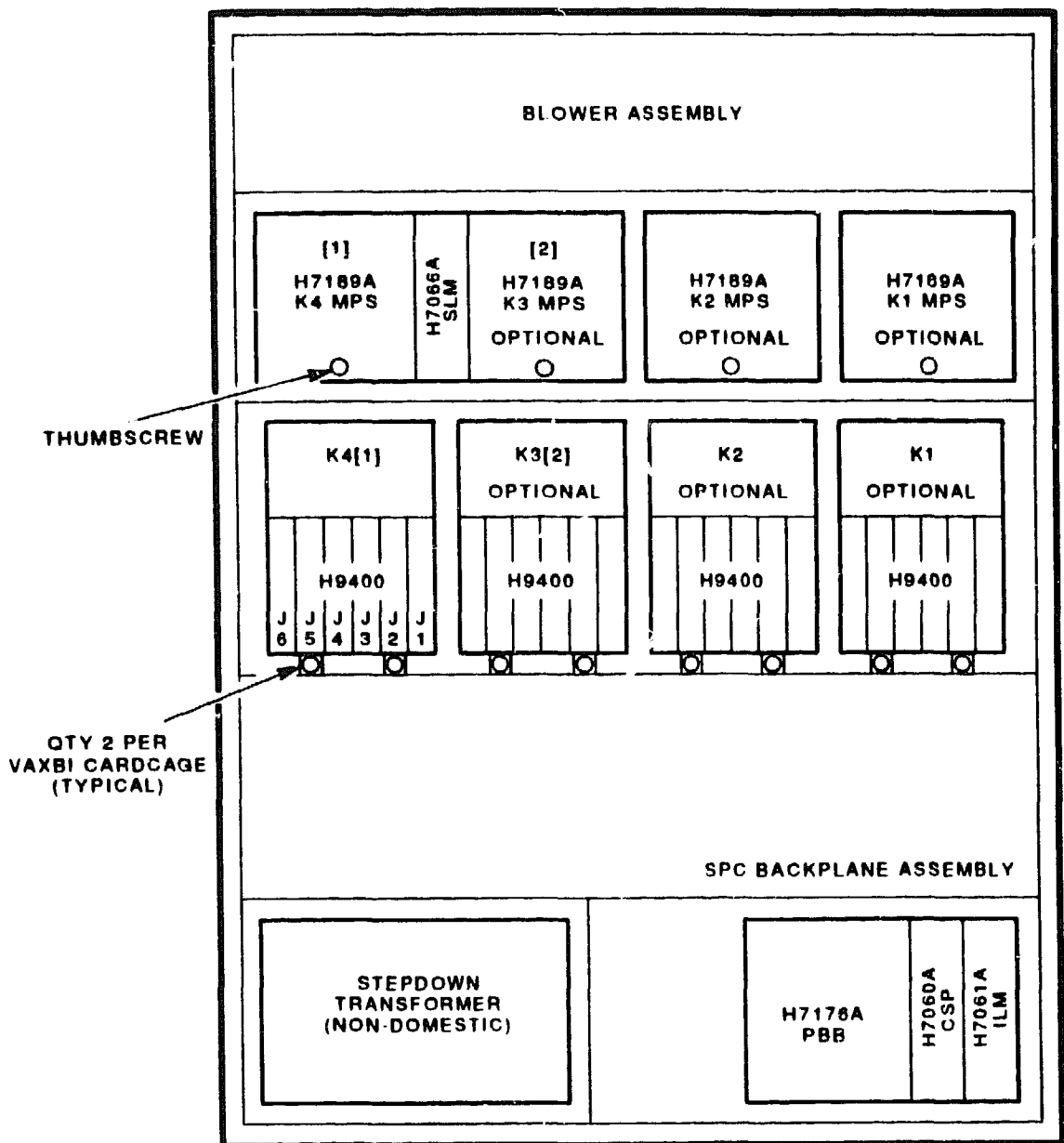
In the rear of the cabinet (see Figure 3-2):

1. Turn off the H405 circuit breaker by pulling the T-handle to the out position.
2. Unplug the power cable as an added precaution.
3. Release the four screws that secure the top I/O bulkhead connector panel (Figure 3-2). Open the panel by holding the top panel corners and gently swinging it down into its most horizontal position.

CAUTION

Care must be taken with any cables attached to this panel.

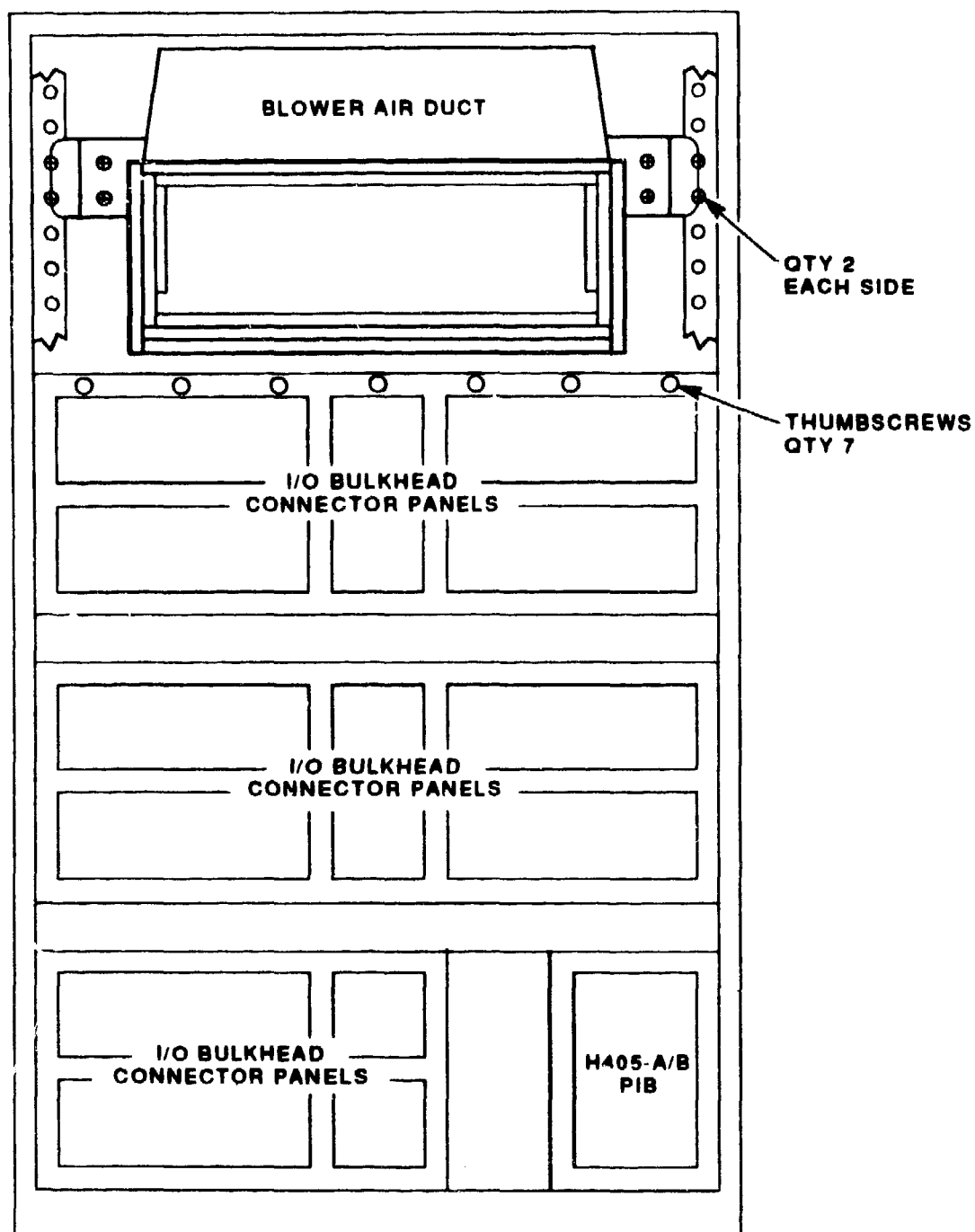
4. Remove the four screws that hold the blower air duct brackets and then remove the air duct.
5. Release the cable by cutting the cable tie at the rear of the VAXBI simulator assembly (Figure 3-3).
6. Remove the two screws on the front (Figure 3-1) and slide out the VAXBI simulator assembly.



