```
+----------------------------------------------------------------------+
|                                                                      |
|  _ _ _ _ _ _ _                     Level of Urgency        Page_1_    |
| | | | | | | | |                       +--+                  Of_10     |
| |d|i|g|i|t|a|l|          FCO          |I |                            |
| |_|_|_|_|_|_|_|                       +--+                            |
|_____|
|                                                                      |
| FIELD  CHANGE  ORDER                        Number:  DWBUA-I002       |
|_____|
| Applicability:   Retrofit all 82XX, 83XX, 85XX, 87XX and 88XX systems which |
| are configured with a DWBUA and Batterybackup options. Field spares stock |
| should also be upgraded. FCO incorporates ECO T1010-MK010            |
|_____|
| Problem/Symptom:  After a powerfail, system will bugcheck when doing a warm |
| restart.                                                             |
|_____|
| Quick Check:  Revisions "H1-H7" - Check for 23-329F4-00 at location E67. |
|                                                                      |
|_____|
| Compatibility/Prerequisite FCO:            | Est. Time to Install:   |
|   DWBUA-R001 (T1010-Rev "F")               | 1 hour                  |
|_____|_____|
| Special Tools or Test Equipment:  See Page 2                         |
|                                                                      |
|_____|
|                    FCO      Parts    Information                     |
|_____|
| Order by        Quantity:        Part Number:        Description:    |
| FCO Kit#:                                                            |
| EQ-01509-01        1                                 See Page 2      |
| FA-04805-01        1                                 FCO Document    |
|_____|
|EQ Kit Variation System/Option Applic: N/A                           |
|_____|
|                         Approvals                                    |
|_____|
|   CSSE Engineer    | F.S.  Product Safety  |  F.S.  Logistics         |
|   Jim Vermette     | Robert Brister        |  Ed Duggan               |
|_____|_____ |_____|
|   CSSE Manager     | F.S. Microfiche Libraries| Affected Population:   |
|   Jan Sicard       |                       |   3500                   |
|_____|   EP-FSNVX-LB   VAX    |_____|
|   ESD&P Micropub.  |                       | Initial Kitting:         |
|   Ray LeBlanc      |   VAXnotes            |   3500                   |
|_____|   STARS               |_____|
|   Revision:        |                       | Hardcopy Publication:    |
|       A            |                       |   3500                   |
|_____|                       |_____|
|  FCO Release Date  |                       | Parts Availability:      |
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| 25-APR-88 | | June 1988 |
+---+

       _ _ _ _ _ _ _ | FCO   DWBUA-I002
      | | | | | | | | | |
      |d|i|g|i|t|a|l| | PAGE 2 of 10
      |_|_|_|_|_|_|_| |
                                  |
_____|_____

SPECIAL TOOLS: Continued from page 1

Field Service Tool Kit.

VELOSTAT Electrostatic Field Service Kit (P/N 29-26246-00).

PARTS LIST:

ORDER BY

FCO KIT#:	QUANTITY	PART NUMBER	DESCRIPTION
EQ-01509-01	1	(1) 23-313F4-00	ROM
		(1) 23-312F4-00	ROM
		(1) 23-329F4-00	ROM
		(1) 36-19208-01	Brady Marker "1"
		(1) 36-19208-02	Brady Marker "2"
		(1) 36-19208-03	Brady Marker "3"
		(1) 36-19208-04	Brady Marker "4"
		(1) 36-19208-05	Brady Marker "5"
		(1) 36-19208-06	Brady Marker "6"
		(1) 36-19208-07	Brady Marker "7"
		(1) 36-19209-08	Brady Marker "H"
FA-04805-01		(1) FA-04805-01	FCO Document

TABLE OF CONTENTS: PAGE NO.

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                                                 |
_____|_____


Section I - Installation Procedures for VAX 82XX/83XX Configuration 1:
          -----------------------------------------------------------


   1.   Shut down the system by executing the Shutdown Command Procedure.

        $ @SYS$SYSTEM:SHUTDOWN

        After VMS shuts down, type HALT.... you will now be in console mode
        PROMPT is >>>

   2.   Turn the upper keyswitch on the console panel fully counterclockwise
        and set the main circuit breaker at the back of the BA32 box to the
        "OFF" (0) position.

        ********************************************************************
        *      NOTE: 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.                                        *
        ********************************************************************

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

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

   5.   Slide the BA32 box out of the cabinet.

   6.   Remove the BA32 box top cover.


        ********************************************************************
        *                                                                 *
        *                        C A U T I O N                            *
        *    All modules and chips contain electrostatic discharge         *
        *    sensitive devices (ESDS).The use of the VELOSTAT kit          *
        *    is essential to prevent damage which may not be noticed       *
        *    immediately.                                                  *
        *                                                                 *
        ********************************************************************


    _ _ _ _ _ _ _                   |      FCO    DWBUA-I002
   | | | | | | | | |                |
   |d|i|g|i|t|a|l|                  |      PAGE  4 of 10
   |_|_|_|_|_|_|_|                  |
                                    |
_____|_____
```

