

LSI-11

TRAPS TEST
MD-11-DVKAD-A

EP DVKAD-DL-A

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FICHE 1 OF 1

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MADE IN USA

The microfiche card displays a grid of frames on the left side, organized into 5 columns and 12 rows. Each frame contains data, likely test results or system status information, presented in a structured format with headers and data fields. The frames are arranged in a grid that is 5 columns wide and 12 rows high. The right side of the card is blank.

SECRET

000007
000006
000003
000000
000001
000002
000000
:04400
104000
000003
000004
000004
000014
000030
000020
000034
177554
:177550
177554
:177556
000240
000024
000007
000010
004700
000106
000404
000402

```

BC=1.7
SP=1.6
TAB=1.3
RC=1.0
LAST=1.1
FIRST=1.2
HLT=HALT
TRAP=104400
EMT=104000
TRT=3
ITRAP5=4
RTRAP5=4
RTRAP4=14
RTRAP3=30
RTRAP2=20
RTRAP1=34
TTCSR=177564
TRCSR=177560
TP5=177564
TPB=177566
BELL=240
NOP=240
TRAPA=000007
RTRAP=10
ILLA=004700
ILLB=100
$ISTNM=$TESTN
$ERROR=$FATAL

```

.MCALL .SAPTHOR
.MCALL .SAPTBL5
.MCALL .SACT11

```

:RESERVED INST AND ILL-LEGAL ADDRESSES
:FOR TRACE TRAP
:FOR EMULATOR TRAP
:FOR IOT TRAP
:FOR TRAP INST

```

```
.x400
.....
```

```
.SBTTL  ACT11 HOOKS
:HOOKS  REQUIRED BY ACT11
```

SSVPC=.

:SAVE PC

46

```

::1)SET LOC.46 TO ADDRESS OF SENDAC IN .SECP

```

SENADO

. = 52

```

::2) SET LOC.52 TO ZERO

```

WFOO 2

SSVPC

RESTORE PC

.SBTTL APT MAILBOX-ETABLE

.EVEN

\$MAIL:			::	APT MAILBOX
\$MSGTY:	.WORD	AMSGTY	::	MESSAGE TYPE CODE
\$FATAL:	.WORD	AFATAL	::	FATAL ERROR NUMBER
\$TESTN:	.WORD	ATESTN	::	TEST NUMBER
\$PASS:	.WORD	APASS	::	PASS COUNT
\$DEVCT:	.WORD	ADEVCT	::	DEVICE COUNT
\$UNIT:	.WORD	ALNIT	::	I/O UNIT NUMBER
\$MSGAD:	.WORD	AMSGAD	::	MESSAGE ADDRESS
\$MSGLG:	.WORD	AMSLG	::	MESSAGE LENGTH
\$ETABLE:			::	APT ENVIRONMENT TABLE
\$ENV:	.BYTE	AENV	::	ENVIRONMENT BYTE
\$ENVN:	.BYTE	AENVN	::	ENVIRONMENT MODE BITS
\$SWREG:	.WORD	ASWREG	::	APT SWITCH REGISTER
\$USWR:	.WORD	ALSWR	::	USER SWITCHES
\$CPUOP:	.WORD	ACPUOP	::	CPU TYPE, OPTIONS

BITS 15-11=CPU TYPE

11/04=01.11/05=02.11 20=03.11 40=04.11 45=05

11/70=C6, P00=07, 3=10

BIT 10=REAL TIME CLOCK

BIT 9=FLOATING POINT PROCESSOR

BIT B=MEMORY MANAGEMENT

```

SIT 8=MEMORY TRAIL
::MEM. TYPE.BLK01

```

MEM. TYPE BYTE -- "BYTE" "

900 NSEC CORE=001

300 NSEC BIPOLAR=002

500 NSEC MOS=003

300 NSEC 1103-003
::MEM.LAST ADDRESS.BLK#1

MEM. LAST ADDR. = 3 BYTES. THIS WORD AND LAST WORD OF "TYPE" ABOVE

```

MEM. LAST ADDR.
::MEM. TYPE. BLK#2

```

```

MEM. TYPE, BLK#2
MEM. LAST ADDRESS. BLK#2

```

```

MEM. LAST ADDRESS, BLK#2
MEM. TYPE, BLK#3

```

```

MEM. TYPE, BLK#3
MEM. LAST ADDRESS, BLK#3

```

```

::MEM.LAST ADDRESS.BLK#3
::MEM.TYPE.BLK#4

```

```
MEM. TYPE, BLK 04
MEM. LAST ADDRESS, BLK 04
```

```
;;MEM.LAST ADDRESS, BLK 84
```

.MEXIT

[illegible]

```

(1)
(1) .SETTL APT PARAMETER BLOCK
(1) :SET LOCATIONS 24 AND 44 AS REQUIRED FOR APT
(2) :*****
(1) 000450 .SX=. ::SAVE CURRENT LOCATION
(1) 000024 .=24 ::SET POWER FAIL TO POINT TO START OF PROGRAM
(1) 000024 200 ::FOR APT START UP
(1) 000044 .=44 ::POINT TO APT INDIRECT ADDRESS PNTR.
(1) 000044 $APTHDR ::POINT TO APT HEADER BLOCK
(1) 000450 .=.SX ::RESET LOCATION COUNTER
(2) :*****
(1) :SETUP APT PARAMETER BLOCK AS DEFINED IN THE APT-PDPI1 DIAGNOSTIC
(1) :INTERFACE SPEC.
(1)
(1) 000450 $APTHD:
(1) 000450 000000 $HIBTS: .WORD 0 ::TWO HIGH BITS OF 18 BIT MAILBOX ADDR.
(1) 000452 000400 $MBADR: .WORD $MAIL ::ADDRESS OF APT MAILBOX (BITS 0-15)
(1) 000454 000011 $TSTM: .WORD 11 ::RUN TIM OF LONGEST TEST
(1) 000456 000011 $PASTM: .WORD 11 ::RUN TIME IN SECS. OF 1ST PASS ON 1 UNIT .QUICK VERIFY.
(1) 000460 000000 $UNITM: .WORD 0 ::ADDITIONAL RUN TIME (SECS) OF A PASS FOR EACH ADDITIONAL UNIT
(1) 000462 000024 .WORD $*END-$MAIL/2 ::LENGTH MAILBOX-ETABLE.WORDS.

```

E01

.MAIN. MAC111 27(732) 25-AUG-76 12:49 PAGE 55-3
 DVKADA.P11 APT PARAMETER BLOCK

*** SEQ 0006

```

5058
5059      000200      000167      000276      : =200
5060      000200      000167      000276      JMP      START
5061      000210      000210      : =210
5062      000210      000203      000406      CLR      20$PASS      ;CLEAR THE PASS COUNT
5063      000214      000167      000262      JMP      START
5064      000500      000500      : =500
5065      000500      000000      000000      BUFF: 000000
5066      000502      012767      013100      177314      START: MOV      #PDOWN.24      ;SET UP THE POWER DOWN VECTOR
5067      000510      012767      000340      177310      MOV      #340.26      ;SET UP POWER DOWN PRIORITY
5068      000516      105767      177676      TSTB     $ENV      ;ARE WE UNDER APT?
5069      000522      001023      : BNE      BEGIN      ;YES
5070      000524      005067      177671      CLR      $ENVM
5071      000530      005067      177672      CLR      $CPUOP
5072      000534      132767      000040      177660      BITB     #40,$$WREG      ;DO WE PRINT END OF PASS
5073      000542      001403      : BEQ      IS      ;YES
5074      000544      152767      000040      177647      BISB     #40,$ENVM
5075
5076      000552      016700      177644      : IS:  MOV      $$WREG,R0      ;GET CONTENT OF $$WREG
5077      000556      032700      000100      BIT      #100,R0      ;DO WE HAVE EIS,FIS OPTION?
5078      000562      001403      : BEQ      BEGIN      ;NO
5079      000564      052767      000300      177634      BIS      #300,$CPUOP      ;YES SET UP LOCATION #CPUOP
5080
5081
5082
5083      000572      012737      177777      012716      BEGIN: MOV      #-1,20$PASSPT
5084      000600      012702      000400      RESTART: MOV     #MSGTY,%2
5085      000604      005067      177570      CLR      $MSGTY
5086      000610      005067      177570      CLR      $STNM
5087      000614      005067      177562      CLR      $ERROR
5088      000620      000167      000026      JMP      TST1
5089      000624      000000      : K1:  0
5090      000626      000000      : K2:  0
5091      000630      000000      : K3:  0
5092      000632      000000      : K4:  0
5093      000634      000000      : K5:  0
5094      000636      000000      : K6:  0
5095      000640      052525      : K7:  052525
5096      000642      052400      : K10: 052400
5097      000644      000000      : K11: 0
5098      000646      000000      : K12: 0
5099      000650      000000      : HERE: 0
5100
5101      (2)      : *****
5102      (3)      : TEST 1 TEST AUTO INCREMENT AND DECREMENT OF R6 FOR WORD AND BYTES
5103      (2)      : *****
5104      (2)      000652      005237      000404      TST1:  INC      20$TESTN      ;UPDATE TEST NUMBER
5105      (2)      000656      022737      000001      000404      CMP      #1,20$TESTN      ;SEQUENCE ERROR?
5106      (2)      000664      001124      : BNE      TST2-12 ;BR TO ERROR HALT ON SEQ ERROR
5107      5101      000666      005006      R6TST: CLR      %6
5108      5102      000670      112667      177754      MOV      (6)+,HERE      ;SIX SHOULD INCREMENT BY TWO
5109      5103      000674      020627      000002      CMP      %6,#2
5110      5104      000700      001405      : BEQ      IS
5111      (3)      000702      012737      000001      000402      MOV      #1,20$FATAL      ;MOVE TO MAILBOX # ***** 1 *****
5112      (2)      000710      005212      : INC      (R2)      ;SET MSGTYP TO FATAL ERROR
5113      (2)      000712      000000      : HALT      ;R6 DID NOT AUTO INCREMENT BY TWO
5114      (4)      : ; TO SCOPE REPLACE HALT W 240

```

F01

MAIN. MACY11 27(732)
DVKADA.P11 T1

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TEST AUTO INCREMENT AND DECREMENT OF R6 FOR WORD AND BYTES

*** SEQ 0007

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(4)
S105                                     ; AND REPLACE NEXT INST W/ 764
S106 000714 012706 001000 15: MOV #1000,%6
S107 000720 114667 177724 MOVB -(6),HERE ; SHOULD DECREMENT BY TWO
S108 000724 020627 000776 CMP %6,#776
S109 000730 001405 BEQ 2$
(3) 000732 012737 000002 000402 MOV #2,0$FATAL ; MOVE TO MAILBOX # ***** 2 *****
(2) 000740 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 000742 000000 HALT ; R6 DID NOT AUTO DECREMENT BY 2
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 750
S110
S111 000744 005006 2$: CLR %6
S112 000746 112626 MOVB (6)+(6)+ ; DOUBLES AUTO INCREMENT OF R6
S113 000750 020627 000004 CMP %6,#4
S114 000754 001405 BEQ 3$
(3) 000756 012737 000003 000402 MOV #3,0$FATAL ; MOVE TO MAILBOX # ***** 3 *****
(2) 000764 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 000766 000000 HALT ; WRONG AUTO INCREMENT OF R6
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 736
S115
S116 000770 005006 3$: CLR %6
S117 000772 005004 CLR %4
S118 000774 122624 CMPB (6)+(4)+ ; TEST INCREMENT OF R6
S119 000776 020627 000002 CMP %6,#2
S120 001002 001405 BEQ 4$
(3) 001004 012737 000004 000402 MOV #4,0$FATAL ; MOVE TO MAILBOX # ***** 4 *****
(2) 001012 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 001014 000000 HALT ; WRONG INCREMENT OF R6
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 723
S121
S122 001016 005006 4$: CLR %6
S123 001020 005004 CLR %4
S124 001022 122426 CMPB (4)+(6)+ ; TEST INCREMENT OF R6
S125 001024 020627 000002 CMP %6,#2
S126 001030 001405 BEQ 5$
(3) 001032 012737 000005 000402 MOV #5,0$FATAL ; MOVE TO MAILBOX # ***** 5 *****
(2) 001040 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 001042 000000 HALT ; WRONG INCREMENT OF R6
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 710
S127
S128 001044 005006 5$: CLR %6
S129 001046 005004 CLR %4
S130 001050 122624 CMPB (6)+(4)+ ; TEST INCREMENT OF R4
S131 001052 020427 000001 CMP %4,#1
S132 001056 001405 BEQ 6$
(3) 001060 012737 000006 000402 MOV #6,0$FATAL ; MOVE TO MAILBOX # ***** 6 *****
(2) 001066 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 001070 000000 HALT ; WRONG INCREMENT OF R4
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 675
S133
S134 001072 005006 6$: CLR %6

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G01

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 DVKADA.P11 T1 TEST AUTO INCREMENT AND DECREMENT OF R6 FOR WORD AND BYTES

*** SEQ 0008

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5135 001074 005004          CLR      %4
5136 001076 122426          CMPB     (4)+, (6)+      ;TEST INCREMENT OF R4
5137 001100 020427 000001   CMP      %4, #1
5138 001104 001405          BEQ      7$
(3) 001106 012737 000007 000402 MOV     #7, 2*$FATAL      ;MOVE TO MAILBOX # ***** 7 *****
(2) 001114 005212          INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 001116 000000          HALT              ;WRONG INCREMENT OF R4
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 662

5139
5140 001120 012706 001000    7$:  MOV     #1000, %6
5141 001124 124667 177520    CMPB     -(6), HERE      ;TEST DECREMENT OF R6
5142 001130 022706 000776    CMP      #776, %6
5143 001134 001405          BEQ      TST2
(4) 001136 012737 000010 000402 MOV     #10, 2*$FATAL      ;MOVE TO MAILBOX # ***** 10 *****
(3) 001144 005212          INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 001146 000000          HALT              ;WRONG DECREMENT OF R6 OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 646

5144
(2)                                     ;*****
(3)                                     ;TEST 2 TEST TRANSFER OF BYTE USING R6
(2)                                     ;*****
(2) 001150 005237 000404    TST2:  INC     2*$TESTN      ;UPDATE TEST NUMBER
(2) 001154 022737 000002 000404 CMP     #2, 2*$TESTN      ;SEQUENCE ERROR?
(2) 001162 001137          BNE     TST3-12 ;BR TO ERROR HALT ON SEQ ERROR
5145 001164 012767 123456 177442 MOV     #123456, K5
5146 001172 012767 050505 177424 MOV     #050505, K1
5147 001200 012705 000624          MOV     #K1, %5      ;%5=(050505)K1
5148 001204 012706 000634          MOV     #K5, %6      ;%6=(123456)K5
5149 001210 112625          MOVB     (6)+, (5)+      ;LOW .BYTE OF R6 TO R5
5150 001212 022767 050456 177404 CMP     #050456, K1
5151 001220 001405          BEQ      1$
(3) 001222 012737 000011 000402 MOV     #11, 2*$FATAL      ;MOVE TO MAILBOX # ***** 11 *****
(2) 001230 005212          INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 001232 000000          HALT              ;FALSE TRANSFER OF .BYTE
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 753

5152
5153 001234 012767 123456 177372 1$:  MOV     #123456, K5
5154 001242 012767 050505 177354 MOV     #050505, K1
5155 001250 012705 000624          MOV     #K1, %5      ;%5(050505)K1
5156 001254 012706 000636          MOV     #K6, %6      ;%6(123456)K5
5157 001260 114625          MOVB     -(6), (5)+      ;LOW .BYTE OF R6 TO R5 (DECREMENT)
5158 001262 026727 177336 050456 CMP     K1, #050456
5159 001270 001405          BEQ      2$
(3) 001272 012737 000012 000402 MOV     #12, 2*$FATAL      ;MOVE TO MAILBOX # ***** 12 *****
(2) 001300 005212          INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 001302 000000          HALT              ;FALSE R6 .BYTE TRANSFER
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 727

5160
5161 001304 012767 123456 177312 2$:  MOV     #123456, K1
5162 001312 012767 050505 177314 MOV     #050505, K5
5163 001320 012705 000624          MOV     #K1, %5      ;(123456)
5164 001324 012706 000634          MOV     #K5, %6      ;(050505)
5165 001330 112526          MOVB     (5)+, (6)+      ;LOW OF R5 TO LOW OF R6

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H01

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 DVKADA.P11 T2 TEST TRANSFER OF BYTE USING R6

*** SEQ 0009

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5166 001332 022767 050456 177274      CMP      #050456,K5
5167 001340 001405      BEQ      3$
(3) 001342 012737 000013 000402      MOV      #13,2#SFATAL ;MOVE TO MAILBOX # ***** 13 *****
(2) 001350 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001252 000000      HALT     ;FALSE R6 .BYTE TRANSFER
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 703

5168
5169 001354 012767 123456 177242 3$: MOV      #123456,K1
5170 001362 012767 050505 177244      MOV      #050505,K5
5171 001370 012705      MOV      #K1+1,%5 ;123456
5172 001374 012706 000625      MOV      #K5,%6 ;050505
5173 001400 112526      MOVB     (5)+,(6)+ ;HIGH OF R5 TO LOW OF R6
5174 001402 026727 177226 050647      CMP      K5,#050647
5175 001410 001405      BEQ      4$
(3) 001412 012737 000014 000402      MOV      #14,2#SFATAL ;MOVE TO MAILBOX # ***** 14 *****
(2) 001420 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001422 000000      HALT     ;FALSE R6 .BYTE TRANSFER
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 657

5176
5177 001424 012767 123456 177172 4$: MOV      #123456,K1
5178 001432 012767 050505 177174      MOV      #050505,K5
5179 001440 012705      MOV      #K1+1,%5 ;R5-123456-ODD ADDRESS
5180 001444 012706 000625      MOV      #K5,%6 ;R6-050505--.EVEN ADDRESS
5181 001450 112625      MOVB     (6)+,(5)+ ;LOW OF R6 TO HIGH OF R5
5182 001452 022767 042456 177144      CMP      #042456,K1
5183 001460 001405      BEQ      TST3
(4) 001462 012737 000015 000402      MOV      #15,2#SFATAL ;MOVE TO MAILBOX # ***** 15 *****
(3) 001470 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(3) 001472 000000      HALT     ;FAILED LOW OF 6 TO HIGH OF 5 OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 633

5184
(2) ;*****
(3) ;TEST 3 TEST BYTE OPERATION WITH SEQUENTIAL ODD; .EVEN ADDRESS
(3) ;*****
(2) 001474 005237 000404      TST3: INC      2#$TESTN ;UPDATE TEST NUMBER
(2) 001500 022737 000003 000404      CMP      #3,2#$TESTN ;SEQUENCE ERROR?
(2) 001506 001103      BNE      TST4-12 ;BR TO ERROR HALT ON SEQ ERROR
5185 001510 126767 177124 177123      CMPB     K7,K7+1 ;SAME .WORD LOW TO HIGH
5186 001516 001405      BEQ      1$
(3) 001520 012737 000016 000402      MOV      #16,2#SFATAL ;MOVE TO MAILBOX # ***** 16 *****
(2) 001526 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001530 000000      HALT     ;SHOULD COMPARE LOW TO HIGH
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 766

5187
5188 001532 126767 177103 177100 1$: CMPB     K7+1,K7 ;COMPARE ODD TO .EVEN SAME .WORD
5189 001540 001405      BEQ      2$
(3) 001542 012737 000017 000402      MOV      #17,2#SFATAL ;MOVE TO MAILBOX # ***** 17 *****
(2) 001550 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001552 000000      HALT     ;ODD TO .EVEN .BYTE FAILURE
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 755

5190
5191 001554 126767 177063 177056 2$: CMPB     K10+1,K7 ;SEQUENTIAL .BYTES

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 DYKADA.P11 T3 TEST BYTE OPERATION WITH SEQUENTIAL ODD; .EVEN ADDRESS

