

# DEC 3000 Models 700 AXP and 900 AXP

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## Service/Upgrade Information Addendum

Order Number: EK-FLSPC-AD. A01

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# Preface

## About This Document

### Purpose

This addendum provides information for servicing the DEC 3000 Model 700 AXP and DEC 3000 Model 900 AXP systems. The information provided in this document is in addition to the service information provided in the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual. An illustration of the parts breakdown is included for easy location of all part numbers. This addendum also includes updated LED error codes and information for DEC 3000 upgrades.

### Audience

This addendum is a support and reference document for Digital services personnel who perform maintenance work on the DEC 3000 Model 700 AXP and DEC 3000 Model 900 AXP systems. It is also intended for Digital customers who have a self-maintenance agreement with Digital.

## Structure

This addendum consists of the following two chapters:

- Chapter 1 includes updates to Chapter 5 of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual.
- Chapter 2 covers upgrading the DEC 3000 Model 600 to 700 and Model 800 to 900.

## Table 1 Conventions

The following conventions are used in this addendum:

Conventions	Meaning
<b>Note</b>	Provides general information.
<b>Caution</b>	Provides information that prevents damage to equipment and software.
<b>Warning</b>	Provides information to prevent personal injury.



## Related Documentation

The documents listed in Table 2 provide additional information about the DEC 3000 Model 700 AXP and DEC 3000 Model 900 AXP systems.

**Table 2 Reference Documentation**

Document	Order Number
<i>DEC 3000 Model 600/600S AXP and 800/800S AXP Service Information</i>	EK-FLSPC-SV
<i>DEC 3000 Model 600/600S/700 AXP Owner's Guide</i>	EK-SNDPL-OG
<i>DEC 3000 Model 600/700 AXP Setting Up Your Workstation</i>	EK-SNDWS-QC
<i>DEC 3000 Model 600S AXP Setting Up Your Server</i>	EK-SNDSR-QC
<i>DEC 3000 Model 600/600S AXP Technical Summary</i>	EK-SNDPR-TM
<i>DEC 3000 Model 600/600S/700 AXP Options Guide</i>	EK-SNDPL-OP
<i>OpenVMS Factory Installed Software User Card</i>	EK-A0377-UG
<i>Guide to Installing DEC OSF/1</i>	EK-SFFIS-UG
<i>DEC 3000 Model 600/600S AXP Floor Stand Installation Card</i>	EK-SNDPR-QC
<i>TURBOchannel Expander Box Owner's Guide</i>	EK-TRBXT-IN
<i>Alpha AXP Systems Firmware Release Notes</i>	AA-PW8YH-TE
<i>DEC 3000 Model 800/800S/900 AXP Owner's Guide</i>	EK-FLMUL-OG
<i>DEC 3000 Model 800/800S/900 AXP Options Guide</i>	EK-FLMUL-OP
<i>DEC 3000 Model 800/900 AXP Quick Installation Card</i>	EK-FLMUL-QC
<i>DEC 3000 Model 800S/900 AXP Quick Installation Card</i>	EK-FLMSR-QC
<i>DEC 3000 Model 800/800S AXP Technical Summary</i>	EC-N0094-51

## **Digital Support Centers**

### **Availability**

Digital service representatives are available at Digital support centers for on-site warranty and service contract customers. If you do not currently receive this support but would like to, please contact either a Digital support center listed in the following table, or your local Digital office.

### **Contact Numbers**

Table 4 lists several telephone numbers for Digital support centers worldwide.

If a Digital services number is not listed for your area, please contact your local Digital office for assistance.

**Table 3 Telephone Numbers of Digital Support Centers**

<b>Country</b>	<b>Telephone Number</b>
United States	1-800-354-9000
Canada	1-800-267-5251
Canada (Quebec)	1-800-267-2603
United Kingdom	[44]256 59200
France	[33]92955111
Germany	[49]-(89)-95913218



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# System Overview and Updates

