_ FCO KDB50-R002, Required microcode fix for ULTRIX based system

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|  _ _ _ _ _ _ _                                                        |
| | | | | | | | |                       Level of        Page _1__      |
| |d|i|g|i|t|a|l|                       Urgency         Of ___10_       |
| |_|_|_|_|_|_|_|          FCO           [ R ]                          |
|_____|
| FIELD CHANGE ORDER                       Number:   KDB50-R002         |
|_____|
| Applicability:   All VAXBI systems using the KDB50 DSA Disk Controller.|
| This FCO incorporates ECO T1002-CX014.                               |
|                                                                      |
| NOTE:   This FCO is an absolute requirement for all ULTRIX based systems.|
|         The T1002 module must be at Revision "D" or higher to implement|
|         this FCO at the customers site. If the T1002 module is below Rev.|
|         "D", replace it.                                             |
|_____|
| Problem/Symptoms:  A number of problems have been solved by correcting|
| the uCode as required.                                              |
| NOTE:  Refer to Section I for VAX 8500/8700/8800 Field Installation and|
| Test Procedures.  Refer to Section II for VAX 8200/8300 Field        |
| Installation and Test Procedures.                                   |
|_____|
| Quick Check:  P/N on PROM at E97, 23-006U2-00.  If PROM 23-006U2-00 is|
| already installed in E97 on the T1002 module, then this FCO isn't need.|
|_____|
| Compatibility/Prerequisite FCO:    N/A          | Est. Time to Install:|
|                                                 |  1.5 hrs.           |
|_____|_____|
| Special Tools or Test Equipment:   Velostat Kit P/N 29-26246-00,  IC |
| Insertion Tool P/N 29-24793-00.                                     |
|_____|
|                         FCO Parts Information                        |
|_____|
| Order by   |                    Contents                            |
| FCO Kit #  |_____     |
|            | Quantity      Part Number      Description             |
| EQ-01507-01|    1          70-23910-02      6 piece PROM set         |
|            |    2                           Rev. Labels             |
| FA-04802-01|    1                           FCO Document            |
|_____|_____      |
| EQ Kit Variation/System-Option Applic:                              |
|_____|
|                          Approvals                                  |
|_____|
| CSSE Engineer          |F.S.  Product Safety   | F.S.  Logistics     |
| Glenn Scadden          | Robert Brister        | Ed Duggan           |
|_____|_____|_____|
| Responsible CSSE Mgr.  |F.S. Microfiche Libraries| Affected Population|
| Randy Elmer            |                       |    11,000           |
|_____| EP-FSNVX-LB   VAX     |_____|
| MicroMedia Publishing  |                       | Initial Kitting     |
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| Ray LeBlanc | VAXnotes | 11,000 |
|_____| STARS |_____|
| Revision: | | Hardcopy Publication |
| A | | 11,000 |
|_____| |_____|
| FCO Release Date | | Parts Availability |
| 7-OCT-1988 | | October 1988 |
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I.   VAX 8500/8700/8800 - FIELD INSTALLATION AND TEST PROCEDURES

     ****
     *   NOTE   *
     *   *
     *   TAKE IN CONSIDERATION WITH THE CUSTOMER THAT A BACKUP OF   *
     *   ALL DRIVES CONNECTED TO THE KDB50 MIGHT BE PERFORMED PRIOR   *
     *   TO THE INSTALLATION OF THIS FCO. HOWEVER, DEFINE ONE DISK   *
     *   TO DO THE FINAL TESTING AND MAKE SURE THAT THIS ONE IS   *
     *   BACKED UP.   *
     ****

     1.   Shut down the system by executing the shutdown command procedure.

          $ @SYS$SYSTEM:SHUTDOWN

          After VMS shut down, type HALT (Or the appropriate "control key"
          to halt the system)....You will now be in console mode prompt is >>>

     2.   Spin down all disks connected to the KDB50.

     3.   Use the 8800 console command to power the system off.

          >>>POWER OFF (CR)

          Now open right rear door of CPU cabinet and set CB1, the main
          circuit breaker on the 876 power controller to the "OFF" (O)
          position.

     ****
     *   NOTE   *
     *   *
     *   THE USE OF ESD EQUIPMENT (VELOSTAT KIT P/N 29-26246-00)   *
     *   IS AN ABSOLUTE REQUIREMENT FOR THIS PROCEDURE. COMPONENT DAMAGE   *
     *   WILL OCCUR IF PROPER GROUNDING IS NOT OBSERVED. THE PARTS IN   *
     *   THE EQ-KIT ARE C-MOS, SO BE VERY CAREFUL WHEN INSTALLING THESE.   *
     ****

4. Set up the VELOSTAT Kit:
    - Unfold the VELOSTAT mat to full size (24x24).
    - Attach the 15' ground cord to the VELOSTAT snap fastener on
      the mat.
    - Attach the alligator clip end of the ground cord to a good
      ground on the cabinet.
    - Attach the wrist strap to either wrist and the alligator clip
      to a convenient portion of the mat.