7. Set up the VELOSTAT Kit:

   - Unfold the VELOSTAT mat to full size.
   - 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 system.
   - Attach the wrist strap to either wrist and the alligator clip
     to a convenient portion of the mat.

8. Remove the T1010 module from the system and place it on the Velostat
   mat.

9. Check the revision of the module taken from the machine. If the
   module is at rev H1-H7, it should be reinstalled in the same slot
   and proceed to step 14. If the module is a Rev F1-F7, go to the next
   step. NOTE: Only modules at rev F1-F7 can be upgraded with the ROMS
   in EQ-01509-01. See prerequisite on page 1.

10. Unplug ROM P/N 23-253F4-00 from location E51 on the T1010 module.
    Install new ROM P/N 23-313F4-00 in the same location. (see
    Figure 1).

11. Unplug ROM P/N 23-251F4-00 from location E46 on the T1010 module.
    Install new ROM P/N 23-312F4-00 in the same location. (See
    Figure 1).

12. Unplug ROM P/N 23-314F4-00 from location E67 on the T1010
    module. Install new ROM P/N 23-329F4-00 in the same location.
    (See Figure 1).

13. Return the T1010 module to the same slot from where it was
    removed.

14. Return the lever of the VAXBI cardcage to the locked position.

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

16. 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.

17. Verify that the module passes self-test by observing that the
    amber light is illuminated on the T1010 module.

18. Secure the BA32 box's top cover.

19. Slide the BA32 box back into the cabinet making sure that cables
    are not harmed and retract the stabilizer leg.

20. Verify the FCO by running EVCBB.EXE.

21. Bring up the Operating System.

22. Update the Site Management Guide to reflect this FCO.

23. Report this FCO activity on the LARS for in the "Fail Area/
    Module/FCO/Comments" column as follows: FCO DWBUA-I002.

Section II - Installation Procedures for VAX 82XX/83XX Configuration 2:
           ----

  1. Shut down the system by executing the Shutdown Command Procedure.

     $ @SYS$SYSTEM:SHUTDOWN

     After VMS shuts down, type HALT.... you will now be in console mode
     PROMPT is >>>

  2. Remove the processor cabinet rear door.

     ****
     *   NOTE   *
     *   The DEC-PWR-BUS cable 17-00931-0X must be in place between   *
     *   the 877 power controller and the H7231 prior to the AC input *
     *   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.   *
     ****

  3. Turn the upper keyswitch on the console panel fully
     counterclockwise and set the main circuit breaker at the back of
     each AC input assembly to the "OFF" (0) position.

     ****
     *   *
     *   C A U T I O N   *
     *   All modules and chips contain 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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 |_|_|_|_|_|_|_|                          |
                                          |
                                          |
_____|_____
```

4. Set up the VELOSTAT Kit:

   - Unfold the VELOSTAT mat to full size.
   - 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 system.
   - Attach the wrist strap to either wrist and the alligator clip
     to a convenient portion of the mat.

5. Remove the T1010 module from the system and place it on the Velostat
   mat.

6. Check the revision of the module taken from the machine. If the
   module is at rev H1-H7, it should be reinstalled in the same slot
   and proceed to step 11. If the module is a Rev F1-F7, go to the next
   step. NOTE: Only modules at rev F1-F7 can be upgraded with the ROMS
   in EQ-01509-01. See prerequisite on page 1.

7. Unplug ROM P/N 23-253F4-00 from location E51 on the T1010 module.
   Install new ROM P/N 23-313F4-00 in the same location. (see
   Figure 1).

8. Unplug ROM P/N 23-251F4-00 from location E46 on the T1010 module.
   Install new ROM P/N 23-312F4-00 in the same location. (See
   Figure 1).

9. Unplug ROM P/N 23-314F4-00 from location E67 on the T1010
   module. Install new ROM P/N 23-329F4-00 in the same location.
   (See Figure 1).

10. Return the T1010 module to the same slot from where it was
    removed.

11. Return the lever of the VAXBI cardcage to the locked position.

12. Power up the CPU by turning both circuit Breakers on each AC input
    assembly to the "ON" (1) position and turning the upper keyswitch
    on the front console panel to ENABLE.

13. Verify that the module passes self-test by observing that the
    amber light is illuminated on the T1010 module.

14. Replace and latch the processor cabinet rear door.

15. Verify the FCO by running EVCBB.EXE.

16. Bring up the Operating System.


