DIGITAL	FCO	CATEGORY [I]	PAGE 1 OF 5

FIELD CHANGE ORDER	NUMBER: 65XMX-I001

APPLICABILITY: Ugrade applicable 6000-5XX system CPU modules (T2052-00) to a minimum revision "K" ONLY WHEN ADDING the DWMVA add-on option to an existing system. Also, ensure a spare module rev "K" is available to support this at the SDU. This FCO incorporates ECO #T2052-TWO003.

PROBLEM & SYMPTOM: Installation of the DWMVA option requires 6000-5XX CPU modules to be upgraded to a new minimum part revision of "K".

SOLUTION: Upgrade applicable T2052-00 CPU modules upon installation of the DWMVA add-on option to an existing system.Use minimum part revision "K".

QUICK CHECK: Component at location E10 should be marked 23-312E9-00. Component at location E8 should be marked 23-311E9-00 and component at location E4 should be marked 23-310E9-00.

PRE/CO-REQUISITE FCO: N/A	MTTI HRS .5/Module

TOOL/TEST EQUIPMENT:

FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS	EQ KIT VARIATION APPLICABILITY
EQ-01630-04	(1) T2052-00 Module, Min Revision "K"	
FA-04965-04	(1) FA-04965-04 FCO Document	

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

APPROVALS

CSSE Jim Vermette	CS 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

```
 _ _ _ _ _ _ _                         |       FCO   65XMX-I001
| | | | | | | | |                      |
| | | | | | | | |                      |
|d|i|g|i|t|a|l|                        |       PAGE 2  OF  5
|_|_|_|_|_|_|_|                        |
                                       |
_____|_____
```

```
***************************************************************************
*                              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 65XMX-I001
----

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     65XMX-I001
| | | | | | | | |              |
|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
    T2052-00 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.                                       *
   ******************************************************************
```

FCO   65XMX-I001

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

11. Remove the T2052-00 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 "K" reinstall it in the same
    slot and proceed to next step. If the module revision is below
    revision "K" install module from EQ-01630-04 and repeat this step
    for all T2052-00 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    65XMX-I001
| | | | | | | |             |
|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) EMSAA.EXE

20. Load and run the following diagnostics:

       EMKAX   Functionality
       EMKMP   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 S,O,F,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                   65XMX           65XMX           65XMX
      Type of Call                 M               M               M
      Action Taken                 D               D               I
      Fail Area-Module-FCO-Comments 65XMX-I001     65XMX-I001      65XMX-I001
      Material Used                EQ-01630-04     EQ-01630-04     EQ-01630-04

      (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".
\\65XMX
\\FCO_DOCS
\^ 65XMX
\\6000-5XX
\\EQ-01630-04
\\1992
```