- [1] H9657-E CABINET IS AVAILABLE WITH ONE STANDARD BACKPLANE AND MPS REGULATOR.
- [2] H9657-EU BI CARD CAGE REGULATOR UPGRADE. UP TO THREE ARE OPTIONAL.
- [3] VAXBI CHANNEL ADAPTER. UP TO FOUR ARE OPTIONAL. ONE, MINIMUM, IS REQUIRED FOR INSTALLATION ON A VAX SYSTEM.

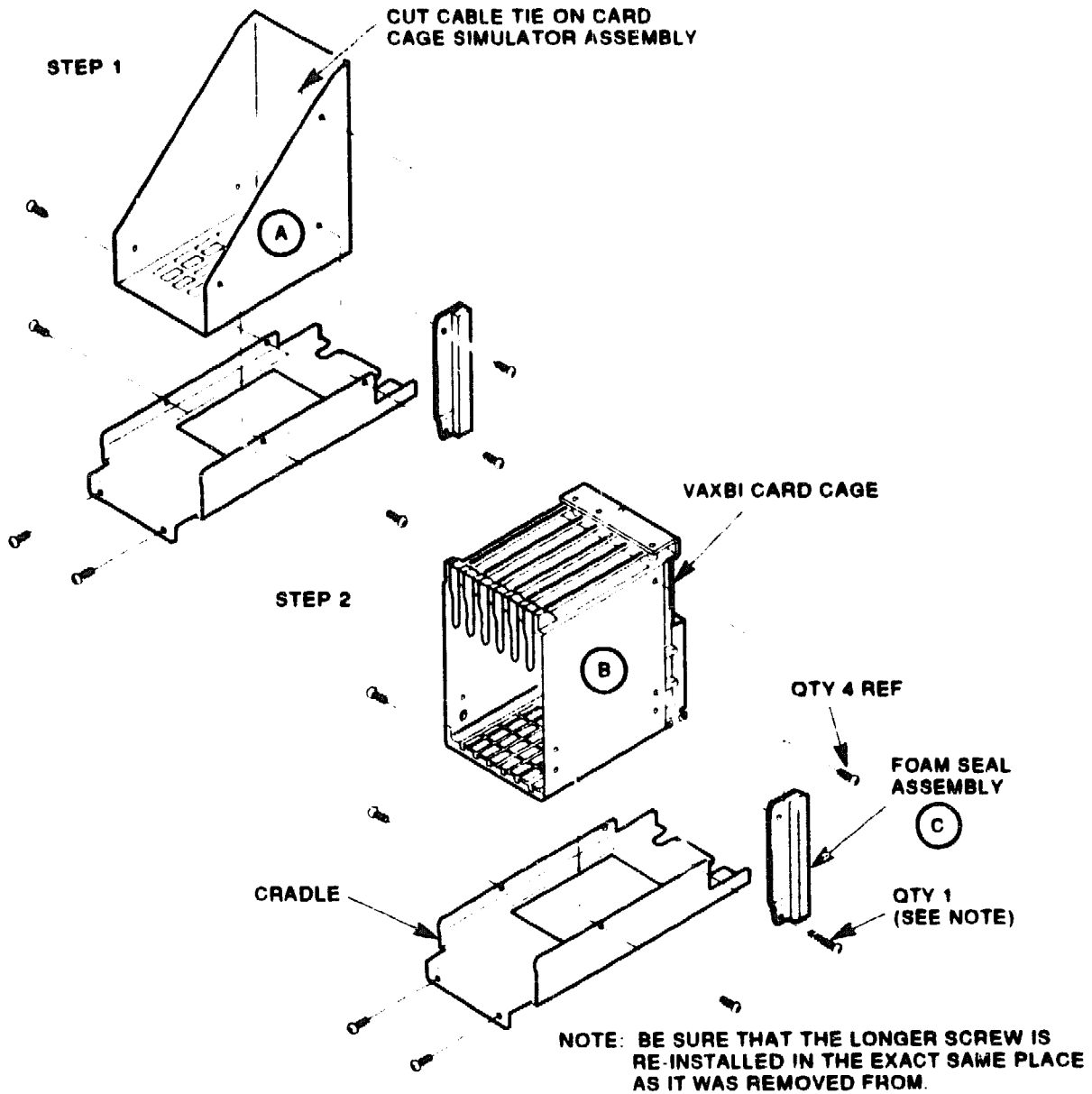
G9F-RC1042-01-DG

Figure 3-1 VAXBI Expander Cabinet Layout (Front View)



OSF-RC1042-02-DG

Figure 3-2 VAXBI Expander Cabinet Layout (Rear View)



REMOVE NEXT AVAILABLE SIMULATOR ASSEMBLY FROM CABINET CARD CAGE ASSEMBLY. REMOVE SIMULATOR (A) FROM CRADLE AND REPLACE WITH VAXBI CARD CAGE (B) USING ALL OF THE SAME HARDWARE EXACTLY AS REMOVED. MAKE SURE THAT THE NEW SEAL ASSEMBLY (C) IS RE-INSTALLED.

Q9F-RC1042-03.MPS

Figure 3-3 Card Cage Simulator Assembly Removal and Replacement

3.2 UPGRADE COMPONENT INSTALLATION

INSTALL THE MPS REGULATOR

Install the MPS regulator from the front of the cabinet:

1. Remove the blank module assembly where the MPS regulator will be installed (K3, K2, or K1 MPS). Unscrew the thumbscrew and pull the dummy module straight out (see Figure 3-1).
2. Place the connector end of the MPS regulator into the opening. Center it on the rails and slide it straight in.
3. Seat the connectors by gently pushing in on the front panel while moving it up and down and from side to side.
4. Secure the thumbscrew.

INSTALL THE VAXBI BUS TERMINATORS (GIFs AND GOMS)

See Figures 3-4 and 3-5. First determine whether you are adding or expanding a VAXBI channel (see Figure 3-4):

- If you are adding a new channel, install both the slot J1 (GIF) and J6 (GOM) terminators.

NOTE

The GIF and GOM terminators should be installed before the H9400 is installed.

- If you are expanding an existing channel, remove the slot J1 (GIF) terminator from the VAXBI channel being expanded. (You must first remove the screw and lift the flexprint dogleg.)

CAUTION

The dogleg standoff should not be loosened. It should remain torqued at 10 ± 1 inch-pounds.

INCORRECT TORQUING OF THIS STANDOFF COULD RESULT IN A POOR GROUND RETURN CONNECTION.