*** SEQ 0010

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5192                                     ;DIFFERENT .WORDS
5193 001562 001462 BEQ TST4
(4) 001564 012737 000020 000402 MOV #20,2#SFATAL ;MOVE TO MAILBOX # ***** 20 *****
(3) 001572 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 001574 000000 HALT ;ODD TO .EVEN FAILED
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 744
5194
5195 001576 126767 177040 177032 CMPB K10,K6
5196 001604 001405 BEQ 3$
(3) 001606 012737 000021 000402 MOV #21,2#SFATAL ;MOVE TO MAILBOX # ***** 21 *****
(2) 001614 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001616 000000 HALT ;.EVEN TO EVEN FAILED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 733
5197 001620 126767 177015 177015 3$: CMPB K7+1,K10+1
5198 001626 001405 BEQ 4$
(3) 001630 012737 000022 000402 MOV #22,2#SFATAL ;MOVE TO MAILBOX # ***** 22 *****
(2) 001636 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001640 000000 HALT ;ODD TO ODD FAILED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 722
5199
5200 001642 126767 176774 176773 4$: CMPB K10,K10+1
5201 001650 001005 BNE 5$
(3) 001652 012737 000023 000402 MOV #23,2#SFATAL ;MOVE TO MAILBOX # ***** 23 *****
(2) 001660 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001662 000000 HALT ;LOW TO HIGH IN SAME .WORD FAILED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 711
5202
5203 001664 126767 176753 176751 5$: CMPB K10+1,K10+1
5204 001672 001405 BEQ 6$
(3) 001674 012737 000024 000402 MOV #24,2#SFATAL ;MOVE TO MAILBOX # ***** 24 *****
(2) 001702 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 001704 000000 HALT ;HIGH TO LOW IN SAME .WORD FAILED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 700
5205
5206 001706 126767 176730 176725 6$: CMPB K10,K7+1
5207 001714 001005 BNE TST4
(4) 001716 012737 000025 000402 MOV #25,2#SFATAL ;MOVE TO MAILBOX # ***** 25 *****
(3) 001724 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 001726 000000 HALT ;.EVEN TO ODD FAILED,OR WRONG $TESTN,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 667
5208
5209 *****
(2) ;TEST 4 TEST THE CC BITS
(3) *****
(2) 001730 005237 000404 000404 TST4: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 001734 022737 000004 000404 CMP #4,2#$TESTN ;SEQUENCE ERROR?
(2) 001742 001070 BNE TST5-12 ;BR TO ERROR HALT ON SEQ ERROR
5210 001744 000277 SCC ;SET STATUS
5211 001746 005067 011124 CLR STATUS
5215 001752 MTPS STATUS

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 DVKADA.P11 T4 TEST THE CC BITS

*** SEQ 0011

(1)	001752	106467			WORD	106400!..C		
5219	001756	103005			BCC	1\$		
(3)	001760	012737	000026	000402	MOV	#25, 2#\$FATAL	; MOVE TO MAILBOX # ***** 26 *****	
(2)	001766	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	001770	000000			HALT		; C NOT CLEAR	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 764	
5220	001772				1\$:			
(1)	001772	102005			BVC	2\$		
(3)	001774	012737	000027	000402	MOV	#27, 2#\$FATAL	; MOVE TO MAILBOX # ***** 27 *****	
(2)	002002	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002004	000000			HALT		; V NOT CLEAR	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 756	
5221	002006				2\$:			
(1)	002006	001005			BNE	3\$		
(3)	002010	012737	000030	000402	MOV	#30, 2#\$FATAL	; MOVE TO MAILBOX # ***** 30 *****	
(2)	002016	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002020	000000			HALT		; Z NOT CLEAR	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 750	
5222	002022				3\$:			
(1)	002022	100005			BPL	4\$		
(3)	002024	012737	000031	000402	MOV	#31, 2#\$FATAL	; MOVE TO MAILBOX # ***** 31 *****	
(2)	002032	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002034	000000			HALT		; N NOT CLEAR	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 742	
5223	002036	000257			4\$:			
5224	002040				CCC		; CLEAR CONDITION CODES	
5228	002040	106767			MFPS	STATUS		
(1)	002040	106767			.WORD	106700!..C		
5232	002044	052767	000017	011024	BIS	#17, STATUS	; SET STATUS TO ONES	
5236	002052				MTPS	STATUS		
(1)	002052	106467			.WORD	106400!..C		
5240	002056	103405			BCS	5\$		
5241	002060	012737	000032	000402	MOV	#32, 2#\$FATAL	; MOVE TO MAILBOX # ***** 32 *****	
(3)	002060	012737			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002066	005212			HALT		; C NOT SET	
(2)	002070	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 724	
5242	002072				5\$:			
(1)	002072	102405			BVS	6\$		
(3)	002074	012737	000033	000402	MOV	#33, 2#\$FATAL	; MOVE TO MAILBOX # ***** 33 *****	
(2)	002102	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002104	000000			HALT		; V NOT SET	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 716	
5243	002106				6\$:			
(1)	002106	001405			BEQ	7\$		
(3)	002110	012737	000034	000402	MOV	#34, 2#\$FATAL	; MOVE TO MAILBOX # ***** 34 *****	
(2)	002116	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002120	000000			HALT		; Z NOT SET	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 710	

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 DVKADA.P11 T4 TEST THE CC BITS

*** SEQ 0012

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5244 002122 75: BMI TST5
(2) 002122 100405 MOV #35,2#SFATAL ;MOVE TO MAILBOX # ***** 35 *****
(4) 002124 012737 000035 000402 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 002132 005212 ;N NOT SET,OR WRONG $TESTN
(3) 002134 000000 HALT ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 702
(5)
5245 ;*****
(2) ;TEST 5 TEST THAT A TRAP OCCURES ON A RESERVED INSTRUCTION
(3) ;*****
(2) 002136 005237 000404 TST5: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 002142 022737 000005 000404 CMP #5,2#$TESTN ;SEQUENCE ERROR?
(2) 002150 001006 BNE TST6-12 ;BR TO ERROR HALT ON SEQ ERROR
5246 002152 012706 000500 MOV #BUFF,SP ;STACK POINTER SETUP
5247 002156 012767 002200 175624 MOV #RETA,RTRAP ;RETURN LOCATION
5248 002164 000007 TRAPA ;RESERVED INSTRUCTION, SHOULD TRAP
5249 002166 012737 000036 000402 MOV #36,2#$FATAL ;MOVE TO MAILBOX # ***** 36 *****
(2) 002174 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 002176 000000 HALT ;DID NOT TRAP OR WRONG $TESTN
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 764
5250 002200 RETA:
5251 ;*****
(2) ;TEST 6 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION
(3) ;*****
(2) 002200 005237 000404 TST6: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 002204 022737 000006 000404 CMP #6,2#$TESTN ;SEQUENCE ERROR?
(2) 002212 001011 BNE TST7-12 ;BR TO ERROR HALT ON SEQ ERROR
5252 002214 012706 000500 MOV #BUFF,SP ;STACK POINTER SETUP
5253 002220 012767 002230 175562 MOV #RETB,RTRAP ;RETURN POINTER
5254 002226 000007 TRAPA ;RESERVED INSTRUCTION
5255 002230 020627 000474 RETB: CMP SP,#BUFF-4 ;TEST DECREMENT OF SP
5256 002234 001405 BEQ TST7
(4) 002236 012737 000037 000402 MOV #37,2#$FATAL ;MOVE TO MAILBOX # ***** 37 *****
(3) 002244 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 002246 000000 HALT ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 761
5257 ;*****
(2) ;TEST 7 TEST THAT PROPER P.C. IS SAVED
(3) ;*****
(2) 002250 005237 000404 TST7: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 002254 022737 000007 000404 CMP #7,2#$TESTN ;SEQUENCE ERROR?
(2) 002262 001012 BNE TST10-12 ;BR TO ERROR HALT ON SEQ ERROR
5258 002264 012706 000500 MOV #BUFF,SP ;STACK POINTER SETUP
5259 002270 012767 002300 175512 MOV #RETC,RTRAP ;RETURN FROM TRAP POINTER
5260 002276 000007 TRAPA ;TRAP ON THIS INSTRUCTION
5261 002300 022767 002300 176166 RETC: CMP #,BUFF-4 ;CHECK FOR INCREMENTED P.C.
5262 002306 001405 BEQ TST10
(4) 002310 012737 000040 000402 MOV #40,2#$FATAL ;MOVE TO MAILBOX # ***** 40 *****
(3) 002316 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 002320 000000 HALT ;INCORRECT P.C. OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 760
5263 ;*****
(2) ;TEST 10 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

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 DVKADA.P11 T7 TEST THAT PROPER P.C. IS SAVED

*** SEQ 0013

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(3)
(2) 002322 005237 000404 000404 1ST10: INC 0#STESTN ;UPDATE TEST NUMBER
(2) 002326 022737 000010 000404 CMP 010,0#STESTN ;SEQUENCE ERROR?
(2) 002334 001044 BNE TST11-12 ;BR TO ERROR HALT ON SEQ ERROR
5264 002336 012706 000500 MOV #BUFF,SP ;SET UP
5265 002342 012767 002364 175440 MOV #RETD,RTRAP ;SET UP
5266 002350 005067 010522 CLR STATUS ;CLEAR STATUS AND PRIORITY
5270 002354 MTPS STATUS
(1) 002354 106467 .WORD 106400!...C
5274 002360 000257 CCC
5275 002362 000007 TRAPA ;TRAP
5276 002364 026727 176106 000000 RETD: CMP BUFF-2,#0 ;TEST THAT OLD STATUS WENT TO STACK
5277 002372 001405 BEQ 1$ ;
(3) 002374 012737 000041 000402 MOV #41,0#SFATAL ;MOVE TO MAILBOX # ***** 41 *****
(2) 002402 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 002404 000000 HALT ;INCORRECT STATUS
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 753
5278 002406 012706 000500 1$: MOV #BUFF,SP ;SET UP
5279 002412 012767 002436 175370 MOV #RETE,RTRAP ;SET UP
5280 002420 012767 000357 010450 MOV #357,STATUS ;SET PRIORITY
5284 002426 MTPS STATUS
(1) 002426 106467 .WORD 106400!...C
5289 002432 000277 SCC ;SET STATUS
5289 002434 000007 TRAPA ;TRAP
5290 002436 026727 176034 000357 RETE: CMP BUFF-2,#357 ;COMPARES STATUS ON STACK
5291 002444 001405 BEQ TST11 ;
(4) 002446 012737 000042 000402 MOV #42,0#SFATAL ;MOVE TO MAILBOX # ***** 42 *****
(3) 002454 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 002456 000000 HALT ;INCORRECT STATUS ON STACK,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 726
5292 ;*****
(2) ;TEST 11 TEST THAT "NEW" STATUS IS CORRECT
(3) ;*****
(2) 002460 005237 000404 000404 1ST11: INC 0#STESTN ;UPDATE TEST NUMBER
(2) 002464 022737 000011 000404 CMP 011,0#STESTN ;SEQUENCE ERROR?
(2) 002472 001132 BNE TST12-12 ;BR TO ERROR HALT ON SEQ ERROR
5293 002474 012706 000500 MOV #BUFF,SP
5294 002500 012767 002514 175302 MOV #RETF,RTRAP
5295 002506 005067 175300 CLR RTRAP+2 ;CLEAR FUTURE PRIORITY AND CC
5296 002512 000007 TRAPA
5297 002514 RETF: BPL 1$
5298 002514 100005 MOV #43,0#SFATAL ;MOVE TO MAILBOX # ***** 43 *****
(3) 002516 012737 000043 000402 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 002524 005212 HALT ;C NOT CLEARED
(2) 002526 000000 ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 761
(4)
5299 002530 1$: BNE 2$
(1) 002530 001005 MOV #44,0#SFATAL ;MOVE TO MAILBOX # ***** 44 *****
(3) 002532 012737 000044 000402 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 002540 005212 HALT ;Z NOT CLEARED
(2) 002542 000000 ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 753
(4)

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 DVKADA.P11 T11 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0014

5300	002544			2\$:	BVC	3\$		
(1)	002544	102005			MOV	#45, 2\$FATAL	; MOVE TO MAILBOX # ***** 45 *****	
(3)	002546	012737	000045 000402		INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002554	005212			HALT		; V NOT CLEARED	
(2)	002556	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 745	
5301	002560			3\$:	BCC	4\$		
(1)	002560	103005			MOV	#46, 2\$FATAL	; MOVE TO MAILBOX # ***** 46 *****	
(3)	002562	012737	000046 000402		INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002570	005212			HALT		; C NOT CLEARED	
(2)	002572	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 737	
5305	002574			4\$:	MFPS	STATUS		
(1)	002574	106767			.WORD	106700!..C		
5309	002600	032767	000340 010270		BIT	#340, STATUS	; TEST PRIORITY	
5310	002606	001405			BEQ	5\$		
(3)	002610	012737	000047 000402		MOV	#47, 2\$FATAL	; MOVE TO MAILBOX # ***** 47 *****	
(2)	002616	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002620	000000			HALT		; PRIORITY NOT ZERO	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 724	
5311	002622	012706	000500	5\$:	MOV	#BUFF, SP		
5312	002626	012767	002644 175154		MOV	#RETG, RTRAP		
5313	002634	012767	000357 175150		MOV	#357, RTRAP+2	; SET NEW "CC" AND PRIORITY	
5314	002642	000007			TRAPA		; TRAP HERE	
5315	002644			RETG:				
5316	002644	100405			BMI	1\$		
(3)	002646	012737	000050 000402		MOV	#50, 2\$FATAL	; MOVE TO MAILBOX # ***** 50 *****	
(2)	002654	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002656	000000			HALT		; N NOT SET	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 705	
5317	002660			1\$:	BEQ	2\$		
(1)	002660	001405			MOV	#51, 2\$FATAL	; MOVE TO MAILBOX # ***** 51 *****	
(3)	002662	012737	000051 000402		INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002670	005212			HALT		; Z NOT SET	
(2)	002672	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 677	
5318	002674			2\$:	BVS	3\$		
(1)	002674	102405			MOV	#52, 2\$FATAL	; MOVE TO MAILBOX # ***** 52 *****	
(3)	002676	012737	000052 000402		INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002704	005212			HALT		; V NOT SET	
(2)	002706	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 671	
5319	002710			3\$:	BCS	4\$		
(1)	002710	103405			MOV	#53, 2\$FATAL	; MOVE TO MAILBOX # ***** 53 *****	
(3)	002712	012737	000053 000402		INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	002720	005212			HALT		; C NOT SET	
(2)	002722	000000					; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 663	
5323	002724			4\$:	MFPS	STATUS		

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 DVKADA.P11 T11 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0015

(1)	002724	106767				.WORD	106700!...C	
5327	002730	016706	010142			MOV	STATUS, SP	
5328	002734	042706	000017			BIC	#17, SP	
5329	002740	022706	000340			CMP	#340, SP	
5330	002744	001405				BEQ	5\$	
(3)	002746	012737	000054	000402		MOV	#54, @#\$FATAL	; MOVE TO MAILBOX # ***** 54 *****
(2)	002754	005212				INC	(R2)	; SET MSGTYP TO FATAL ERROR
(2)	002756	000000				HALT		; PRIORITY WAS CHANGED, OR WRONG \$TESTN
(4)								; TO SCOPE REPLACE HALT W/ 240
(4)								; AND REPLACE NEXT INST W/ 645
5331	002760	012767	000012	175022	5\$:	MOV	#12, 10	
5332	002766	005067	175020			CLR	12	
5333						;*****		
(2)						;TEST 12 TEST THAT A TRAP OCCURES FOR A "TRAP" INSTRUCTION		
(3)						;*****		
(2)	002772	005237	000404			TST12:	INC	@#\$TESTN ; UPDATE TEST NUMBER
(2)	002776	022737	000012	000404			CMP	#12, @#\$TESTN ; SEQUENCE ERROR?
(2)	003004	001006					BNE	TST13-12 ; BR TO ERROR HALT ON SEQ ERROR
5334	003006	012706	000500				MOV	#BUFF, SP ; STACK POINTER SETUP
5335	003012	012767	003034	175014			MOV	#RETA1, RTRAP1 ; RETURN LOCATION
5336	003020	104400					TRAP	; RESERVED INSTRUCTION, SHOULD TRAP
5337	003022	012737	000055	000402			MOV	#55, @#\$FATAL ; MOVE TO MAILBOX # ***** 55 *****
(2)	003030	005212					INC	(R2) ; SET MSGTYP TO FATAL ERROR
(2)	003032	000000					HALT	; DID NOT TRAP, OR WRONG \$TESN
(4)								; TO SCOPE REPLACE HALT W/ 240
(4)								; AND REPLACE NEXT INST W/ 764
5338	003034					RETA1:		
5339						;*****		
(2)						;TEST 13 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION		
(3)						;*****		
(2)	003034	005237	000404			TST13:	INC	@#\$TESTN ; UPDATE TEST NUMBER
(2)	003040	022737	000013	000404			CMP	#13, @#\$TESTN ; SEQUENCE ERROR?
(2)	003046	001011					BNE	TST14-12 ; BR TO ERROR HALT ON SEQ ERROR
5340	003050	012706	000500				MOV	#BUFF, SP ; STACK POINTER SETUP
5341	003054	012767	003064	174752			MOV	#RETB1, RTRAP1 ; RETURN POINTER
5342	003062	104400					TRAP	; RESERVED INSTRUCTION
5343	003064	020627	000474			RETB1:	CMP	SP, #BUFF-4 ; TEST DECREMENT OF SP
5344	003070	001405					BEQ	TST14
(4)	003072	012737	000056	000402			MOV	#56, @#\$FATAL ; MOVE TO MAILBOX # ***** 56 *****
(3)	003100	005212					INC	(R2) ; SET MSGTYP TO FATAL ERROR
(3)	003102	000000					HALT	; NOT DECREMENTED TWO WORDS, OR WRONG \$TESTN
(5)								; TO SCOPE REPLACE HALT W/ 240
(5)								; AND REPLACE NEXT INST W/ 761
5345						;*****		
(2)						;TEST 14 TEST THAT PROPER P.C. IS SAVED		
(3)						;*****		
(2)	003104	005237	000404			TST14:	INC	@#\$TESTN ; UPDATE TEST NUMBER
(2)	003110	022737	000014	000404			CMP	#14, @#\$TESTN ; SEQUENCE ERROR?
(2)	003116	001012					BNE	TST15-12 ; BR TO ERROR HALT ON SEQ ERROR
5346	003120	012706	000500				MOV	#BUFF, SP ; STACK POINTER SETUP
5347	003124	012767	003134	174702			MOV	#RETC1, RTRAP1 ; RETURN FROM TRAP POINTER
5348	003132	104400					TRAP	; TRAP ON THIS INSTRUCTION
5349	003134	022767	003134	175332		RETC1:	CMP	#, BUFF-4 ; CHECK INCREMENTED P.C.
5350	003142	001405					BEQ	TST15
(4)	003144	012737	000057	000402			MOV	#57, @#\$FATAL ; MOVE TO MAILBOX # ***** 57 *****
(2)	003152	005212					INC	(R2) ; SET MSGTYP TO FATAL ERROR

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 DYNADN.P11 T14 TEST THAT PROPER P.C. IS SAVED

*** SEQ 0016

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(3) 003154 000000 HALT ; INCORRECT P.C. OR WRONG TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 760
5351 *****
(2) :TEST 15 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK
(3) *****
(2) 003156 005237 000404 TST15: INC 0#TESTN ; UPDATE TEST NUMBER
(3) 003162 022737 000015 000404 CMP 015,0#TESTN ; SEQUENCE ERROR?
(3) 003170 001043 BNE TST16-12 ; BR TO ERROR HALT ON SEQ ERROR
5352 003172 012706 000500 MOV 0#BUFF,SP ; SET UP
5353 003176 012767 003220 174630 MOV 0#RET01,RTRAP1 ; SET UP
5354 003204 005067 007666 CLR STATUS ; CLEAR STATUS AND PRIORITY
5359 003210 MTPS STATUS
(1) 003210 106467 .WORD 106400!...C
5362 003214 000257 CCC
5363 003216 104400 TRAP
5364 003220 026727 175252 000000 RETD1: CMP 0#BUFF-2,0#0 ; TRAP
5365 003226 001405 BEQ 15 ; TEST THAT OLD STATUS WENT TO STACK
(2) 003230 012737 000060 000402 MOV 0#60,0#SFATAL ; MOVE TO MAILBOX # ***** 60 *****
(2) 003236 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 003240 000000 HALT ; INCORRECT STATUS
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 753
5366 003242 012706 000500 15: MOV 0#BUFF,SP ; SET UP
5367 003246 012767 003270 174560 MOV 0#RETE1,RTRAP1 ; SET UP
5368 003254 012757 000357 007614 MOV 0#357,STATUS ; SET PRIORITY
5372 003262 MTPS STATUS
(1) 003262 106467 .WORD 106400!...C
5376 003266 104400 TRAP
5377 003270 026727 175202 000357 RETE1: CMP 0#BUFF-2,0#357 ; SET CC
5378 003276 001405 BEQ TST16 ; COMPARES STATUS ON STACK
(4) 003300 012737 000061 000402 MOV 0#61,0#SFATAL ; MOVE TO MAILBOX # ***** 61 *****
(3) 003306 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(3) 003310 000000 HALT ; INCORRECT STATUS ON STACK
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 727
5379 *****
(2) :TEST 16 TEST THAT "NEW" STATUS IS CORRECT
(3) *****
(2) 003312 005237 000404 TST16: INC 0#TESTN ; UPDATE TEST NUMBER
(2) 003316 022737 000016 000404 CMP 016,0#TESTN ; SEQUENCE ERROR?
(2) 003324 001125 BNE TST17-12 ; BR TO ERROR HALT ON SEQ ERROR
5380 003326 012706 000500 MOV 0#BUFF,SP
5381 003332 012767 003346 174474 MOV 0#RETF1,RTRAP1
5382 003340 005067 174472 CLR RTRAP1+2 ; CLEAR FUTURE PRIORITY AND CC
5383 003344 104400 TRAP
5384 003346 RETF1:
5385 003346 100005 BPL 15
(3) 003350 012737 000062 000402 MOV 0#62,0#SFATAL ; MOVE TO MAILBOX # ***** 62 *****
(2) 003356 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 003360 000000 HALT ; C NOT CLEARED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 761
5386 003362 15:
(1) 003362 001005 BNE 25
(3) 003364 012737 000063 000402 MOV 0#63,0#SFATAL ; MOVE TO MAILBOX # ***** 63 *****