## Overview

### Introduction

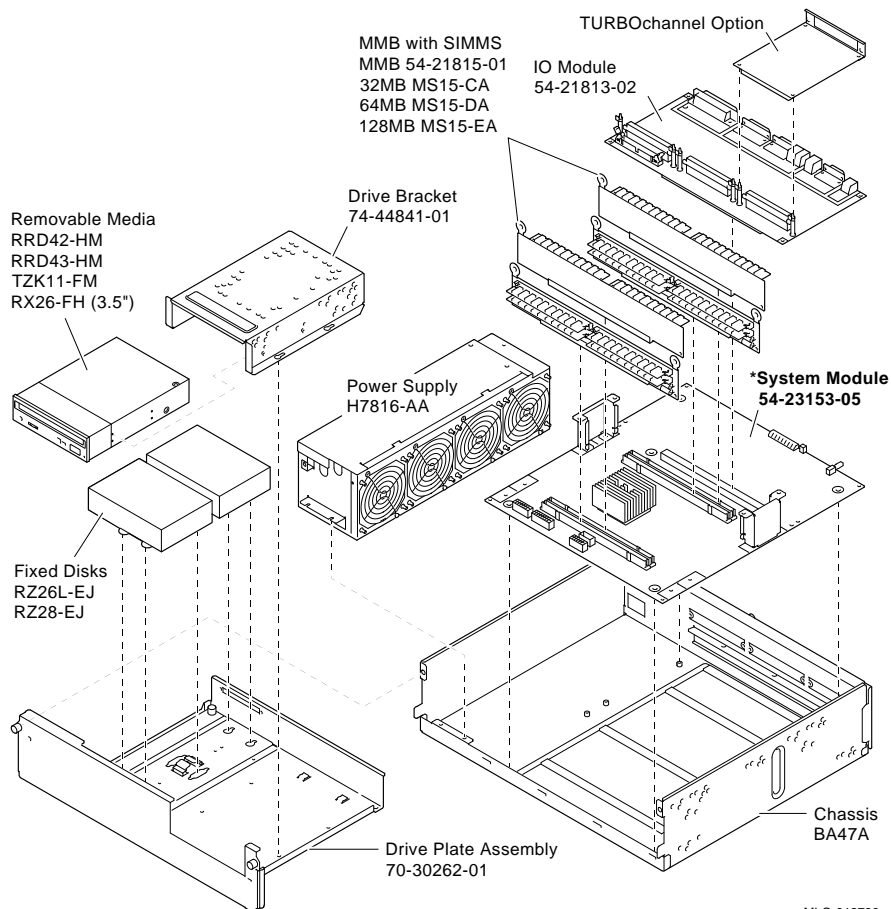
The DEC 3000 Model 700 (desktop) and Model 900 (deskside) AXP systems are high performance workstations. These systems incorporate Digital's DECchip 21064A RISC processors, which are part of the Alpha AXP architecture.

## Overview and Updates

# Parts Breakdown

## Parts Breakdown Model 700

All of the parts listed for the Model 700 are interchangeable with the Model 600 unless denoted otherwise.



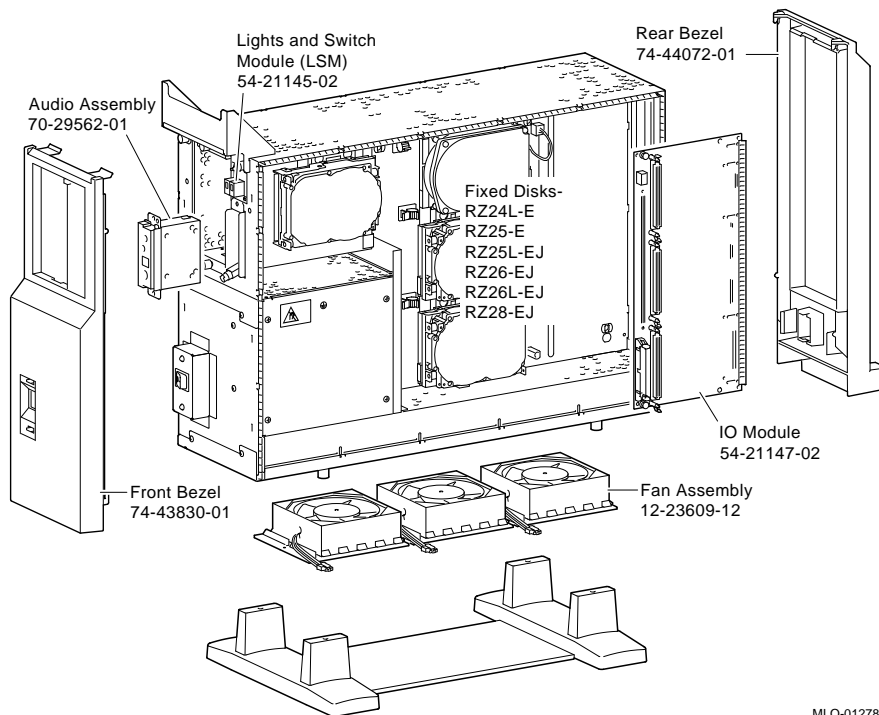
MLO-012780

\* The system module is unique to the Model 700.