- Reinstall the removed terminator in the J1 position of the newly installed VAXBI card cage.

Locate the slotted bit and torque screwdriver provided in the Field Service VAXBI tool kit (P/N A2-M1094-10).

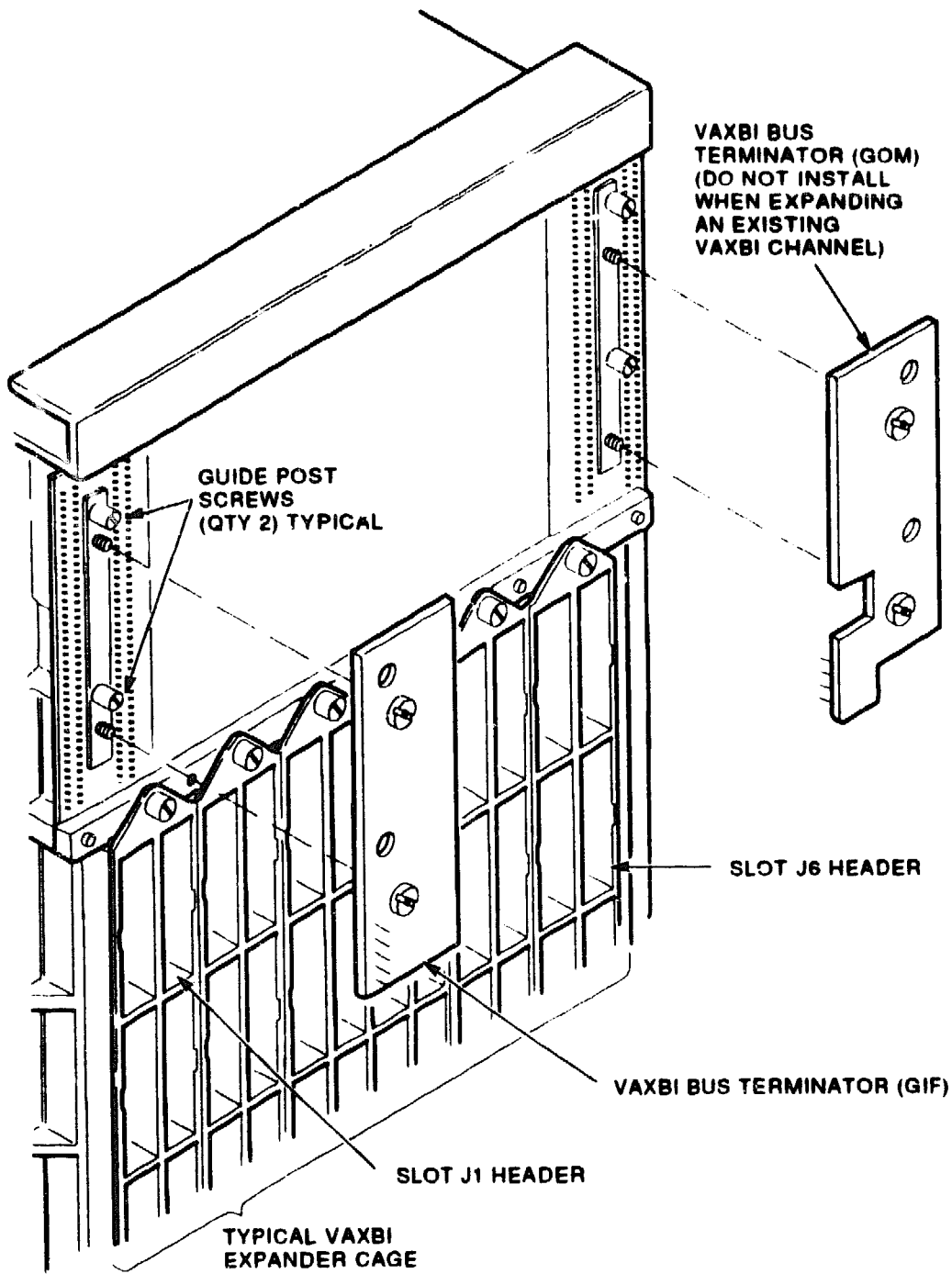
Install the terminator(s) as follows:

1. Align the terminator over the locating studs on the card cage.

CAUTION

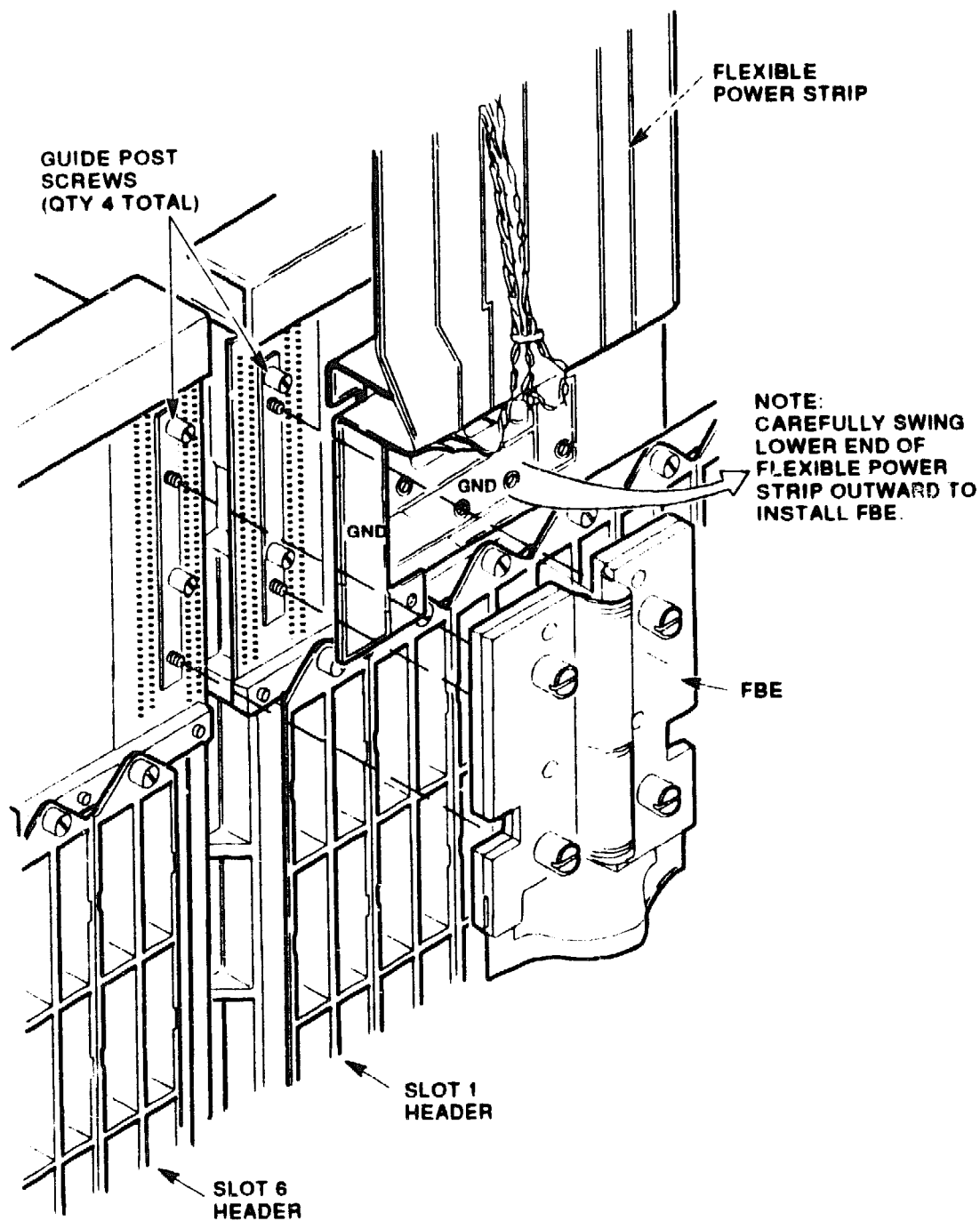
Carefully align the pins with the socket. Otherwise, the pins may be bent or broken.