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C02

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CANADA.P11 T16 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0017

(2)	003372	005212			INC	(R2)	:SET MSGTYP TO FATAL ERROR
(3)	003374	000000			HALT		:Z NOT CLEARED
(4)							: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 753
5387	003376			25:	BVC	35	
(1)	003376	102005			MOV	#64,2#SFATAL	:MOVE TO MAILBOX # ***** 64 *****
(3)	003400	012737	000064	000402	INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003406	005212			HALT		:V NOT CLEARED
(2)	003410	000000					: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 745
5388	003412			35:	BCC	45	
(1)	003412	103005			MOV	#65,2#SFATAL	:MOVE TO MAILBOX # ***** 65 *****
(3)	003414	012737	000065	000402	INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003422	005212			HALT		:C NOT CLEARED
(2)	003424	000000					: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 737
5392	003426			45:	MFPS	STATUS	
(1)	003426	106767			.WORD	106700!..C	
5396	003432	032767	000340	007436	BIT	#340,STATUS	:TEST PRIORITY
5397	003440	001405			BEO	55	
(3)	003442	012737	000066	000402	MOV	#66,2#SFATAL	:MOVE TO MAILBOX # ***** 66 *****
(2)	003450	005212			INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003452	000000			HALT		:PRIORITY NOT ZERO
(4)							: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 724
5398	003454	012706	000500		MOV	#8JFF,SP	
5399	003460	012767	003476	174346	MOV	#RETG1,RTRAP1	
5400	003466	012767	000357	174342	MOV	#357,RTRAP1+2	:SET NEW "CC" AND PRIORITY
5401	003474	104400			TRAP		:TRAP HERE
5402	003476			RETG1:			
5403	003476	100405			BMI	15	
(3)	003500	012737	000067	000402	MOV	#67,2#SFATAL	:MOVE TO MAILBOX # ***** 67 *****
(2)	003506	005212			INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003510	000000			HALT		:N NOT SET
(4)							: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 705
5404	003512			15:	BEO	25	
(1)	003512	001405			MOV	#70,2#SFATAL	:MOVE TO MAILBOX # ***** 70 *****
(3)	003514	012737	000070	000402	INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003522	005212			HALT		:Z NOT SET
(2)	003524	000000					: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 677
5405	003526			25:	BVS	35	
(1)	003526	102405			MOV	#71,2#SFATAL	:MOVE TO MAILBOX # ***** 71 *****
(3)	003530	012737	000071	000402	INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003536	005212			HALT		:V NOT SET
(2)	003540	000000					: TO SCOPE REPLACE HALT W/ 240
(4)							: AND REPLACE NEXT INST W/ 671
5406	003542			35:	BCS	45	
(1)	003542	103405			MOV	#72,2#SFATAL	:MOVE TO MAILBOX # ***** 72 *****
(3)	003544	012737	000072	000402	INC	(R2)	:SET MSGTYP TO FATAL ERROR
(2)	003552	005212					

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 DVKADA.P11 T16 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0018

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(2) 003554 000000          HALT          ;C NOT SET
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 663

5410 003556          45:  MFPS      STATUS
(1) 003556          .WORD 106700! ;C
5414 003562 015706 007310      MOV      STATUS,SP
5415 003566 042706 000017      SIC      #17,SP
5416 003572 022706 000340      CMP      #340,SP
5417 003576 001405          BEQ      TST17
(4) 003600 012737 000073 000402      MOV      #73,0#SFATAL ;MOVE TO MAILBOX # ***** 73 *****
(3) 003606 005212          INC      (R2) ;SET MSGTYP TO FATAL ERROR
(3) 003610 000000          HALT        ;PRIORITY WAS CHANGED, OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 545
5418 *****
(2) ;TEST 17          TEST THAT ALL COMBINATION OF "TRAP" WILL CAUSE A TRAP
(3) *****
(2) 003612 005237 000404      TST17: INC      0#STESTN ;UPDATE TEST NUMBER
(2) 003616 022737 000017 000404      CMP      #17,0#STESTN ;SEQUENCE ERROR?
(2) 003624 001011          BNE      RB1AA ;BR TO ERROR HALT ON SEQ ERROR
5419 003626 012767 104400 000012      MOV      #TRAP,RB1 ;INITIALIZE BASE TRAP INSTRUCTION
5420 003634 012767 003662 174172      MOV      #RA1,34 ;RETURN FROM TRAP TO RA1
5421 003642 012706 000500      RC1:  MOV      #BUFF,SP ;SET UP STACK POINTER
5422 003646 104400          RB1:  TRAP ;TRAP INST WILL BE MODIFIED TO TRAP+377
5423 003650          RB1AA:
(2) 003650 012737 000074 000402      MOV      #74,0#SFATAL ;MOVE TO MAILBOX # ***** 74 *****
(2) 003656 005212          INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 003660 000000          HALT        ;PREVIOUS INST FAILED TO TRAP OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 761
5424 003662 005267 177760      RA1:  INC      RB1
5425 003666 022767 104777 177752      CMP      #104777,RB1 ;TRAP+377 TO UPPER LIMIT
5426 003674 103362          BHIS     RC1 ;HAVE WE TESTED ALL
5427 003676 012767 000036 174130      MOV      #36,34
5428 003704 005067 174126      CLR      36
(2) *****
(2) ;TEST 20          TEST THAT A TRAP OCCURES ON AN "IOT" INSTRUCTION
(3) *****
(2) 003710 005237 000404      TST20: INC      0#STESTN ;UPDATE TEST NUMBER
(2) 003714 022737 000020 000404      CMP      #20,0#STESTN ;SEQUENCE ERROR?
(2) 003722 001006          BNE      TST21-12 ;BR TO ERROR HALT ON SEQ ERROR
5430 003724 012706 000500      MOV      #BUFF,SP ;STACK POINTER SETUP
5431 003730 012767 003752 174062      MOV      #RETA2,RTRAP2 ;RETURN LOCATION
5432 003736 000004          IOT      ;RESERVE INSTRUCTION, SHOULD TRAP
5433 003740 012737 000075 000402      MOV      #75,0#SFATAL ;MOVE TO MAILBOX # ***** 75 *****
(2) 003746 005212          INC      (R2) ;SET MSGTYP TO FATAL ERROR
(2) 003750 000000          HALT        ;IOT DID NOT TRAP, OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 764
5434 003752          RETA2:
5435 *****
(2) ;TEST 21          TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION
(3) *****
(2) 003752 005237 000404      TST21: INC      0#STESTN ;UPDATE TEST NUMBER
(2) 003756 022737 000021 000404      CMP      #21,0#STESTN ;SEQUENCE ERROR?
(2) 003764 001011          BNE      TST22-12 ;BR TO ERROR HALT ON SEQ ERROR

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E02

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 DVKADA.P11 T21 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION

*** SEQ 0019

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5436 003766 012706 000500      MOV      #BUFF,SP      ;STACK POINTER SETUP
5437 003772 012767 004002 174020  MOV      #RETB2,RTRAP2 ;RETURN POINTER
5438 004000 000004      IOT              ;RESERVED INSTRUCTION
5439 004002 020627 000474      RETB2: CMP      SP,#BUFF-4    ;TEST DECREMENT OF SP
5440 004006 001405      BEQ      TST22
      (4) 004010 012737 000076 000402  MOV      #76,#SFATAL ;MOVE TO MAILBOX # ***** 76 *****
      (3) 004016 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (3) 004020 000000      HALT      ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
      (5) ; TO SCOPE REPLACE HALT W/ 240
      (5) ; AND REPLACE NEXT INST W/ 761
5441 ;*****
      (2) ;TEST 22 TEST THAT PROPER P.C. IS SAVED
      (2) ;*****
      (2) 004022 005237 000404      TST22: INC      @#$TESTN ;UPDATE TEST NUMBER
      (2) 004026 022737 000022 000404  CMP      #22,@#$TESTN ;SEQUENCE ERROR?
      (2) 004034 001012      BNE      TST23-12 ;BR TO ERROR HALT ON SEQ ERROR
5442 004036 012706 000500      MOV      #BUFF,SP      ;STACK POINTER SETUP
5443 004042 012767 004052 173750  MOV      #RETC2,RTRAP2 ;RETURN FROM TRAP POINTER
5444 004050 000004      IOT              ;TRAP ON THIS INSTRUCTION
5445 004052 022767 004052 174414  RETC2: CMP      #,BUFF-4    ;CHECK FOR INCREMENTED P.C.
5446 004060 001405      BEQ      TST23
      (4) 004062 012737 000077 000402  MOV      #77,#SFATAL ;MOVE TO MAILBOX # ***** 77 *****
      (3) 004070 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (3) 004072 000000      HALT      ;INCORRECT P.C. OR WRONG $TESTN
      (5) ; TO SCOPE REPLACE HALT W/ 240
      (5) ; AND REPLACE NEXT INST W/ 760
5447 ;*****
      (2) ;TEST 23 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK
      (2) ;*****
      (2) 004074 005237 000404      TST23: INC      @#$TESTN ;UPDATE TEST NUMBER
      (2) 004100 022737 000023 000404  CMP      #23,@#$TESTN ;SEQUENCE ERROR?
      (2) 004106 001044      BNE      TST24-12 ;BR TO ERROR HALT ON SEQ ERROR
5448 004110 012706 000500      MOV      #BUFF,SP      ;SET UP
5449 004114 012767 004136 173676  MOV      #RETD2,RTRAP2 ;SET UP
5450 004122 005067 006750      CLR      STATUS ;CLEAR STATUS AND PRIORITY
5451 004126      MTPS      STATUS
      (1) 004126 106467      .WORD 106400!...C
5452 004132 000257      CCC
5453 004134 000004      IOT
5454 004136 026727 174334 000000  RETD2: CMP      BUFF-2,#0 ;TRAP
5455 004144 001405      BEQ      15 ;TEST THAT OLD STATUS WENT TO STACK
      (3) 004146 012737 000100 000402  MOV      #100,@#$FATAL ;MOVE TO MAILBOX # ***** 100 *****
      (2) 004154 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004156 000000      HALT      ;INCORRECT STATUS
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 753
5462 004160 012706 000500      15: MOV      #BUFF,SP ;SET UP
5463 004164 012767 004210 173626  MOV      #RETE2,RTRAP2 ;SET UP
5464 004172 012767 000357 006676  MOV      #357,STATUS ;SET PRIORITY
5465 004200      MTPS      STATUS
      (1) 004200 106467      .WORD 106400!...C
5472 004204 000277      SCC
5473 004206 000004      IOT
5474 004210 026727 174262 000357  RETE2: CMP      BUFF-2,#357 ;SET CC
5475 004216 001405      BEQ      TST24 ;TRAP
      (4) 004220 012737 000101 000402  MOV      #101,@#$FATAL ;COMPARES STATUS ON STACK
      ;MOVE TO MAILBOX # ***** 101 *****

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F02

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 DVKADA.P11 T23 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

*** SEQ 0020

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(3) 004226 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004230 000000 HALT ;INCORRECT STATUS ON STACK, OR WRONG $TESTN
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 726
*****
5476 ;TEST 24 TEST THAT "NEW" STATUS IS CORRECT
*****
(2) 004232 005237 000404 000404 1ST24: INC 2*$TESTN ;UPDATE TEST NUMBER
(2) 004236 022737 000024 000404 CMP 24,2*$TESTN ;SEQUENCE ERROR?
(2) 004244 001125 BNE STP ;BR TO ERROR HALT ON SEQ ERROR
5477 004246 012706 000500 MOV #BUFF,SP
5478 004252 012767 004266 173540 MOV #RET2,RTRAP2
5479 004250 005067 173536 CLR RTRAP2+2 ;CLEAR FUTURE PRIORITY AND CC
5480 004264 000004 IOT
5481 004266 RETF2:
5482 004266 100005 BPL 1$
(3) 004270 012737 000102 000402 MOV #102,2*$FATAL ;MOVE TO MAILBOX # ***** 102 *****
(2) 004276 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004300 000000 HALT ;C NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 761
5483 004302 1$:
(1) 004302 001005 BNE 2$
(2) 004304 012737 000103 000402 MOV #103,2*$FATAL ;MOVE TO MAILBOX # ***** 103 *****
(2) 004312 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004314 000000 HALT ;Z NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 753
5484 004316 2$:
(1) 004316 102005 BVC 3$
(3) 004320 012737 000104 000402 MOV #104,2*$FATAL ;MOVE TO MAILBOX # ***** 104 *****
(2) 004326 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004330 000000 HALT ;V NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 745
5485 004332 3$:
(1) 004332 103005 BCC 4$
(3) 004334 012737 000105 000402 MOV #105,2*$FATAL ;MOVE TO MAILBOX # ***** 105 *****
(2) 004342 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004344 000000 HALT ;C NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 737
5489 004346 4$: MFPS STATUS
(1) 004346 106767 .WORD 106700!..C
5493 004352 032767 000340 006516 BIT #340,STATUS ;TEST PRIORITY
5494 004360 001405 BEQ 5$
(3) 004362 012737 000106 000402 MOV #106,2*$FATAL ;MOVE TO MAILBOX # ***** 106 *****
(2) 004370 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 004372 000000 HALT ;PRIORITY NOT ZERO
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 724
5495 004374 012706 000500 5$: MOV #BUFF,SP
5496 004400 012767 004416 173412 MOV #RET2,RTRAP2
5497 004406 012767 000357 173406 MOV #357,RTRAP2+2 ;SET NEW "CC" AND PRIORITY
5498 004414 000004 IOT ;TRAP HERE
5499 004416 RETG2:

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G02

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 DVKADA.P11 T24 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0021

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5500 004416 100405      BMI      1$
      (3) 004420 012737 000107 000402      MOV      #107,2#$FATAL ;MOVE TO MAILBOX # ***** 107 *****
      (2) 004426 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004430 000000      HALT      ;N NOT SET
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 705

5501 004432      1$:      BEQ      2$
      (1) 004432 001405      MOV      2$
      (3) 004434 012737 000110 000402      INC      #110,2#$FATAL ;MOVE TO MAILBOX # ***** 110 *****
      (2) 004442 005212      HALT      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004444 000000 ;Z NOT SET
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 677

5502 004446      2$:      BVS      3$
      (1) 004446 102405      MOV      3$
      (3) 004450 012737 000111 000402      INC      #111,2#$FATAL ;MOVE TO MAILBOX # ***** 111 *****
      (2) 004456 005212      HALT      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004460 000000 ;V NOT SET
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 671

5503 004462      3$:      BCS      4$
      (1) 004462 103405      MOV      4$
      (3) 004464 012737 000112 000402      INC      #112,2#$FATAL ;MOVE TO MAILBOX # ***** 112 *****
      (2) 004472 005212      HALT      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004474 000000 ;C NOT SET
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 663

5507 004476      4$:      MFPS      STATUS
      (1) 004476 106767      .WORD 106700!...C
5511 004502 016706 006370      MOV      STATUS,SP
5512 004506 042706 000017      BIC      #17,SP
5513 004512 022706 000340      CMP      #340,SP
5514 004516 001405      BEQ      STPA
      (1) 004520
      (3) 004520 012737 000113 000402 STP:      MOV      #113,2#$FATAL ;MOVE TO MAILBOX # ***** 113 *****
      (2) 004526 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004530 000000      HALT      ;PRIORITY WAS CHANGED, OR WRONG $TESTN
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 645

5515 004532 012767 000022 173260 STPA:      MOV      #22,20
5516 004540 005067 173256      CLR      22
5517 (2) ;*****
      (3) ;TEST 25 TEST THAT A TRAP OCCURS ON AN EMT RESTRICTED INSTRUCTION
      (2) ;*****
      (2) 004544 005237 000404 TST25:      INC      2#$TESTN ;UPDATE TEST NUMBER
      (2) 004550 022737 000025 000404      CMP      #25,2#$TESTN ;SEQUENCE ERROR?
      (2) 004556 001006      BNE      TST26-12 ;BR TO ERROR HALT ON SEQ ERROR
5518 004560 012706 000500      MOV      #BUFF,SP ;STACK POINTER SETUP
5519 004564 012767 004606 173236      MOV      #RETA3,RTRAP3 ;RETURN LOCATION
5520 004572 104000      EMT      ;RESERVE INSTRUCTION, SHOULD TRAP
5521 004574 012737 000114 000402      MOV      #114,2#$FATAL ;MOVE TO MAILBOX # ***** 114 *****
      (2) 004602 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
      (2) 004604 000000      HALT      ;EMT DID NOT TRAP, OR WRONG $TESTN
      (4) ; TO SCOPE REPLACE HALT W/ 240
      (4) ; AND REPLACE NEXT INST W/ 764

5522 004606      RETA3:

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H02

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 DVKADA.P11 T25 TEST THAT A TRAP OCCURS ON AN EMT RESTRICTED INSTRUCTION

*** SEQ 0022

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5523      ;*****
(2)      ;TEST 26      TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION
(3)      ;*****
(2) 004606 005237 000404      TST26: INC      2*STESTN      ;UPDATE TEST NUMBER
(2) 004612 022737 000026 000404      CMP      26,2*STESTN      ;SEQUENCE ERROR?
(2) 004620 001011      BNE      TST27-12      ;BR TO ERROR HALT ON SEQ ERROR
5524 004622 012706 000500      MOV      #BUFF,SP      ;STACK POINTER SETUP
5525 004626 012767 004636 173174      MOV      #RETB3,RTRAP3      ;RETURN POINTER
5526 004634 104000      EMT      ;RESERVED INSTRUCTION
5527 004636 020627 000474      RETB3: CMP      SP,#BUFF-4      ;TEST DECREMENT OF SP
5528 004642 001405      BEQ      TST27
(4) 004644 012737 000115 000402      MOV      #115,2*SFATAL      ;MOVE TO MAILBOX # ***** 115 *****
(3) 004652 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 004654 000000      HALT      ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
(5)      ; TO SCOPE REPLACE HALT W/ 240
(5)      ; AND REPLACE NEXT INST W/ 761
5529      ;*****
(2)      ;TEST 27      TEST THAT PROPER P.C. IS SAVED
(3)      ;*****
(2) 004656 005237 000404      TST27: INC      2*STESTN      ;UPDATE TEST NUMBER
(2) 004662 022737 000027 000404      CMP      27,2*STESTN      ;SEQUENCE ERROR?
(2) 004670 001012      BNE      TST30-12      ;BR TO ERROR HALT ON SEQ ERROR
5530 004672 012706 000500      MOV      #BUFF,SP      ;STACK POINTER SETUP
5531 004676 012767 004706 173124      MOV      #RETC3,RTRAP3      ;RETURN FROM TRAP POINTER
5532 004704 104000      EMT      ;TRAP ON THIS INSTRUCTION
5533 004706 022767 004706 173560      RETC3: CMP      #,BUFF-4      ;CHECK FOR INCREMENTED P.C.
5534 004714 001405      BEQ      TST30
(4) 004716 012737 000116 000402      MOV      #116,2*SFATAL      ;MOVE TO MAILBOX # ***** 116 *****
(3) 004724 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 004726 000000      HALT      ;INCORRECT P.C. OR WRONG $TESTN
(5)      ; TO SCOPE REPLACE HALT W/ 240
(5)      ; AND REPLACE NEXT INST W/ 760
5535      ;*****
(2)      ;TEST 30      TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK
(3)      ;*****
(2) 004730 005237 000404      TST30: INC      2*STESTN      ;UPDATE TEST NUMBER
(2) 004734 022737 000030 000404      CMP      30,2*STESTN      ;SEQUENCE ERROR?
(2) 004742 001044      BNE      TST31-12      ;BR TO ERROR HALT ON SEQ ERROR
5536 004744 012706 000500      MOV      #BUFF,SP      ;SET UP
5537 004750 012767 004772 173052      MOV      #RETD3,RTRAP3      ;SET UP
5538 004756 005067 006114      CLR      STATUS      ;CLEAR STATUS AND PRIORITY
5542 004762      MTPS      STATUS
(1) 004762 106467      .WORD      106400!..C
5546 004766 000257      CCC
5547 004770 104000      EMT
5548 004772 026727 173500 000000      RETD3: CMP      BUFF-2,#0      ;TRAP
5549 005000 001405      BEQ      15      ;TEST THAT OLD STATUS WENT TO STACK
(3) 005002 012737 000117 000402      MOV      #117,2*SFATAL      ;MOVE TO MAILBOX # ***** 117 *****
(2) 005010 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 005012 000000      HALT      ;INCORRECT STATUS
(4)      ; TO SCOPE REPLACE HALT W/ 240
(4)      ; AND REPLACE NEXT INST W/ 753
5550 005014 012706 000500      15: MOV      #BUFF,SP      ;SET UP
5551 005020 012767 005044 173002      MOV      #RETE3,RTRAP3      ;SET UP
5552 005026 012767 000357 006042      MOV      #357,STATUS      ;SET PRIORITY
5556 005034      MTPS      STATUS

