DIGITAL	FCO	CATEGORY [O]	PAGE 1 OF 11

FIELD CHANGE ORDER   NUMBER: DRB32-O004

APPLICABILITY: This FCO applies to all DRB32-W options which contain the T1023-00 module. The DRB32-W option may be found on any VAXBI bus system that provides connectivity to any one of a wide variety of far end devices. This FCO incorporates ECO T1023-YA-TW001.

PROBLEM & SYMPTOM: This FCO corrects two problems:1) A "hang" condition might occur when a User Device causes an unexpected condition while transferring data. Once the DRB32-W is hung, the system must power fail to reset the DRB32; 2)T1023-00 does not contain a Word Counter. T1023-YA adds a Word Counter.

SOLUTION: Replace T1023-00 module with T1023-YA.

QUICK CHECK:
 T1023-YA is etched on the module and E34 is part #23-022L5-00.

PRE/COREQUISITE FCO: N/A | MTTI HRS
                                                                 | 1 hr.

TOOL/TEST EQUIPMENT:

FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS	EQ KIT VARIATION APPLICABILITY
EQ-01570-01/02	See Page 2 for Contents of EQ Kits.	
FA-04898-01	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
DEC	DEC	DEC	DEC	CUS	CUS	CUS	CUS	CUS

APPROVALS

CSSE Jim Vermette	FSHQ LOGISTICS Bill Stanley	FS PRODUCT SAFETY Robert Brister
CSSE MANAGER Ric Grogan	FS. MICROFICHE LIBRARIES	FCO RELEASE DATE September 17, 1990
	VAXDOC EP-CSVDC-LB	
MICROMEDIA Diane MacDonald	VAX/PDP EP-CSMST-LB	FCO REVISION A
	STARS	

```
 _ _ _ _ _ _                          |     FCO   DRB32-O004
| | | | | | | |                       |
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|_|_|_|_|_|_|_|                       |
                                      |
_____|_____
```

```
********************************************************************************
*                              NOTE 1                                          *
*                                                                              *
*   WHEN THE T1023-YA MODULE IS INSTALLED, IT COMES UP IN T1023-00 MODE AND     *
*   THE WORD COUNTER IS NOT ACTIVATED.                                         *
*                                                                              *
*   TO INCORPORATE THE INSTRUCTIONS THAT PUT THE T1023-YA MODULE IN THE MODE    *
*   THAT UTILIZES THE WORD COUNTER FUNCTIONALITY, PLACE A SEMI-COLON AT THE     *
*   START OF THE LINE IMMEDIATELY PRECEDING THE LABEL 0$: IN THE                *
*   CONTROLLER _INIT ROUTINE. THIS LINE IS CLEARLY MARKED WITHIN THE SOURCE     *
*   CODE.                                                                       *
********************************************************************************
```

```
********************************************************************************
*                              NOTE 2                                          *
*                                                                              *
*   IF A CUSTOMER HAS MADE DEVICE SPECIFIC MODIFICATIONS TO THE PREVIOUS        *
*   UQWDRIVER, THOSE CHANGES MUST BE MIGRATED TO THE V3.0 UQWDRIVER.            *
*                                                                              *
*   DIGITAL FIELD SERVICE IS ADVISED TO SUPPLY THE CUSTOMER WITH THE V3.0       *
*   SAVESETS (DRB32030.A, DRB3203.B, and DRB3203.C) CONTAINED IN EQ-01570-02.*
*   INSTALLATION AND ANY REQUIRED MODIFICATION OF THE UQWDRIVER OR CUSTOMER     *
*   DRIVER/APPLICATION IS THE SOLE RESPONSIBILITY OF THE CUSTOMER               *
********************************************************************************
```

   Installation of the T1023-YA at revision "A1" changes the revision of the
   DRB32-W option to revision "E".