2. Guide the pins into the holes on the card cage. Turn the captive screws from one-half to one turn each but do not tighten. Check that the pins are properly aligned.
3. Using the torque screwdriver, alternately tighten the two screws in rotation, one-half to one turn each. Tighten the screws to 6 ± 1 inch-pounds.



GSF-RC1042-04-MPS

Figure 3-4 VAXBI Bus Terminator Installation



GSF-RC1042-05-MPS

Figure 3-5 Flexible Backplane Extender Installation

INSTALL THE VAXBI CARD CAGE

See Figures 3-1 and 3-3. Install the VAXBI card cage from the front of the cabinet (Figure 3-1):

1. Remove two screws holding the cradle (P/N 74-36203-01) where the card cage will be installed (K3, K2, or K1) and cut the tie wrap that holds the cable on the rear vertical wall (on the cradle).

2. Slide the cradle out and remove the five screws holding the card cage simulator assembly (P/N 74-36202-01).
3. Remove the power connection protective cover (P/N 99-07664-01) from the rear of the H9400 VAXBI card cage (not shown).
4. Install the foam seal assembly (P/N 70-25589-01) with one screw on the card cage (duplicate removal effort).
5. Mount the card cage in place of the simulator module (P/N 74-36202-01) on the cradle with the original screws.

NOTE

One of the screws is longer than the others.

6. Insert the card cage cradle assembly so the slots engage the shoulder bolts on the rear support frame.
7. Secure the cradle at the front, using the two previously removed screws.

INSTALLING THE FLEXIBLE BACKPLANE EXTENDER (FBE)

If you are expanding an existing VAXBI channel, install the FBE (P/N 17-01038-01) between the card cages as shown in Figure 3-5. The FBE connects terminator slot J1 of the existing card cage with slot J6 of the new card cage.

1. See Figure 3-6.

CAUTION

The standoff can be removed with a 1/4-inch nut driver. During reinstallation, the standoff must be torqued to approximately 10 ± 1 inch-pounds. Note that the standoff screw is loose and can fall into the machine.

2. Replace the four guide posts (Figure 3-5) with four guide post screws (P/N 12-25003-02) (only for FBE installation).
3. Prepare the FBE by folding the large and small flexible cables so the folds extend outward and not between the card cages.
4. Align the FBE over the locating guide posts on both card cages with the small cable at the bottom.

CAUTION

Carefully align the FBE alignment pins with the socket. Otherwise, the pins may be bent or broken.

5. Guide the guide post pins into the holes on the FBE. Turn the knurled captive screws on the connector from one-half to one turn each but do not tighten.
6. Using the torque screwdriver, alternately tighten each of the screws in rotation one-half to one turn each.
7. Tighten each of the guideposts to 6 ± 1 inch-pounds (four guideposts total).

CAUTION

Check that the standoff beneath the flexprint dogleg has been tightened to 10 ± 1 inch-pounds.

8. Reinstall the flexprint and the dogleg screw and tighten the dogleg screw to 10 ± 1 inch-pounds.

3.3 MPS AND VAXBI CARD CAGE CONNECTIONS

Perform the following procedures from the rear of the cabinet.

FLEXIBLE POWER STRIP CONNECTIONS (UPPER)

Locate six 6-32 panhead screws and two 4-40 threaded spacers from the accessories package. Connect the upper end of the flexible power strip to the MPS card cage terminals as shown in Figure 3-7.

1. Plug in the main connector and secure with the two threaded spacers. Insert the six panhead screws through the flexible power strip and into the MPS card cage terminals, but do not tighten.
2. Align the lower screw holes with the VAXBI card cage backplane terminals and tighten the upper six screws.

FLEXIBLE POWER STRIP CONNECTIONS (LOWER)

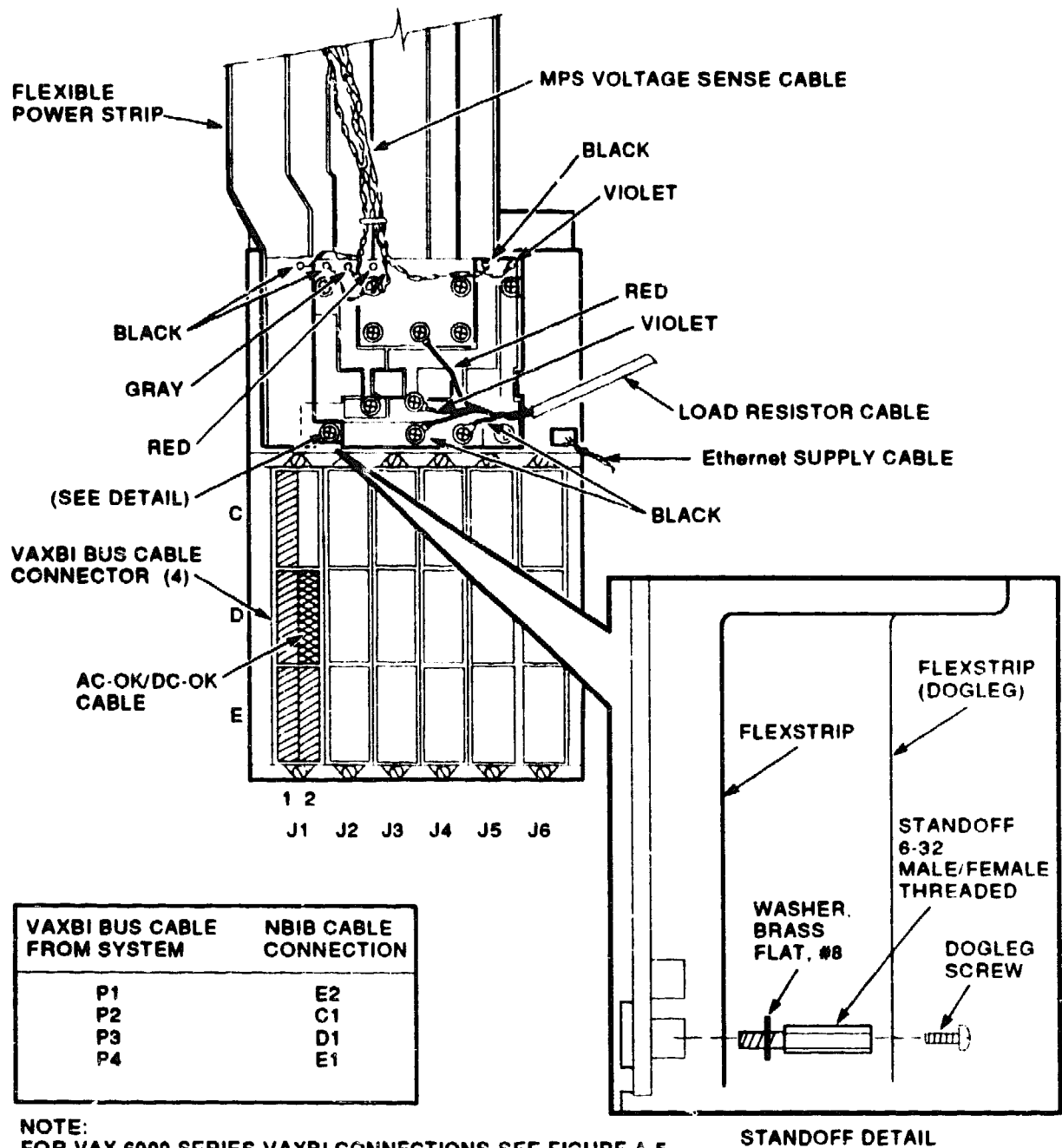
Figure 3-6 shows the typical VAXBI card cage connections for the flexible power strip (P/N 17-01791-01) and cables.

