

DIGITAL	FCO	CATEGORY	PAGE 1
		[0]	OF 10

FIELD CHANGE ORDER	NUMBER: 9XXX-0002
--------------------	-------------------

APPLICABILITY: Upgrade all systems and field spares that have the suspect MCUs listed in Appendix A of this document (See page 5).

PROBLEM & SYMPTOM: The pedestal on which the die sits during the encapsulation process in Mfg. was not cleaned and the build up of residue may have caused the top surface of the die to come in contact with the syringe needle point, resulting in possible gross functional failures.

SOLUTION: Digital is replacing Logic which may have long term reliability implications.

QUICK CHECK:  
Reference MCU serial number list in Appendix A.

PRE/COREQUISITE FCO:	MTTI HRS
N/A	2 hrs

TOOL/TEST EQUIPMENT:	
EK-KA901-MG VAX 9000 System Maintenance Guide, Vol 1	

## FCO PARTS INFORMATION

FCO KIT NOA.	DESCRIPTION OF CONTENTS	EQ KIT VARIATION APPLICABILITY
EQ-01609-XX	See Page 2 for contents	
FA-04941-01	FCO Document	

## FCO CHARGING INFORMATION

WARRANTY/CONTRACT				NONWARRANTY/NONCONTRACT				
ON-SITE		OFF-SITE		ON-SITE		OFF-SITE		MATERIAL ONLY
TRAVEL/	EQ		EQ	TRAVEL/	EQ		EQ	ORDER-ADMIN, HANDLING
INSTALL	KIT	INSTALL	KIT	INSTALL	KIT	INSTALL	KIT	PKG, SHIPPING & EQ KIT
DEC	DEC	DEC	DEC	N/A	N/A	N/A	N/A	N/A

## APPROVALS

CSSE Tom Daley	FSHQ LOGISTICS Dick Joseph	FS PRODUCT SAFETY Robert Brister
-------------------	-------------------------------	-------------------------------------

CSSE MANAGER Dino Genova	This document is published on multiple media including hardcopy, Customer Services	FCO RELEASE DATE 1 April 1991
-----------------------------	--	----------------------------------

MICROMEDIA	Microfiche Libraries,	FCO REVISION
------------	-----------------------	--------------

Diane MacDonald	Customer Services CD-ROM and MDS Microfiche Libraries.	A
POPULATION 144		PARTS AVAILABILITY 18-MAR-91

```

|_|_|_|_|_|_|_|_|_|_|
|d|i|g|i|t|a|l|
|_|_|_|_|_|_|_|_|_|_|

```

FCO 9XXX-0002

PAGE 2 OF 10

E.Q. Kit Applicability (cont.)

QTY	EQ KIT	CONTENTS
---	-----	-----
1 ea	EQ-01609-01	F6-P1001-AA DST MCU
1 ea	EQ-01609-02	F6-P1002-AA INT MCU
1 ea	EQ-01609-03	F6-P1004-AA FAD MCU
1 ea	EQ-01609-04	F6-P1005-AA CTL MCU
1 ea	EQ-01609-05	F6-P1007-AA XBR MCU
1 ea	EQ-01609-06	F6-P1008-AA OPU MCU
1 ea	EQ-01609-07	F6-P1012-AA DTB MCU
1 ea	EQ-01609-08	F6-P1013-AA CTU MCU
1 ea	EQ-01609-09	F6-P1014-AA VRG MCU
1 ea	EQ-01609-10	F6-P1015-AA CCU MCU
1 ea	EQ-01609-11	F6-P1017-AA VAD MCU
1 ea	EQ-01609-12	F6-P1019-AA DAX MCU
1 ea	EQ-01609-13	F6-P1020-AA DBX MCU
1 ea	EQ-01609-14	F6-P1011-AA DTA MCU
4 ea	12-29836-01	Screws will be added to each EQ kit.
1 ea	FA-04941-01	FA Document will be contained in each EQ kit

MCU Removal and Replacement Procedure

- Follow procedures in EK-KA901-MG VAX 9000 Family System Maintenance Guide, Volume 1 for shut down, MCU removal and replacement and start up procedures.
- Once the MCU R-R procedures are completed, as described in EK-KA901-MG perform the following:

Where "n" is the CPU in which the new MCU(s) will be installed:

```

>>> SENSE CPU n
>>> SHOW CONFIG/RINGS/CPU:n

```

(Verify that no mismatches occur)

```
  _ _ _ _ _  
 | | | | |  
 |d|i|g|i|t|a|l|  
 | _ _ _ _ _
```

FCO 9XXX-0002

PAGE 3 OF 10

---

```
>>> TEST/SCAN/LOG/TRACE/ISOLATION/CPU:n  
>>> TEST/SCAN/LOG/TRACE/ISOLATION/SCU ! If SCU MCUs replaced  
>>> SET CLOCK/SCU/CPU:ALL OFF  
>>> TEST/SCU/CPU:n  
>>> TEST/STRUCTURE/ALL/LOG/CPU:n  
>>> TEST/STRUCTURE/ALL/LOG/SCU ! If SCU MCUs replaced  
>>> I/K  
>>> @[TOOLS]CPUn_ZFLEX  
>>> I/K  
>>> SET BOOTSET/PRIMARY:n  
>>> LOAD [SYSMAINT]EVKAA  
>>> ST 200  
>>> ^P  
>>> HALT/CPU:ALL  
>>> I/K/B  
>>> @[CONSOLE]CLEAR_MEMORY  
>>> SET BOOTSET/PRIMARY:n
```

Load VDS and run the following MACRO level Diagnostics:

```
EVKAQ  
EVKAR  
EVKAS  
EVKAT  
EVKAU  
EVKAV  
EWKAX  
EWKMP
```

```
DS> EXIT  
>>> HALT/CPU:ALL  
>>> I/K  
>>> B
```

Boot VMS and run UETP for 6 hours

3. Report this FCO activity on the LARS form in the "Fail Area/  
Module/FCO/Comments" column as per the example on Page 4.

```
  _ _ _ _ _  
 | | | | |  
 |d|i|g|i|t|a|l|  
 | _ _ _ _ _
```

FCO 9XXX-0002

PAGE 4 OF 10

|\_|\_|\_|\_|\_|\_|\_|\_|

LARS FORM

-----

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
(b)RTD/Off-site Agreement	F		
Product Line	01		
DEC Option	9XXX	9XXX	9XXX
Type of Call	M	M	M
Action Taken	D	D	I
Fail Area-Module-FCO-Comments	9XXX-0002	9XXX-0002	9XXX-0002
Material Used	EQ-01609-XX	EQ-01609-XX	EQ-01609-XX

- (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
- (c) RTD=Return to Digital or Off-site Agreements; If Field Engineer On-site, use Activity Code "F".

\_	\_	\_	\_	\_	\_	\_	\_
d	i	g	i	t	a	l	
\_	\_	\_	\_	\_	\_	\_	\_

FCO 9XXX-0002

PAGE 5 OF 10

Appendix A - Affected MCUs by serial number

GIA RECALL MCUs IN CUSTOMER MACHINES

CUSTOMER	OPTION	SERIAL NUMBER
TRANSALTA - CANADA	P1001-AA	CT04900467
	P1013-AA	CT05000460
	P1013-AA	CT05000454
OYO - JAPAN	P1001-AA (WAS REMOVED AFTER INSTALL)	CT10300564
JRC - JAPAN	P1004-AA (WAS REMOVED BEFORE INSTALL)	CT10500590