## Overview and Updates

### Parts Breakdown Model 900

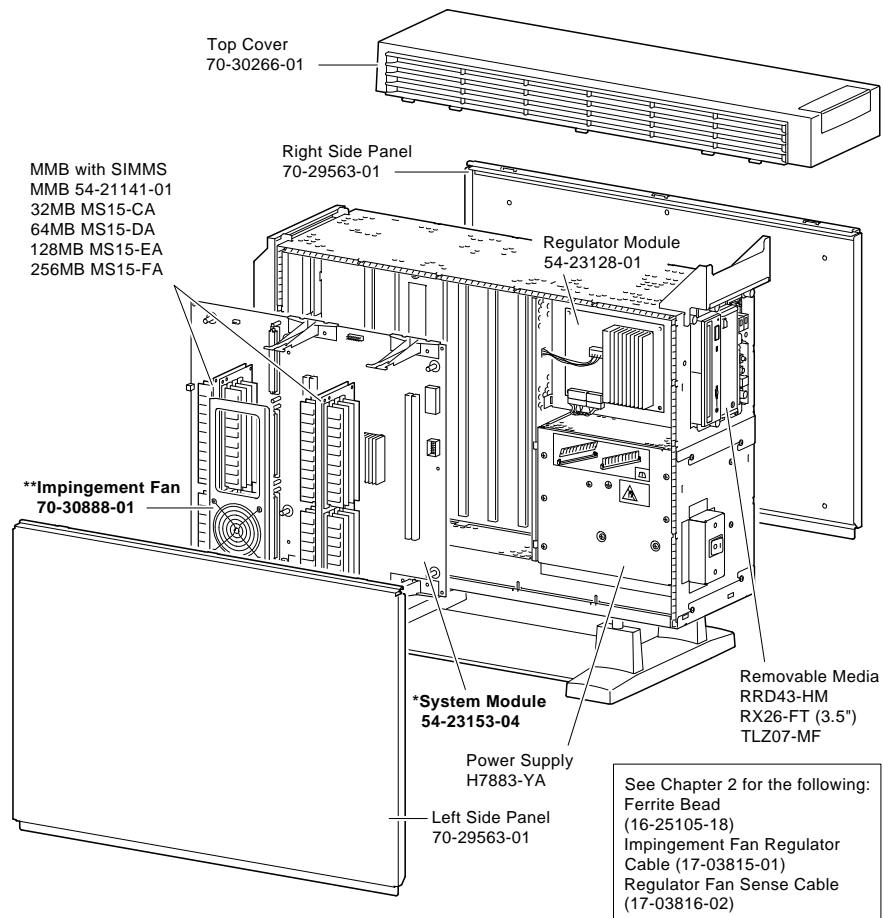
All of the parts listed for the Model 900 are interchangeable with the Model 800 unless denoted otherwise.



MLO-012781

## Overview and Updates

### Model 900



\* The system module is unique to the Model 900.

\*\* The impingement fan is new and only used on the Model 900.



## LED Codes

The LED code information in Chapter 5 (pages 5-2 –5-14) of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* has been corrected on pages 1-5–1-19 of this addendum. These corrections supersede the LED information in Chapter 5 of *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information*.

If the system enters console mode, execute diagnostics and interpret the error information using the SHOW ERROR command described in Chapters 4 and 14 of the *DEC 3000 Models 600/600S AXP and 800/800 AXP Service Information (EK-FLSPC-SV)*.

An LED display indicates the diagnostic currently being executed when the unit is first powered on. If an error occurs before the system enters console mode, the failed test is identified on this display.

On the Model 900 system, this display consists of two LEDs on the front of the unit, which represent two hexadecimal digits. On the Model 700 system, this display consists of a row of eight LEDs on the rear of the unit. The eight LEDs correspond to eight binary bits, which can be grouped to form two four-bit bytes.

Use the diagnostic LEDs to help diagnose problems when the system is unable to set up the console. This portion of the testing does not appear on the monitor.

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### Note

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In the tables containing LED codes, • indicates that an LED is on; o indicates that an LED is off.

All changes from Chapter 5 of the service information manual appear in bold within the tables.

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## Overview and Updates

### Serial ROM LED Codes

Apply the solutions listed in Table 1-2 as indicated in Table 1-1.

**Table 1-1 Serial ROM LED Codes**

LED Display	Hex Code	Solution 1	Solution2	Solution 3
●●●●●●●●	FF	2	3	—
●●●●●●●○	FE	2	3	—
●●●●●●○●	FD	2	3	—
●●●●●○○●	FC	2	3	—
●●●●●○●●	FB	*		
●●●●●○●○	FA	2	5	3
●●●●●○○●	F9	2	5	3
●●●●●○○○	F8	2	5	3
●●●●○●●●	F7	2	5	3
●●●●○●●○	F6	*		
●●●●○●○●	F5	*		
●●●●○●○○	F4	1	4	—
●●●●○○●●	F3	*		
●●●●○○●○	F2	1	4	—
●●●●○○○●	F1	*		
●●●●○○○○	F0	1	4	—
○○●○○○○○	20	2	5	—

\* Informational only, never fails here.

**Table 1-2 Serial ROM LED Codes Action Table**

<b>Solution</b>	<b>Action</b>
1	Ensure that a good connection is made between the system module and I/O module.
2	Ensure that all memory SIMMs are properly installed. It may be necessary to reseat memory SIMMs.
3	Replace system module.
4	Replace I/O module
5	Replace MMB/SIMMs.