```
 _ _ _ _ _ _ _                  |
```

17. Update the Site Management Guide to reflect this FCO.

18. Report this FCO activity on the LARS for in the "Fail Area/
    Module/FCO/Comments" column as follows: FCO DWBUA-I002

Section III - Installation Procedures for VAX 85XX/87XX/88XX.
             ----

1. Shut down the system by executing the Shutdown Command Procedure.

    $ @SYS$SYSTEM:SHUTDOWN

    After VMS shuts down, type ^P .... you will now be in console mode
    PROMPT is >>>

    At the console prompt type HALT (CR)

2. Using the console command, power off the system,

    >>>POWER OFF (CR)

    After the system has powered down, place the Circuit Breaker
    (CB1) located near the input power cord, in the "OFF" (0)
    position. Wait five minutes to allow the capacitors to bleed down.

```
    *****************************************************************
    *                                                               *
    *                       C A U T I O N                           *
    *    All modules and chips contain electrostatic discharge      *
    *    sensitive devices (ESDS). The use of the VELOSTAT kit       *
    *    is essential to prevent damage which may not be noticed     *
    *    immediately.                                                *
    *                                                               *
    *****************************************************************
```

3. Set up the VELOSTAT Kit:

    - Unfold the VELOSTAT mat to full size.
    - 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 system.
    - Attach the wrist strap to either wrist and the alligator clip
      to a convenient portion of the mat.

4. Using the hex key, open the doors of the 85XX/87XX/88XX.

    Open the air-flow slides in front of the card cage exposing the
    area around the slot containing the T1010 module.

5. Remove the T1010 module from the system and place it on the Velostat mat.

6. Check the revision of the module taken from the machine. If the module is at rev H1-H7, it should be reinstalled in the same slot and proceed to step 12. If the module is a Rev F1-F7, go to the next step. NOTE: Only modules at rev F1-F7 can be upgraded with the ROMS in EQ-01509-01. See prerequisite on page 1.

7. Unplug ROM P/N 23-253F4-00 from location E51 on the T1010 module. Install new ROM P/N 23-313F4-00 in the same location. (see Figure 1).

8. Unplug ROM P/N 23-251F4-00 from location E46 on the T1010 module. Install new ROM P/N 23-312F4-00 in the same location. (See Figure 1).

9. Unplug ROM P/N 23-314F4-00 from location E67 on the T1010 module. Install new ROM P/N 23-329F4-00 in the same location. (See Figure 1).

10. Set Circuit Breaker CB1 to the "ON" (1) position. Close and latch cabinet doors.

11. Return the T1010 module to the same slot from where it was removed.

12. Return the lever of the VAXBI card cage to the locked position.

13. Power up the CPU by typing the following command;

    >>>POWER ON <CR> at the console.

    a. Type @SYSINIT.COM to initialize CPU.

    b. Run EVCBB.EXE.

14. Verify that the module passes self-test by observing that the amber light is illuminated on the T1010 module.

15. Bring up the Operating System.

16. Update the Site Management Guide to reflect this FCO.

17. Report this FCO activity on the LARS for in the "Fail Area/ Module/FCO/Comments" column as follows: FCO DWBUA-I002

                         LARS

                         USA   GIA   EUROPE

Activity -
    Contract and Warranty   W   U   Y
    Non Contract/Non Warranty F   U   F
DEC Option   DWBUA   DWBUA   DWBUA
Type of Call   M   M   M
Action Taken   D   D   I
Fail Area-Module-FCO-Comments
Material Used   EQ-01509-01   EQ-01509-01   EQ-01509-01

                         FIGURE 1

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\^ DWBUA
\\DWBUA
\\VERMETTE
\\1988
\\APR
\\FCO_DOCS
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