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 DVKADA.P11 T30 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

*** SEQ 0023

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(1) 005034 106467 .WORD 106400!..C
5560 005040 000277 SCC
5561 005042 104000 EMT
5562 005044 026727 173426 000357 RETE3: CMP BUFF-2,#357 ;SET CC
;TRAP
5563 005052 001405 BEQ TST31 ;COMPARES STATUS ON STACK
(4) 005054 012737 000120 000402 MOV #120,#SFATAL ;MOVE TO MAILBOX # ***** 120 *****
(3) 005062 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 005064 000000 HALT ;INCORRECT STATUS ON STACK,OR WRONG $TESTN
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 726
5564 *****
(2) ;TEST 31 TEST THAT "NEW" STATUS IS CORRECT
(3) *****
(2) 005066 005237 000404 TST31: INC #1,$TESTN ;UPDATE TEST NUMBER
(2) 005072 022737 000031 000404 CMP #31,#$TESTN ;SEQUENCE ERROR?
(2) 005100 001125 BNE TST32-12 ;BR TO ERROR HALT ON SEQ ERROR
5565 005102 012706 000500 MOV #BUFF,SP
5566 005106 012767 005122 172714 MOV #RTRAP3,RTRAP3
5567 005114 005067 172712 CLR RTRAP3+2 ;CLEAR FUTURE PRIORITY AND CC
5568 005120 104000 EMT
5569 005122 RETF3: ;TEST FOR "C" CLEARED
5570 005122 100005 BPL 1$
(3) 005124 012737 000121 000402 MOV #121,#SFATAL ;MOVE TO MAILBOX # ***** 121 *****
(2) 005132 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005134 000000 HALT ;C NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 761
5571 005136 1$:
(1) 005136 001005 BNE 2$
(3) 005140 012737 000122 000402 MOV #122,#SFATAL ;MOVE TO MAILBOX # ***** 122 *****
(2) 005146 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005150 000000 HALT ;Z NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 753
5572 005152 2$:
(1) 005152 102005 BVC 3$
(3) 005154 012737 000123 000402 MOV #123,#SFATAL ;MOVE TO MAILBOX # ***** 123 *****
(2) 005162 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005164 000000 HALT ;V NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 745
5573 005166 3$:
(1) 005166 103005 BCC 4$
(3) 005170 012737 000124 000402 MOV #124,#SFATAL ;MOVE TO MAILBOX # ***** 124 *****
(2) 005176 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005200 000000 HALT ;C NOT CLEARED
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 737
5577 005202 4$: MFPS STATUS
(1) 005202 106767 .WORD 106700!..C
5581 005206 032767 000340 005662 BIT #340,STATUS ;TEST PRIORITY
5582 005214 001405 BEQ 5$
(3) 005216 012737 000125 000402 MOV #125,#SFATAL ;MOVE TO MAILBOX # ***** 125 *****
(2) 005224 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005226 000000 HALT ;PRIORITY NOT ZERO
; TO SCOPE REPLACE HALT W/ 240

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 DVKADA.P11 T31 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0024

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(4)
5583 005230 012706 000500 55: MOV #BUFF, SP ; AND REPLACE NEXT INST W/ 724
5584 005234 012767 005252 172566 MOV #RETG3, RTRAP3
5595 005242 012767 000357 172562 MOV #357, RTRAP3+2 ; SET NEW "CC" AND PRIORITY
5586 005250 104000 EMT ; TRAP HERE
5587 005252 RETG3:
5588 005252 100405 9MI 15
(3) 005254 012737 000126 000402 MOV #126, @#$FATAL ; MOVE TO MAILBOX # ***** 126 *****
(2) 005262 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 005264 000000 HALT ; N NOT SET
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 705
5599 005266 15:
(1) 005266 001405 BEQ 25
(3) 005270 012737 000127 000402 MOV #127, @#$FATAL ; MOVE TO MAILBOX # ***** 127 *****
(2) 005276 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 005300 000000 HALT ; Z NOT SET
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 677
5590 005302 25:
(1) 005302 102405 BVS 35
(3) 005304 012737 000130 000402 MOV #130, @#$FATAL ; MOVE TO MAILBOX # ***** 130 *****
(2) 005312 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 005314 000000 HALT ; V NOT SET
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 671
5591 005316 35:
(1) 005316 103405 BCS 45
(3) 005320 012737 000131 000402 MOV #131, @#$FATAL ; MOVE TO MAILBOX # ***** 131 *****
(2) 005326 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(2) 005330 000000 HALT ; C NOT SET
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 663
5595 005332 45: MFPS STATUS
(1) 005332 106767 .WORD 106700!...C
5599 005336 016706 005534 MOV STATUS, SP
5600 005342 042706 000017 RIC #17, SP
5601 005346 022706 000340 CMP #340, SP
5602 005352 001405 BEQ TST32
(4) 005354 012737 000132 000402 MOV #132, @#$FATAL ; MOVE TO MAILBOX # ***** 132 *****
(3) 005362 005212 INC (R2) ; SET MSGTYP TO FATAL ERROR
(3) 005364 000000 HALT ; PRIORITY WAS CHANGED, OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 645
5603 *****
(2) :TEST 32 TEST THAT ALL COMBINATION OF EMT WILL CAUSE A TRAP
(3) *****
(2) 005366 005237 000404 TST32: INC @#$TESTN ; UPDATE TEST NUMBER
(2) 005372 022737 000032 000404 CMP #32, @#$TESTN ; SEQUENCE ERROR?
(2) 005400 001011 BNE RBBB ; BR TO ERROR HALT ON SEQ ERROR
5604 005402 012767 104000 000012 MOV #EMT, RB ; INITIALIZE BASE EMT INSTRUCTION
5605 005410 012767 005436 172412 MOV #RA, 30 ; RETURN FROM TRAP TO RA
5606 005416 012706 000500 RC: MOV #BUFF, SP ; SET UP STACK POINTER
5607 005422 104000 RB: EMT ; TRAP INST. WILL BE MODIFIED TO EMT+377
5608 005424 (3) 005424 012737 000133 000402 RBBB: MOV #133, @#$FATAL ; MOVE TO MAILBOX # ***** 133 *****

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K02

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DVKADA.P11 T32 TEST THAT ALL COMBINATION OF EMT WILL CAUSE A TRAP

*** SEQ 0025

(2)	005432	005212			INC	(R2)		;SET MSGTYP TO FATAL ERROR
(2)	005434	000000			HALT			;PREVIOUS INST FAILED TO TRAP,OR WRONG STESTN
(4)								; TO SCOPE REPLACE HALT W/ 240
(4)								; AND REPLACE NEXT INST W/ 761
5609	005436	005267	177760		RA:	INC	RB	
5610	005442	022767	104377	177752		CMP	#104377,RB	;EMT+377 TO EMT?
5611	005450	103362				BHIS	RC	;HAVE WE TESTED ALL
5612	005452	012767	000032	172350		MOV	#32,30	
5613	005460	005067	172346			CLR	32	;HALT

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 DVKADA.P11 T32 TEST THAT ALL COMBINATION OF EMT WILL CAUSE A TRAP

*** SEQ 0026

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5615 ;*****
(2) ;TEST 33 TEST THAT A TRAP OCCURES ON AN "BPT" INSTRUCTION
(3) ;*****
(2) 005464 005237 000404 000404 TST33: INC @#STESTN ;UPDATE TEST NUMBER
(2) 005470 022737 000033 000404 CMP #33,@#STESTN ;SEQUENCE ERROR?
(2) 005476 001006 000500 172302 BNE TST34-12 ;BR TO ERROR HALT ON SEQ ERROR
5616 005500 012706 000500 172302 MOV #BUFF,SP ;STACK POINTER SETUP
5617 005504 012767 005526 172302 MOV #RETA4,RTRAP4 ;RETURN LOCATION
5618 005512 000003 000134 000402 TRT ;RESERVED INSTRUCTION, SHOULD TRAP
5619 005514 012737 000134 000402 MOV #134,@#SFATAL ;MOVE TO MAILBOX # ***** 134 *****
(2) 005522 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 005524 000000 HALT ;DID NOT TRAP,OR WRONG $TESTN
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 764

5620 005526 RETA4:
5621 ;*****
(2) ;TEST 34 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION
(3) ;*****
(2) 005526 005237 000404 000404 TST34: INC @#STESTN ;UPDATE TEST NUMBER
(2) 005532 022737 000034 000404 CMP #34,@#STESTN ;SEQUENCE ERROR?
(2) 005540 001011 000500 172240 BNE TST35-12 ;BR TO ERROR HALT ON SEQ ERROR
5622 005542 012706 000500 172240 MOV #BUFF,SP ;STACK POINTER SETUP
5623 005546 012767 005556 172240 MOV #RETB4,RTRAP4 ;RETURN POINTER
5624 005554 000003 000474 RETB4: CMP SP,#BUFF-4 ;RESERVED INSTRUCTION
5625 005556 020627 000474 BEQ TST35 ;TEST DECREMENT OF SP
5626 005562 001405 000135 000402 MOV #135,@#SFATAL ;MOVE TO MAILBOX # ***** 135 *****
(4) 005564 012737 000135 000402 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 005572 005212 HALT ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
(3) 005574 000000 ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 761
(5)

5627 ;*****
(2) ;TEST 35 TEST THAT PROPER P.C. IS SAVED
(3) ;*****
(2) 005576 005237 000404 000404 TST35: INC @#STESTN ;UPDATE TEST NUMBER
(2) 005602 022737 000035 000404 CMP #35,@#STESTN ;SEQUENCE ERROR?
(2) 005610 001012 000500 172170 BNE TST36-12 ;BR TO ERROR HALT ON SEQ ERROR
5628 005612 012706 000500 172170 MOV #BUFF,SP ;STACK POINTER SETUP
5629 005616 012767 005626 172170 MOV #RETC4,RTRAP4 ;RETURN FROM TRAP POINTER
5630 005624 000003 005626 172640 TRT ;TRAP ON THIS INSTRUCTION
5631 005626 022767 005626 172640 RETC4: CMP #,BUFF-4 ;CHECK FOR INCREMENTED P.C.
5632 005634 001405 000136 000402 BEQ TST36 ;MOVE TO MAILBOX # ***** 136 *****
(4) 005636 012737 000136 000402 MOV #136,@#SFATAL ;SET MSGTYP TO FATAL ERROR
(3) 005644 005212 INC (R2) ;INCORRECT P.C. OR WRONG $TESTN
(3) 005646 000000 HALT ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 760
(5)

5633 ;*****
(2) ;TEST 36 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK
(3) ;*****
(2) 005650 005237 000404 000404 TST36: INC @#STESTN ;UPDATE TEST NUMBER
(2) 005654 022737 000036 000404 CMP #36,@#STESTN ;SEQUENCE ERROR?
(2) 005662 001044 000500 172116 BNE TST37-12 ;BR TO ERROR HALT ON SEQ ERROR
5634 005664 012706 000500 172116 MOV #BUFF,SP ;SET UP
5635 005670 012767 005712 172116 MOV #RETD4,RTRAP4 ;SET UP
5636 005676 005067 005174 CLR STATUS ;CLEAR STATUS AND PRIORITY

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M02

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 DVKADA.P11 T36 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

*** SEQ 0027

5640	005702				MIPS	STATUS	
(1)	005702	106467			.WORD	106400!..C	
5644	005706	000257			CCC		
5645	005710	000003			TRT		; TRAP
5646	005712	026727	172560	000000	RET04: CMP	BUFF-2, #0	; TEST THAT OLD STATUS WENT TO STACK
5647	005720	001405			BEQ	1\$	
(3)	005722	012737	000137	000402	MOV	#137, 2#\$FATAL	; MOVE TO MAILBOX # ***** 137 *****
(2)	005730	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR
(2)	005732	000000			HALT		; INCORRECT STATUS
(4)							; TO SCOPE REPLACE HALT W/ 240
(4)							; AND REPLACE NEXT INST W/ 753
5648	005734	012706	000500		1\$: MOV	#BUFF, SP	; SET UP
5649	005740	012767	005764	172046	MOV	#RETE4, RTRAP4	; SET UP
5650	005746	012767	000357	005122	MOV	#357, STATUS	; SET PRIORITY
5654	005754				MIPS	STATUS	
(1)	005754	106467			.WORD	106400!..C	
5658	005760	000277			SCC		; SET-SET CC
5659	005762	000003			TRT		; TRAP
5660	005764	026727	172506	000357	RETE4: CMP	BUFF-2, #357	; COMPARES STATUS ON STACK
5661	005772	001405			BEQ	TST37	
(4)	005774	012737	000140	000402	MOV	#140, 2#\$FATAL	; MOVE TO MAILBOX # ***** 140 *****
(3)	006002	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR
(3)	006004	000000			HALT		; INCORRECT STATUS ON STACK, OR WRONG \$TESTN
(5)							; TO SCOPE REPLACE HALT W/ 240
(5)							; AND REPLACE NEXT INST W/ 726
5662					;*****		
(2)					;TEST 37		
(3)					;*****		
(2)	006006	005237	000404		TST37: INC	2#\$TESTN	; UPDATE TEST NUMBER
(2)	006012	022737	000037	000404	CMP	#37, 2#\$TESTN	; SEQUENCE ERROR?
(2)	006020	001132			BNE	TST40-12	; BR TO ERROR HALT ON SEQ ERROR
5663	006022	012706	000500		MOV	#BUFF, SP	
5664	006026	012767	006042	171760	MOV	#RETF4, RTRAP4	
5665	006034	005067	171756		CLR	RTRAP4+2	; CLEAR FUTURE PRIORITY AND CC

N02

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 DVKADA.P11 T37 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0028

5668	006040	000003			TRT			
5669	006042				RETF4:			
5670	006042	100005			BPL	1\$		
(3)	006044	012737	000141	000402	MOV	#141,2#\$FATAL	; MOVE TO MAILBOX # ***** 141 *****	
(2)	006052	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	006054	000000			HALT		; C NOT CLEARED	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 761	
5671	006056				1\$:			
(1)	006056	001005			BNE	2\$		
(3)	006060	012737	000142	000402	MOV	#142,2#\$FATAL	; MOVE TO MAILBOX # ***** 142 *****	
(2)	006066	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	006070	000000			HALT		; Z NOT CLEARED	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 753	
5672	006072				2\$:			
(1)	006072	102005			BVC	3\$		
(3)	006074	012737	000143	000402	MOV	#143,2#\$FATAL	; MOVE TO MAILBOX # ***** 143 *****	
(2)	006102	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	006104	000000			HALT		; V NOT CLEARED	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 745	
5673	006106				3\$:			
(1)	006106	103005			BCC	4\$		
(3)	006110	012737	000144	000402	MOV	#144,2#\$FATAL	; MOVE TO MAILBOX # ***** 144 *****	
(2)	006116	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	006120	000000			HALT		; C NOT CLEARED	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 737	
5677	006122				4\$:			
(1)	006122	106767			MFPS	STATUS		
5681	006126	032767	000340	004742	.WORD	106700!...C		
5682	006134	001405			BIT	#340,STATUS	; TEST PRIORITY	
(3)	006136	012737	000145	000402	BEQ	5\$		
(2)	006144	005212			MOV	#145,2#\$FATAL	; MOVE TO MAILBOX # ***** 145 *****	
(2)	006146	000000			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(4)					HALT		; PRIORITY NOT ZERO	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 724	
5683	006150	012706	000500		5\$:			
5684	006154	012767	006172	171632	MOV	#BUFF,SP		
5685	006162	012767	000357	171626	MOV	#RETG4,RTRAP4	; SET NEW "CC" AND PRIORITY	
5686	006170	000003			MOV	#357,RTRAP4+2	; TRAP HERE	
5687	006172				TRT			
5688	006172	100405			RETF4:			
(3)	006174	012737	000146	000402	BMI	1\$		
(2)	006202	005212			MOV	#146,2#\$FATAL	; MOVE TO MAILBOX # ***** 146 *****	
(2)	006204	000000			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(4)					HALT		; N NOT SET	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 705	
5689	006206				1\$:			
(1)	006206	001405			BEQ	2\$		
(3)	006210	012737	000147	000402	MOV	#147,2#\$FATAL	; MOVE TO MAILBOX # ***** 147 *****	
(2)	006216	005212			INC	(R2)	; SET MSGTYP TO FATAL ERROR	
(2)	006220	000000			HALT		; Z NOT SET	
(4)							; TO SCOPE REPLACE HALT W/ 240	
(4)							; AND REPLACE NEXT INST W/ 677	

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 TEST "HAT" "NEW" STATUS IS CORRECT

*** SET 0029

56:00 006222 102405 25: BVS 35
 006222 012737 000150 000402 MOV #150,0#SFATAL :MOVE TO MAILBOX # ***** 150 *****
 006223 005212 INC (R2) :SET MSGTYP TO FATAL ERROR
 006234 000000 HALT :V NOT SET
 : TO SCOPE REPLACE HALT W/ 240
 : AND REPLACE NEXT INST W/ 571

56:01 006236 103405 35: BCS 45
 006236 012737 000151 000402 MOV #151,0#SFATAL :MOVE TO MAILBOX # ***** 151 *****
 006240 005212 INC (R2) :SET MSGTYP TO FATAL ERROR
 006250 000000 HALT :C NOT SET
 : TO SCOPE REPLACE HALT W/ 240
 : AND REPLACE NEXT INST W/ 563

56:05 006252 106767 45: MFPS STATUS
 006252 016706 .WORD 106700!...C
 006256 042706 MOV STATUS.SP
 006262 022706 BIC #17,SP
 006266 001405 CMP #340,SP
 006272 012737 BEQ 55
 006274 005212 MOV #152,0#SFATAL :MOVE TO MAILBOX # ***** 152 *****
 006302 000000 INC (R2) :SET MSGTYP TO FATAL ERROR
 006304 000000 HALT :PRIORITY WAS CHANGED, OR WRONG \$TESTN
 : TO SCOPE REPLACE HALT W/ 240
 : AND REPLACE NEXT INST W/ 645

57:00 006306 012767 000016 171500 55: MOV #16,14
 006314 005067 171476 CLR 16
 :PDP-11 ILLEGAL AND ADDRESS INSTRUCTION TEST
 :ALL INSTRUCTIONS THAT ARE RESERVED
 :SHOULD TRAP TO LOCATION 4, AND THE
 :PC THAT POINTS TO THE TRAPPING INSTRUCTION
 :SHOULD BE PLACED ON THE STACK

 :TEST 40 TEST THAT A TRAP OCCURS ON AN ILLEGAL INSTRUCTION

 57:00 006320 005237 000404 :ST40: INC 0#STESTN :UPDATE TEST NUMBER
 006324 022737 000040 000404 CMP #40,0#STESTN :SEQUENCE ERROR
 006332 001006 BNE TST41-12 :BR TO ERROR HALT ON SEQ ERROR
 006334 012706 000500 MOV #BLFF,SP :STACK POINTER SETUP
 006340 012767 006362 171436 MOV #RETAS,RTRAPS :RETURN LOCATION
 006346 000100 JMP %0 :ILLEGAL INSTRUCTION, SHOULD TRAP
 57:06 006350 012737 000153 000402 MOV #153,0#SFATAL :MOVE TO MAILBOX # ***** 153 *****
 006356 005212 INC (R2) :SET MSGTYP TO FATAL ERROR
 006360 000000 HALT :DID NOT TRAP, OR WRONG \$TESTN
 : TO SCOPE REPLACE HALT W/ 240
 : AND REPLACE NEXT INST W/ 764

57:07 006362 RETAS:

 :TEST 41 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION

 57:08 006362 005237 000404 :ST41: INC 0#STESTN :UPDATE TEST NUMBER
 006366 022737 000041 000404 CMP #41,0#STESTN :SEQUENCE ERROR
 006374 001011 BNE TST42-12 :BR TO ERROR HALT ON SEQ ERROR
 57:09 006376 012706 000500 MOV #BLFF,SP :STACK POINTER SETUP

C03

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 DVKAD09.P11 T41 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION

*** SEQ 0030

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5720 006402 012767 006412 171374      MOV      #RETBS,RTRAPS ;RETURN POINTER
5721 006410 000100                      JMP      %0          ;RESERVED INSTRUCTION
5722 006412 020627 000474      RETBS:  CMP      SP,#BUFF-4 ;TEST DECREMENT OF SP
5723 006416 001405                      BEQ      TST42
(4) 006420 012737 000154 000402      MOV      #154,2#SFATAL ;MOVE TO MAILBOX # ***** 154 *****
(3) 006426 005212                      INC      (R2)          ;SET MSGTYP TO FATAL ERROR
(3) 006430 000000                      HALT                    ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 761
5724 006432 005237 000404 000404      TST42:  INC      2#$TESTN ;UPDATE TEST NUMBER
(3) 006436 022737 000042 000404      CMP      #42,2#$TESTN ;SEQUENCE ERROR?
(2) 006444 001012                      BNE      TST43-12 ;BR TO ERROR HALT ON SEQ ERROR
5725 006446 012706 000500                      MOV      #BUFF,SP ;STACK POINTER SETUP
5726 006452 012767 006462 171324      MOV      #RETCS,RTRAPS ;RETURN FROM TRAP POINTER
5727 006460 000100                      JMP      %0          ;TRAP ON THIS INSTRUCTION
5728 006462 022767 006462 172004      RETCS:  CMP      #. BUFF-4 ;CHECK FOR INCREMENTED P.C.
5729 006470 001405                      BEQ      TST43
(4) 006472 012737 000155 000402      MOV      #155,2#$FATAL ;MOVE TO MAILBOX # ***** 155 *****
(3) 006500 005212                      INC      (R2)          ;SET MSGTYP TO FATAL ERROR
(3) 006502 000000                      HALT                    ;INCORRECT P.C. OR WRONG $TESTN
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 760
5730 006504 005237 000404 000404      TST43:  INC      2#$TESTN ;UPDATE TEST NUMBER
(3) 006510 022737 000043 000404      CMP      #43,2#$TESTN ;SEQUENCE ERROR?
(2) 006516 001044                      BNE      TST44-12 ;BR TO ERROR HALT ON SEQ ERROR
5731 006520 012706 000500                      MOV      #BUFF,SP ;SET UP
5732 006524 012767 006546 171252      MOV      #RETDS,RTRAPS ;SET UP
5733 006532 005067 004340                      CLR      STATUS ;CLEAR STATUS AND PRIORITY
5737 006536 106467                      MTPS     STATUS
(1) 006536 106467                      .WORD    106400!...C
5741 006542 000257                      CCC
5742 006544 000100                      JMP      %0          ;TRAP
5743 006546 026727 171724 000000      RETDS:  CMP      BUFF-2,%0 ;TEST THAT OLD STATUS WENT TO STACK
5744 006554 001405                      BEQ      1$
(3) 006556 012737 000156 000402      MOV      #156,2#$FATAL ;MOVE TO MAILBOX # ***** 156 *****
(2) 006564 005212                      INC      (R2)          ;SET MSGTYP TO FATAL ERROR
(2) 006566 000000                      HALT                    ;INCORRECT STATUS
; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 753
5745 006570 012706 000500 1$:      MOV      #BUFF,SP ;SET UP
5746 006574 012767 006620 171202      MOV      #RETES,RTRAPS ;SET UP
5747 006602 012767 000357 004266      MOV      #357,STATUS ;SET PRIORITY
5751 006610 106467                      MTPS     STATUS
(1) 006610 106467                      .WORD    106400!...C
5755 006614 000277                      SCC
5756 006616 000100                      JMP      %0          ;SET CC
5757 006620 026727 171652 000357      RETES:  CMP      BUFF-2,#357 ;TRAP
5758 006626 001405                      BEQ      TST44 ;COMPARES STATUS ON STACK
(4) 006630 012737 000157 000402      MOV      #157,2#$FATAL ;MOVE TO MAILBOX # ***** 157 *****
(3) 006636 005212                      INC      (R2)          ;SET MSGTYP TO FATAL ERROR

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 DVKADA.P11 T43 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

*** SEQ 0031

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(3) 006640 000000          HALT          ; INCORRECT STATUS ON STACK, OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 726
5759 *****
(2) :TEST 44          TEST THAT "NEW" STATUS IS CORRECT
(2) *****
(2) 006642 005237 000404          ;ST44: INC 2*$TESTN          ; UPDATE TEST NUMBER
(2) 006646 022737 000044 000404    CMP 244,2*$TESTN      ; SEQUENCE ERROR?
(2) 006654 001123          BNE TST45-12          ; BR TO ERROR HALT ON SEQ ERROR
5760 006656 012706 000500          MOV 2*BUFF,SP
5761 006662 012767 006676 171114    MOV 2*RETFS,RTRAPS
5762 006670 005067 171112          CLR RTRAPS+2          ; CLEAR FUTURE PRIORITY AND CC
5763 006674 000100          JMP %0
5764 006676          RETFS:
5765 006676 100005          BPL 1$
(3) 006700 012737 000160 000402    MOV 2*160,2*$FATAL      ; MOVE TO MAILBOX # ***** 160 *****
(2) 006706 005212          INC (R2)          ; SET MSGTYP TO FATAL ERROR
(2) 006710 000000          HALT          ; C NOT CLEARED
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 761
5766 006712          1$:
(1) 006712 001005          BNE 2$
(3) 006714 012737 000161 000402    MOV 2*161,2*$FATAL      ; MOVE TO MAILBOX # ***** 161 *****
(2) 006722 005212          INC (R2)          ; SET MSGTYP TO FATAL ERROR
(2) 006724 000000          HALT          ; Z NOT CLEARED
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 753
5767 006726          2$:
(1) 006726 102005          BVC 3$
(3) 006730 012737 000162 000402    MOV 2*162,2*$FATAL      ; MOVE TO MAILBOX # ***** 162 *****
(2) 006736 005212          INC (R2)          ; SET MSGTYP TO FATAL ERROR
(2) 006740 000000          HALT          ; V NOT CLEARED
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 745
5768 006742          3$:
(1) 006742 103005          BCC 4$
(3) 006744 012737 000163 000402    MOV 2*163,2*$FATAL      ; MOVE TO MAILBOX # ***** 163 *****
(2) 006752 005212          INC (R2)          ; SET MSGTYP TO FATAL ERROR
(2) 006754 000000          HALT          ; C NOT CLEARED
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 737
5772 006756          4$:
(1) 006756 106767          MFPS STATUS
5776 006762 032767 000357 004106    .WORD 106700!...C
5777 006770 001405          BIT 2*357,STATUS          ; TEST PRIORITY
(3) 006772 012737 000164 000402    BEQ 5$
(2) 007000 005212          MOV 2*164,2*$FATAL      ; MOVE TO MAILBOX # ***** 164 *****
(2) 007002 000000          INC (R2)          ; SET MSGTYP TO FATAL ERROR
(4)                                     ; PRIORITY NOT ZERO
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 724
5778 007004 012706 000500          5$: MOV 2*BUFF,SP
5779 007010 012767 007026 170766    MOV 2*RETGS,RTRAPS
5780 007016 012767 000357 170762    MOV 2*357,RTRAPS+2
5781 007024 000100          JMP %0          ; SET NEW "CC" AND PRIORITY
5782                                     ; TRAP HERE
5783 007026 100405          RETGS: BMI 1$

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DYKADA.P11 T44 TEST THAT "NEW" STATUS IS CORRECT

*** SEQ 0032

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(3) 007030 012737 000165 000402      MOV      #165,2#SFATAL ;MOVE TO MAILBOX # ***** 165 *****
(2) 007036 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 007040 000000      HALT                      ;N NOT SET
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 705
5784 007042                                     15:
(1) 007042 001405      SEQ      25
(3) 007044 012737 000166 000402      MOV      #166,2#SFATAL ;MOVE TO MAILBOX # ***** 166 *****
(2) 007052 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 007054 000000      HALT                      ;Z NOT SET
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 677
5785 007056                                     25:
(1) 007056 002405      BVS      35
(3) 007060 012737 000167 000402      MOV      #167,2#SFATAL ;MOVE TO MAILBOX # ***** 167 *****
(2) 007066 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 007070 000000      HALT                      ;V NOT SET
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 671
5786 007072                                     35:
(1) 007072 103405      BCS      45
(3) 007074 012737 000170 000402      MOV      #170,2#SFATAL ;MOVE TO MAILBOX # ***** 170 *****
(2) 007102 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 007104 000000      HALT                      ;C NOT SET
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 663
5790 007106                                     45:
(1) 007106 106767      MFPS      STATUS
(1) 007112 016706      .WORD    106700!...C
5794 007112 016706      MOV      STATUS,SP
5795 007116 022706 000376J      CMP      #357,SP
5796 007122 001405      BEQ      TST45
(4) 007124 012737 000171 000402      MOV      #171,2#SFATAL ;MOVE TO MAILBOX # ***** 171 *****
(3) 007132 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 007134 000000      HALT                      ;PRIORITY WAS CHANGED, OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 647
5797                                     ;*****
(2)                                     ;TEST 45      TEST THAT A TRAP OCCURES ON ALL ILLEGAL INSTRUCTION
(2)                                     ;*****
(2) 007136 005237 000404      TST45: INC      2#STESTN ;UPDATE TEST NUMBER
(2) 007142 022737 000045 000404      CMP      #45,2#STESTN ;SEQUENCE ERROR?
(2) 007150 001006      BNE      TST46-12 ;BR TO ERROR HALT ON SEQ ERROR
5799 007152 012706 000500      MOV      #BUFF,SP ;STACK POINTER SETUP
5799 007156 012767 007200 170620      MOV      #RETH5,RTRAPS ;RETURN LOCATION
5800 007164 004000      JSR      %D,%D ;RESERVED INSTRUCTION, SHOULD TRAP
5801 007166 012737 000172 000402      MOV      #172,2#SFATAL ;MOVE TO MAILBOX # ***** 172 *****
(2) 007174 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 007176 000000      HALT                      ;DID NOT TRAP, OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 764
5802 007200      RETH5:
5803                                     ;*****
(2)                                     ;TEST 46      TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION
(3)                                     ;*****
(2) 007200 005237 000404      TST46: INC      2#STESTN ;UPDATE TEST NUMBER
(2) 007204 022737 000046 000404      CMP      #46,2#STESTN ;SEQUENCE ERROR?

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 DVKADA.P11 T46

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 TEST DECREMENT OF STACK POINTER ON A TRAP OPERATION

*** SEQ 0033

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(3) 007212 001011 BNE TST47-12 ;BR TO ERROR HALT ON SEQ ERROR
5804 007214 012706 000500 MOV #BUFF,SP ;STACK POINTER SETUP
5805 007220 012767 007230 170556 MOV #RETJ,RTRAPS ;RETURN POINTER
5806 007226 004000 JSR %0,%0 ;RESERVED INSTRUCTION
5807 007230 020627 000474 RETJ: CMP SP,#BUFF-4 ;TEST DECREMENT OF SP
5808 007234 001405 BEQ TST47
(4) 007236 012737 000173 000402 MOV #173,#SFATAL ;MOVE TO MAILBOX # ***** 173 *****
(3) 007244 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 007246 000000 HALT ;NOT DECREMENTED TWO WORDS,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 761
5809 *****
(2) ;TEST 47 TEST THAT PROPER P.C. IS SAVED
(3) *****
(2) 007250 005237 000404 TST47: INC #TESTN ;UPDATE TEST NUMBER
(2) 007254 022737 000047 000404 CMP #47,#TESTN ;SEQUENCE ERROR?
(2) 007262 001012 BNE TST50-12 ;BR TO ERROR HALT ON SEQ ERROR
5810 007264 012706 000500 MOV #BUFF,SP ;STACK POINTER SETUP
5811 007270 012767 007300 170506 MOV #RETK,RTRAPS ;RETURN FROM TRAP POINTER
5812 007276 004000 INSTK: JSR %0,%0 ;TRAP ON THIS INSTRUCTION
5813 007300 022767 007300 171166 RETK: CMP #INSTK+2,BUFF-4 ;CHECK FOR INCREMENTED P.C.
5814 007306 001405 BEQ TST50
(4) 007310 012737 000174 000402 MOV #174,#SFATAL ;MOVE TO MAILBOX # ***** 174 *****
(3) 007316 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 007320 000000 HALT ;INCORRECT P.C.,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 760
5815 *****
5816 ;TEST 50 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK
(2) *****
(3) 007322 005237 000404 TST50: INC #TESTN ;UPDATE TEST NUMBER
(2) 007326 022737 000050 000404 CMP #50,#TESTN ;SEQUENCE ERROR?
(2) 007334 001044 BNE TST51-12 ;BR TO ERROR HALT ON SEQ ERROR
5817 007336 012706 000500 MOV #BUFF,SP ;SET UP
5818 007342 012767 007364 170434 MOV #RETL,RTRAPS ;SET UP
5819 007350 005067 003522 CLR STATUS ;CLEAR STATUS AND PRIORITY
5823 007354 MTPS STATUS
(1) 007354 106467 .WORD 106400!..C
5827 007360 000257 CCC
5828 007362 004000 JSR %0,%0 ;TRAP
5829 007364 026727 171106 000000 RETL: CMP BUFF-2,#0 ;TEST THAT OLD STATUS WENT TO STACK
5830 007372 001405 BEQ IS
(3) 007374 012737 000175 000402 MOV #175,#SFATAL ;MOVE TO MAILBOX # ***** 175 *****
(2) 007402 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 007404 000000 HALT ;INCORRECT STATUS
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 753
5831 007406 012706 000500 IS: MOV #BUFF,SP ;SET UP
5832 007412 012767 007436 170364 MOV #RETM,RTRAPS ;SET UP
5833 007420 012767 000357 003450 MOV #357,STATUS ;SET PRIORITY
5837 007426 MTPS STATUS
(1) 007426 106467 .WORD 106400!..C
5841 007432 000277 SCC
5842 007434 004000 JSR %0,%0 ;SET CC
5843 007436 026727 171034 000357 RETM: CMP BUFF-2,#357 ;TRAP
;COMPARES STATUS ON STACK

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 DVKADA.P11 T50 TEST THAT "OLD" STATUS AND PRIORITY ARE PLACED ON STACK

*** SEQ 0034

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5844 007444 001405      BEQ      TST51
(4) 007446 012737      MOV      #176,2#SFATAL ;MOVE TO MAILBOX # ***** 176 *****
(3) 007454 005212      INC      (R2) ;SET MSGTYP TO FATAL ERROR
(3) 007456 000000      HALT      ;INCORRECT STATUS ON STACK, OR WRONG STSTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 726
5845 ;*****
(2) ;TEST 51 TEST THAT "NEW" STATUS IS CORRECT
(2) ;*****
(2) 007460 005237 000404 TST51: INC 2#STSTN ;UPDATE TEST NUMBER
(2) 007464 022737 000051 000404 CMP #51,2#STSTN ;SEQUENCE ERROR?
(2) 007472 001122 BNE STP1 ;BR TO ERROR HALT ON SEQ ERROR
5846 007474 012706 000500 MOV #BUFF,SP
5847 007500 012767 007514 170276 MOV #RETN,RTRAPS
5848 007506 005067 170274 CLR RTRAPS+2 ;CLEAR FUTURE PRIORITY AND CC
5849 007512 004000 JSR %0,%0 ;TEST FOR "C" CLEARED
5850 007514 RETN:
5851 007514 100005 BPL 1$
(3) 007516 012737 000177 000402 MOV #177,2#SFATAL ;MOVE TO MAILBOX # ***** 177 *****
(2) 007524 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 007526 000000 HALT ;C NOT CLEARED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 761
5852 007530 1$:
(1) 007530 001005 BNE 2$
(2) 007532 012737 000200 000402 MOV #200,2#SFATAL ;MOVE TO MAILBOX # ***** 200 *****
(2) 007540 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 007542 000000 HALT ;Z NOT CLEARED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 753
5853 007544 2$:
(1) 007544 102005 BVC 3$
(3) 007546 012737 000201 000402 MOV #201,2#SFATAL ;MOVE TO MAILBOX # ***** 201 *****
(2) 007554 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 007556 000000 HALT ;V NOT CLEARED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 745
5854 007560 3$:
(1) 007560 103005 BCC 4$
(3) 007562 012737 000202 000402 MOV #202,2#SFATAL ;MOVE TO MAILBOX # ***** 202 *****
(2) 007570 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 007572 000000 HALT ;C NOT CLEARED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 737
5858 007574 4$:
(1) 007574 106767 MFPS STATUS
5862 007600 016700 .WORD 106700!...C
5863 007604 001405 MOV STATUS,%0 ;TEMP STORAGE
(3) 007606 012737 000203 000402 BEQ 5$
(2) 007614 005212 MOV #203,2#SFATAL ;MOVE TO MAILBOX # ***** 203 *****
(2) 007616 000000 INC (R2) ;SET MSGTYP TO FATAL ERROR
(4) ;PRIORITY NOT ZERO
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 725
5864 007620 012706 000500 5$: MOV #BUFF,SP
5865 007624 012767 007642 170152 MOV #RETO,RTRAPS
5866 007632 012767 000357 170146 MOV #357,RTRAPS+2 ;SET NEW "CC" AND PRIORITY

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DVKADA.P11 T51 TEST THAT "NEW" STATUS IS CORRECT

PC	Instruction	Op	Op2	Op3	Op4	Op5	Op6	Op7	Op8	Op9	Op10	Op11	Op12	Op13	Op14	Op15	Op16	Op17	Op18	Op19	Op20	Op21	Op22	Op23	Op24	Op25	Op26	Op27	Op28	Op29	Op30	Op31	Op32	Op33	Op34	Op35	Op36	Op37	Op38	Op39	Op40	Op41	Op42	Op43	Op44	Op45	Op46	Op47	Op48	Op49	Op50	Op51	Op52	Op53	Op54	Op55	Op56	Op57	Op58	Op59	Op60	Op61	Op62	Op63	Op64	Op65	Op66	Op67	Op68	Op69	Op70	Op71	Op72	Op73	Op74	Op75	Op76	Op77	Op78	Op79	Op80	Op81	Op82	Op83	Op84	Op85	Op86	Op87	Op88	Op89	Op90	Op91	Op92	Op93	Op94	Op95	Op96	Op97	Op98	Op99	Op100	Op101	Op102	Op103	Op104	Op105	Op106	Op107	Op108	Op109	Op110	Op111	Op112	Op113	Op114	Op115	Op116	Op117	Op118	Op119	Op120	Op121	Op122	Op123	Op124	Op125	Op126	Op127	Op128	Op129	Op130	Op131	Op132	Op133	Op134	Op135	Op136	Op137	Op138	Op139	Op140	Op141	Op142	Op143	Op144	Op145	Op146	Op147	Op148	Op149	Op150	Op151	Op152	Op153	Op154	Op155	Op156	Op157	Op158	Op159	Op160	Op161	Op162	Op163	Op164	Op165	Op166	Op167	Op168	Op169	Op170	Op171	Op172	Op173	Op174	Op175	Op176	Op177	Op178	Op179	Op180	Op181	Op182	Op183	Op184	Op185	Op186	Op187	Op188	Op189	Op190	Op191	Op192	Op193	Op194	Op195	Op196	Op197	Op198	Op199	Op200	Op201	Op202	Op203	Op204	Op205	Op206	Op207	Op208	Op209	Op210	Op211	Op212	Op213	Op214	Op215	Op216	Op217	Op218	Op219	Op220	Op221	Op222	Op223	Op224	Op225	Op226	Op227	Op228	Op229	Op230	Op231	Op232	Op233	Op234	Op235	Op236	Op237	Op238	Op239	Op240	Op241	Op242	Op243	Op244	Op245	Op246	Op247	Op248	Op249	Op250	Op251	Op252	Op253	Op254	Op255	Op256	Op257	Op258	Op259	Op260	Op261	Op262	Op263	Op264	Op265	Op266	Op267	Op268	Op269	Op270	Op271	Op272	Op273	Op274	Op275	Op276	Op277	Op278	Op279	Op280	Op281	Op282	Op283	Op284	Op285	Op286	Op287	Op288	Op289	Op290	Op291	Op292	Op293	Op294	Op295	Op296	Op297	Op298	Op299	Op300	Op301	Op302	Op303	Op304	Op305	Op306	Op307	Op308	Op309	Op310	Op311	Op312	Op313	Op314	Op315	Op316	Op317	Op318	Op319	Op320	Op321	Op322	Op323	Op324	Op325	Op326	Op327	Op328	Op329	Op330	Op331	Op332	Op333	Op334	Op335	Op336	Op337	Op338	Op339	Op340	Op341	Op342	Op343	Op344	Op345	Op346	Op347	Op348	Op349	Op350	Op351	Op352	Op353	Op354	Op355	Op356	Op357	Op358	Op359	Op360	Op361	Op362	Op363	Op364	Op365	Op366	Op367	Op368	Op369	Op370	Op371	Op372	Op373	Op374	Op375	Op376	Op377	Op378	Op379	Op380	Op381	Op382	Op383	Op384	Op385	Op386	Op387	Op388	Op389	Op390	Op391	Op392	Op393	Op394	Op395	Op396	Op397	Op398	Op399	Op400	Op401	Op402	Op403	Op404	Op405	Op406	Op407	Op408	Op409	Op410	Op411	Op412	Op413	Op414	Op415	Op416	Op417	Op418	Op419	Op420	Op421	Op422	Op423	Op424	Op425	Op426	Op427	Op428	Op429	Op430	Op431	Op432	Op433	Op434	Op435	Op436	Op437	Op438	Op439	Op440	Op441	Op442	Op443	Op444	Op445	Op446	Op447	Op448	Op449	Op450	Op451	Op452	Op453	Op454	Op455	Op456	Op457	Op458	Op459	Op460	Op461	Op462	Op463	Op464	Op46
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 DVKADA.P11 T52 TEST THAT THE TRACE TRAP; (BIT 20(B)) WILL CAUSE A TRAP TO 14