## Overview and Updates

### ASIC LED Codes

The ASIC LED codes represent continued power-on testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) , or hex code DD is not displayed on the LEDs, then use Tables 1-3 and 1-4 to isolate the failed FRU.

**Table 1-3 ASIC LED Codes**

LED Display	Hex Code	Solution 1	Solution 2	Solution 3
00●●0000	30	1	2	3*
00●●000●	31	1	2	3
00●●00●0	32	1	2	3
00●●00●●	33	1	2	3
00●●0●00	34	1	2	3
00●●0●0●	35	1	2	3
00●●0●●0	36	1	2	3
00●●0●●●	37	1	2	3
00●●●000	38	1	2	3
00●●●00●	39	1	2	3
00●●●0●0	3A	1	2	3
00●●●●●●	3F	<b>None: All tests Passed</b>		

\* If replacing the system module fixes the system, then try reinstalling the original I/O module.

**Table 1-4 ASIC LED Codes Action Table**

<b>Step</b>	<b>Action</b>
1	Reseat I/O module.
2	Replace I/O module.
3	Replace system module.

## Memory LED Codes

The memory LED codes represent continued power-on testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or hex code DD is not displayed on the LEDs, then use table 1-5 to isolate the failed FRU..

**Table 1-5 Memory LED Codes**

LED Display	Hex Code	Description
00•00000	20	Machine Check
00•0000•	21	CELL Fill mem with test pattern data
00•000•0	22	CELL Forward RD/Compare/Complement/Wr
00•000••	23	CELL Reverse RD/Compare/Complement/Wr
00•00•00	24	ADDR Fill mem with addresses as data
00•00•0•	25	Refresh test in progress
00•00••0	<b>26</b>	<b>Addr Read/Compare data = address</b>
00•00•••	<b>27</b>	<b>BITS Fill mem with a pattern of 1's in a field of 0's</b>
00•0•000	<b>28</b>	<b>BITS Read/Compare data = pattern</b>
00•0•00•	29	Reserved
00•0•0•0	2A	Reserved
00•0•0••	2B	LLSC load-locked/store-conditional tests
00•0••00	2C	B-cache tag parity detection
00•0••0•	2D	ECC detection
00•0•••0	2E	Reserved
00•0••••	2F	Clear memory to zeros

## NVR LED Codes

The NVR LED codes represent continued power-on testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or the hex code DD is not displayed on the LEDs, use Tables 1-6 and 1-7 to isolate the failed FRU.

**Table 1-6 NVR LED Codes**

LED Display	Hex Code	Solution 1	Solution 2
00●●●●0	3A	1	2
00●●●●●	3B	1	2
00●●●●00	3C	1	2
00●●●●●●	3D	1	2
00●●●●●●	3E	1	2
00●●●●●●	3F	<b>All Tests Passed</b>	

**Table 1-7 NVR LED Codes Action Table**

Step	Action
1	Reseat I/O module
2	Replace I/O module

## Overview and Updates

### SCC LED Codes

The SCC LED codes represent continued power-on and extended self-test testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or if hex code DD is not displayed on the LEDs, use Tables 1-8 and 1-9 to isolate the failed FRU.

**Table 1-8 SCC LED Codes**

LED Display	Hex Code	Solution 1	Solution 2	Solution 3
0●000000	40	*		
0●00000●	41	*		
0●0000●0	42	1	5	—
0●0000●●	43	2	5	—
0●000●00	44	1	5	—
0●000●0●	45	1	5	—
0●000●●0	46	1	5	—
0●000●●●	47	4	7	5**
0●00●000	48	3	6	5
0●00●00●	49	Reserved	—	—
0●00●0●0	4A	Reserved	—	—
0●00●0●●	4B	Reserved	—	—
0●00●●00	4C	Reserved	—	—
0●00●●0●	4D	Reserved	—	—
0●00●●●0	4E	Reserved	—	—
0●00●●●●	4F	*		

\* Informational only – never fails here. \*\* If replacing the I/O module fixes the system, then try reinstalling the original keyboard.



**Table 1-9 SCC LED Codes Action Table**

<b>Step</b>	<b>Action</b>
1	Reseat I/O module
2	Reseat modem loopback (only in service mode).
3	Reseat mouse connection.
4	Reseat keyboard connection
5	Replace I/O module.
6	Replace mouse
7	Replace keyboard

## Overview and Updates

### NI LED Codes

The NI LED codes represent continued power-on and extended self-test testing. If an error occurs during this testing sequence, then a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or if hex code DD is not displayed on the LEDs, then use Tables 1-10 and 1-11 to isolate the failed FRU.

