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FIELD CHANGE ORDER	NUMBER: KD560-0001
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APPLICABILITY:

This FCO should be implemented on ALL VAXft model 810 systems.

The KD560 module in EACH ZONE of the model 810 is a 54-21081-01. The reason for this FCO is to insure that all field stockrooms, supplies, and customer sites are purged and upgraded to revision "H" for these modules. This will insure that a hardware ECO from revision "F05/F06" is installed as well as the newest release of SROM and CPU firmware.

PROBLEM & SYMPTOM:

Several problems existed in firmware and hardware on the current revisions of the KD560 module.

- 1.) Several unterminated inputs on the 'checker' chips could produce or indicate false errors when no errors had actually occurred which could result in the removal of a module or zone from the system config.
- 2.) SROM diagnostics were enhanced to provide additional coverage.
- 3.) CPU Flash Rom has been upgraded to fix auto reboot bug on Zone "A".
- 4.) CPU Flash Rom also has a corrected error register mask in the CPU diagnostic section.

SOLUTION:

Install fully upgraded rev "H" 54-21083-01 modules, (the KD560-AA), in EACH ZONE of the system.

QUICK CHECK:

Visually inspect BOTH KD560-AA modules, (the 54-21083-01, ATM module), in the VAXft 810 system, (1 module per Zone). Verify that the following are present on both modules in the system;

- 1.) On checker chips at E83 and E87 look for 2 small ECO wires on each component connecting pins 65 to 66, and pins 31 to 32.
- 2.) On E150 look for identifier; 23-073Z4-00, or V1.5, or chksm. 14A5.
- 3.) On E151 look for identifier; 23-072Z4-00, or V1.5, or chksm. B0B5.
- 4.) On E18 look for identifier; 23-357E7-00, or V1.3, or chksm. A230.

PRE/CO-REQUISITE FCO:

N/A

MFIT HRS

1.5

TOOL/TEST EQUIPMENT:	1.) Std FS tool kit and ESD kit
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FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS
EQ-01722-01	Qty : KD560-AA module (Revision H or Higher)
FA-05055-01	Qty : Field Application (FA) Document

FCO CHARGING INFORMATION (see last page)

APPROVALS

TECH. ENGINEER Lee Wolfe	BUSINESS Manager Ron Woodcock	DSHQ Logistics Bill Stanley	DS Product Safety Robert Brister
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IDC PUBLISHING Diane MacDonald	PARTS AVAILABILITY	FCO REVISION A	FCO RELEASE DATE
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*****
* WARNING:          *
*                   *
*   o It must be noted that this upgrade CANNOT BE DONE   *
* AS A ROLLING OR CONTINUOUS SERVICE UPGRADE!              *
*                   *
* THE SYSTEM MUST BE BROUGHT FULLY DOWN, BOTH ZONES      *
* AT THE SAME TIME. THIS MUST BE SCHEDULED WITH          *
*   YOUR CUSTOMER PRIOR TO YOUR ARRIVAL ON SITE.         *
*                                                           *
*****
    
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| PRE-INSTALLATION |
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1. PRE-INSTALLATION

1.1 STOCK ROOM SUPPLIES:

- a) VERIFY that all the KD560(54-21083-01) module(s) presently in stockrooms, comply with this FCO.
- b) If any of the KD560(54-21083-01) module(s) in the stockroom need this FCO implemented, order the appropriate FCO kit to replace the out of revision module(s). You should consume the kit on a LARS form.

1.2 CUSTOMER SITE:

- a) To perform the FCO upgrades will REQUIRE that the

ENTIRE FT SYSTEM be brought down. THIS CANNOT BE PERFORMED AS A CONTINUOUS SERVICE OR ROLLING UPGRADE! Schedule this required downtime with your customer.

- b) It is suggested that the unless the customer is reporting problems with the KD560(54-21083-01) module(s), the system shutdown be performed during a regularly scheduled maintenance visit or during a regularly scheduled customer system shutdown.