*** SEQ 0036

```

(2) 010036 000000          HALT          ;TRACE BIT DID NOT TRAP!,OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 757
5893 010040          RETAT:
5894          ;*****
(2)          ;TEST 53          TEST STACK POINTER DECREMENTS
(3)          ;*****
(2) 010040 005237 000404          TST53: INC 2*$TESTN          ;UPDATE TEST NUMBER
(2) 010044 022737 000053 000404          CMP 53,2*$TESTN          ;SEQUENCE ERROR?
(2) 010052 001023          BNE TST54-12          ;BR TO ERROR HALT ON SEQ ERROR
5895 010054 012706 000500          MOV 8*BUFF,SP
5896 010060 012767 010114 167726          MOV 8*RETBT,RTRAP4
5897 010056 012746 000020          MOV 20,-(SP)          ;PUSH T BIT
5898 010072 012746 010100          MOV 6,-(SP)          ;PUSH PC
5899 010076 000002          RTI          ;SET T BIT
5900 010100 000240          NOP          ;TRAP HERE
5901 010102 012737 000212 000402          MOV 212,2*$FATAL          ;MOVE TO MAILBOX # ***** 212 *****
(2) 010110 005212          INC (R2)          ;SET MSGTYP TO FATAL ERROR
(2) 010112 000000          HALT          ;TRACE BIT DID NOT TRAP!
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 757
5902 010114 020627 000474          RETBT: CMP SP,8*BUFF-4
5903 010120 001405          BEQ TST54
(4) 010122 012737 000213 000402          MOV 213,2*$FATAL          ;MOVE TO MAILBOX # ***** 213 *****
(3) 010130 005212          INC (R2)          ;SET MSGTYP TO FATAL ERROR
(3) 010132 000000          HALT          ;STACK POINTER WAS NOT PUSHED BY TRAP,OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 747
5904          ;*****
(2)          ;TEST 54          TEST FOR PROPER PC ON STACK
(3)          ;*****
(2) 010134 005237 000404          TST54: INC 2*$TESTN          ;UPDATE TEST NUMBER
(2) 010140 022737 000054 000404          CMP 54,2*$TESTN          ;SEQUENCE ERROR?
(2) 010146 001016          BNE TST55-12          ;BR TO ERROR HALT ON SEQ ERROR
5905 010150 012706 000500          MOV 8*BUFF,SP
5906 010154 012767 010174 167632          MOV 8*RETCT,RTRAP4
5907 010162 012746 000020          MOV 20,-(SP)          ;PUSH T BIT
5908 010166 012746 010174          MOV 6,-(SP)          ;PUSH PC
5909 010172 000002          RTI          ;SET T BIT
5910          ;TRAP HERE
5911 010174 022767 010174 170272          RETCT: CMP 8*BUFF-4
5912 010202 001405          BEQ TST55
(4) 010204 012737 000214 000402          MOV 214,2*$FATAL          ;MOVE TO MAILBOX # ***** 214 *****
(3) 010212 005212          INC (R2)          ;SET MSGTYP TO FATAL ERROR
(3) 010214 000000          HALT          ;CORRECT PC WAS NOT SAVED ON STACK,OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 754
5913          ;*****
5914          ;TEST 55          TEST THAT RTT POPS T- BIT
5915          ;*****
(2)          ;*****
(3)          ;*****
(2) 010216 005237 000404          TST55: INC 2*$TESTN          ;UPDATE TEST NUMBER
(2) 010222 022737 000055 000404          CMP 55,2*$TESTN          ;SEQUENCE ERROR?
(2) 010230 001015          BNE TST56-12          ;BR TO ERROR HALT ON SEQ ERROR
5916

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 DVKADA.P11 T55 TEST THAT RTT POPS T- BIT

*** SEQ 0037

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5917 010232 012706 000500      MOV      #BUFF, SP
5918 010236 005001      CLR      R1          ;CLEAR R1
5919 010240 012746      MOV      #20, -(SP)
5920 010244 012746 010260      MOV      #RTT1, -(SP)
5921 010250 012767 010276 167536      MOV      #RTT2, 14
5922 010256 000006      RTT
5923 010260 000240      NOP
5924 010262 001405      BEQ      TST56
(4) 010264 012737 000215 000402      MOV      #215, #SFATAL ;MOVE TO MAILBOX # ***** 215 *****
(3) 010272 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 010274 000000      HALT          ;T-BIT DID NOT TRAP, OR WRONG $TESTN
(5)                                ; TO SCOPE REPLACE HALT W/ 240
(5)                                ; AND REPLACE NEXT INST W/ 755

5925
5926 010276      RTT2:
5927      ;*****
(2)      ;TEST 56      TEST THAT RTT ALLOWS ONE INST. BEFORE TRAP
(3)      ;*****
(2) 010276 005237 000404      TST56: INC      #TESTN      ;UPDATE TEST NUMBER
(2) 010302 022737 000056 000404      CMP      #56, #TESTN      ;SEQUENCE ERROR?
(2) 010310 001031      BNE      TST57-12      ;BR TO ERROR HALT ON SEQ ERROR
5928 010312 012705 177777      MOV      #177777, %5
5929 010316 012706 000500      RTT5: MOV      #BUFF, SP
5930 010322 012746 000020      MOV      #20, -(SP)
5931 010326 012746 010344      MOV      #RTT3, -(SP)
5932 010332 012767 010364 167454      MOV      #RTT4, 14
5933 010340 005001      CLR      R1          ;CLEAR R0
5934 010342 000006      RTT          ;SET T-BIT
5935 010344 005201      RTT3: INC      R1
5936 010346 005205      INC      %5
5937 010350 001762      BEQ      RTT5
5938 010352 012737 000216 000402      MOV      #216, #SFATAL ;DO THIS TEST NO MORE THAN 2 TIMES
(2) 010360 005212      INC      (R2)      ;MOVE TO MAILBOX # ***** 216 *****
(2) 010362 000000      HALT          ;SET MSGTYP TO FATAL ERROR
(4)                                ;DID NOT TRAP
(4)                                ; TO SCOPE REPLACE HALT W/ 240
(4)                                ; AND REPLACE NEXT INST W/ 752
(4)                                ;SEE IF RTT ALLOWS 1 INST.

5939 010364 005301      RTT4: DEC      R1
5940 010366 001407      BEQ      RTT6
5941 010370 005205      INC      %5      ;DO THIS TEST NO MORE THAN TWO TIMES
5942 010372 001751      BEQ      RTT5
(3) 010374 012737 000217 000402      MOV      #217, #SFATAL ;MOVE TO MAILBOX # ***** 217 *****
(2) 010402 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 010404 000000      HALT          ;RTT DID NOT ALLOW 1 INST., OR WRONG $TESTN
(4)                                ; TO SCOPE REPLACE HALT W/ 240
(4)                                ; AND REPLACE NEXT INST W/ 741

5943 010406      RTT6:
5944      ;*****
(2)      ;TEST 57      TEST THAT RTI DOES NOT ALLOW 1 INST.
(3)      ;*****
(2) 010406 005237 000404      TST57: INC      #TESTN      ;UPDATE TEST NUMBER
(2) 010412 022737 000057 000404      CMP      #57, #TESTN      ;SEQUENCE ERROR?
(2) 010420 001023      BNE      TST60-12      ;BR TO ERROR HALT ON SEQ ERROR
5945 010422 012706 000500      MOV      #BUFF, SP
5946 010426 012746 000020      MOV      #20, -(SP)
5947 010432 012746 010450      MOV      #RTT1, -(SP)
5948 010436 012767 010464 167350      MOV      #RTI2, 14

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K03

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 DVKADA.P11 TS7 TEST THAT RTI DOES NOT ALLOW 1 INST.

*** SEQ 0038

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5949 010444 005001 CLR R1
5950 010446 000002 RTI
5951 010450 005201 RTI1: INC R1 ;SET T-BIT
5952 010452 012737 000220 000402 MOV #220,2#SFATAL ;RTI SHOULD NOT ALLOW THIS
(2) 010460 005212 INC (R2) ;MOVE TO MAILBOX # ***** 220 *****
(2) 010462 000000 HALT ;SET MSGTYP TO FATAL ERROR
(4) ;T-BIT DID NOT CAUSE TRAP
(4) ; TO SCOPE REPLACE HALT W/ 240
; AND REPLACE NEXT INST W/ 756
5953 010464 005701 RTI2: TST R1
5954 ;RTI SHOULD NOT ALLOW 1 INST. BEFORE TRAP
5955 010466 001405 BEQ TST60
(4) 010470 012737 000221 000402 MOV #221,2#SFATAL ;MOVE TO MAILBOX # ***** 221 *****
(3) 010476 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(3) 010500 000000 HALT ;RTI DID ALLOW 1 INST. BEFORE TRAP,OR WRONG $TESTN
(5) ; TO SCOPE REPLACE HALT W/ 240
(5) ; AND REPLACE NEXT INST W/ 747
5956
5957 ;*****
(2) ;TEST 60 TEST TRAP ON TRAP
(3) ;*****
(2) 010502 005237 000404 TST60: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 010506 022737 000060 000404 CMP #60,2#$TESTN ;SEQUENCE ERROR?
(2) 010514 001033 BNE TRACE ;BR TO ERROR HALT ON SEQ ERROR
5959 ;TEST THAT TRACE BIT TRAPS ARE INHIBITED ON TRAP INST
5959
5960 010516 012705 177777 TRPTRP: MOV #177777,%5
5961 010522 012706 000500 MOV #BUFF,%6
5962 010526 012767 010600 167260 MOV #TRACE1,14 ;TRACE TRAP
5963 010534 005027 000016 CLR #16
5964 010540 005027 000022 CLR #22
5965 010544 012767 010616 167246 MOV #TONT1,20 ;TONT TRAP
5966 010552 012746 000020 MOV #20,-(SP) ;PUSH T BIT
5967 010556 012746 010564 MOV #.+6,-(SP) ;PUSH PC
5968 010562 000006 RTT ;SET T BIT
5969 010564 000004 IOT ;TRAP, NEW STATUS HAVE TRACE RESET
5970 010566 012737 000222 000402 MOV #222,2#SFATAL ;MOVE TO MAILBOX # ***** 222 *****
(2) 010574 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 010576 000000 HALT ;NO TRAP OCCURRED
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 746
5971 010600 005205 TRACE1: INC %5 ;IF FAILED TRY THIS TEST TWICE BUT NO MORE
5972 010602 001747 BEQ TRPTRP
(1) 010604 TRACE:
(3) 010604 012737 000223 000402 MOV #223,2#SFATAL ;MOVE TO MAILBOX # ***** 223 *****
(2) 010612 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 010614 000000 HALT ;TONT SHOULD HAVE CLEARED THE T BIT,OR WRONG $TESTN
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 737
5973 010616 012767 000016 167170 TONT1: MOV #16,14
5974 010624 012767 000022 167166 MOV #22,20
5975 ;*****
(2) ;TEST 61 TEST THAT THE TRACE BIT WILL CAUSE A TRAP
(3) ;*****
(2) 010632 005237 000404 TST61: INC 2#$TESTN ;UPDATE TEST NUMBER
(2) 010636 022737 000061 000404 CMP #61,2#$TESTN ;SEQUENCE ERROR?
(2) 010644 001026 BNE TST62-12 ;BR TO ERROR HALT ON SEQ ERROR

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 DVKADA.P11 T61 TEST THAT THE TRACE BIT WILL CAUSE A TRAP

*** SEQ 0039

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5976 010646 012706 000500      MOV      #BUFF,%6      ;SET UP STACK POINTER
5977 010652 012767 010712 167134  MOV      #TRC1,14      ;TRACE TRAP RETURN
5978 010660 005067 167132      CLR        16
5979 010664 012746 000020      MOV      #20,-(SP)      ;PUSH T BIT
5980 010670 012746 010676      MOV      #.+6,-(SP)      ;PUSH PC
5981 010674 000002      RTI          ;SET T BIT
5982 010676 000240      NOP
5983 010700 012737 000224 000402  MOV      #224,@#$FATAL      ;MOVE TO MAILBOX # ***** 224 *****
(2) 010706 005212      INC        (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 010710 000000      HALT      ;DO NOT TRAP
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 755
5984 010712 036727 167560 000020 TRC1:  BIT      BUFF-2,#20      ;CHECK FOR T BIT ON STACK
5985 010720 001005      BNE      TST62
(4) 010722 012737 000225 000402  MOV      #225,@#$FATAL      ;MOVE TO MAILBOX # ***** 225 *****
(3) 010730 005212      INC        (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 010732 000000      HALT      ;T BIT NOT SAVED ON STACKED OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 744
5986                                     ;*****
(2) ;TEST 62      TEST THAT AN RTI POPS THE T BIT
(3) ;*****
(2) 010734 005237 000404      TST62:  INC      @#$TESTN      ;UPDATE TEST NUMBER
(2) 010740 022737 000062 000404  CMP      #62,@#$TESTN      ;SEQUENCE ERROR?
(2) 010746 001020      BNE      TST63-12      ;BR TO ERROR HALT ON SEQ ERROR
5987 010750 012706 000500      MOV      #BUFF,%6      ;SET UP THE STACK
5988 010754 012746 000020      MOV      #20,-(6)      ;FUTURE T BIT ON STACK
5989 010760 012746 010774      MOV      #TRC2,-(6)      ;RTI RETURN
5990 010764 012767 011010 167022  MOV      #TRC3,14      ;TRACE TRAP INTERRUPT POINTER
5991 010772 000002      RTI
5992
5993 010774 000240      TRC2:  NOP
5994 010776 012737 000226 000402  MOV      #226,@#$FATAL      ;TRACE IS SET SHOULD TRAP TO 14
(2) 011004 005212      INC        (R2)      ;MOVE TO MAILBOX # ***** 226 *****
(2) 011006 000000      HALT      ;SET MSGTYP TO FATAL ERROR
(4)                                     ;DID NOT TRACE TRAP OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 757
5995
5996 011010 012767 000016 166776 TRC3:  MOV      #16,14
5997 011016 005067 166774      CLR        16
5998                                     ;*****
(2) ;TEST 63      TEST THAT A PENDING INTERRUPT OCCURS BEFORE TRAP
(3) ;*****
(2) 011022 005237 000404      TST63:  INC      @#$TESTN      ;UPDATE TEST NUMBER
(2) 011026 022737 000063 000404  CMP      #63,@#$TESTN      ;SEQUENCE ERROR?
(2) 011034 001045      BNE      TST64-12      ;BR TO ERROR HALT ON SEQ ERROR
5999 011036 105737 177564      TSTB     @#TPS
6000 011042 100375      BPL        -4
6001 011044 012706 000500      MOV      #BUFF,%6
6002 011050 012767 000340 002020  MOV      #340,$STATUS      ;HIGHEST PRIORITY LEVEL
6006 011056      MTPS     STATUS
(1) 011056 106467      .WORD    106400!...C
6010 011062 012767 011132 166774  MOV      #TR0,64
6011 011070 012767 000100 166466  MOV      #100,$TCSR      ;INTERRUPT FOR TTY PUNCH/PRINTER
6012 011076 012767 011144 166730  MOV      #TR1,34      ;TRAP VECTOR
6013 011104 012767 011156 166752  MOV      #TR2,64      ;TTY VECTOR

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MO3

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OVKADA.P11 T63 TEST THAT A PENDING INTERRUPT OCCURS BEFORE TRAP

*** SEQ 0040

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6014 011112 012767 000340 166716      MOV      #340,36      ;IF TRAP TRAPS, MOVE 340 TO PRIORITY
6015 011120 005067 001752              CLR      STATUS      ;SHOULD TRAP AT END OF CLR INST
6019 011124              MTPS     STATUS
(1) 011124 106467      .WORD    106400!...C
6023 011130 104400      TRAP              ;TTY INTERRUPT SHOULD OVERRIDE TRAP
6024 011132              TR0:
(3) 011132 012737 000227 000402      MOV      #227,2#SFATAL ;MOVE TO MAILBOX # ***** 227 *****
(2) 011140 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 011142 000000      HALT              ;TTY SHOULDN'T HAVE INTERRUPTED
(4)              ; TO SCOPE REPLACE HALT W/ 240
(4)              ; AND REPLACE NEXT INST W/ 734
6025 011144              TR1:
(3) 011144 012737 000230 000402      MOV      #230,2#SFATAL ;MOVE TO MAILBOX # ***** 230 *****
(2) 011152 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 011154 000000      HALT              ;INTERRUPT DID NOT OCCUR FIRST, OR WRONG $TESTN
(4)              ; TO SCOPE REPLACE HALT W/ 240
(4)              ; AND REPLACE NEXT INST W/ 727
6026 011156 005067 166654      TR2:  CLR      36
6027              ;*****
(2)              ;TEST 64      TEST THAT A PENDING INTERRUPT;INTERRUPTS BETWEEN TRAPS
(3)              ;*****
(2) 011162 005237 000404      TST64: INC      2#$TESTN      ;UPDATE TEST NUMBER
(2) 011166 022737 000064 000404      CMP      #64,2#$TESTN ;SEQUENCE ERROR?
(2) 011174 001050      BNE      TST65-12      ;BR TO ERROR HALT ON SEQ ERROR
6028 011176 042767 000100 166360      BIC      #100,TTC SR
6029 011204 012706 000500      MOV      #BUFF,%6
6030 011210 012767 000340 001660      MOV      #340,$STATUS
6034 011216      MTPS     STATUS
(1) 011216 106467      .WORD    106400!...C
6038 011222 012767 000100 166334      MOV      #100,TTC SR
6039 011230 012767 011262 166576      MOV      #TR3,34      ;TRAP
6040 011236 012767 011276 166620      MOV      #TR4,64      ;TTY OUTPUT
6041 011244 012767 011264 166546      MOV      #TR5,20      ;IOT
6042 011252 012767 000340 166542      MOV      #340,22      ;IOT PRIORITY
6043 011260 104400      TRAP              ;THE ACT OF TRAPPING LOWER PRIORITY
6044 011262 000004      TR3:  IOT              ;INTERRUPT SHOULD OCCUR IN PLACE OF IOT TRAP
6045 011264      TR5:
(3) 011264 012737 000231 000402      MOV      #231,2#SFATAL ;MOVE TO MAILBOX # ***** 231 *****
(2) 011272 005212      INC      (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 011274 000000      HALT              ;NO INTERRUPT BETWEEN TRAPS, OR WRONG $TESTN
(4)              ; TO SCOPE REPLACE HALT W/ 240
(4)              ; AND REPLACE NEXT INST W/ 737
6046 011276 005067 166520      TR4:  CLR      22      ;CLR IOT PRIORITY
6047 011302 005067 166560      CLR      66
6048 011306 012767 000066 166550      MOV      #66,64
6049 011314 012767 000036 166512      MOV      #36,34
6050 011322 012767 000022 166470      MOV      #22,20
6051
6052              ;*****
(2)              ;TEST 65      TEST THAT "RESET" GOES TO OUTSIDE WORLD
(3)              ;*****
(2) 011330 005237 000404      TST65: INC      2#$TESTN      ;UPDATE TEST NUMBER
(2) 011334 022737 000065 000404      CMP      #65,2#$TESTN ;SEQUENCE ERROR?
(2) 011342 001026      BNE      TST66-12      ;BR TO ERROR HALT ON SEQ ERROR
6056 011344      MTPS     #340
(1) 011344 106427      .WORD    106400!...C

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 DVKADA.P11 T65 TEST THAT "RESET" GOES TO OUTSIDE WORLD

*** SEQ 0041

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6060 011350 012767 000100 166206      MOV      #100,TTCSR      ;SET INTERRUPT ENABLE
6061 011356 012767 000100 166174      MOV      #100,TRCSR     ;SET INTERRUPT ENABLE
6062 011364 000005                RESET      ;SHOULD CLEAR INTERRUPT ENABLE
6063 011366 032767 000100 166170      BIT       #100,TTCSR     ;TEST FOR CLEAR
6064 011374 001405                BEQ        1$
(3) 011376 012737 000232 000402      MOV      #232,2#$FATAL ;MOVE TO MAILBOX # ***** 232 *****
(2) 011404 005212                INC        (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 011406 000000                HALT              ;RESET FAILED TO CLEAR TTCSR
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 755
6065 011410 032767 000100 166142 1$: BIT      #100,TRCSR     ;TEST FOR CLEAR
6066 011416 001405                BEQ        TST66
(4) 011420 012737 000233 000402      MOV      #233,2#$FATAL ;MOVE TO MAILBOX # ***** 233 *****
(3) 011426 005212                INC        (R2)      ;SET MSGTYP TO FATAL ERROR
(3) 011430 000000                HALT              ;RESET FAILED TO CLEAR TRCSR,OR WRONG $TESTN
(5)                                     ; TO SCOPE REPLACE HALT W/ 240
(5)                                     ; AND REPLACE NEXT INST W/ 744
6067                                     ;*****
(2)                                     ;TEST 66      TEST THAT RESET HAS NO EFFECT ON THE TRACE TRAP
(3)                                     ;*****
(2) 011432 005237 000404                INC        2#$TESTN ;UPDATE TEST NUMBER
(2) 011436 022737 000066 000404      CMP      #66,2#$TESTN ;SEQUENCE ERROR?
(2) 011444 001025                BNE        TST67-12 ;BR TO ERROR HALT ON SEQ ERROR
6068 011446 012706 000500                MOV      #BUFF,%6 ;SET STACK
6069 011452 012767 011510 166334      MOV      #RESET2,14 ;SET UP TRACE VECTOR
6070 011460 012746 000020                MOV      #20,-(SP) ;PUSH T BIT
6071 011464 012746 011472                MOV      #.+6,-(SP) ;PUSH PC
6072 011470 000006                RTT              ;SET T BIT
6073 011472 000005                RESET      ;SHOULD HAVE NO EFFECT
6074 011474 000005                RESET      ;NO EFFECT
6075 011476 012737 000234 000402      MOV      #234,2#$FATAL ;MOVE TO MAILBOX # ***** 234 *****
(2) 011504 005212                INC        (R2)      ;SET MSGTYP TO FATAL ERROR
(2) 011506 000000                HALT              ;TRACE TRAP FAILED,OR WRONG $TESTN
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 756
6076 011510 005067 001362      RESET2: CLR      STATUS ;CLEAR TRACK
6080 011514                MTPS      STATUS
(1) 011514 106467                .WORD     106400!...C
6084 011520 012767 000016 166266      MOV      #16,14
6085 011526 005067 166264                CLR      16 ;TRACE STATUS
6086
6087                                     ;*****
(2)                                     ;TEST 67      TEST THAT WHEN TTY INTERRUPTS IT POPS NEW STATUS
(3)                                     ;*****
(2) 011532 005237 000404                INC        2#$TESTN ;UPDATE TEST NUMBER
(2) 011536 022737 000067 000404      CMP      #67,2#$TESTN ;SEQUENCE ERROR?
(2) 011544 001066                BNE        TST70-12 ;BR TO ERROR HALT ON SEQ ERROR
6088 011546 000005                RESET
6089 011550 012706 000500                MOV      #BUFF,%6 ;SET UP STACK
6090 011554 012767 011616 166302      MOV      #TTY3,64 ;INTERRUPT VECTOR
6094 011562                MTPS      #0
(1) 011562 106427                .WORD     106400!...C
6098 011566 012767 000357 166272      MOV      #357,66 ;HIGH PRIORITY ON INTERRUPT
6099 011574 052767 000100 165762      BIS      #100,TTCSR   ;SHOULD SET INTERRUPT ENABLE & INTERRUPT
6100 011602 000240                NOP
6101 011604 012737 000235 000402      MOV      #235,2#$FATAL ;MOVE TO MAILBOX # ***** 235 *****