**Table 1-10 NI LED Codes**

LED Display	Hex Code	Solution 1	Solution 2
0●0●0000	50	1	2
0●0●000●	51	1	2
0●0●00●0	52	1	2
0●0●00●●	53	1	2
0●0●0●00	54	1	2
0●0●0●0●	55	1	2
0●0●0●●0	56	1	2
0●0●0●●●	57	1	2
0●0●●000	58	1	2
0●0●●00●	59	1	2
0●0●●0●0	5A	1	2
0●0●●0●●	5B	1	2
0●0●●●00	5C	1	2
0●0●●●0●	5D	1	2
0●0●●●●0	5E	1	2
0●0●●●●●	5F	<b>None: All Tests Passed</b>	

**Table 1-11 NI LED Codes Action Table**

Step	Action
1	Reseat I/O module and system module.
2	Replace I/O module.

### ISDN LED Codes

The ISDN LED codes represent continued power-on and extended self-test testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or if hex code DD is not displayed on the LEDs, use Tables 1-12 and 1-13 to isolate the failed FRU.

**Table 1-12 ISDN LED Codes**

LED Display	Hex Code	Solution 1	Solution 2
0●●●0000	70	1	2
0●●●000●	71	1,3,4	2,5 (M800/M800S/M900)
0●●●00●0	72	1	2
0●●●00●●	73	1	2
0●●●0●00	74	1	2
0●●●0●0●	75	1	2
0●●●0●●●	77	3,4,1	2
0●●●●000	78	3,4,1	2
0●●●●00●	79	3,4,1	2
0●●●●●●●	7F	None: All Tests Passed	—

## Overview and Updates

**Table 1-13 ISDN LED Codes Action Table**

<b>Step</b>	<b>Action</b>
1	Reseat I/O module and system module.
2	Replace I/O module.
3	Make sure a handset is connected.
4	Make sure that the audio module cable is connected to the I/O module.
5	Replace Audio Module (M800/M800S/M900)

## SCSI LED Codes

The SCSI LED codes represent continued power-on and extended self-test testing. If an error occurs during this testing sequence, a hexadecimal code appears with FRU and error code information on the monitor screen.

If the system does not enter console mode (>>>) or if hex code DD is not displayed on the LEDs, use Tables 1-14 and 1-15 to isolate the failed FRU.

**Table 1-14 SCSI LED Codes**

LED Display	Hex Code	Solution 1	Solution 2
0●●00000	60	1	2
0●●0000●	61	1	2
0●●0000○	62	1	2
0●●000●●	63	1, then 3	2, then 4
0●●00●00	64	1, then 3	2, then 4
0●●00●0●	65	1, then 3	2, 4, then 5
0●●00●●○	66	*	
0●●00●●●	67	*	
0●●0●000	68	*	
0●●0●00●	69	*	
0●●0●0○0	6A	*	
0●●0●0●●	6B	*	
0●●0●●00	6C	*	
0●●0●●0●	6D	*	
0●●0●●●○	6E	*	
0●●0●●●●	6F	<b>None: All Tests Passed</b>	

\* Reserved for future use.

## Overview and Updates

**Table 1-15 SCSI LED Codes Action Table**

<b>Step</b>	<b>Action</b>
1	Reseat I/O module and system module.
2	Replace I/O module.
3	Check SCSI cables and SCSI ID.
4	Replace the drive.
5	All removable disk devices must have media installed.

### Console LED Codes

The last testing sequence before entering the console program now begins. If this is successful, the LEDs should display hex code DD for console entry.

If the system does not enter console mode, use Tables 1-16 and 1-17 to isolate the failed FRU.

No information appears other than the console (>>>) prompt or the DD hex code to indicate that the console mode has been entered.

**Table 1-16 Console LED Codes**

LED Display	Hex Code	Solution 1	Solution 2
●●●0●●●●	EF	*	
●●●0●●●0	EE	*	
●●●0●●0●	ED	*	
●●●0●●00	EC	1	2
●●●00●●●	EB	1	2
●●●000●0	EA	1	2
●●●0000●	E9	1	2
●●●00000	E8	1	2
●●●00●●●	E7	1	2
●●●00●●0	E6	1	2
●●●000●●	E5	1	2
●●●00000	E4	1	2
●●●000●●	E3	1	2
●●●0000●	E2	1	2
●●●0000●	E1	1	2
●●●00000	E0	*	
●●0●●●●●	DF	1	2
●●0●●●●0	DE	1	2
●●0●●●0●	DD	Console entry >>>	
00000000	00	**	

\* Informational only – never fails here. \*\* Console is about to be exited.

**Table 1-17 Console LED Codes Action Table**

Step	Action
1	Replace I/O module.
2	Replace system module.

### MIPS Emulator LEDs

The following LED codes represent MIPS emulator diagnostic tests. If an error occurs during one of the tests, the screen displays a FRU code and error code.

