DIGITAL	FCO	CATEGORY [O]	PAGE 1 OF 4

FIELD CHANGE ORDER	NUMBER: KN15-AA-O002

APPLICABILITY: This is an "as needed" FCO and should only be used on DEC3000 AXP Model 500/500S systems that exhibit the symptoms listed below, and have a system module below revision level "J05" for D etch modules, or "J06" for F etch modules. See ECO # 5421149-DSG005.

PROBLEM & SYMPTOM: The problem manifests itself as an interaction between TURBOchannel DMA reads and conflicted I/O writes, and results in the possibility of an indefinite system hang. 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 with the new system module Rev. "J05" D etch, or Rev. "J06" F etch.

QUICK CHECK: Look for revision "J05" or "J06" printed on the system module. To determine the rev. level, the system must be disassembled and the system module inspected. If it is not at revision "J05" or "J06" and the failure symptoms are as indicated above, then the FCO should be installed.

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-01676-01	54-21149-01 System Module and FA Document
FA-05012-01	Field Application Document (FA Document)

FCO CHARGING INFORMATION (See Page 4 of 4)

APPROVALS

TECH. ENGINEER Bob Sherman	ENG. BUSINESS MGR. Joe Bitto	DSHQ LOGISTICS Scott Almeida	DS PRODUCT SAFETY Robert Brister

```
+----------------------------+   |
|   |   |   |   |   |   |   | |   |        FCO   KN15-AA-O002
| d | i | g | i | t | a | l| |   |
|   |   |   |   |   |   |   | |   |        PAGE 2 OF 4
+----------------------------+   |
_____|_____
```

INSTRUCTIONS ON HOW TO INSTALL THE KN15-AA-O002 FCO
_____

```
*********************************************************************
*                          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.                 *
*                                                                   *
*********************************************************************
```
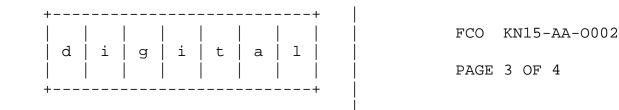
1. Refer to Chapter 7 of the DEC 3000 AXP Model 500/500S Service
   Information Manual (EK-FLAMI-SV). Chapter 7 will instruct you
        on how to remove and replace the parts needed for this FCO.

   2. Have the customer shutdown the system software.

3. Power-off the system and disconnect power cord from wall socket.

4. Remove top cover and both side panels.

5. The system module revision label is located on the bottom left
        side of the system module. If there is a TURBOchannel option in
        the bottom slot, you will have to remove it to see the revision
        label. If the system module is a D etch the minimum revision
        is "J05", and if the system module is a F etch the minimum
   revision is "J06". If the system has one of these modules you do
   not need to install this FCO and you can re-install the TURBO-
        channel option (if present), the two side panels and the top
        cover. If the system module is below "J05" for D etch, or "J06"
        for F etch, you must continue with these instructions and install
        this FCO.

6. Remove all cables from the back of the system unit.

7. Remove the four memory mother boards.

8. Remove any TURBOchannel options installed on the system
   module side.

9. Disconnect the three power supply connectors from the back
            side of the system module.

```
+----------------------------+    |
|   |   |   |   |   |   |   | |    |                FCO   KN15-AA-O002
| d | i | g | i | t | a | l | |    |
|   |   |   |   |   |   |   | |    |                PAGE 3 OF 4
+----------------------------+    |
_____|_____
```

10. Release the six captive rivets that hold the system module
            in place and remove the system module.

11. Install new Rev. J06 system module.

12. Check the right side of the system to be sure that the I/O
            module is seated.

13. Reconnect the three power supply connectors from the power
            supply to the system module and put the right side panel
            back on.

14. Re-install the four memory mother boards and any TURBOchannel
    options that were removed earlier.

15. Put the left panel and top cover back on.

16. Reconnect all the cables that were removed earlier.

17. Power-on the system and let the power-up self-tests run. If
            the power-up self-tests pass, then go to the next step. If
            they fail, go to Section 6 of the DEC 3000 AXP Model 500/500S
    Service Manual for troubleshooting techniques.

18. Reboot the operating system.

19. Report this FCO activity on the LARS form in the "Fail Area/
            Module/FCO/Comments" column as follows: FCO KN15-AA-O002.
            (See example on Page 4 of 4)

LARS

	USA	GIA	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	A3500	A3500	A3500
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-AA-O002	KN15-AA-O002	KN15-AA-O002
Material Used	EQ-01676-01	EQ-01676-01	EQ-01676-01

(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_DOCS
\\KN15-AA
\\DEC 3000