Locate one 6-32 male/female threaded standoff, one number 6 flat washer, and thirteen 6-32 panhead screws.

1. Screw the male end of the threaded standoff (with a number 6 flat washer) into the card cage ground terminal as shown in Figure 3-6 (just above the thumbscrews for the J1 and J2 cable headers) and tighten.
2. Insert 13 panhead screws through the flexible power strip and into the VAXBI card cage terminals. Include the four resistor cable eyelets as shown in Figure 3-6. Torque all screws to 10 ± 1 inch-pounds.

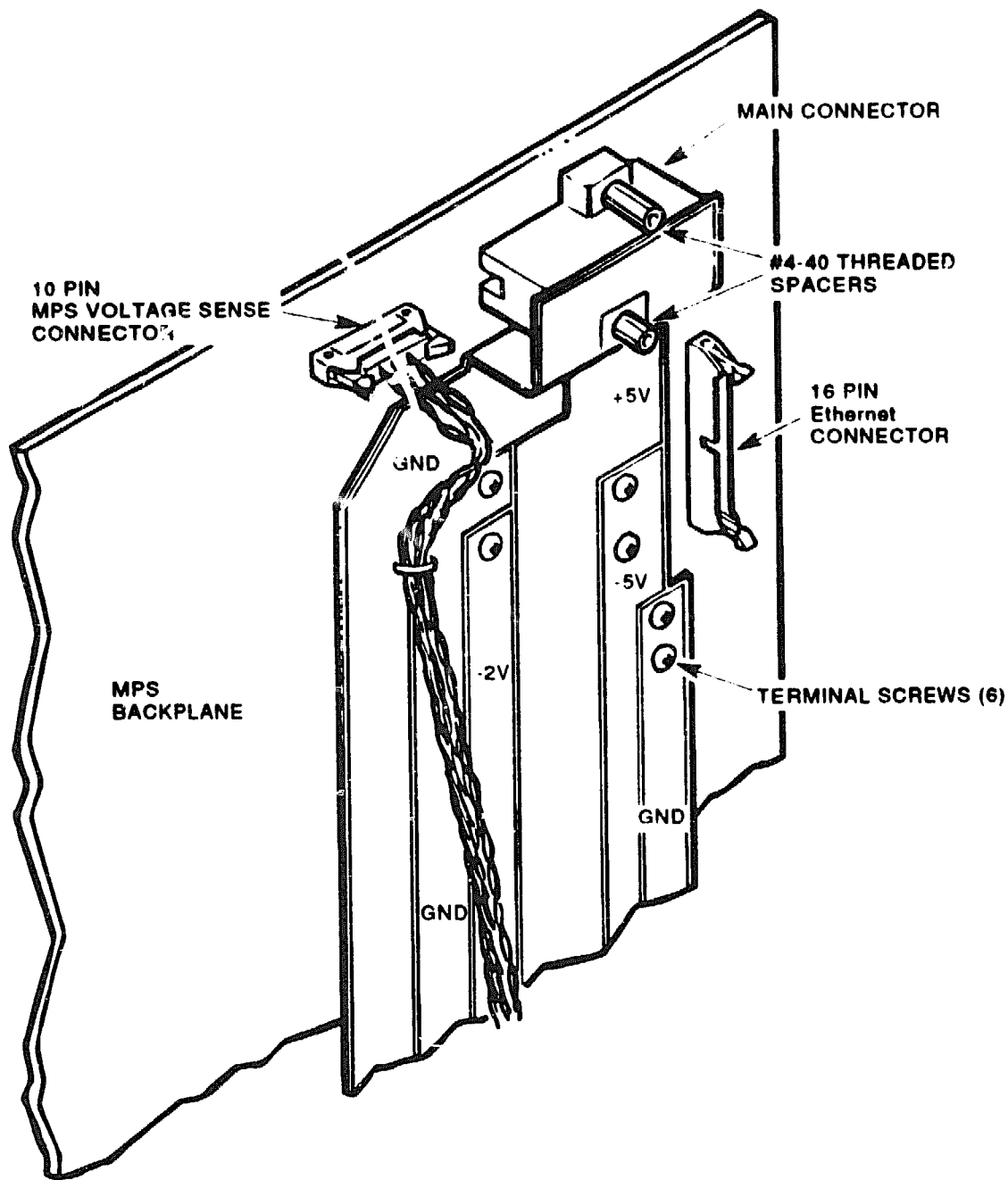
Connect the remaining card cage cables as shown in Figure 3-6.

1. Plug the MPS voltage sense cable (twisted pairs from the flexible power strip) into the MPS voltage sense connector (Figure 3-7).
2. Plug the Ethernet cable (P/N 17-01870-01) 16-pin connector into the Ethernet connector (Figure 3-7).
3. An existing harness inside the cabinet positions an AC OK/DC OK cable near slot J1 of each card cage. Locate the AC OK/DC OK cable for the new card cage and plug the connector into header D2 of slot J1 (Figure 3-6).



GSF-RC1042-06-MPS

Figure 3-6 Typical VAXBI Card Cage Backplane Connections (Rear View)



GSF-RC1042-07-MPS

Figure 3-7 Flexible Power Strip Connections (Upper)

3.4 VAXBI CARD CAGE/CHANNEL CONFIGURATION

VAXBI BUS CABLES

Figure 3-6 shows typical connector locations for the VAXBI bus cables from the system. The cables must be connected according to the chart provided in the installation or maintenance guide for each specific VAX system, or in accordance with Appendix A.

CAUTION

Use proper ESD procedures and the tools provided in the Field Service static tools kit when installing or replacing VAX system modules.

If you are adding another VAXBI channel:

1. Connect the new cable set from the VAX system channel to slot J1 of the new card cage according to the system requirements.
2. Plug the channel adapter module into slot J1 of the new card cage.

If you are expanding an existing VAXBI channel:

1. Transfer the channel adapter module from slot J1 of the existing card cage to slot J1 of the new card cage.
2. Reroute the cables from slot J1 of the existing card cage to slot J1 of the new card cage.

