DIGITAL	FCO	CATEGORY	PAGE 1
		[I]	OF 5

FIELD CHANGE ORDER   NUMBER: 64XMX-I003

APPLICABILITY: Upgrade applicable 6000-4XX system CPU modules to a minimum revision "AM" ONLY WHEN ADDING A DWMVA option to an existing system. Also, ensure a spare module rev "AM" is available to support this at the SDU. This FCO incorporates ECO #T2015-TWO011.

PROBLEM & SYMPTOM: Installation of the DWMVA option requires 6000-4XX CPU modules to be upgraded to a new minimum part revision of "AM".

SOLUTION: Upgrade applicable 6000-4XX system CPU modules upon installation of the DWMVA add-on option. Use module part revision "AM" or higher.

QUICK CHECK: Component at location E97 is p/n 23-308E9-00 for rev "AM". Component at location E77 should be p/n 23-307E9-00.

PRE/COREQUISITE FCO: N/A	MTTI HRS .5/Module

TOOL/TEST EQUIPMENT: Field Service Tool Kit.

FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS	EQ KIT VARIATION APPLICABILITY
EQ-01630-03 FA-04965-03	T2015-00 Module Min Rev "AM" FA-04965-03 FCO Document	YES

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	CUS	CUS	CUS	CUS	CUS

APPROVALS

CSSE Jim Vermette	CSL LOGISTICS Len Pellerin	CS PRODUCT SAFETY Robert Brister
CSSE MANAGER Ric Grogan	This document is published on multiple media including hardcopy, Customer Services	FCO RELEASE DATE
MICROMEDIA	Microfiche Libraries,	FCO REVISION

```
| Diane MacDonald      |Customer Services CD-ROM and| A                           |
|_____|MDS Microfiche Libraries.   |-----------------------------|
| POPULATION           |                            | PARTS AVAILABILITY          |
|   225                |                            |                             |
|                      |                            |                             |
|_____|_____|_____|
```

```
***********************************************************************************
*                                  NOTE                                          *
*  The DWMVA option requires VAX/VMS Version 5.4-3. PLEASE DO NOT                 *
*  INSTALL the DWMVA option until the system has been upgraded with this         *
*  version of VAX/VMS.                                                           *
***********************************************************************************
```

           INSTALLATION AND TEST PROCEDURE FOR 64XMX-I003
           ----

   1. Shut down the VAX/VMS operating system:

        Example of shutdown:

        $ @sys$system:shutdown

        SHUTDOWN -- Perform an Orderly System Shutdown on node PEEVEE

        How many minutes until final shutdown [0]:<CR>
        Reason for shutdown [Standalone]:<CR>
        Do you want to spin down the disk volumes [NO]?<CR>
        Do you want to invoke the site-specific shutdown procedure [YES]?<CR>
        Should an automatic system reboot be performed [NO]?<CR>
        When will the system be rebooted [later]:<CR>
        Shutdown options (enter as a comma-separated list):
         REMOVE_NODE   Remaining nodes in the cluster should adjust quorum
         CLUSTER_SHUTDOWN   Entire cluster is shutting down
         REBOOT_CHECK   Check existence of basic system files
         SAVE_FEEDBACK   Save AUTOGEN feedback information from this boot

        Shutdown options [NONE]:<CR>

        VMS will issue several messages indicating it is shutting down.
        Finally, VMS will issue:

        SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM

   2. At this point perform a Control^P to halt the primary processor.
       The console will print the following, but the numeric values may
       not match the example:

```
?02 External halt (CTRL/P, break, or external halt)
    PC  = 801C7F92
```

3. Enter INITIALIZE at the >>> prompt. This will reset the whole
    system and force all processors into console mode.

```
 _ _ _ _ _ _ _                |        FCO     64XMX-I003
| | | | | | | |               |
|d|i|g|i|t|a|l|               |        PAGE   3  OF  5
|_|_|_|_|_|_|_|               |
_____|_____
```

4. Examine the console map to determine the location of each processor
    in your system. Record the location of each processor and which
    processor is the dedicated primary.

5. Enter the SHOW BOOT command, and record the saved boot
    specifications. Here is a sample of the command output:

```
>>> SHOW BOOT
  DEFAULT /XMI:E /BI:4 DU3D
  R54A    /R5:00000001/XMI:E/BI:4 DU4A
  DIAG    /R5:00000010/XMI:E/BI:4 DU15
```

    If the SHOW BOOT command does not produce information it means that
    there hasn't been a SAVE BOOT.

6. Enter the <CTRL/3><DEL>SHOW SYSTEM SERIAL command, and record the
    system serial number. Here is a sample of the command output:

```
    *******************************************************
    *                        NOTE                         *
    *On VT100 series terminals replace <CTRL/3> with  <ESC> *
    *in the steps below.                                  *
    *******************************************************
```

```
    >>> $^?SHOW SYSTEM SERIAL
    System serial number: xxxxxxxx
```

7. Use the SETUP feature on your terminal, and ensure the baud rate of
    the terminal is set to 1200 baud. This is necessary due to the
    T2015-00 module within the FCO kit has the baud rate set to 1200 as
    the default.