Contents of EQ Kits (Continued from Page 1)

   EQ-01570-01   (1) T1023-YA module, min Rev "A1"
   EK-DRB32-TM   (1) Technical Manual Rev 003 (to be left at customer site)
   AA-HZ25C-TE   (1) Programmer's Manual (to be left at customer site)
   FA-04898-01   (1) FCO Document

   EQ-01570-02   (1) Magtape containing two drivers (one for VMS 4.X customers
                     and one for VMS 5.X customers).
                 (1) TK50 containing two drivers (one for VMS 4.X customers and
                     one for VMS 5.X customers).

   NOTE: Branches should share the -02 kit. It is NOT NECESSARY to order one

-02 kit for each -01 kit which is required. (See Note 2 above.)

TABLE OF CONTENTS

Page

I. FIELD INSTALLATION AND TEST PROCEDURE FOR 6XXX Systems
   ===

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

```
$ @SYS$SYSTEM:SHUTDOWN
```

    After VMS shuts down, type ^P .... you will now be at the console
    mode prompt, >>>

    At the console prompt type HALT <CR>

    2. Turn the upper key switch on the system's console panel fully
       counterclockwise. This shuts off the output of the battery
       backup unit if present. To ensure "Total Off", push the power
       circuit breaker to the OFF position on the H405 AC power
       controller located on the lower right side at the back of the
       system to the OFF position.

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

    ****

```
*                           CAUTION                                  *
*    All VAX modules contain electrostatic discharge sensitive       *
*    devices (ESDS). The use of the new VELOSTAT case is  essential  *
*    to prevent damage which may not be noticed immediately.         *
*********************************************************************
```

4.   Hook the static strap from the system to the ESD case. Hook the
      other ESD strap to your wrist.

5.   Remove the module, T1023-00, from the cardcage and place it on the
      open top half of the conductive package. Install T1023-YA
      (EQ-01570-01) in the same slot.

6.   Complete the Non-Conforming Material Tag and attach the tag
      to the old T1023-00 module.

7.   Package the old module in the same ESD container and close
      the case.

8.   Remove the grounding cable from the ESD container once closed.

9.   Return the old T1023-00 module through normal channels ASAP.

10.   Power up the system by pushing the Circuit Breaker to the"ON"
      position. Turn the upper key switch on the systems console panel
      clockwise to the "ENABLE" position.

11.   Boot the Diagnostic Supervisor (VAX/DS).

```
 _ _ _ _ _ _ _          |        FCO   DRB32-O004
| | | | | | | |         |
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|_|_|_|_|_|_|_|         |
_____|_____
```

```
*********************************************************************
*                            NOTE                                  *
*   Before diagnosing the DRB32-W using EVDRI, be sure the DRB32-M  *
*   module (T1022) is fully functional by running Self-Test and     *
*   EVDRH.EXE. Only after the DRB32-M is known to be good should     *
*   diagnosing of the DRB32-W take place. This will help prevent     *
*   erroneous testing results.  The DRB32-W does not contain a VAXBI*
*   corner and, therefore, does not need to be attached to the       *
*   supervisor process.                                             *
*********************************************************************
```

12.   Load EVDRI.EXE and test the T1023-YA module.

```
*********************************************************************
*                            NOTE                                  *
*   Version 4.1 of EVDRI is required to test the new functionality  *
*   of the T1023-YA module. This is scheduled to be shipped from SSB*
*   (formerly SDC) in Release 40 on July 16, 1990.                  *
*********************************************************************
```

13. Upon successful completion of the diagnostics exit the VAX/DS.

14. Bring up the operating system.

15. Copy the V3.0 Savesets from EQ-01570-02 to the SYS$LDR directory.

16. Update Site Management Guide to reflect this FCO.

17. Report FCO activity on LARS form in the "Module/fail area/FCO".
    (See attached examples.)

```
************************************************************************
*                            NOTE                                     *
* TECHNICAL MANUAL AND PROGRAMMER'S MANUAL SHOULD BE LEFT AT CUSTOMER SITE*
************************************************************************
```