```

PC	PC+1	PC+2	PC+3	PC+4	PC+5	PC+6	PC+7	PC+8	PC+9	PC+10	PC+11	PC+12	PC+13	PC+14	PC+15	PC+16	PC+17	PC+18	PC+19	PC+20	PC+21	PC+22	PC+23	PC+24	PC+25	PC+26	PC+27	PC+28	PC+29	PC+30	PC+31	PC+32	PC+33	PC+34	PC+35	PC+36	PC+37	PC+38	PC+39	PC+40	PC+41	PC+42	PC+43	PC+44	PC+45	PC+46	PC+47	PC+48	PC+49	PC+50	PC+51	PC+52	PC+53	PC+54	PC+55	PC+56	PC+57	PC+58	PC+59	PC+60	PC+61	PC+62	PC+63	PC+64	PC+65	PC+66	PC+67	PC+68	PC+69	PC+70	PC+71	PC+72	PC+73	PC+74	PC+75	PC+76	PC+77	PC+78	PC+79	PC+80	PC+81	PC+82	PC+83	PC+84	PC+85	PC+86	PC+87	PC+88	PC+89	PC+90	PC+91	PC+92	PC+93	PC+94	PC+95	PC+96	PC+97	PC+98	PC+99	PC+100	PC+101	PC+102	PC+103	PC+104	PC+105	PC+106	PC+107	PC+108	PC+109	PC+110	PC+111	PC+112	PC+113	PC+114	PC+115	PC+116	PC+117	PC+118	PC+119	PC+120	PC+121	PC+122	PC+123	PC+124	PC+125	PC+126	PC+127	PC+128	PC+129	PC+130	PC+131	PC+132	PC+133	PC+134	PC+135	PC+136	PC+137	PC+138	PC+139	PC+140	PC+141	PC+142	PC+143	PC+144	PC+145	PC+146	PC+147	PC+148	PC+149	PC+150	PC+151	PC+152	PC+153	PC+154	PC+155	PC+156	PC+157	PC+158	PC+159	PC+160	PC+161	PC+162	PC+163	PC+164	PC+165	PC+166	PC+167	PC+168	PC+169	PC+170	PC+171	PC+172	PC+173	PC+174	PC+175	PC+176	PC+177	PC+178	PC+179	PC+180	PC+181	PC+182	PC+183	PC+184	PC+185	PC+186	PC+187	PC+188	PC+189	PC+190	PC+191	PC+192	PC+193	PC+194	PC+195	PC+196	PC+197	PC+198	PC+199	PC+200	PC+201	PC+202	PC+203	PC+204	PC+205	PC+206	PC+207	PC+208	PC+209	PC+210	PC+211	PC+212	PC+213	PC+214	PC+215	PC+216	PC+217	PC+218	PC+219	PC+220	PC+221	PC+222	PC+223	PC+224	PC+225	PC+226	PC+227	PC+228	PC+229	PC+230	PC+231	PC+232	PC+233	PC+234	PC+235	PC+236	PC+237	PC+238	PC+239	PC+240	PC+241	PC+242	PC+243	PC+244	PC+245	PC+246	PC+247	PC+248	PC+249	PC+250	PC+251	PC+252	PC+253	PC+254	PC+255	PC+256	PC+257	PC+258	PC+259	PC+260	PC+261	PC+262	PC+263	PC+264	PC+265	PC+266	PC+267	PC+268	PC+269	PC+270	PC+271	PC+272	PC+273	PC+274	PC+275	PC+276	PC+277	PC+278	PC+279	PC+280	PC+281	PC+282	PC+283	PC+284	PC+285	PC+286	PC+287	PC+288	PC+289	PC+290	PC+291	PC+292	PC+293	PC+294	PC+295	PC+296	PC+297	PC+298	PC+299	PC+300	PC+301	PC+302	PC+303	PC+304	PC+305	PC+306	PC+307	PC+308	PC+309	PC+310	PC+311	PC+312	PC+313	PC+314	PC+315	PC+316	PC+317	PC+318	PC+319	PC+320	PC+321	PC+322	PC+323	PC+324	PC+325	PC+326	PC+327	PC+328	PC+329	PC+330	PC+331	PC+332	PC+333	PC+334	PC+335	PC+336	PC+337	PC+338	PC+339	PC+340	PC+341	PC+342	PC+343	PC+344	PC+345	PC+346	PC+347	PC+348	PC+349	PC+350	PC+351	PC+352	PC+353	PC+354	PC+355	PC+356	PC+357	PC+358	PC+359	PC+360	PC+361	PC+362	PC+363	PC+364	PC+365	PC+366	PC+367	PC+368	PC+369	PC+370	PC+371	PC+372	PC+373	PC+374	PC+375	PC+376	PC+377	PC+378	PC+379	PC+380	PC+381	PC+382	PC+383	PC+384	PC+385	PC+386	PC+387	PC+388	PC+389	PC+390	PC+391	PC+392	PC+393	PC+394	PC+395	PC+396	PC+397	PC+398	PC+399	PC+400	PC+401	PC+402	PC+403	PC+404	PC+405	PC+406	PC+407	PC+408	PC+409	PC+410	PC+411	PC+412	PC+413	PC+414	PC+415	PC+416	PC+417	PC+418	PC+41
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 SYKADA.P11 T70 TEST NON-EXISTENT ADDRESS TRAPS

*** SEQ 0043

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(2) 012016 000000          HALT          ;SHOULD HAVE TRAPED
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 753
6153 012020 005300          ;RETURN HERE ON AN ADDRESS TRAP
6154 012022 010067 177726  ATRAP: DEC     RO          ;MOVE THE FIRST NXM LOCATION IN CORH
6155                                     MOV     RO,CORH ;IL IT FINDS AN EXISTANT MEMORY LOCATION
6156 012026 012700 160001    ;THIS ROUTINE DOES NXM TRAPS UNTIL
6157 012032 012767 012070 165744 CTRAP: MOV     #160001,RO ;SET UP THE HIGHEST MEM LOCATION
6158 012040 012706 000500    MOV     #BTRAP,4 ;SET UP THE VECTOR
6159 012044 105740          MOV     #BUFF,SP
6160 012046 005200          TSTB    -(RO)        ;DOES IT EXIST?
6161 012050 020067 177700    DTRAP: INC     RO          ;IF YES INCREMENT IT
6162 012054 001430          CMP     RO,CORH        ;IS IT THE SAME LOCATION?
(3) 012056 012737 000241 000402 MOV     #241,3#SFATAL ;MOVE TO MAILBOX # ***** 241 *****
(2) 012064 005212          INC     (R2)          ;SET MSGTYP TO FATAL ERROR
(2) 012066 000000          HALT          ;CONTENTS OF RO AND CORH SHOULD HAVE BEEN EQUAL
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 727
6163                                     ;IF THIS COMPARISON FAILS IT MEANS
6164                                     ;THAT SOME LEGAL ADDRESS TRAPPED OR
6165                                     ;THAT AN ILLEGAL ADDRESS DID NOT TRAP
6166 012070          BTRAP: MFPS     STATUS
(1) 012070 106767          .WORD    106700!..C
6167 012074 005767 000776    TST     STATUS
6168 012100 001405          BEQ     15
(3) 012102 012737 000242 000402 MOV     #242,3#SFATAL ;MOVE TO MAILBOX # ***** 242 *****
(2) 012110 005212          INC     (R2)          ;SET MSGTYP TO FATAL ERROR
(2) 012112 000000          HALT          ;NEW PSW SHOULD HAVE BEEN ZERO
(4)                                     ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 715
6175 012114 026727 166354 012046 15:  CMP     BUFF-4,#DTRAP
6176 012122 001743          BEQ     CTRAP
(1) 012124          AUTO1: MOV     #243,3#SFATAL ;MOVE TO MAILBOX # ***** 243 *****
(3) 012124 012737 000243 000402 INC     (R2)          ;SET MSGTYP TO FATAL ERROR
(2) 012132 005212          HALT          ;OLD PC WAS NOT SAVED OR WRONG TESTN
(2) 012134 000000          ; TO SCOPE REPLACE HALT W/ 240
(4)                                     ; AND REPLACE NEXT INST W/ 704
6177 012136 012767 000006 165640 TRAPB: MOV     #6,4
6178 012144 005067 165636    CLR     6
6179
6180 *****
(2) TEST 71          TEST THE 'WAIT' INSTRUCTION
(3) *****
(2) 012150 005237 000404          TST71: INC     3#STESTN ;UPDATE TEST NUMBER
(2) 012154 022737 000071 000404 CMP     #71,3#STESTN ;SEQUENCE ERROR?
(2) 012162 001064          BNE     REES1 ;BR TO ERROR HALT ON SEQ ERROR
6181 012164 105767 166230    TSTB    $ENV        ;ARE WE UNDER APT?
6182 012170 001066          BNE     REES        ;YES
6183 012172 042767 000100 165364 BIC     #100,TPS ;CLEAR INTERRUPT ENABLE
6184 012200 012706 000500          MOV     #BUFF,SP ;SET UP THE STACK
6185 012204 012767 012300 165652 MOV     #WATE,64 ;SET UP THE INTERRUPT VECTOR
6186 012212 005067 165650          CLR     66
6187 012216 105767 165342    WATE1: TSTB    TPS
6188 012222 100375          BPL     WATE1          ;WAIT FOR READY
                                           ;TO BE UP

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OVKADA.P11 T71 TEST THE 'WAIT' INSTRUCTION

*** SEQ 0044

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6189 012224 012767 000015 165334      MOV      #15,TPB      ;DO A CARRIAGE RETURN
6190 012232 105767 165326      TSTB     TPS        ;WAIT FOR READY TO COME UP
6191 012236 100375      BPL      WATE2      ;
6192 012240 012767 000015 165320      MOV      #15,TPB      ;DO ANOTHER CARRIAGE RETURN
6193 012246 052767 000100 165310      BIS      #100,TPS     ;SET THE INTERRUPT ENABLE
6194 012254 005067 000616      CLR      STATUS     ;CLEAR THE PSW
6198 012260      MTPS     STATUS
(1) 012260 106467      .WORD    106400!...C
6202 012264 000001      WATE3:  WAIT      ;WAIT FOR THE INTERRUPT
6203 012266 012737 000244 000402      MOV      #244,2#SFATAL ;MOVE TO MAILBOX # ***** 244 *****
(2) 012274 005212      INC      (R2)        ;SET MSGTYP TO FATAL ERROR
(2) 012276 000000      HALT     ;WAIT INSTRUCTION DID NOT LOOP
(4)      ; TO SCOPE REPLACE HALT W/ 240
(4)      ; AND REPLACE NEXT INST W/ 731

6207 012300      WATE:   MFPS     STATUS
(1) 012300 106767      .WORD    106700!...C
6211 012304 005767 000566      TST      STATUS      ;IS THE PSW CORRECT?
6212 012310 001405      BEQ      1$
(3) 012312 012737 000245 000402      MOV      #245,2#SFATAL ;MOVE TO MAILBOX # ***** 245 *****
(2) 012320 005212      INC      (R2)        ;SET MSGTYP TO FATAL ERROR
(2) 012322 000000      HALT     ;NEW PSW SHOULD HAVE BEEN ZERO
(4)      ; TO SCOPE REPLACE HALT W/ 240
(4)      ; AND REPLACE NEXT INST W/ 717

6213 012324 026727 166144 012266 1$:      CMP      BUFF-4,#WATE3+2 ;IS THE OLD PC SAVED
6214 012332 001405      BEQ      REES
(1) 012334      REES1:  MOV      #246,2#SFATAL ;MOVE TO MAILBOX # ***** 246 *****
(3) 012334 012737 000246 000402      INC      (R2)        ;SET MSGTYP TO FATAL ERROR
(2) 012342 005212      HALT     ;OLD PC WAS NOT SAVED OR WRONG $TESTN
(2) 012344 000000      ; TO SCOPE REPLACE HALT W/ 240
(4)      ; AND REPLACE NEXT INST W/ 706
(4)      ; CLEAR THE INTERRUPT ENABLE

5215 012346 042767 000100 165210 REES:   BIC      #100,TPS
5216 012354 012767 000066 165502      MOV      #66,64
6217 (2)      ;*****
(3)      ;TEST 72      TEST      THAT ODD ADDRESSING WILL IGNORE BIT 0
(3)      ;*****
(2) 012362 005237 000404      TST72:  INC      2#$TESTN ;UPDATE TEST NUMBER
(2) 012366 022737 000072 000404      CMP      #72,2#$TESTN ;SEQUENCE ERROR?
(2) 012374 001003      BNE     TST73-12      ;BR TO ERROR HALT ON SEQ ERROR
6218 012376 000167 000013      JMP      000+1
6219 012402 012737 000247 000402      MOV      #247,2#SFATAL ;MOVE TO MAILBOX # ***** 247 *****
(2) 012410 005212      INC      (R2)        ;SET MSGTYP TO FATAL ERROR
(2) 012412 000000      HALT     ;SHOULD HAVE JUMPED, OR WRONG $TESTN
(4)      ; TO SCOPE REPLACE HALT W/ 240
(4)      ; AND REPLACE NEXT INST W/ 770

6220 012414 005307      ODD:    DEC      PC
6221 (2)      ;*****
(3)      ;TEST 73      TEST      THAT ALL RESERVED INSTRUCTIONS TRAP
(3)      ;*****
(2) 012416 005237 000404      TST73:  INC      2#$TESTN ;UPDATE TEST NUMBER
(2) 012422 022737 000073 000404      CMP      #73,2#$TESTN ;SEQUENCE ERROR?
(2) 012430 001166      BNE     RET4          ;BR TO ERROR HALT ON SEQ ERROR
6222 012432 010700      MOV      PC,%0      ;SET THESE
6223 012434 010704      MOV      PC,%4      ;REGISTERS
6224 012436 010705      MOV      PC,%5      ;TO EXISTENT MEMORY LOCATIONS
6225 012440 012703 013032      MOV      #TABLE,TAB ;TABLE POINTER

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E04

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 DVKADA.P11 T73 TEST THAT ALL RESERVED INSTRUCTIONS TRAP

*** SEQ 0045

6226	012444	012302		GIN1:	MOV	(TAB)+,FIRST	;FIRST OR CURRENT INSTRUCTION
6227	012446	012301			MOV	(TAB)+,LAST	;LAST INSTRUCTION OR GROUP
6228	012450	020267	000366		CMP	FIRST,EISFIS	;IS IT THE 'EISFIS' GROUP?
6229	012454	001007			BNE	15	;NO
6230	012456	032767	000300 165742		BIT	#300,\$CPUOP	;DO WE HAVE EISFIS OPTION?
6231	012464	001403			BEQ	15	;NO
6232	012466	062703	000004		ADD	#4,TAB	;IF YES DO NO DO THE
6233	012472	000764			BR	GIN1	;EIS FIS OP CODES
6234	012474	020267	000352	15:	CMP	FIRST,STOP	;IS IT THE STOP GROUP
6235	012500	001005			BNE	25	;NO
6236	012502	032767	000020 165712		BIT	#20,\$SWREG	;DO WE WANT TO DO IT?
6237	012510	001401			BEQ	25	;YES
6238	012512	000754			BR	GIN1	;NO
6239	012514	020267	000336	25:	CMP	FIRST,STOP1	;IS IT THE STOP1 GROUP?
6240	012520	001005			BNE	35	;NO
6241	012522	032767	000010 165672		BIT	#10,\$SWREG	;DO WE WANT TO DO IT?
6242	012530	001401			BEQ	35	;YES
6243	012532	000744			BR	GIN1	;NO
6244	012534	020267	000322	35:	CMP	FIRST,FINISH	;TESTED ALL
6245	012540	001417			BEQ	GIN3	;YES BRANCH
6246	012542	010267	000316		MOV	FIRST,INST	;SET UP INST
6247	012546	005267	000312		INC	INST	
6248	012552	012767	012736 165230	GIN2:	MOV	#RET,10	;SET UP RETURN FROM TRAP
6249	012560	012706	000500		MOV	#BUFF,SP	;SET UP STACK POINTER
6250	012564	005067	000306		CLR	STATUS	;CLEAR PRIORITY
6254	012570				MTPS	STATUS	
(1)	012570	106467			.WORD	106400!..C	
6258	012574	000167	000264		JMP	INST	;EXECUTE RESERVED INSTRUCTION
6259							
6260	012600	005237	000406	GIN3:	INC	#SPASS	
6261	012604	105267	000106		INCB	PASSPT	;SHOULD PRINT THIS PASS?
6262	012610	001023			BNE	ACT	;NO
6263	012612	132767	000040 165601		BITB	#40,\$ENVN	;WILL APT ALLOW PRINTING?
6264	012620	001017			BNE	ACT	;NO
6265	012622	012700	012720		MOV	#MSG,RO	;GET MSG ADDR.
6266	012626	105737	177564	WAIT:	TSTB	#TPS	;TTY READY
6267	012632	100375			BPL	WAIT	;NO WAIT
6268	012634	112037	177566		MOVB	(RO)+,#TPB	;PRINT CHARACTER
6269	012640	001372			BNE	WAIT	;NEXT IF NOT DONE.
6270	012642	105737	177564	WAIT1:	TSTB	#TPS	
6271	012646	100375			BPL	WAIT1	
6272	012650	000005			RESET		
6273	012652	012767	177761 000036	ACT:	MOV	#177761,PASSPT	;DO IT 15 DECIMAL TIMES
6274	012660	013700	000042		MOV	#42,RO	;CHECK ACT
6275	012664	001405			BEQ	GOAGIN	;KEEP GOING
6276	012666	000005			RESET		
6277	012670	004710		SENDAD:	JSR	PC,(RO)	;ACT HOOKS
6278	012672	000240			NOP		
6279	012674	000240			NOP		
6280	012676	000240			NOP		
6281	012700	012767	000012 165102	GOAGIN:	MOV	#12,10	
6282	012706	005067	165100		CLR	12	
6283	012712	000167	165662		JMP	RESTR	;DO NEXT PASS
6284	012716	177777		PASSPT:	-1		
6285	012720	005015	047105 020104	MSG:	.ASCIZ	<15><12>.END OF PASS.	
	012726	043117	050040 051501				

