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|---|----------------------------|---------------|--|--|
| d i g i t a l d i g i t a l d i g i t a l | FCO | +- | of Urgency Page_1_ + Of_4_ F + | |
| FIELD CHANGE ORDE | R | Nı | umber: DMB32-F001-DAS | |
| Applicability: (1) Upgrade all DMB32's (T1012) for systems exhibiting System/Process Page Table Entry Access Violations. (2) Upgrade the DMB32 (T1012) for those systems using the LP29 (2000 LPM) Printer. (3) Upgrade all other DMB32's exhibiting Problem/Symptoms as noted on Page 2. | | | | |
| Problem/Symptom: | | | | |
| See Page 2 for Problem/Symptoms Section. | | | | |
| 1) Verify E28 is part number 23-369E6-00. 2) Verify E29 is part number 23-370E6-00. 3) Verify DMB32 (T1032) is at rev. K1 or higher. | | | | |
| Compatibility/Prerequisite FCO: N/A Est. Time to Install: 1.0 Hr. | | | | |
| Special Tools or Te | st Equipment: 1 | N/A | | |
| | FCO Part | ts Informat | tion | |
| Order by Q | uantity: | Part Number: | : Description: | |
| EQ-01522-02 | 1 т | 1012-00 DMB32 | 2 (VAXBI COMM CONTROLLER) | |
| FA-04822-02 | 1 F0 | CO Document | | |
| EQ Kit Variation Sys | tem/Option Appl: | ic: | | |
| | Approva | ls | | |
| CSSE Engineer Lee Sondrini | F.S. Product Robert B | | F.S. Logistics Joseph Michalski | |
| | F.S. Microfich | ne Libraries | Affected Population: 724 | |
| MicroMedia Pub Diane MacDonald | VAXnotes | | | |

| | STARS | |
|------------------|-------|-----------------------|
| Revision: | | Hardcopy Publication: |
| A | | 750 |
| | | |
| FCO Release Date | | Parts Availability: |
| June 18, 1989 | | July 1989 |
| + | | + |

| | FCO DMB32-F001 | |
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| d i g i t a l | PAGE 2 OF 4 | |
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| | | |

PROBLEM/SYMPTOMS (Continued from Page 1.)

- 1. Problem: Incorrect mask in Virtual to Physical address translation routine causing invalid access to System/Process Page Table Entries.
 - Symptom: Print queues hang, (system logs LIAO errors), system reboot required to free print queue), print jobs lost, async ports exhibit lost data, and sync port logs "Line Sync Lost" errors.
 - 2. Problem: Revision 10 Microcode (Rev. "H1/H2" T1012) does not support 2000 LPM LP29 Printer.

Symptom: Unacceptable throughput of LP29 Printer.

- 3. Problem: Start of 68000 cycles not synchronized to start of VAXBI Master transactions.
 - Symptom: 1) Intermittent EVDAK test 32 failures (hard error number 8).
 - 2) DMA errors which caused VMS/SNA to experience occasional automatic shutdown of the circuit with "Circuit Shutdown Forced, Device Inactive" error messages.
- 4. Problem: Async RX and TX split speed operation mis-matched.

 Symptom: Split speed operation requires transmit speed to be varied by changing receive speed and vice-versa.
- 5. Problem: First four receive sync characters discarded by DMB32 following a receive abort in GENBYTE or BISYNC mode.
 - Symptom: Problem in GENBYTE protocol which caused time-out problem in customer written network applications.
- 6. Problem: PBUFFCT register not updated at the termination of a transfer. Symptom: PR.CHAR.CT field not updated with the number of characters left to transmit at the end of a DMA.
- 7. Problem: BIIC EXT Vector Bit clear after module reset, to conform to DEC STD 057.

Symptom: BIIC EXT Vector Bit set after node self-test.

| | Problem: Physical addressing functional specific Symptom: Valid bits set in P | |
|---------------|---|--|
| _ d _ | | FCO DMB32-F001 PAGE 3 OF 4 |
| | REWORK | INSTRUCTIONS |
| | I | MPORTANT |
| 1. | of the operating system. Pothe console switch. Locate power controller and set i | edures to perform an orderly shutdown ower down the system to be worked on via the main breaker (CB1) on the cabinet to the "0" (OFF) position. |
| | * cord must be disconnected | is removed from the unit, the AC power * d. * ******************************** |
| 2. | Gain access to the appropria | ate T1012 (DMB32) module to be reworked. |
| | * *** * DO NOT SLIDE ANY BA11 BOX * IS BOLTED TO AN ADJACENT * EXTENDED. ONLY ONE CABINX * PULLED OUT AT ANY ONE TIME | CAUTION *** CAUTION *** CAUTION *** CABINET UNLESS THE CABINET * CABINET OR THE STABILIZER LEGS ARE ET IS ALLOWED TO HAVE AN OPTION OR BOX * ME. ******************************** |
| | * ** * THE DMB32 MODULE AS WELL * ELECTROSTATIC DISCHARGE * VELOSTAT KIT IS ESSENTIA * NOTICED IMMEDIATELY. | ******************* * CAUTION *** AS THE EPROMS IN THIS FCO KIT, ARE SENSITIVE DEVICES. THE USE OF THE L TO PREVENT DAMAGE WHICH MAY NOT BE * ********************************* |
| 3. | Remove the T1012 (DMB32) fr | om the SPC slot. |
| 4. | Install the T1012 (DMB32) must from which the below R | odule (supplied in this EQ Kit) into the evision T1012 was removed. |
| | ******* | ********** |

| * | *** CAUTION *** | * |
|-----|--|-------|
| * | INSERT THE MODULE SLOWLY AND CAREFULLY TO AVOID CATCHING | * |
| * | COMPONENTS ON THE CARD GUIDES OR ADJACENT MODULES. | * |
| * * | ****************** | * * * |

- 5. Reset CB1 on the cabinet power controller and power up the system using the console switch.
- 6. Ensure that the T1012 (DMB32) Diagnostic LED is on. This will indicate that the On-Board Diagnostics have completed satisfactorily.

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| | PAGE 4 OF 4 |
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| | |

REWORK INSTRUCTIONS (continued)

7. Run the DMB32 standalone diagnostic EVDAK to verify correct operation of the module. Due to the firmware changes a patch is required for EVDAK revision 3.0 to run error free.

DS> LOAD EVDAK
DS> DEPOSIT C253 10068
DS> DEPOSIT/BYTE C24E 3F

DS> SAVE

If the patch is not installed the diagnostic will report the following error:

Test 25 Error 5
Printer Port DMA Start and Abort test Failed.

This problem will be resolved for VAX Diagnostic Release 34. EVDAK version 4.0 will no longer require the preceding patch.

\^ DMB32 \\DMB32-F001 \\SONDRINI \\1989 \\JUN \\FCO_DOCS