II. FIELD INSTALLATION AND TEST PROCEDURE FOR 82XX/83XX Systems Config. 1
    ==

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. Remove the processor cabinet front and rear doors and fully extend
   the cabinet stabilizer leg.

```
        ********************************************************************
        *                            NOTE                                 *
        *    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.                                                    *
        ********************************************************************
```

3. Turn the upper key switch on the console panel fully
   counterclockwise and slide the BA32 system box out of the
   cabinet. Set the main circuit breaker at the back of the
   BA32 box to the "OFF" (down) position. Remove the BA32 top

```
      cover.
```

   4.   Use ALL ESD safety precautions to prevent DOA modules/chips in
        upgrade kits.

```
   ***********************************************************************
   *                          CAUTION                                   *
   *   All VAX modules contain electrostatic discharge sensitive       *
   *   devices (ESDS). The use of the new VELOSTAT case is essential*
   *    to prevent damage which may not be noticed immediately.         *
   ***********************************************************************
```

   5.   Hook the static strap from the system to the ESD case. Hook the
        other ESD strap to your wrist.

   6.   Remove the module, T1023-00, from the cardcage and place it on
        the open top half of the conductive package. Install T1023-YA
        (EQ-01570-01) in the same slot.

   7.   Complete the Non-Conforming Material Tag and attach the tag
        to the old T1023-00 module.

   8.   Package the old module in the same ESD container and close
        the case.

   9.   Remove the grounding cable from the ESD container once closed.

  10.   Return the old T1023-00 module through normal channels ASAP.

  11.   Replace the BA32 Top Cover. Power up the system by pushing the
        Circuit Breaker to the "ON" position. Turn the upper key switch
        on the systems console panel clockwise to the "ENABLE" position.

  12.   Boot the Diagnostic Supervisor (VAX/DS).


```
 _ _ _ _ _ _ _             |      FCO   DRB32-O004
| | | | | | | |            |
|d|i|g|i|t|a|l|            |      PAGE 7  OF  11
|_|_|_|_|_|_|_|            |
_____|_____
```

```
   ***********************************************************************
   *                           NOTE                                     *
   *  Before diagnosing the DRB32-W using EVDRI, be sure the DRB32-M    *
   *  module (T1022) is fully functional by running Self-Test and       *
   *  EVDRH.EXE. Only after the DRB32-M is known to be good should      *
   *  diagnosing of the DRB32-W take place. This will help prevent      *
   *  erroneous testing results.  The DRB32-W does not contain a VAXBI*
   *  corner and, therefore, does not need to be attached to the        *
   *  supervisor process.                                               *
   ***********************************************************************
```

  13.   Load EVDRI.EXE and test the T1023-00 or T1023-YA module.

```
*********************************************************************
* Version 4.1  of EVDRI is required to test the new functionality  *
* of the T1023-YA module. This is scheduled to be shipped from SSB  *
* (formerly SDC) in Release 40 on July 16, 1990.                    *
*********************************************************************
```

14.   Upon successful completion of the diagnostics exit the VAX/DS.

15.   Slide the BA32 box back into the cabinet and retract the
      stabilizer leg.

16.   Update Site Management Guide to reflect this FCO.

17.   Report FCO activity on LARS form in the "Module/fail area/FCO".
      (See attached examples.)

```
*********************************************************************************
*                                NOTE                                          *
* TECHNICAL MANUAL AND PROGRAMMER'S MANUAL SHOULD BE LEFT AT CUSTOMER SITE*
*********************************************************************************
```

II. FIELD INSTALLATION AND TEST PROCEDURE FOR 82XX/83XX SYSTEMS - Config. 2
    ==

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.   Remove the processor cabinet rear door.

```
 _ _ _ _ _ _ _                  |       FCO   DRB32-O004
| | | | | | | | |               |
|d|i|g|i|t|a|l|                 |       PAGE 8  OF  11
|_|_|_|_|_|_|_|                 |
_____|_____
```

```
        *****************************************************************
        *                          NOTE                                *
        *    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.                                                  *
        *****************************************************************
```

3.   Turn the upper key switch on the console panel fully

counterclockwise and set the main circuit breaker at the back
of each AC input assembly to the "OFF" (down) position.

