

DIGITAL	FCO	CATEGORY [0]	PAGE 1 OF 4
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FIELD CHANGE ORDER	NUMBER: KN15-BA-0002
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APPLICABILITY:

This is an as needed FCO and should only be used on DEC 3000 AXP Model 400/400S systems that meet ALL the following criteria:

1. The system is exhibiting the symptoms described below.
2. The system module (54-21149-02) is below revision level H09 for D etch modules or H10 for F etch modules.
3. Any options that utilize the TURBOchannel DMA reads feature, such as:

TNVRAM	JV2	PMAG-D,	PMAGB-EA
DEFTA	KZTSA-AA	PMAGB-DA	PMAGB-FA

NOTE: This option list is not all inclusive. Some 3rd party TURBOchannel options may also contribute to this problem.

PROBLEM & SYMPTOM:

The problem manifests itself as an interaction between TURBOchannel DMA reads and conflicted I/O writes, and results in the possibility of a system hanging forever. The system will require a hard reset to clear this system hang. All this is invisible to the software, since conflicts on the TURBOchannel are purely a hardware feature.

SOLUTION:

The solution for this problem is to replace the system module (54-21149-02) with a new system module - which will be, at a minimum, revision H09 D etch, or H10 F etch.

QUICK CHECK:

The system module (54-21149-02) is at revision level H09 for D etch or H10 for F etch modules and the system complies with the 3 criteria listed above.

PRE/CO-REQUISITE FCO: None

MTTI HRS
1.0

TOOL/TEST EQUIPMENT: Power-up self-test is all that is needed.

FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS
EQ-01678-01	1 54-21149-02 System Module (Rev H*)
FA-05014-01	1 FCO Field Applicability Document (FA)

APPROVALS

TECH. ENGINEER Bob Sherman	ENG. BUSINESS MGR. Joe Bitto	DSHQ LOGISTICS Scott Almeida	DS PRODUCT SAFETY Robert Brister
IDC PUBLISHING Brenda Rogers	PARTS AVAILABILITY December 1993	FCO REVISION A	FCO RELEASE DATE December 1, 1993

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INSTRUCTIONS ON HOW TO INSTALL THE KN15-BA-0002 FCO

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*****
*                                     *
*                   CAUTION          *
*                                     *
*   WEAR A STATIC WRIST STRAP AND   *
*   USE A STATIC MAT.                *
*                                     *
*   This module, as all other modules, *
*   contains electrostatic discharge *
*   sensitive devices (ESDS).         *
*   The use of the VELOSTAT kit is    *
*   essential to prevent damage      *
*   which may not be noticed         *
*   immediately.                     *
*                                     *
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1. Refer to Chapter 7 of the DEC 3000 AXP Model 400/400S Service Information (EK-SNDPR-SV). Chapter 7 has more detail on how to remove and replace the parts required for this FCO.

2. Have the customer shutdown the system software.

3. Power off the system.

4. Loosen the rear captive screw and slide the cover towards the front of the system and lift it off.

5. Mark and remove all external cables from rear of system.

6. Disconnect the short SCSI cable from connector, loosen the two captive screws mounted on the drive shelf front face plate.
7. Loosen the two knurled screws located near the rear of the shelf.
8. Tilt the rear of the drive shelf forward to allow access to the power connector. Disconnect the power connector.
9. Tilt the drive shelf completely forward and lift the shelf tabs from the chassis slots.

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10. Remove the I/O module from the system. You can now see the system module revision.

11. The system module revision is located on a label that is on the left rear side of the system module. Check the revision.

If it is below H09 for D etch, or H10 for F etch, continue with step 12 and install this FCO.

If the system module is at H09 for D etch, or H10 for F etch, or higher, DO NOT INSTALL THIS FCO.

12. Remove the four Memory Mother Boards (MMBs).

13. Remove any TURBOchannel options installed in the system.

14. Disconnect the power supply connectors from the system module.

15. Remove the six screws that attach the system module to the base

of the workstation chassis.

16. Lift the system module from the front and slide it forward and out of the system.

17. Install the new system module from the FCO kit.

18. Reverse steps 16 through 3 to restore the system.

19. Reboot the operating system.

20. Report this FCO activity on the LARS form in the "Fail Area/Module/FCO/Comments" column as follows: FCO KN15-BA-0002

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LARS

	USA	APA	EUROPE
Activity -			
(a)Contract	W	U	K
Warranty	W	U	W
(b)IN-DEC Contract	K	U	A
Non Contract/Non Warranty	F	F	F
(c)RTD/Off-site Agreement	F	U	F
Hardware Segment Code	111	111	111
Product Line	031		031
DEC Option	A3400	A3400	A3400
Option ID	X	N/A	N/A
Type of Call	M	M	M
Action Taken	D	D	I/V
Fail Area-Module-FCO-Comments	KN15-BA-0002	KN15-BA-0002	KN15-BA-0002

- (a) Warranty Optimum, Warranty Standard and Warranty Basic (on-site) Agreements; * Note material (only) free of charge for all customers.
- (b) Applies to IN-DEC Area Only
- (c) RTD=Return to Digital or Off-site Agreements; If Field Engineer On-site, use Activity Code "F".

FCO CHARGING INFORMATION

WARRANTY/CONTRACT				NONWARRANTY/NONCONTRACT				
ON-SITE		OFF-SITE		ON-SITE		OFF-SITE		MATERIAL ONLY
TRAVEL/ INSTALL	EQ KIT	INSTALL	EQ KIT	TRAVEL/ INSTALL	EQ KIT	INSTALL	EQ KIT	ORDER-ADMIN, HANDLING PKG, SHIPPING & EQ KIT
DEC	DEC	DEC	DEC	CUST	CUST	CUST	CUST	CUST

\\FCO_DOCS KN15-BA