US RECALL MCUs IN CUSTOMER MACHINES

CUSTOMER	OPTION	SERIAL NUMBER
HONEYWELL	P1001-AA	CT10100509
LOCKHEED 3	P1001-AA	CT10200548
SCHLUMB 1	P1001-AA	CT10400581
SCHLUMB 2	P1002-AA	CT04900456
LOCKHEED 2	P1004-AA	CT10100527
CSX 2	P1004-AA	CT10100530
	P1015-AA	CT04900413
	P1019-AA	CT04900493
CSX 1	P1007-AA	CT04900446
LOCKHEED 1	P1012-AA	CT04900436
	P1015-AA	CT04900415
CORSTAR	P1013-AA	CT04900443
ITT RESRC	P1013-AA	CT04900445
PROG RESRC	P1013-AA	CT05000457
GLAXO	P1013-AA	CT05000459
	P1015-AA	CT04900411
	P1019-AA	CT04900491
MENTAL RET	P1013-AA	CT05000468
HUGHES AIR	P1013-AA	CT05000469
	P1013-AA	CT05000480

	d	i	g	i	t	a	l

FCO 9XXX-0002

PAGE 6 OF 10

USERS	P1013-AA	CT05000474
RJR	P1019-AA	CT04900490
	P1020-AA	CT04900475

RECALL MCUs LOCATED IN GIA

COUNTRY	OPTION (A2 AND F6)	SERIAL NUMBER
JAPAN	F6-P1001-AA	CT10300568
	F6-P1001-AA	CT10300559
	F6-P1001-AA	CT10300552

CANADA - EDMONTON	F6-P1001-AA	CT04900466
	F6-P1001-AA	CT10200538
CANADA - OTTAWA	F6-P1013-AA	CT05000477

(KOREA ONLY SITE YET TO BE CHECKED)

RECALL MCUs LOCATED IN US AREA\*

-----  
LOGISTICS SUPPORT SITE(IF KNOWN)      OPTION (A2 AND F6)      SERIAL NUMBER  
-----

	A2 OR	F6-P1001-AA	CT04900465
		F6-P1001-AA	CT10100508
		F6-P1001-AA	CT10200534
		F6-P1001-AA	CT10200544
EL SEGUNDO, CA		F6-P1001-AA	CT10300560
EL SEGUNDO, CA		F6-P1001-AA	CT10300561
SEATTLE, WA		F6-P1001-AA	CT10300565
SEATTLE, WA		F6-P1001-AA	CT10300571
		F6-P1001-AA	CT10300572
SEATTLE, WA		F6-P1001-AA	CT10300573
LANDOVER, MD		F6-P1001-AA	CT10300574
		F6-P1001-AA	CT10300576
		F6-P1001-AA	CT10400579
		F6-P1004-AA	CT10200535
		F6-P1008-AA	CT04900431
		F6-P1008-AA	CT04900434
		F6-P1008-AA	CT10100504

	d	i	g	i	t	a	l

FCO      9XXX-0002  
PAGE    7    OF    10

F6-P1013-AA	CT04800384
F6-P1013-AA	CT04900440
F6-P1013-AA	CT04900442
F6-P1013-AA	CT04900446
F6-P1013-AA	CT04900447
F6-P1013-AA	CT04900449
F6-P1013-AA	CT05000455
F6-P1013-AA	CT05000461
F6-P1013-AA	CT05000470
F6-P1013-AA	CT05000471
F6-P1013-AA	CT05000484

-----  
RECALL MCUs THAT MAY BE IN THE FIELD  
-----

A2, F6 OR	P1001-AA	CT10100511
	P1001-AA	CT10200543
	P1001-AA	CT10500606
	P1005-AA	CT10500564
	P1013-AA	CT05000456
	P1013-AA	CT05000473
	P1013-AA	CT05000482
	P1015-AA	CT10300477
	P1019-AA	CT04900484
	P1019-AA	CT04900487
	P1019-AA	CT10200533
	P1019-AA	CT10500584
	P1019-AA	CT10500588
	P1019-AA	CT10500591
	P1019-AA	CT10500593
	P1019-AA	CT10500598

```

- - - - -
| | | | |
| d | i | g | i | t | a | l |
| - | - | - | - | - | - | - |

```

FCO 9XXX-0002

PAGE 8 OF 10

The following is a list of the RECALL MCU's which have been shipped to Europe. Units affected have been shipping since mid-December mainly as Upgrades. Owing to some problems in our tracability system we do not have full details on a portion of the upgrade population. The Customer Name (Systems) and Country (Upgrade sets) are attached to part number and serial number below.