4. Remove the plastic shield in front of the modules to allow
access to the modules.

```
************************************************************************
*                            CAUTION                                  *
*  All modules contain electrostatic discharge sensitive devices      *
*  (ESDS). The use of the new VELOSTAT case is essential to prevent    *
*  damage which may not be noticed immediately.                       *
*                                                                     *
************************************************************************
```

5. Hook the static strap from the system to the ESD case. Hook the
other ESD strap to your wrist.

6. Remove the module, T1023-00, from the cardcage and place it on the
open top half of the conductive package. Install T1023-YA
(EQ-01570-01) in the same slot.

7. Complete the Non-Conforming Material Tag and attach the tag
to the old T1023-00 module.

8. Package the old module in the same ESD container and close
the case.

9. Remove the grounding cable from the ESD container once closed.

10. Return the old T1023-00 module through normal channels ASAP.

11. Return the plastic shield in front of the modules. Power up the
system 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.

12. Boot the Diagnostic Supervisor (VAX/DS).

```
 _ _ _ _ _ _ _              |      FCO   DRB32-O004
| | | | | | | |             |
|d|i|g|i|t|a|l|             |      PAGE 9  OF  11
|_|_|_|_|_|_|_|             |
_____|_____
```

```
************************************************************************
*                             NOTE                                    *
*  Before diagnosing the DRB32-W using EVDRI, be sure the DRB32-M      *
*  module (T1022) is fully functional by running Self-Test and        *
*  EVDRH.EXE. Only after the DRB32-M is known to be good should        *
*  diagnosing of the DRB32-W take place. This will help prevent        *
*  erroneous testing results.  The DRB32-W does not contain a VAXBI*
*  corner and, therefore, does not need to be attached to the         *
*  supervisor process.                                                *
```

```
         ***********************************************************************

    13.    Load EVDRI.EXE and test the T1023-00 or T1023-YA module.

         ***********************************************************************
         *                               NOTE                                  *
         * Version 4.1 of EVDRI is required to test the new functionality of *
         * the T1023-YA module. This is scheduled to be shipped from SSB      *
         * (formerly SDC) in Release 40 on July 16, 1990.                     *
         ***********************************************************************


    14.    Upon successful completion of the diagnostics exit the VAX/DS.

    15.    Replace and latch the processor cabinet rear door.

    16.    Bring up the operating system.

    17.    Copy the V3.0 Savesets from EQ-01570-02 to the SYS$LDR directory.

    18.    Update Site Management Guide to reflect this FCO.

    19.    Report FCO activity on LARS form in the "Module/fail area/FCO".
           (See attached examples.)

*****************************************************************************
*                               NOTE                                       *
* TECHNICAL MANUAL AND PROGRAMMER'S MANUAL SHOULD BE LEFT AT CUSTOMER SITE*
*****************************************************************************

III.   FIELD INSTALLATION AND TEST PROCEDURE FOR VAX 85X0/8700/88X0/8974 & 8978
       =======================================================================


         ***********************************************************************
         *                                                                     *
         *                          C A U T I O N                              *
         *                                                                     *
         *      The module, as all other VAX 8XXX modules,                     *
         *      contains electrostatic discharge sensitive                     *
         *      devices (ESDS).  The use of the new VELOSTAT                    *
         *      case is essential to prevent damage which may                  *
         *      not be noticed immediately.                                    *
         *                                                                     *
         ***********************************************************************
```

```
    1.    Shut down the system by executing the Shutdown Command Procedure.
          $ @SYS$SYSTEM:SHUTDOWN

          After VMS shuts down, type CTRL^P HALT.... you will now be in
```

the console mode. The prompt is ">>>"

2. Using the 85X0/8700/88X0/897X console commands, power the
    CPU off.

        >>>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.