SLM BACKPLANE CONFIGURATION SWITCHES

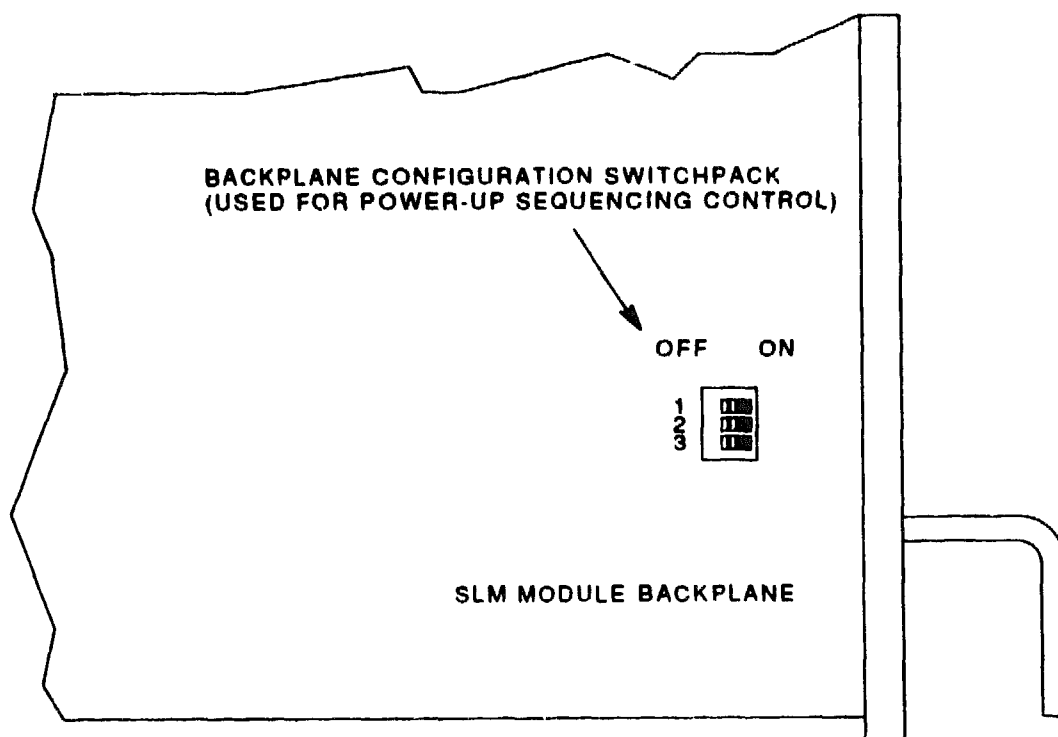
At the front of the cabinet, unscrew the thumbscrew and remove the SLM module. Set the switches on the circuit board to the new VAXBI backplane configuration according to the chart shown in Figure 3-8.

To replace the module, gently push in on the front panel while moving it around to seat the connector.

Secure the thumbscrew. The front panel switches must be set to the center (off) position for normal operation.

VAXBI OPTION INSTALLATION

Install any new VAXBI options as required using proper ESD and safety precautions. Refer to the appropriate installation guide for each option.



SWITCH NUMBER 1 2 3	BACKPLANE CONFIGURATION	CONFIGURATION TYPE
0 0 0	FOUR, 6-SLOT VAXBI CHANNELS	A (4-PACK)
0 0 1	ONE, 12-SLOT VAXBI CHANNEL (K4-K3) AND TWO, 6-SLOT VAXBI CHANNELS (K2-K1)	C (3-PACK)
0 1 0	TWO, 12-SLOT VAXBI CHANNELS (K4-K3 AND K2-K1)	B (2-PACK)
0 1 1	ONE, 24-SLOT VAXBI CHANNEL (K4-K1)	E (1-PACK)
1 X X	ONE, 18-SLOT VAXBI CHANNEL (K4-K2) AND ONE, 6-SLOT VAXBI CHANNEL (K1)	D (B-PACK)

NOTE: 0 = ON (CLOSED/GND), 1 = OFF (OPEN/HIGH) X = DON'T CARE

GSF-RC1042-08-DG

Figure 3-8 VAXBI Card Cage Configuration Switches

REASSEMBLE THE VAXBI CABINET

At the front of the cabinet:

1. Close the module cover panel and secure the two top fasteners.
2. Turn on the H7176 circuit breaker, but do not close the SPC panel.

At the rear of the cabinet:

1. Using care not to kink or bend any I/O cables, raise the I/O bulkhead connector door and secure the seven top fasteners.
2. Locate the blower air duct and the four original screws that held the air duct in place.
 - a. Place the air duct over the protective grill. Position the bracket slots and install the four screws and lockwashers.
 - b. Support the air duct with one hand and replace the two original screws. Tighten all four screws.
3. Turn on the H405 circuit breaker by pushing in the T-handle.
4. Plug in the power cable.
5. Replace the doors:
 - a. Lift each door and gently lower it onto its hinges.
 - b. Reconnect the ground strap from each door to the cabinet frame. Leave the doors open.

NOTE

The blower air duct and all filler modules (MPS regulator and VAXBI card cage) must be in place to provide proper cabinet airflow.

3.5 RETURNING SYSTEMS TO SERVICE

If you added cables or performed any functions inside the host VAX system or any connected system, close up the system, plug in the power cable, and turn on the main system circuit breaker.

Bring up all VAX systems, starting with the host system.

1. Initiate the power-up sequence from the console.
2. Check the states of the SLM and ILM indicators in the VAXBI cabinet. Refer to the *VAXBI Expander Cabinet Installation Guide* (EK-VBIEA-IN) for further information on the SLM and ILM modules.
3. Close the SPC panel in the front of the cabinet, then close and latch the doors with a 1/4-inch hex key wrench.
4. Initialize the system and boot the operating system.
5. Install and run the diagnostics and application software for all new VAXBI options.
6. Perform any other system installation/acceptance requirements and return the system to service.

A

CABINET INTERCONNECTIONS

This appendix provides generic information for the point-to-point connection of the H9657-E VAXBI expander cabinet to any of the VAXBI systems that support it. The information covers new system installation and installed base cabinet upgrades and can be used as a troubleshooting guide.

NOTE

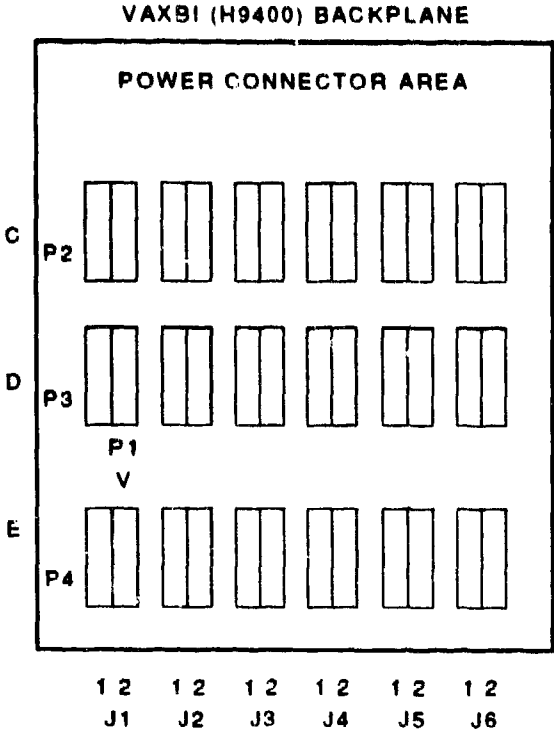
The information contained herein is particularly necessary for installed-base installation of the DB88-AC/AD/BC and/or H9657-EU options.