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1.2.1 REPLACEMENT OF KD560 MODULE

- a) If the KD560(54-21083-01) module(s) need this FCO implemented, order the EQ kit. The revision of the 54-21083-01 module, with this (FCO/ECO) implemented, will be H01 or H02.
b) Once you have received the new KD560 module(s), verify that they have the FCO implemented. Use the visual inspection process in this FCO for verification. (See "Quick Check" on page #1 of this FCO.)
c) Refer to the INSTALLATION section of this FCO (section 4), for installation sequence.

2. Tools

2.1 Use Standard Field Service tool kit with ESD kit.

NOTE: Make sure proper ESD module removal process is followed.

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

3. ESD measures

3.1 Set up VELOSTAT KIT

- 3.1.1 Unfold the VELOSTAT mat to full size (24" x 24").
- 3.1.2 Attach the 15 foot ground cord to the VELOSTAT snap fastener on the mat.
- 3.1.3 Attach the alligator clip end of the ground cord to a good ground on the cabinet.
- 3.1.4 Attach the wrist strap to either wrist.

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| INSTALLATION |
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4. Installation

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*
*
*          ***      N O T E      ***
*
* It is recommended that a hard copy device be
* available for use at the time of upgrade. There
* is a considerable amount of pertinent information
* which must be captured and recorded from the console
* terminals output.
*
*
*****
```

4.1 SYSTEM SHUTDOWN

- a) Bring new KD560(54-21083-01) module(S) to the customer site.
- b) Bring the system down using the customer's preferred shutdown process.
- c) Locate the KD560(s) that do not have this FCO implemented using the "SHOW VERSION<cr>" command at the consoles ">>>" prompt. If consoles are still in synchronous mode, (DUPLEX), init both zones by typing "I<cr>" and wait for completion of machine initialization, then retype "SHOW VERSION<cr>" command.
- d) On each zone type the "SHOW ALL<cr>" command and record the results for later reuse. (Please pay particular

attention to the capture of Ethernet addresses and any default boot or boot aliases which have been defined.)

- e) Power down one zone from the Operators Control Panel, (Note: this requires that both power off buttons on the zone be pressed simultaneously.)
- f) Replace ONLY ONE of the KD560(s) affected by this FCO, with a new KD560 that has this FCO implemented.
- g) Turn power back on from the Operator Control Panel for the zone which has just had the upgraded KD560 installed.
- h) Wait for successful completion of the power up diagnostics. (Note: it should log a "CPU area mismatch" failure.) (Also note that at this time you may need to execute a "SET ZONE x" command; where zone "x" is the zone which you are upgrading, either "A" or "B". This will only be necessary if the module you are installing is the same as the zone id of the already present zone.)

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- i) At the ">>>" prompt execute the "SHOW ALL" command and examine the results. Verify that the revision levels of firmware reflect the new versions of CPU and SROM.
- j) Now execute a "MATCH_ZONES" command and answer "YES" to the confirmation of update request.

