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FCO

Level of
 Urgency
 [R]

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FIELD CHANGE ORDER

Number RQDX3-R001

Applicability

All MicroVAX, VAXstation II and MicroPDP 1183 systems in BA123 enclosures which contain the 17-00861-01 cable connecting the M7555 to the M9058 will be eligible for this "REQUIRED" FCO.

This FCO implements RQDX3-ML001 and M7555-ML004.

Problem/Symptoms

The accumulation of recoverable (soft) errors on RD53 drives.
 The development of unrecoverable (hard) errors on RD53 drives.
 The need to reformat RD53 drives every six weeks to three months.

Quick Check

Presence of 17-01520-01 cable connecting M7555 to M9058.

Compatibility/Prerequisite FCO: N/A

Est. Time to Install
 3.0 hrs

Special Tools or Test Equipment: N/A

FCO Parts Information

Order by
 FCO Kit #

Contents

	Quantity	Part Number	Description
EQ-01489-01	1		See page 2
FA-04782-01	1		FCO Document, RQDX2
FA-04782-02	1		FCO Document, RQDX3

EQ Kit Variation/System-Option Applic: See page 2.

Approvals

CSSE Engineer
 K. Caruso

F.S. Product Safety
 Steve Caccia

F.S. Logistics
 E. Duggan

Responsible CSSE Mgr
 E. Toledo

F.S. Microfiche Libraries

Affected Population
 6450

ESD&P Micropublishing Ray LeBlanc	EP-FSNVX-LB VAX EP-FSP11-LB PDP11	Initial Kitting 6450
Revision A	VAXnotes STARS	Hardcopy Publication 7000
FCO Release Date 22-SEP-87		Parts Availability October 1987

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FCO Parts Information: Continued from page 1.

FCO Kit #	Quantity	Part Number	Description
EQ-01489-01	1	17-01520-01	One foot shielded cable
	1	12-18783-00	Jumper
FA-04782-01	1		FCO Document, RQDX2
FA-04782-02	1		FCO Document, RQDX3

EQ Kit Variation/System-Option Applic: Continued from page 1.

630QB, 630Q3, 630Q4, 183QB, 183Q2, LV55B
LV55F, VS215, LV55R, LV55U, LV59B, LV59C

Document Contents

- Preface
- Section 1: Installation Instructions
- Section 2: Reformatting Instructions

Preface:

The following instructions specify the installation of hardware changes which will resolve the accumulation of errors in the RD subsystem due to noise in the disk data cable.

The following systems are subject to this FCO:

MicroVAX II / VAXstation II / VAXstation II GPX:

- All BA123 based systems with serial numbers beginning with "BTO"
- All BA123 based systems with serial numbers up to "WFO620xxxx"
- All BA123 based systems with serial numbers up to "GAO 0502"

BA123 based systems = 630QB-**, DH-630Q3-**, DH-630Q4-**, **-LV55B-**,

SV-LV55F-**, VS215-**, SU-LV55R-**, **-LV55U-**, **-LV59B-**, **-LV59C-**

MicroPDP 1183:

All 183QB-** and DH-183Q2-** systems with serial numbers up to "WFO620xxxx"

If you encounter a system exhibiting the problems described on the cover sheet of this FCO but does not fall within the serial number range, it is eligible for this FCO.

Note: Because disk backup operations may require several hours, the installation of this FCO should be pre-arranged with the customer such that when you arrive on-site the backup operation is complete. In some instances, where the soft error rate is very high, it may be advantageous to install the hardware changes, first, and then have the customer perform the backup, reformat and restore.

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Single LBN entries:

If ONLY ONE LBN is constantly identified, in the system errorlog, as "Uncorrectable ECC error, Operation successful", this is probably indicating a media defect which has not yet gotten severe enough to cause a replacement. Drives exhibiting this type of error should be monitored closely after applying the hardware changes and reformatting the drives. If soft errors begin appearing at the same LBN again the drive should be swapped.

INSTALLATION INSTRUCTIONS

* CAUTION *
* THE CUSTOMER IS RESPONSIBLE FOR MAINTAINING UP-TO- *
* DATE BACKUP'S OF DISK DATA. THE CUSTOMER MUST PERFORM*
* A BACKUP BEFORE THIS FCO IS INSTALLED. *

- 1. Obtain the customer's permission and power down the system via the console switch. NOTE: If applicable, spin down and unload any drives that may be on the system prior to powering down.

* CAUTION *

* AC POWER MUST BE REMOVED FROM THE *
* SYSTEM BEFORE PROCEEDING. *

2. Remove the power cord from the power receptacle after powering down.
3. Open the rear door of the BA123 enclosure.
4. Loosen the captive screw that connects the right side panel to the rear of the enclosure frame.
5. The panel is attached to the bottom of the enclosure frame by two snap fasteners. Pull the bottom of the panel out until the panel detaches from the bottom of the enclosure.
6. Lift the panel slightly to release it from the lip at the top of the frame and remove the panel.