Figure A-1 illustrates and describes NBIB cable connections made to the VAX 8000 series VAXBI (H9400) backplane. Figures A-2 through A-4 illustrate and describe backplane cable connections made to the following kernel systems:

- VAX 8820/8830/8840
- VAX 8700/8800/8810/8820-N
- VAX 8500/8530/8550
- VAX 92XX/94XX

Figure A-5 illustrates and describes XMI-to-XBIB backplane cable connections made to the VAX 6000 series system.

Figure A-6 illustrates and describes XBIA+-to-XBIB backplane cable connections made to the VAX 9000 series system.



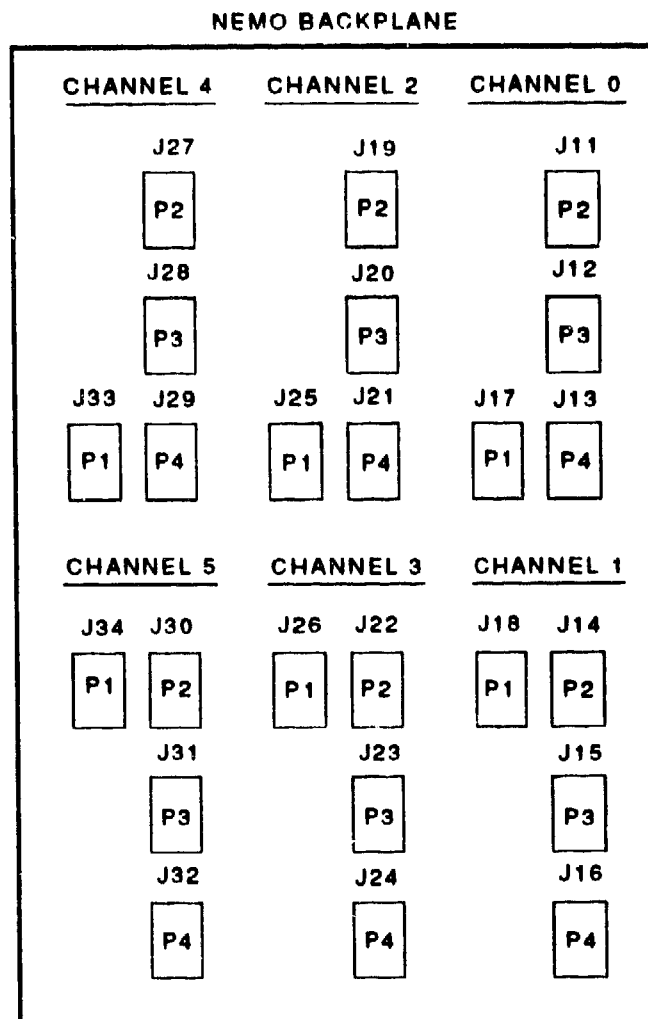
CAUTION:
CARE MUST BE TAKEN WHEN INSTALLING THE CABLE PLUGS TO THE H9400 BACKPLANE JACKS. IT IS POSSIBLE TO OFFSET THE PLUG BY ONE ROW OF PINS, THEREBY, NOT MAKING PROPER CONNECTION.

NOTES:
VAXBI SLOT J1 SHOULD CONTAIN THE XBIB (T1043 OR EQUIVALENT) MODULE. THE NBIA OR PBIA MODULE (F1011 OR F103 OR EQUIVALENTS) MUST BE PRESENT IN THE APPROPRIATE KERNEL SYSTEM SLOT.
AC OK/DC OK CABLE TYPICALLY CONNECTS TO BI BACKPLANE J1-D2.

VAXBI BUS CABLE FROM 8000 SERIES KERNEL	VAXBI BACKPLANE NBIB CABLE CONNECTION
P1	J1E2
P2	J1C1
P3	J1D1
P4	J1E1

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Figure A-1 VAX 8000 Series System — VAXBI (H9400) Backplane NBIB Cable Connections



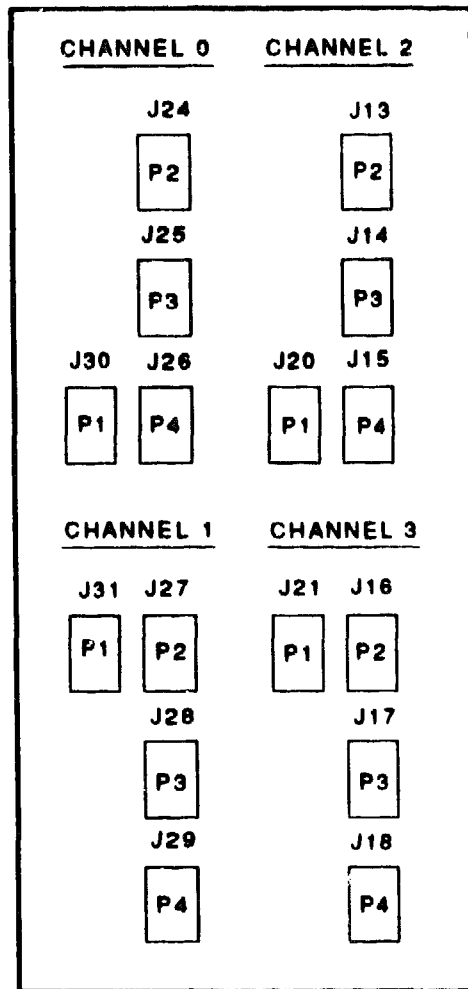
DB88-AD CABLE	VAXBI BACKPLANE	NEMO BACKPLANE VAXBI CHANNEL					
		CH. 0	CH. 1	CH. 2	CH. 3	CH. 4	CH. 5
P1	J1E2	J17	J18	J25	J26	J33	J34
P2	J1C1	J11	J14	J19	J22	J27	J30
P3	J1D1	J12	J15	J20	J23	J28	J31
P4	J1E1	J13	J16	J21	J24	J29	J32

NOTE:
AC OK/DC OK CABLE TYPICALLY CONNECTS TO BI BACKPLANE J1-D2.

GSF_0151 69.00

Figure A-2 VAX 8820/8830/8840 Kernel Systems — H9657-E(X) Cable Backplane Connections

CPU BACKPLANE



POINT-TO-POINT NBIA/NBIB CABLING CHART

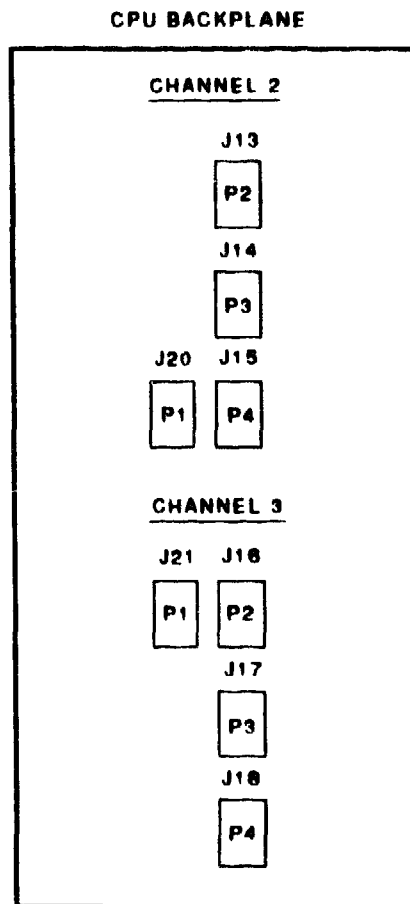
DB88-AD CABLE	VAXBI BACKPLANE	CPU BACKPLANE VAXBI CHANNEL			
		CH. 0	CH. 1	CH. 2	CH. 3
P1	J1E2	J30	J31	J20	J21
P2	J1C1	J24	J27	J13	J16
P3	J1D1	J25	J28	J14	J17
P4	J1E1	J26	J29	J15	J18

NOTE:

AC OK/DC OK CABLE TYPICALLY CONNECTS TO BI BACKPLANE J1-D2.