8. Turn the upper key switch on the system control panel fully
    counterclockwise. This shuts off the output of the battery
    backup unit if present. To ensure "Total Off", pull the power
    circuit breaker on the H405 AC power controller located on the
    lower right side at the back of the system. Unplug the system.

9. Use ALL ESD safety precautions to prevent DOA modules in upgrade
    kit.

```
        ********************************************************************
        *                        C A U T I O N                          *
        *                                                                *
        *        All VAX modules contain electrostatic discharge         *
        *        sensitive devices (ESDS).  The use of an antistatic     *
        *        wrist strap attached to the cabinet is essential when   *
        *        handling modules.                                       *
        ********************************************************************
```

10. Unscrew the XMI cardcage cover assembly and remove the cover.

11. Remove the T2015-00 module targeted for upgrade from the cardcage
     using all ESD procedures. Check the revision of the module taken
     from the machine. If the module is an "AM" reinstall it in the same
     slot and proceed to next step. If the module revision is below
     revision "AM" install module from EQ-01630-03 and repeat this step
     for all T2015-00 modules installed within the XMI backplane.

12. Re-install the XMI cardcage cover assembly and tighten retaining
     screw.

13. Install the new DWMVA option in accordance with the Installation
     Guide which comes with the option.

14. Record the original position of the lower key switch. Turn lower
     key switch on the system console panel to the UPDATE Position.

15. Plug in the system. Apply power to the system by pushing the
     Circuit Breaker in to the "ON" position. Power up the system by
     turning the upper key switch on the system control panel
     clockwise to the "ENABLE" position.

16. Enter the <CTRL/3><DEL>SET SYSTEM SERIAL command, using the serial
     number you recorded in Step 6. Here is a sample output from the
     command:

```
     ****************************************************************
     *                         NOTE 1                              *
     *                                                             *
     *   On VT100 series terminals replace <CTRL/3> with  <ESC>    *
     *   in the steps below.                                       *
     ****************************************************************
```

```
         >>> $^?SET SYSTEM SERIAL
         System Serial Number>>> AG83701988
         Serial number read as: AG83701988

          Update EEPROM? (Y or N) >>> Y
         ?73 System serial number updated.
```

```
***********************************************************
*                        NOTE 2                          *
*                                                         *
*If more than one processor is being FCO'd, the system serial *
*number must be updated for each processor. Proceed with       *
*command "SET CPU n" where n = CPU Node Id.Repeat step 16 for *
*each CPU module installed.                                *
***********************************************************
```

17.   Enter the boot specifications you saved previously in Step 5
      using the SET BOOT command. Here is a sample input;

      >>> SET BOOT DEFAULT /XMI:E/BI:4 DU3D


```
 _ _ _ _ _ _                |      FCO     64XMX-I003
| | | | | | | |             |
|d|i|g|i|t|a|l|             |      PAGE   5  OF  5
|_|_|_|_|_|_|_|             |
_____|_____
```


      If your system contains more than one processor, entering the
      SET BOOT command causes the boot specification to be copied to all
      processors, so this command does not need to be repeated on each
      processor.

18. Return the lower front panel key switch to the HALT position.

19. Boot the Diagnostic Supervisor (VDS) ERSAA.EXE

20. Load and run the following diagnostics:

        ERKAX   Functionality
        ERKMP   Multiprocessor Exerciser
        EVKAQ   Basic Instructions Exerciser Part I
        EVKAR   Basic Instructions Exerciser Part II
        EVKAS   Floating Point Instructions Exerciser Part I
        EVKAT   Floating Point Instructions Exerciser Part II
        EVKAU   Privileged Architecture Exerciser Part I
        EVKAV   Privileged Architecture Exerciser Part II

21. Return the lower key switch to the position recorded in Step 14.

22. Bring up the operating system.

23. Update Site Management Guide to reflect this FCO.

24. Report FCO activity on LARS form in the "Module/fail area/FCO".

                          LARS EXAMPLE

CATEGORY I   USA   GIA   EUROPE

```
       Activity -
       (a)Contract and Warranty     W                 U                 Y
       (b)IN-DEC Contract           K
          Hardware Segment Code     031               111
          Non Contract/Non Warranty F                 F                 F
       (c)RTD/Off-site Agreement    F
          Product Line              031               031

       DEC Option                   64XMX             64XMX             64XMX
       Type of Call                 M                 M                 M
       Action Taken                 D                 D                 I
       Fail Area-Module-FCO-Comments 64XMX-I003       64XMX-I003        64XMX-I003
       Material Used                EQ-01630-03       EQ-01630-03       EQ-01630-03

       (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
\\64XMX
\^ 64XMX
\\6000-4XX
\\EQ-01630-03
\\1992
```