**Table 1-18 MIPS Emulator Codes**

LED Display	Hex Code	Description
●●●●●●	90	MIPS Emulator running with no errors.
●●●●●●	91	Invalid REX command entered.
●●●●●●	92	Unsupported REX command entered. Supported in REX but not supported by emulator.
●●●●●●	93	Bad address detected by the emulator.
●●●●●●	94	ROM not found in this slot.
●●●●●●	95	ROM object not found.
●●●●●●	96	Cannot load ROM object.
●●●●●●	97	Invalid MIPS-I instruction detected.
●●●●●●	98	ROM object called halt.
●●●●●●	99	Invalid callback called.
●●●●●●	9A	Unsupported callback called; callback currently not in this release.



## Memory LED Diagnostic Codes

The following memory LED code table supersedes and corrects the table on page 14–4 of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual.

The following LED codes represent memory diagnostic tests. If an error occurs during one of these tests, the screen displays an FRU code and error code.

**Table 1-19 Memory LED Diagnostic Codes**

Hex Code	Description
20	Machine Check
21	CELL Fill mem with test Pattern data
22	CELL Forward RD/Compare/Complement/Wr
23	CELL Reverse RD/Compare/Complement/Wr
24	ADDR Fill mem with addresses as data
25	Refresh test in progress
<b>26</b>	<b>ADDR Read/Compare data = address</b>
<b>27</b>	<b>BITS Fill mem with a pattern of 1's in a field of 0's</b>
<b>28</b>	<b>BITS Read/Compare data = pattern</b>
29	Reserved
2A	Reserved
2B	LLSC load-locked/store-conditional tests
2C	B-cache tag parity detection
2D	ECC detection
2E	Reserved
2F	Clear memory to zeros



# 2

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## System Upgrade Information

This chapter contains information for upgrading the DEC 3000 Model 600 to a Model 700 and the DEC 3000 Model 800 to a Model 900. You will need to use this chapter and the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual (EK-FLSPC-SV) to upgrade your system.

**Table 2-1 Upgrade Kits**

Model	Part Number
700	PE44U-AA/BA
900	PE54U-AA/BA

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**Note**

See Chapters 3 and 8 of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual for removal and replacement procedures.

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## Overview and Updates

**Table 2-2 Upgrade Parts List**

The following table lists of all the parts contained in the update kits:

<b>Model No.</b>	<b>Parts description</b>	<b>Part Number</b>	<b>Comments</b>
Model 700	CPU module	54-23153-05	
	Label, product conversion	36-15946-01	
	VMS-LIC. PAK DEC 3000 700	75-00023-15	BA version only
	OSF-LIC. PAK DEC 3000 700	75-00023-16	AA version only
	Upgrade Information Sheet	EK-D3AXP-IN	
	Alpha AXP FW/Console Kit	QZ-003AA-E8	
Model 900	CPU module	54-23153-04	
	Label, product conversion	36-15946-01	
	VMS-LIC. PAK DEC 3000 900	75-00022-15	BA version only
	OSF-LIC. PAK DEC 3000 900	75-00022-16	AA version only
	Wire harness assembly	17-03815-01	
	Wire harness assembly	17-03816-02	
	Fan bracket assembly	70-30888-01	
	Screw, sems 6-32 pan	90-00049-01	qty 2
	Screw, mach 6-32 flt	90-06039-02	
	Clip, cable	12-37200-02	qty 2
	Ferrite bead assembly	16-25105-18	
	Alpha AXP FW/Console Kit	QZ-003AA-E8	
	Upgrade Information Sheet	EK-D3AXP-IN	

## Upgrading from Model 600 to Model 700

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**Note**

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See Chapters 3 and 8 of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual for removal and replacement procedures.

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### Procedure 1

1. Check all field blitzes and verify that any needed field notices have been installed in the system.
2. If the system is not already operating with OSF Version 2.1 or later, or VMS Version 6.1 or later, then back up all the files.
3. Ensure that the customer has all required Base operating systems and layered product licenses (PAKS) to support installation of OSF Version 2.1 or later or VMS Version 6.1 or later.
4. Shut down the operating system and upgrade your system firmware to Version 3.3 or later by following the procedure in the firmware release notes.
5. Power up the system and verify that the system firmware has been properly updated.

## Overview and Updates

### Procedure 2

1. Remove the disk-tray assembly.
2. Remove the TURBOchannel option cards, and take note of the slot number that each card was installed in.
3. Remove the 4 MMB modules (leaving SIMM cards installed).
4. Remove the disk-tray supports.
5. Remove the I/O module.
6. Remove the system module.

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#### **Note**

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Save the nylon washers for remounting the system module.

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**Procedure 3**

1. Install the Model 700 system module.

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**Caution**

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Use the nylon washers saved previously when you install the new system module. Place the two washers on the two most centered screws. Failure to use nylon washers will result in an inoperable system.

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2. Reassemble the system to its original configuration by performing the reverse of procedure 2.