```
* * * * *
THIS COMMAND IS TYPED ON THE CONSOLE TERMINAL ATTACHED
TO THE ZONE WHICH WAS JUST UPGRADED!
* * * * *
```

(Please note: it takes approx. 1 minute to execute this command during which time there is no terminal output.)

This command should replicate the NVRAM entries from the OTHER zone which has the 'correct' entries for the default boot and boot aliases.

- k) Once again type the "SHOW ALL" command and verify that the results of the match_zones command are successful.

(If the results are incorrect enter the boot strings

and boot default manually. Remember that it must match the other zone exactly.)

- l) Now repeat steps a) through k) for the other zone.
- m) After successfully completing upgrade of the other zone please proceed to verification and functional check section, (section #5), of this FCO.

NOTE: It should take approximately 1 to 1.5 hours to install this FCO. Make sure proper ESD module removal process is followed.

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| VERIFICATION |
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5. Verification

5.1 FUNCTIONAL CHECK

- a) Power down BOTH zones of the system and then restore power at the same time to initiate power-up self test diagnostics. (This is the only way to initiate all of the self tests provided in the newly upgraded SROM.)
- b) Verify self test performs and completes without errors. If SYSTEM FAULT LED lights during power-up self test and then goes out, self test has passed successfully. Verify this on the CPU and ATM modules in the front of the system, and all NIM and DIM P-CARDS in the rear of the system, both zones.
- c) Type a "SHOW CONFIG" command to the ">>>" prompt and insure that all modules are noted as present and have 'good' status.
- d) Type the "SHOW STATE" command to the ">>>" prompt and insure that mode is 'failsafe', crosslink status is 'present', and synchable status is 'synchable'.
- e) Type the "SHOW BOOT" command to the ">>>" prompt and insure that the boot default and aliases listed match those previously defined by the customer.

- f) Boot the system software, following any preferred customer process.
- g) Verify that both consoles are active and that zones respond correctly to a "SHOW ZONE" command.
- h) Insure that all DSSI drives can be seen by VMS and that all Ethernet connections are working or are on standby, ready for failover.

VERIFICATION IS COMPLETE

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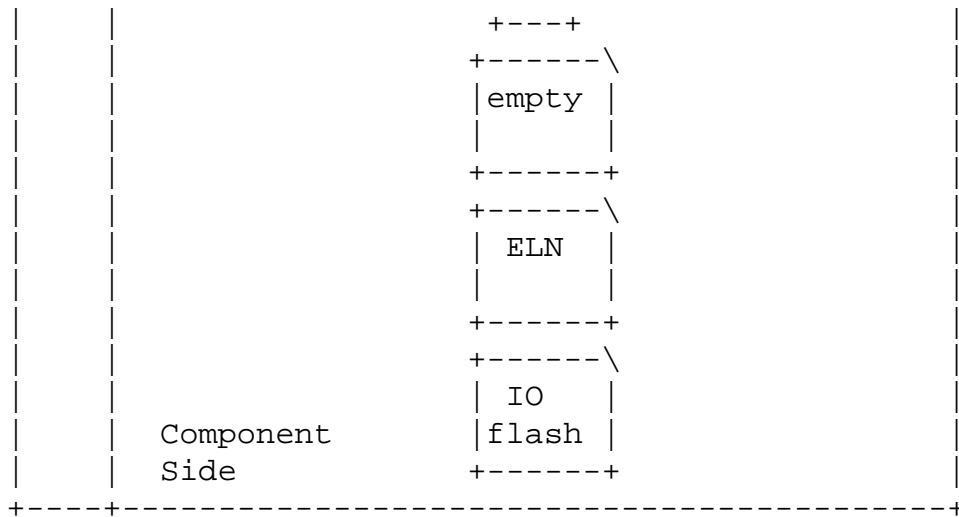
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LARS

CATEGORY	F	USA	APA	EUROPE
Activity - Coverage Code				
(a)Contract		W	U	K
Warranty		W	U	W
Inhouse				A
Invoiced per Call				F
(b)IN-DEC Contract		K	U	
Non Contract/Non Warranty		F	F	
(c)RTD/Off-site Agreement		F	U	
Hardware Segment Code		111	111	
Product Line		031	031	
BBC Code for K,W,A				111
BBC Code for F				031
DEC Option		KD560-AA	KD560-AA	KD560-AA
Option ID		X	N/A	N/A
Type of Call		M	M	
Request Type				I
Action Taken		D	D	Y
Quality Codes				M,L,J,R,X,A,Y,Z
Fail Area-Module		KD560-0001	KD560-0001	KD560-0001
FCO-Comments				
Material Used		EQ-01722-01	EQ-01722-01	EQ-01722-01

(a) Warranty Optimum, Warranty Standard and Warranty Basic (on-site) Agreements; * Note material (only) free of charge for all customers.

(b) Applies to IN-DEC Area Only



Flash Rom

=====

Slanted surface

|
v

+-----\ Beveled corner

| | |
| |o| pin 1 designator

+-----+

| | |