3. Use ALL ESD safety precautions to prevent DOA modules/chips in
    upgrade kit.

4. Hook static strap from 8XXX to ESD case, hook the other ESD strap
    to wrist.

5. Remove the module, T1023-00, from the cardcage and place it on the
    open top half of the conductive package. Install T1023-YA
    (EQ-01570-01) in the same slot.

6. Complete the Non-Conforming Material Tag and attach the tag
    to the old T1023-00 module.

7. Package the old module in the same ESD container and close
    the case.

8. Remove the grounding cable from the ESD container once closed.

9. Return the old T1023-00 module through normal channels ASAP.

10. Power up the system by pushing the Circuit Breaker (CB1) to the
     "ON" position. Type POWER ON at the console:

         >>>POWER ON (CR)

11. Boot the Diagnostic Supervisor (VAX/DS).
    ****
    *   NOTE   *
    * Before diagnosing the DRB32-W using EVDRI, be sure the DRB32-M   *
    * module (T1022) is fully functional by running Self-Test and   *
    * EVDRH.EXE. Only after the DRB32-M is known to be good should   *
    * diagnosing of the DRB32-W take place. This will help prevent   *
    * erroneous testing results. The DRB32-W does not contain a VAXBI*
    * corner and, therefore, does not need to be attached to the   *
    * supervisor process.   *
    ****

12. Load EVDRI.EXE and test the T1023-00 or T1023-YA module.

```
|_|_|_|_|_|_|_|                         |
_____|_____
```

```
     ********************************************************************
     *                              NOTE                               *
     * Version 4.1 of EVDRI is required to test the new functionality of*
     * the T1023-YA module. This is scheduled to be shipped  from SSB   *
     * (formerly SDC) in Release 40 on July 16, 1990.                   *
     ********************************************************************
```

13. Upon successful completion of the diagnostics exit the VAX/DS.

14. Type @SYSINIT.COM to initialize the CPU and boot the
     Operating System.

15. Copy the V3.0 Savesets from EQ-01570-02 to the SYS$LDR directory.

16. Update Site Management Guide to reflect this FCO.

17. Report FCO activity on LARS form in the "Module/fail area/FCO".
     (See attached examples.)

```
********************************************************************************
*                                 NOTE                                        *
* TECHNICAL MANUAL AND PROGRAMMER'S MANUAL SHOULD BE LEFT AT CUSTOMER SITE*
********************************************************************************
```

                              LARS

CATEGORY O	USA	GIA	EUROPE
Activity -			
(a)Contract and Warranty	W	U	Y
(b)IN-DEC Contract	K		
Hardware Segment Code	111		
Non Contract/Non Warranty	F	F	F
(c)RTD/Off-site Agreement	F		
Product Line	01		
DEC Option	DRB32-W	DRB32-W	DRB32-W
Type of Call	M	M	M
Action Taken	D	D	I
Fail Area-Module-FCO-Comments	DRB32-O004	DRB32-O004	DRB32-O004
Material Used	EQ-01570-01/	EQ-01570-01/	EQ-01570-01/
	EQ-01570-02	EQ-01570-02	EQ-01570-02

(a) Warranty Optimum, Warranty Standard and Warranty Basic (on-site)
     Agreements.
(b) Applies to INDEC AREA ONLY - Warranty Optimum, Warranty Standard
     and Warranty Basic (on-site) Agreements.
(c) RTD=Return to Digital or Off-site Agreements; If Field Engineer
     On-site, use Activity Code "F".

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\^ DRB32
\\DRB32
\\VERMETTE
\\1990
\\SEP
\\FCO_DOCS
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