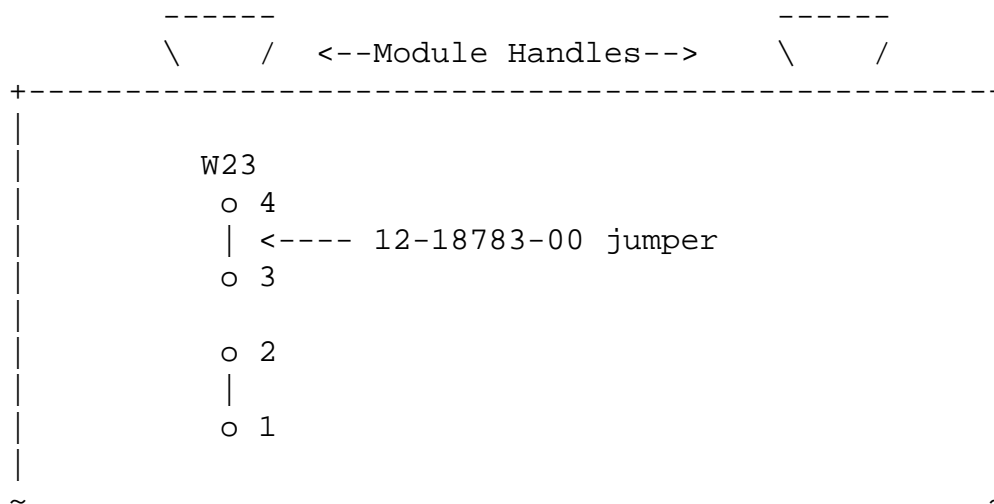
* NOTE *
* THE MODULES IN THIS SYSTEM CONTAIN ELECTROSTATIC *
* DISCHARGE SENSITIVE DEVICES. THE USE OF THE *
* VELOSTAT KIT IS ESSENTIAL TO PREVENT DAMAGE *
* WHICH MAY NOT BE NOTICED IMMEDIATELY. *

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7. Set up the VELOSTAT kit in the following manner:
 - a. Unfold the VELOSTAT mat to full size.
 - b. Attach the ground cord to the snap fastener on the VELOSTAT mat.
 - c. Attach the alligator clip end of the ground cord to a good (bare metal) ground on the system.
 - d. Attach the wrist strap to either wrist and the alligator clip to a convenient portion of the mat.
8. Remove the card cage door by releasing the two clasps at the front end of the door and swinging the door open.
9. Locate the M7555 module and slide partially out of the backplane.
10. Disconnect the 17-00861-01 or BC05W-02 cable.

11. Remove the module from the backplane and place on the velostat worksheet.
12. Inspect jumper W23. W23 is a four position jumper on the M7555 module. The module you remove will have a jumper either from pins 1 to 2 or a jumper from pins 2 to 3 (either setting was valid until now). Modify the existing W23 jumper setting so that a jumper is placed on pins 1 to 2 and a jumper is placed on pins 3 to 4 as follows:



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13. Place the module partially in its backplane slot.
14. Disconnect the 17-00861-01 or BC05W-02 cable from the M9058 (Note: the M9058 is the RD/RX signal distribution card, this module sits in slot 13 of the backplane). Replace it with the 17-01520-01 cable provided in the EQ kit. The red stripe should face down and the smooth surface should face out. Insure the cable seats firmly into the connector such that it is latched by the locking tabs.
15. Connect the cable at the M7555 end.
16. Seat the M7555 firmly into its backplane slot.
17. Reassemble the system, reversing the order it was disassembled.
18. Reformat the problem drives following the instructions in the reformat section of this document.
19. Update the Site management Guide to reflect this FCO.
20. Report LARS data as per example.

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*****
*                                     NOTE                                     *
*   It is the Customer's responsibility to restore the data on the disk drives. *
*                                     *
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Disk Formatting Instructions

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* Note, these instructions assume the customer has a valid backup of the disk that is going to be reformat-
* ted. It is the customers' responsibility to backup the disk drives on a regular basis.
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MDM

1. Use release 120 (8/87) or later MDM kit. Load the MDM Diagnostic either from tape or diskette. If loading from the TK50 tape (P/N AQ-GM5AL-DN) use the CONNECT/IGNORE commands and ignore everything except the disk controller to save load time. If loading from RX50 diskettes only the first three diskettes (P/N BL-GLLAL-DN, BL-FMLBA-DN and BL-GLOAL-DN) need be loaded.
2. Select Menu #3, Customer formatter.
3. Answer the questions and select the appropriate disk drive.
4. The formatter will run to completion. An RD53 should require approximately 35 minutes to complete.

XXDP

1. Load the XXDP diagnostics from tape or load the Micro-11 formatter diskette (P/N BL-FN7AG-MC or later) if the system contains RX drives.
2. If the system contains an RQDX3, run ZRQC??. If the system contains an RQDX2 run ZRQB??
3. Answer the questions for the appropriate disk. In particular always answer yes to AUTOFORMAT mode and use the proper

serial number of the drive.

4. If the subsystem is free of further problems the formatter will run to completion. An RD53 should require approximately 35 minutes to complete.

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LARS

	USA	GIA	EUROPE
Activity -			
Contract and Warranty	W	U	Y
Non Contract/Non Warranty	F	U	F
DEC Option	RQDX3	RQDX3	RQDX3
Type of Call	M	M	M
Action Taken	D	D	I
Fail Area-Module-FCO-Comments	RQDX3-R001	RQDX3-R001	RQDX3-R001
Material Used	EQ-01489-01	EQ-01489-01	EQ-01489-01

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