In total there are 69 MCU's involved broken out as follows;

- \* 15 in 5 Customer Systems ,
- \* 21 in known Upgrade sets ,
- \* 33 which shipped either as P1's , Spares or Upgrades .

VAX9000 SYSTEMS IN FIELD WITH SUSPECT MCU'S  
=====

1) VBO BENCHMARK CENTRE (IEG, France)

```

-----
CPU0      P1002 (CT04900452)
          P1007 (CT04900452)
CPU1      P1001 (CT00200546)
          P1002 (CT05000466)
          P1004 (CT10100532)

```

2) DEPARTMENT OF TRANSPORT (UK)

-----  
P1002 (CT05000467)

3) PJG - UNIVERSITY OF LAUSANNE (SWITZERLAND)

-----  
P1002 (CT04900453)  
P1011 (CT04900442)  
P1012 (CT04900441)  
P1013 (CT05000478)

4) FAG KUGEFISCHER (GERMANY/SWITZERLAND ??)

-----  
P1004 (CT10100529)  
P1008 (CT10100503)  
P1015 (CT04900412)  
P1020 (CT04900477)

5) DEPARTMENT OF SOCIAL WELFARE (IRELAND)

-----  
P1011 (CT04900443)

-----  
| | | | | | | | | |  
d	i	g	i	t	a	l
-----

FCO 9XXX-0002

PAGE 9 OF 10

MCU's As Part of UPGRADE SETS

Country of Upgrade	Option	Serial Number
DENMARK	P1001-AA	CT10100510
SWITZERLAND	P1001-AA	CT10300556
SWITZERLAND	P1001-AA	CT10200546
FINLAND	P1001-AA	CT10200545
NETHERLANDS	P1001-AA	CT10200539
GERMANY	P1001-AA	CT10200542
GERMANY	P1001-AA	CT10200540
NORWAY	P1001-AA	CT10200535
DIGITAL FRANCE	P1001-AA	CT10200533
ITALY	P1001-AA	CT10300553
ITALY	P1001-AA	CT10300577
ISRAEL	P1001-AA	CT10400582
ISRAEL	P1013-AA	CT05000476
BELGIUM	P1001-AA	CT10400584
BELGIUM	P1001-AA	CT10400589
BRUSSELS	P1004-AA	CT10100523
BRUSSELS	P1008-AA	CT10400557
BRUSSELS	P1008-AA	CT04900436



UK SPARES P1008-AA CT04900435  
UK SPARES P1013-AA CT04900441  
UK SPARES P1001-AA CT10300566

\*\*\*\*\*

MCU's used in Pl's, upgrades or part of spare sets but with location UNKNOWN.

P1001-AA CT10100507  
P1001-AA CT10100513  
P1001-AA CT10400583  
P1001-AA CT10500608  
P1002-AA CT04900455  
P1004-AA CT10600599  
P1004-AA CT10100528  
P1004-AA CT10200533  
P1004-AA CT10400544  
P1004-AA CT04900448  
P1004-AA CT04900449  
P1004-AA CT04900451  
P1005-AA CT04900450  
P1007-AA CT04900455  
P1008-AA CT10500574  
P1008-AA CT04900432  
P1012-AA CT04900437

\_|\_|\_|\_|\_|\_|\_|\_|\_|\_|  
|d|i|g|i|t|a|l|  
\_|\_|\_|\_|\_|\_|\_|\_|\_|\_|

FCO 9XXX-0002

PAGE 10 OF 10

P1013-AA CT05000462  
P1013-AA CT10500619  
P1013-AA CT04900444  
P1013-AA CT05000456  
P1013-AA CT05000482  
P1013-AA CT05000473  
P1013-AA CT05000475  
P1013-AA CT05000472  
P1013-AA CT05000479  
P1013-AA CT05000481  
P1013-AA CT05000460  
P1013-AA CT05000471  
P1013-AA CT05000468  
P1014-AA CT04900140  
P1017-AA CT05000188  
P1020-AA CT10200505

\^ 9XXX  
\FCO\_DOCS  
\DALEY

\\9XXX  
\\9000  
\\APR  
\\1991