5. Open air-flow slides in front of the card gage around slot
    containing the T1002 module.

6. Locate the T1002 module (KDB50 Microprocessor Module) in the BI
    module cage, raise the actuating lever, and remove the module.

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7. Check the revision of the T1002 module. If the T1002 module
    is at ETCH "C" REV M1 or ETCH "D" REV M2, Proceed to step 12.
    If the module is below the above revision proceed to step 8.

8. Locate the six PROM sockets in the upper left hand portion of
    the module. Refer to Figure 1 on page 10.

9. Carefully remove the current PROMs and set them aside.

10. Using the ROM insertion tool (see Special Tools and Test
    Equipment requirements listed on the front page), insert the
    new PROMs in the following order:

Socket	PROM part number
E 50	23-001U2-xx
E 61	23-002U2-xx
E 72	23-003U2-xx
E 83	23-004U2-xx
E 92	23-005U2-xx
E 97	23-006U2-xx

    The key which identifies pin 1 has to go towards the top edge of the
    module. Refer to Figure 1 on page 10.

11. Locate the revision level label along the top edge of the module
    and replace the label with the new revision label from the upgrade
    kit.

    The new revision label should indicate the new REV:

M1 for an ETCH "C" module; M2 for an ETCH "D" module.

12.   Reinstall the module in the BI module cage. Insure that the module
       is properly seated. Close the air-flow slides.

13.   Set circuit breaker CB1 on the 876-A power controller to the ON (1)
       position.

       Use the 8800 console command to power the system ON.
       >>>POWER ON <CR>

14.   Verify that the KDB50 passes self test by observing that the amber
       light is illuminated on the T1002 module. Close and latch cabinet
       doors.

15.   Spin up the drive you have backed up and selected for final testing.

       ****
       * If you run any diagnostic in the user data area of the disk, *
       * be sure that the customers data is backed up.   *
       ****


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```

16.   Run diagnostic EVRLF for three passes and diagnostic EVRLJ for
       fifteen minutes. These are Level 3 Diagnostics, so you have to
       boot the system STANDALONE.

       When running EVRLJ answer the questions as followed:

       Do you wish to change the global test parameters [(No), Yes],
       Type N.

       Do you wish to change the device specific test parameters [(No),
       Yes], Type N.

       ****
       * In this mode the diagnostic will set the drive WRITE PROTECT *
       * and not overwrite customer data. The backup has been done for *
       * safety reasons.   *
       ****

       After 15 minutes of runtime type CTRL C This will bring you
       back to the Diagnostic Supervisor prompt, DS>

       Now type:

       DS>sum (CR)

Check the summary for any errors. If both diagnostics run
error free continue.

17. Spin up the other drives connected to the KDB50.

18. Reboot the customers system and return the system to the customer.

19. Update site management guide to reflect FCO change.

20. Complete LARS form as per example on page 9.

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 _ _ _ _ _ _                    |        FCO   KDB50-R002
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II VAX 8200/8300 – FIELD INSTALLATION AND TEST PROCEDURE.

```
********************************************************************
*                            NOTE                                *
*                                                                *
*   TAKE IN CONSIDERATION WITH THE CUSTOMER THAT A BACKUP OF     *
*   ALL DRIVES CONNECTED TO THE KDB50 MIGHT BE PERFORMED PRIOR   *
*   TO THE INSTALLATION OF THIS FCO. HOWEVER, DEFINE ONE DISK    *
*   TO DO THE FINAL TESTING AND MAKE SURE THAT THIS ONE IS       *
*   BACKED UP.                                                   *
********************************************************************
```

1. Shut down the system by executing the shutdown command procedure.

    $ @SYS$SYSTEM:SHUTDOWN

2. Spin down all disks connected to the KDB50.

3. Remove the processor cabinet front and rear doors.

4. Turn the upper keyswitch on the console panel to the fully
    counter-clockwise position. Then set the main circuit breaker
    at the back of the BA32 box to the "OFF" (DOWN) position.

```
*************************************************************
*                        WARNING                          *
*                                                         *
*   IF BATTERY BACKUP H7231 IS PRESENT AS AN OPTION,      *
*   THE DEC-PWR-BUS CABLE 17-00931-0X MUST BE IN PLACE    *
*   BETWEEN THE 877 POWER CONTROLLER AND THE H7231 PRIOR  *
*   TO THE BA32 CIRCUIT BREAKER BEING PLACED IN THE OFF   *
```

```
*    POSITION.  IF THIS CABLE IS NOT IN PLACE, BATTERY       *
*    BACKUP MAY BECOME ACTIVATED.  THE CIRCUIT BREAKER ON    *
*    THE 877 POWER CONTROLLER MUST NOT BE UTILIZED.          *
*************************************************************
```

