FCO DRB32-O004, Corrects "hang" condition and adds a Word Counter.

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 |
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 |

APPROVALS

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VAX/PDP EP-CSMST-LB
STARS
FS PRODUCT SAFETY
Robert Brister
FCO RELEASE DATE
September 17, 1990
FCO REVISION
A
**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 UQWDRIIVER, THOSE CHANGES MUST BE MIGRATED TO THE V3.0 UQWDRIIVER.*

*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 UQWDRIIVER 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)

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<tr>
<th>EQ-01570-01</th>
<th>1) T1023-YA module, min Rev &quot;A1&quot;</th>
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<tr>
<td>EK-DRB32-TM</td>
<td>1) Technical Manual Rev 003 (to be left at customer site)</td>
</tr>
<tr>
<td>AA-HZ25C-TE</td>
<td>1) Programmer’s Manual (to be left at customer site)</td>
</tr>
<tr>
<td>FA-04898-01</td>
<td>1) FCO Document</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>EQ-01570-02</th>
<th>1) Magtape containing two drivers (one for VMS 4.X customers and one for VMS 5.X customers).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) TK50 containing two drivers (one for VMS 4.X customers and one for VMS 5.X customers).</td>
</tr>
</tbody>
</table>

NOTE: Branches should share the -02 kit. It is NOT NECESSARY to order one
I. Installation procedures for 6000-XXX Systems

II. Installation procedures for 82XX/83XX Configuration I Systems

III. Installation procedures for 82XX/83XX Configuration II Systems

IV. Installation procedures for VAX 85X0/8700/88X0, 8974 & 8978

V. LARS Example

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.

*******************************************************************************
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).

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

   _ _ _ _ _ _ _               |           FCO  DRB32-O004 
   | | | | | | | |              |           PAGE 6  OF  11 
   |d|i|g|i|t|a|l              |_________________________________________ 
   _______________________________|_________________________________________ 

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

******************************************************************
* CAUTION *
* All VAX modules contain electrostatic discharge sensitive (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).

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

   |_______________________________|_________________________________________
   |                            |                                             |
   |d|i|g|i|t|a|l                  |           PAGE 8  OF  11                   |
   |_______________________________|_________________________________________

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

   __________________________________________________________________________
   * 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. *
   * __________________________________________________________________________
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).

********************************************************************
* 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
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.
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                               *
***************************************************************************

LARS

<table>
<thead>
<tr>
<th>CATEGORY O</th>
<th>USA</th>
<th>GIA</th>
<th>EUROPE</th>
</tr>
</thead>
</table>

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 | DRB32-0004 | DRB32-0004 | DRB32-0004 |
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".

***************************************************************************
*                               NOTE                               *
***************************************************************************