GSF_0152_89.DG

Figure A-3 VAX 8700/8800/8810/8820-N Kernel Systems — H9657-E(X) Cable Backplane Connections



POINT-TO-POINT NBIA/NBIB CABLING CHART

DB88-AD CABLE	VAXBI BACKPLANE	CPU BACKPLANE VAXBI CHANNEL	
		CH. 2	CH. 3
P1	J1E2	J20	J21
P2	J1C1	J13	J16
P3	J1D1	J14	J17
P4	J1E1	J15	J18

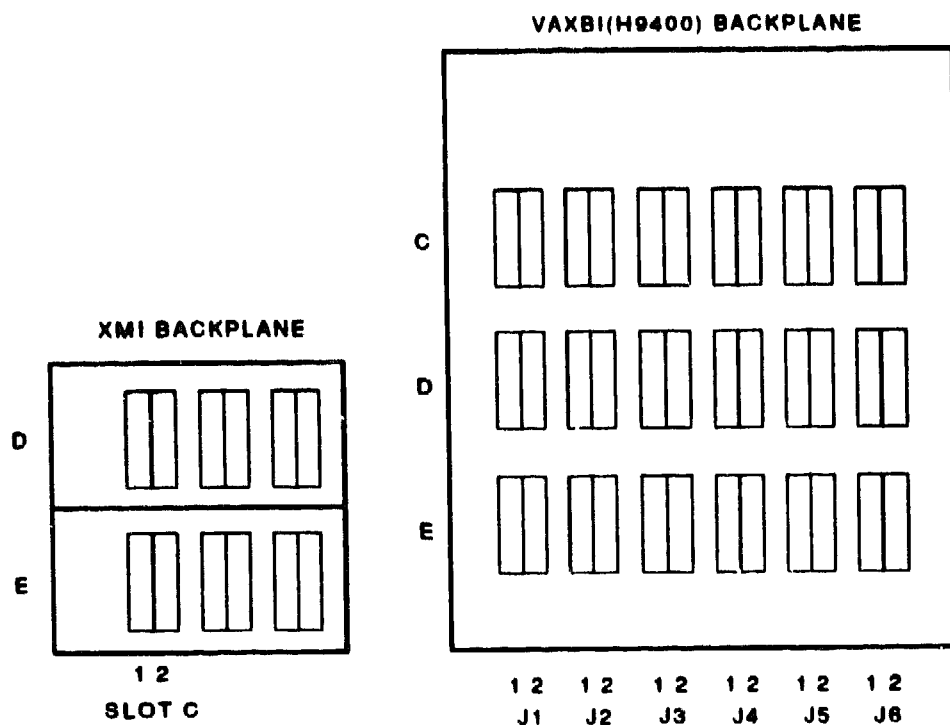
NOTE:
THERE ARE NO CHANNELS
0 AND 1 IN THE 85X0
SERIES SYSTEMS.

NOTE:
AC OK/DC OK CABLE TYPICALLY CONNECTS TO BI BACKPLANE J1-D2.

GSP_0153_89 DG

Figure A-4 VAX 8500/8530/8550 Kernel Systems — H9657-E(X) Cable Backplane Connections

A-6 CABINET INTERCONNECTIONS



NOTES:

VAXBI SLOT J1 SHOULD CONTAIN THE
XE'B (T1043 OR EQUIVALENT) MODULE.
THE XBIA MODULE (T2012 OR EQUIVALENT)
MUST BE PRESENT IN THE APPROPRIATE
XMI SLOT.

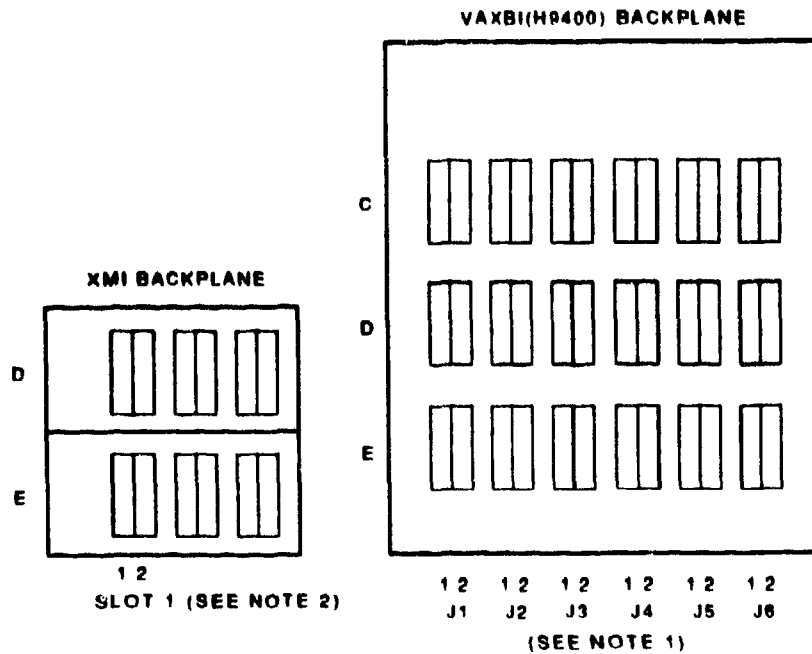
DWMBA CABLE CONNECTIONS

XMI BACKPLANE (XBIB CABLE FROM KERNEL)	VAXBI BACKPLANE (XBIB CABLE TO H9400)
D1	J1D2
D2	J1D1
E1	J1E2
E2	J1E1

NOTE:
AC OK/DC OK CABLE TYPICALLY CONNECTS
TO BI BACKPLANE J1-C1.

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Figure A-5 VAX 6000 Series Systems — XMI-to-XBIB Cable Connections

**NOTES:**

1. VAXBI SLOT J1 SHOULD CONTAIN THE XBIB (T1043 OR EQUIVALENT) MODULE. THE XBIA+ MODULE (T2018 OR EQUIVALENT) MUST BE PRESENT IN THE APPROPRIATE XMI SLOT.
2. XMI SLOT 1 IS USED IF BI EXPANDS TO THE RIGHT AND SLOT 14 IS USED IF BI EXPANDS TO THE LEFT (OR USE THE NEXT AVAILABLE SLOT TO THE RULE STATED ABOVE IF NUMBERED SLOT IS ALREADY IN USE.
(REF: SEE XCON RULES AND CONFIGURATIONS.)

DWM8B CABLE CONNECTIONS

XMI BACKPLANE (XBIB CABLE FROM KERNEL)	VAXBI BACKPLANE (XBIB CABLE TO H9400)
D1	J1D2
D2	J1D1
E1	J1E2
E2	J1E1

NOTE:
AC OK/DC OK CABLE TYPICALLY CONNECTS
TO VAXBI BACKPLANE J1-C1.

GSF RC1042 21 DG

Figure A-6 VAX 9000 Series Systems — XBI-to-XBIB Cable Connections

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