**Procedure 4**

1. Power up the system and verify that the system powers up correctly.
2. Complete the assembly of the system enclosure.
3. Run all extended power up self-tests.
3. Install the new OSF/1 Version 2.1 or later, or VMS Version 6.1 kit or later (if not already done) and restore all of the customer's files.
4. Package the old system module for return to Digital. Use the packaging from the new system module.

## Overview and Updates

### Upgrading from Model 800 to Model 900

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**Note**

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See Chapters 3 and 8 of the *DEC 3000 Models 600/600S AXP and 800/800S AXP Service Information* manual for removal and replacement procedures.

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#### Procedure 1

1. Check all field blitzes and verify that any needed field notices have been installed in the system.
2. If the system is not already operating with OSF Version 2.1 or later, or VMS Version 6.1 or later, then back up all the files.
3. Ensure that the customer has all required Base operating systems and layered product licenses (PAKS) to support installation of OSF Version 2.1 or greater or VMS Version 6.1 or later.
4. Shut down the operating system and upgrade your system firmware to Version 4.0 or later by following the procedure in the firmware release notes.
5. Power up the system and verify that the system firmware has been properly updated.



## Overview and Updates

### **Procedure 2**

1. Remove the TURBOchannel option cards, and take note of the slot number that each card was installed in.
2. Remove the 4 MMB modules (leaving SIMM cards installed).
3. On the right side of the enclosure (the side with the drive bays), disconnect the three power cables and the cable to the light and switch module from the system module.
4. Remove the system module.

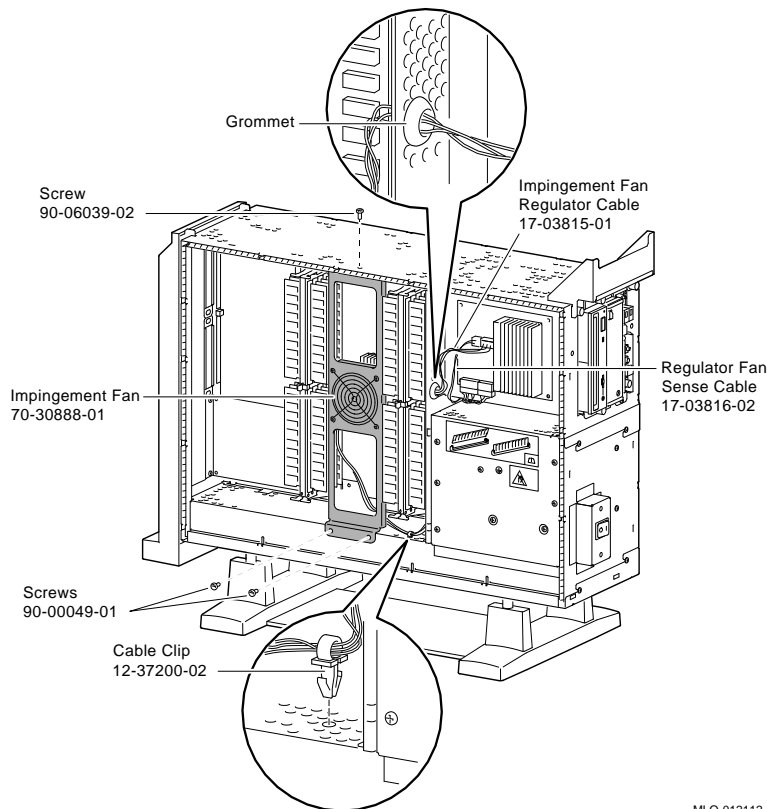
### **Procedure 3**

1. Install the Model 900 system module.
2. Reassemble the system to its original configuration by performing the reverse of procedure 2.