5.   From the front of the CPU cabinet, fully extend the cabinet
      stabilizer leg.

6.   From the rear of the processor cabinet, release the BA32 box
      track lock.

7.   Slide the BA32 box out of the cabinet.

8.   Remove the BA32 box top cover.

```
    *******************************************************************
    *                            NOTE                                *
    *                                                                *
    *   THE USE OF ESD PROTECTION EQUIPMENT IS AN ABSOLUTE REQUIREMENT *
    *   FOR THIS PROCEDURE. COMPONENT DAMAGE WILL OCCUR IF PROPER      *
    *   GROUNDING IS NOT OBSERVED. THE PARTS IN THE EQ-KIT ARE C-MOS,  *
    *   SO BE EVEN MORE CAREFUL WHEN INSTALLING THESE.                *
    *******************************************************************
```

9.   Set up the VELOSTAT Kit:
      - Unfold the VELOSTAT mat to full size (24x24).
      - Attach the 15' ground cord to the VELOSTAT snap fastener on
        the mat.
      - Attach the alligator clip end of the ground cord to a good
        ground on the cabinet.
      - Attach the wrist strap to either wrist and the alligator clip
        to a convenient portion of the mat.

      Locate the T1002 module (KDB50 Microprocessor Module) in the BI
      module cage, raise the actuating lever, and remove the module.

10.   Check the revision of the T1002 module. If the T1002 module is at
      ETCH "C" REV M1 or ETCH "D" REV M2, proceed to step 16. If the
      module is below the above revision proceed to step 12.

11.   Locate the six PROM sockets in the upper left hand portion of the
      module. Refer to Figure 1 on page 10.

12.   Carefully remove the current PROMs and set them aside.

13. Using the ROM insertion tool (see Special Tools and Test Equipment
    requirements listed on the front page), insert the new PROMs in the
    following order:

           Socket   PROM part number
           ------   ----------------
            E 50   23-001U2-xx
            E 61   23-002U2-xx
            E 72   23-003U2-xx
            E 83   23-004U2-xx
            E 92   23-005U2-xx
            E 97   23-006U2-xx

   NOTE: The key which identifies pin 1 has to go towards the top edge
         of the module. Refer to Figure 1 on page 10.

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 _ _ _ _ _ _ _              |     FCO   KDB50-R002
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```

14. Locate the revision level label along the top edge of the
    module and replace the label with the new revision label from
    the upgrade kit. The new revision label should indicate the
    new REV., M1 for an ETCH "C" module and M2 for an ETCH "D"
    module.

15. Reinstall the module in the BI module cage. Insure that the
    module is properly seated.

16. Place the top cover on the BA32 box but do not secure it with
    the 14 screws.

17. Power up the CPU by turning on the circuit breaker on the back
    of the BA32 box to the ON (1) position and turning the upper
    keyswitch on the front console panel to enable.

18. Verify that the KDB50 passes self test by observing that the
    amber light is illuminated on the T1002 module.

19. Spin up the drive you have backed up and selected for final testing.

    ****
    * If you run any diagnostic in the user data area of the disk, *
    * be sure that customers data is backed up.   *
    ****

20. Run diagnostic EVRLF for three passes and diagnostic EVRLJ for
    fifteen minutes. These are Level 3 Diagnostics, which means you
    have to boot the system STANDALONE.

Note: If you need help with the diagnostic, you can type "Help EVRLF",
      (for example).

When running EVRLJ answer the questions as followed:

Do you wish to change the global test parameters [(No), Yes] Type: N

Do you wish to change the device specific test parameters [(No), Yes]
Type: N


```
**********************************************************************
* In this mode, the diagnostic will set the drive WRITE PROTECT and not*
* overwrite customer data. The backup has been done for safety reasons.*
**********************************************************************
```

After 15 minutes of runtime type CTRL C. This will bring you back to the
Diagnostic Supervisor prompt, DS>

Now type: DS>sum (CR)

Check the summary for any errors. If both diagnostics run error free,
continue.

21. Spin up the other drives connected to the KDB50.

22. Secure the BA32 box's top cover.

23. Slide the BA32 box back into the cabinet making sure that the
     cables are not harmed.

24. Slide the cabinet stabilizer leg back in.

25. Replace and latch the processor cabinet front and rear doors.

26. Reboot the customers system and return the system to the customer.

27. Update site management guide to reflect FCO change.

28. Complete LARS form as per example on page 9.

```
                                    |
_____|_____


                    LARS


                            USA                 GIA                 EUROPE

Activity -
    Contract and Warranty       W                   U                   Y
    Non Contract/Non Warranty   F                   U                   F
DEC Option                      KDB50               KDB50               KDB50
Type of Call                    M                   M                   M
Action Taken                    D                   D                   I
Fail Area-Module-FCO-Comment    KDB50-R002          KDB50-R002          KDB50-R002
Material Used                   EQ-01507-01         EQ-01507-01         EQ-01507-01




    _ _ _ _ _ _ _                     |         FCO   KDB50-R002
   | | | | | | | |                    |
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                                      |
_____|_____

                        FIGURE 1

\^ KDB50
\\KDB50
\\SCADDEN
\\1988
\\OCT
\\FCO_DOCS
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