## Overview and Updates

### Procedure 4

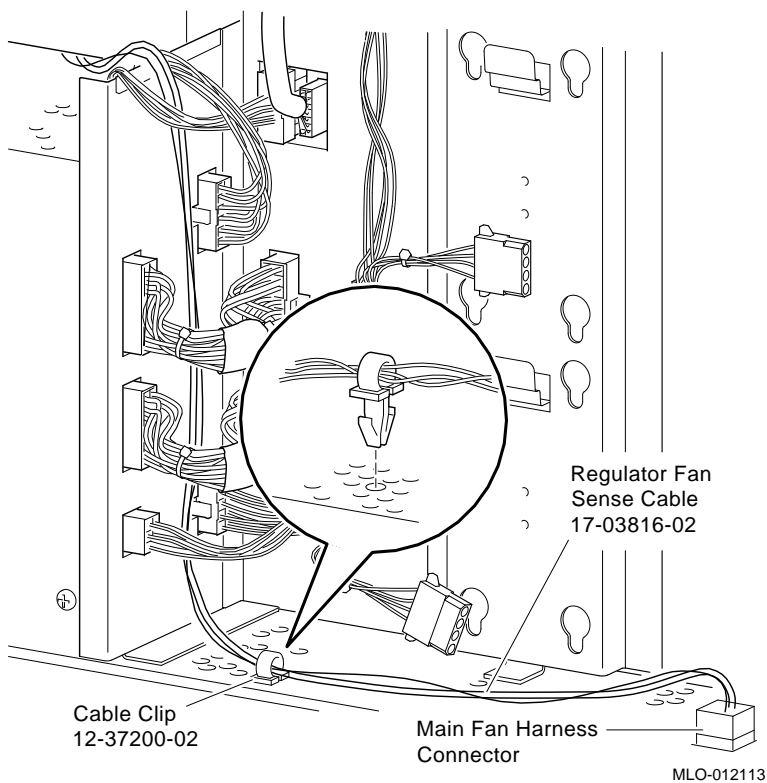
1. Install the impingement fan assembly and regulator cable by completing the following steps:
  - A. Position the fan assembly into the system box and screw it in as shown.
  - B. Install cable (17-03815-01) into clip (12-37200-02) and attach clip through hole in chassis as shown.
  - C. Remove the grommet and route the cable through the hole from which the grommet was removed. Then route the cable through the grommet and install the grommet in its original location.
  - D. Connect the impingement fan regulator cable (17-03815-01) to the impingement fan and regulator as shown.



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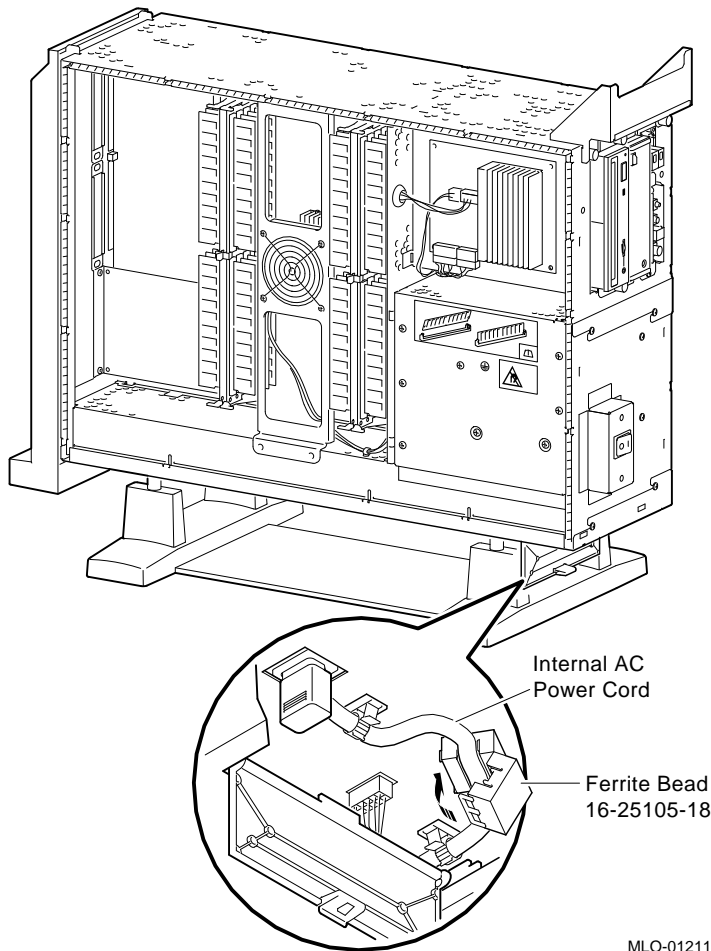
## Overview and Updates

2. Install the regulator fan sense cable (17-03816-02) by completing the following steps:
  - A. Connect regulator cable to the main fan harness connector.
  - B. Install regulator cable into clip and attach through hole in chassis as shown.
  - C. Route the cable under the removable media tray and connect to regulator as shown in the figure on page 2-8.



## Overview and Updates

3. Install the ferrite bead as described in the following instructions:
  - A. Remove the internal AC power cord from the clip nearest to the AC power connector.
  - B. Install the snap on ferrite bead around only the AC power cord (not the ground pigtail wire) as shown.
  - C. Replug the AC power cord and make sure that it is clipped in.



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## Overview and Updates

### Procedure 5

1. Power up the system and verify that all of the fans are moving and that the system powers up correctly.
2. To make sure that the firmware is matched in the CPU and I/O, follow the firmware release notes and boot the update utility. Then use the verify command to ensure that both the CPU and I/O ROM firmware revision match. If they do not match then update the firmware with Version 4.0 or later.
3. Complete the assembly of the system enclosure.
4. Verify the system is functional by running all extended power-up self-tests.
5. Install the new OSF/1 Version 2.1 or later or VMS Version 6.1 kit or later (if not already done) and restore all of the customer's files.
6. Package the old system module for return to Digital. Use the packaging from the new system module.