F04

MAIN. MACY11 27(732) 25-AUG-76 12:49 PAGE 58-18
 DVKADA.P11 T73 TEST THAT ALL RESERVED INSTRUCTIONS TRAP

*** SEQ 0046

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012734 000123
6286
6287 ;TRAPPING SHOULD SEND YOU HERE
6288 012736 020627 000474 RET: CMP SP,BUFF-4 ;TEST DECREMENT OF SP
6289 012742 001405 BEQ RET1
(3) 012744 012737 000250 000402 MOV #250,#SFATAL ;MOVE TO MAILBOX # ***** 250 *****
(2) 012752 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 012754 000000 HALT ;WRONG DECREMENT
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 625
6290 012756 026727 165512 013066 RET1: CMP BUFF-4,#INST+2 ;LOC OF INST UNINCREMENTED
6291 012764 001405 BEQ RET2
(3) 012756 012737 000251 000402 MOV #251,#SFATAL ;MOVE TO MAILBOX # ***** 251 *****
(2) 012774 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 012776 000000 HALT ;INST INC ON TRAP
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 614
6292 013000 005767 165472 RET2: TST BUFF-2
6293 013004 001405 BEQ RET3
(1) 013006 RET4:
(3) 013006 012737 000252 000402 MOV #252,#SFATAL ;MOVE TO MAILBOX # ***** 252 *****
(2) 013014 005212 INC (R2) ;SET MSGTYP TO FATAL ERROR
(2) 013016 000000 HALT ;CONDITION CODES SET ON TRAP
(4) ; TO SCOPE REPLACE HALT W/ 240
(4) ; AND REPLACE NEXT INST W/ 604
6294 013020 026701 000040 RET3: CMP INST, LAST
6295 013024 001607 BEQ GIN1 ;SET UP NEW GROUP
6296 013026 000167 177514 JMP GIN2 ;FINISH OLD GROUP
6297 ;END OF INSTRUCTION GROUP
6298 013032 006777 TABLE: 6777
6299 013034 007777 7777
5300 013036 106777 106777
6301 013040 107777 107777
6302 013042 067777 EISFIS: 67777 ;IF WE HAVE THE EIS FIS OPTION
6303 013044 073777 73777 ;THEN THE EISFIS GROUP
6304 013046 074777 74777 ;WILL BE SKIPE
6305 013050 075037 75037
6306 013052 075377 STOP: 75377
6307 013054 076777 STOP1: 76777
6308 013056 167777 167777
6309 013060 177777 177777
6310 013062 013062 FINISH:
6311 013064 000000 INST: HALT ;END FLAG
6312 013066 000000 HALT ;WILL CONTINUE RESERVED INST
6313 013070 000000 HALT ;SHOULD TRAP TO LOC 10
6314 013072 000000 HALT ;LOC 10 SHOULD SEND YOU TO
6315 013074 000000 HALT ;RET
6316 013076 000000 STATUS: 0
6317
6318
6319 ;*****
6320 ;POWER FAIL ROUTINE
6321 ;*****
6322
6323 013100 012767 013110 164716 PWRDWN: MOV #PWRUP,24
6324 013106 000000 HALT

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G04

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 DVKADA.P11 T73 TEST THAT ALL RESERVED INSTRUCTIONS TRAP

*** SEQ 0047

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6325
6326 013110 012767 013100 164706 PWRUP: MOV #PWRDOWN,24
6327 013116 012706 000500 MOV #BUFF,SP
6328 013122 132767 000040 165271 BITB #40,$ENVM ;WILL APT ALLOW PRINTING?
6329 013130 001013 BNE PFRES ;NO
6330 013132 012700 013164 MOV #MSGPWF,RO ;GET MSG ADDR.
6331 013136 105737 177564 PWAIT: TSTB @*TPS ;TTY READY
6332 013142 100375 BPL PWAIT ;NO WAIT
6333 013144 112037 177566 MOVB (RO)+,@*TPB ;PRINT CHARACTER
6334 013150 001372 BNE PWAIT ;NEXT IF NOT DONE.
6335 013152 105737 177564 PWAIT1: TSTB @*TPS
6336 013156 100375 BPL PWAIT1
6337 013150 000167 165316 PFRES: JMP START
6338 013164 005015 047520 042527 MSGPWF: .ASCIZ <15><12>.POWER FAILED!.
        013172 020122 040506 046111
        013200 042105 000041
6339 000001 .END

```


		5533	5536	5548	5550	5562	5565	5583	5606	5616	5622	5625	5628	5628	5631	5631
		5634	5646	5648	5660	5663	5683	5713	5719	5722	5725	5728	5731	5743	5743	5743
		5745	5757	5760	5778	5798	5804	5807	5810	5813	5817	5829	5831	5843	5843	5843
		5846	5864	5886	5895	5902	5905	5911	5917	5929	5945	5961	5976	5984	5984	5984
		5987	6001	6029	6068	6089	6112	6147	6158	6175	6184	6213	6249	6288	6288	6288
		6290	6292	6327												
CORH	011754	6143#	6154*	6161												
CTRAP	012032	6157#	6176													
DTRAP	012046	6160#	6175													
EISFIS	013042	6228	6302#													
EMT	= 104000	4956#	5604													
FINISH	013062	6244	6310#													
FIRST	=%000002	4953#	6226*	6228	6234	6239	6244	6246								
GIN1	012444	6226#	6233	6238	6243	6295										
GIN2	012546	6247#	6296													
GIN3	012600	6245	6260#													
GOAGIN	012700	6275	6281#													
HERE	000650	5099#	5102*	5107*	5141											
HLT	= 000000	4954#														
ILLA	= 004700	4972#														
ILLB	= 000100	4973#														
INST	013064	6246*	6247*	6258	6290	6294	6311#									
INSTC	002276	5260#														
INSTK	007276	5812#	5813													
ITRAPS	= 000004	4958#														
K1	000624	5089#	5146*	5147	5150	5154*	5155	5158	5161*	5163	5169*	5171	5177*	5179	5179	5179
		5182														
K10	000642	5096#	5191	5195	5197	5200	5203	5206								
K11	000644	5097#														
K12	000646	5098#														
K2	000626	5090#														
K3	000630	5091#														
K4	000632	5092#														
K5	000634	5093#	5145*	5148	5153*	5162*	5164	5166	5170*	5172	5174	5178*	5180			
K6	000636	5094#	5156	5195												
K7	000640	5095#	5185	5188	5191	5197	5206									
LAST	=%000001	4952#	6227*	6294												
MSG	012720	6265	6285#													
MSGPWF	013164	6330														

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 DVKADA.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

*** SEQ 0050

RC1	003642	5421#	5426	
REES	012346	6182	6214	6215#
REES1	012334	6180	6214#	
RESET2	011510	6069	6076#	
RESTRY	000600	5084#	6283	
RET	012736	6248	6288#	
RETA	002200	5247	5250#	
RETAT	010040	5887	5893#	
RETA1	003034	5335	5338#	
RETA2	003752	5431	5434#	
RETA3	004606	5519	5522#	
RETA4	005526	5617	5620#	
RETA5	006352	5714	5717#	
RETB	002230	5253	5255#	
RETB1	010114	5896	5902#	
RETB1	003064	5341	5343#	
RETB2	004002	5437	5439#	
RETB3	004636	5525	5527#	
RETB4	005556	5623	5625#	
RETB5	006412	5720	5722#	
RETC	002300	5259	5261#	
RETC1	010174	5906	5911#	
RETC1	003134	5347	5349#	
RETC2	004052	5443	5445#	
RETC3	004706	5531	5533#	
RETC4	005626	5629	5631#	
RETC5	006462	5726	5728#	
RETD	002364	5265	5276#	
RETD1	003220	5353	5364#	
RETD2	004136	5449	5460#	
RETD3	004772	5537	5548#	
RETD4	005712	5635	5646#	
RETD5	006546	5732	5743#	
RETE	002436	5279	5290#	
RETE1	003270	5367	5377#	
RETE2	004210	5463	5474#	
RETE3	005044	5551	5562#	
RETE4	005764	5649	5660#	
RETE5	006620	5746	5757#	
RETF	002514	5294	5297#	
RETF1	003346	5381	5384#	
RETF2	004266	5478	5481#	
RETF3	005122	5566	5569#	
RETF4	006042	5664	5669#	
RETF5	006676	5761	5764#	
RETG	002644	5312	5315#	
RETG1	003476	5399	5402#	
RETG2	004416	5496	5499#	
RETG3	005252	5584	5587#	
RETG4	006172	5684	5687#	
RETG5	007026	5779	5782#	
RETH5	007200	5799	5802#	
RETI	007230	5805	5807#	
RETK	007300	5811	5813#	
RETL	007361	5818	5829#	
RETM	007436	5832	5843#	

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DVKADA.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

RETN	007514	5847	5850*
RETO	007642	5865	5868*
RET1	012756	6289	6290*
RET2	013000	6291	6292*
RET3	013020	6293	6294*
RET4	013006	6221	6293*
RTI1	010450	5947	5951*
RTI2	010464	5948	5953*
RTRAP =	000010	4971*	5253* 5259* 5265* 5279* 5294* 5295* 5312* 5313*
RTRAP1=	000034	4963*	5335* 5341* 5347* 5353* 5367* 5381* 5382* 5399* 5400*
RTRAP2=	000020	4962*	5431* 5437* 5443* 5449* 5463* 5478* 5479* 5496* 5497*
RTRAP3=	000030	4961*	5519* 5525* 5531* 5537* 5551* 5566* 5567* 5584* 5585*
RTRAP4=	000014	4960*	5617* 5623* 5629* 5635* 5649* 5664* 5665* 5684* 5685* 5887* 5896* 5906*
RTRAF5=	000004	4959*	5714* 5720* 5726* 5732* 5746* 5761* 5762* 5779* 5780* 5799* 5805* 5911*
		5818*	5832* 5847* 5848* 5865* 5866*
RTT1	010260	5920	5923*
RTT2	010276	5921	5926*
RTT3	010344	5931	5935*
RTT4	010364	5932	5939*
RTT5	010316	5929*	5937 5942
RTT6	010406	5940	5943*
RO	=%000000	4951*	5076* 5077 6153* 6154 6156* 6159 6160* 6161 6265* 6268 6274* 6277
		6330*	6333
R1	=%000001	5918*	5933* 5935* 5939* 5949* 5951* 5953
R2	=%000002	5104*	5109* 5114* 5120* 5126* 5132* 5138* 5143* 5151* 5159* 5167* 5175* 5183*
		5186*	5189* 5193* 5196* 5198* 5201* 5204* 5207* 5219* 5220* 5221* 5222* 5241*
		5242*	5243* 5244* 5249* 5256* 5262* 5277* 5291* 5298* 5299* 5300* 5301* 5310*
		5316*	5317* 5318* 5319* 5330* 5337* 5344* 5350* 5365* 5378* 5385* 5386* 5387*
		5388*	5397* 5403* 5404* 5405* 5406* 5417* 5423* 5433* 5440* 5446* 5461* 5475*
		5482*	5483* 5484* 5485* 5494* 5500* 5501* 5502* 5503* 5514* 5521* 5528* 5534*
		5549*	5563* 5570* 5571* 5572* 5573* 5582* 5588* 5589* 5590* 5591* 5602* 5608*
		5619*	5626* 5632* 5647* 5661* 5670* 5671* 5672* 5673* 5682* 5688* 5689* 5690*
		5691*	5702* 5716* 5723* 5729* 5744* 5758* 5765* 5766* 5767* 5768* 5777* 5783*
		5784*	5785* 5786* 5796* 5801* 5808* 5814* 5830* 5844* 5851* 5852* 5853* 5854*
		5863*	5869* 5870* 5871* 5872* 5882* 5892* 5901* 5903* 5912* 5924* 5938* 5942*
		5952*	5955* 5970* 5972* 5983* 5985* 5994* 6024* 6025* 6045* 6064* 6066* 6075*
		6101*	6110* 6131* 6151* 6162* 6174* 6176* 6203* 6212* 6214* 6219* 6289* 6291*
		6293*	
R6TST	000666	5101*	
SP	=%000006	4949*	5246* 5252* 5255 5258* 5264* 5278* 5293* 5311* 5327* 5328* 5329 5334*
		5340*	5343 5346* 5352* 5366* 5380* 5398* 5414* 5415* 5416 5421* 5430* 5436*
		5439	5442* 5448* 5462* 5477* 5495* 5511* 5512* 5513 5518* 5524* 5527 5530*
		5536*	5550* 5565* 5583* 5599* 5600* 5601 5606* 5616* 5622* 5625 5628* 5634*
		5648*	5663* 5683* 5699* 5700* 5701 5713* 5719* 5722 5725* 5731* 5745* 5760*
		5778*	5794* 5795 5798* 5804* 5807 5810* 5917* 5831* 5846* 5864* 5886* 5888*
		5889*	5895* 5897* 5898* 5902 5905* 5907* 5908* 5917* 5919* 5920* 5929* 5930*
		5931*	5945* 5946* 5947* 5966* 5967* 5979* 5980* 6070* 6071* 6147* 6158* 6184*
		6249*	6288 6327*
START	000502	5060	5063 5066*
STATUS	013076	5211*	5215* 5228* 5232* 5236* 5266* 5270* 5280* 5284* 5305* 5309 5323* 5327
		5354*	5358* 5368* 5372* 5392* 5396 5410* 5414 5450* 5454* 5464* 5468* 5489*
		5493	5507* 5511 5538* 5542* 5552* 5556* 5577* 5581 5595* 5599 5636* 5640*
		5650*	5654* 5677* 5681 5695* 5699 5733* 5737* 5747* 5751* 5772* 5776 5790*
		5794	5819* 5823* 5833* 5837* 5858* 5862 5876* 5880 6002* 6006* 6015* 6019*
		6030*	6034* 6076* 6080* 6105* 6109 6126*

*** SEQ 0053

[illegible]

```

$ERROR= 000402
$ETABL 000420
$ETEND 000450
$EFATAL 000402

```

\$HIBTS	000450
\$MADR1	000432
\$MADR2	000436
\$MADR3	000442
\$MADR4	000446
\$MAIL	000400
\$MBADR	000452
\$MSGAD	000414
\$MSGLG	000416
\$MSGTY	000400
\$MTYP1	000430
\$MTYP2	000434
\$MTYP3	000440
\$MTYP4	000444
\$PASS	000406
\$PASTM	000456
\$SVPC =	000400
\$SWR =	000000
\$SWREG	000422
\$TESTN	000404

STN = 000074

STSTM 000454
STSTM= 000404

5783#	5784#	5785#	5786#	5796#	5801#	5808#	5814#	5830#	5844#	5851#	5852#	5853#
5854#	5863#	5869#	5870#	5871#	5872#	5882#	5892#	5901#	5903#	5912#	5924#	5938#
5942#	5952#	5955#	5970#	5972#	5983#	5985#	5994#	6024#	6025#	6045#	6064#	6066#
6075#	6101#	6110#	6131#	6151#	6162#	6174#	6176#	6203#	6212#	6214#	6219#	6289#
6291#	6293#											
4975#	5087*											
5055#												
5055#	5056											
4975	5055#	5104*	5109*	5114*	5120*	5126*	5132*	5138*	5143*	5151*	5159*	5167*
5175*	5183*	5186*	5189*	5193*	5196*	5198*	5201*	5204*	5207*	5219*	5220*	5221*
5222*	5241*	5242*	5243*	5244*	5249*	5256*	5262*	5277*	5291*	5298*	5299*	5300*
5301*	5310*	5316*	5317*	5318*	5319*	5330*	5337*	5344*	5350*	5365*	5378*	5385*
5386*	5387*	5388*	5397*	5403*	5404*	5405*	5406*	5417*	5423*	5433*	5440*	5446*
5461*	5475*	5482*	5483*	5484*	5485*	5494*	5500*	5501*	5502*	5503*	5514*	5521*
5528*	5534*	5549*	5563*	5570*	5571*	5572*	5573*	5582*	5588*	5589*	5590*	5591*
5602*	5608*	5619*	5626*	5632*	5647*	5661*	5670*	5671*	5672*	5673*	5682*	5688*
5689*	5690*	5691*	5702*	5716*	5723*	5729*	5744*	5758*	5765*	5766*	5767*	5768*
5777*	5783*	5784*	5785*	5786*	5796*	5801*	5808*	5814*	5830*	5844*	5851*	5852*
5853*	5854*	5863*	5869*	5870*	5871*	5872*	5882*	5892*	5901*	5903*	5912*	5924*
5938*	5942*	5952*	5955*	5970*	5972*	5983*	5985*	5994*	6024*	6025*	6045*	6064*
6066*	6075*	6101*	6110*	6131*	6151*	6162*	6174*	6176*	6203*	6212*	6214*	6219*
6289*	6291*	6293*										
5056#												
5055#												
5055#												
5055#												
5055#												
5055#	5056											
5056#												
5055#												
5055#												
5055#	5084	5085*										
5055#												
5055#												
5055#												
5055#												
5055#	5062*	6260*										
5056#												
5054#												
4666#												
5055#	5072	5076	6236	6241								
4974	5055#	5100*	5144*	5184*	5209*	5245*	5251*	5257*	5263*	5292*	5333*	5339*
5345*	5351*	5379*	5418*	5429*	5435*	5441*	5447*	5476*	5517*	5523*	5529*	5535*
5564*	5603*	5615*	5621*	5627*	5633*	5662*	5712*	5718*	5724*	5730*	5759*	5797*
5803*	5809*	5816*	5845*	5885*	5894*	5904						

= 013204

[illegible]

	5300	5301	5305	5310	5316	5317	5318	5319	5323	5330	5333	5337	5339
	5344	5345	5349	5350	5351	5358	5365	5372	5378	5379	5385	5386	5387
	5388	5392	5397	5403	5404	5405	5406	5410	5417	5418	5423	5429	5433
	5435	5440	5441	5445	5446	5447	5454	5461	5468	5475	5476	5482	5483
	5484	5485	5489	5494	5500	5501	5502	5503	5507	5514	5517	5521	5523
	5528	5529	5533	5534	5535	5542	5549	5556	5563	5564	5570	5571	5572
	5573	5577	5582	5588	5589	5590	5591	5595	5602	5603	5608	5615	5619
	5621	5625	5627	5631	5632	5633	5640	5647	5654	5661	5662	5670	5671
	5672	5673	5677	5682	5688	5689	5690	5691	5695	5702	5712	5716	5718
	5723	5724	5728	5729	5730	5737	5744	5751	5758	5759	5765	5766	5767
	5768	5772	5777	5783	5784	5785	5786	5790	5796	5797	5801	5803	5808
	5809	5814	5816	5823	5830	5837	5844	5845	5851	5852	5853	5854	5858
	5853	5859	5870	5871	5872	5876	5882	5885	5889	5892	5894	5898	5901
	5903	5904	5908	5911	5912	5915	5924	5927	5938	5942	5944	5952	5955
	5957	5967	5970	5972	5975	5980	5983	5985	5986	5994	5998	6000	6005
	6019	6024	6025	6027	6034	6045	6052	6056	6064	6066	6067	6071	6075
	6080	6097	6094	6101	6105	6110	6118	6126	6131	6138	6151	6162	6169
	6174	6176	6180	6198	6203	6207	6212	6214	6217	6219	6221	6254	6299
	6291	6293	6310										
..X = 000450	5056												
..A = 012570	5215	5228	5236	5270	5284	5305	5323	5358	5372	5392	5410	5454	5468
	5489	5507	5542	5555	5577	5595	5640	5654	5677	5695	5737	5751	5772
	5790	5823	5837	5858	5876	6006	6019	6034	6056	6080	6094	6105	6117
..B = 012574	6126	6169	6198	6207	6254								
	5215	5228	5236	5270	5284	5305	5323	5358	5372	5392	5410	5454	5468
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	5790	5823	5837	5858	5876	6006	6019	6034	6056	6080	6094	6105	6118
..C = 000067	6126	6169	6198	6207	6254								
	5215	5228	5236	5270	5284	5305	5323	5358	5372	5392	5410	5454	5468
	5489	5507	5542	5556	5577	5595	5640	5654	5677	5695	5737	5751	5772
	5790	5823	5837	5858	5876	6006	6019	6034	6056	6080	6094	6105	6118
	6126	6169	6198	6207	6254								

COMMEN	974#														
ENDCOM	986#														
ERROR	4533#	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	5186
	5189#	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243	5244
	5249#	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319	5320
	5337#	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406	5417
	5423#	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	5501	5502	5503
	5514#	5521	5528	5534	5549	5563	5570	5571	5572	5573	5582	5588	5589	5590	5591
	5602#	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682	5688	5689	5690
	5691#	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784	5785
	5786#	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870	5871
	5872#	5882	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970	5972	5983	5985
	5994#	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176	6203
	6212#	6214	6219	6289	6291	6293									
ESCAPE	1091#														
LOOP	4699#	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	5186
	5189#	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243	5244
	5249#	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319	5320
	5337#	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406	5417
	5423#	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	5501	5502	5503
	5514#	5521	5528	5534	5549	5563	5570	5571	5572	5573	5582	5588	5589	5590	5591
	5602#	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682	5688	5689	5690
	5691#	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784	5785
	5786#	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870	5871
	5872#	5882	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970	5972	5983	5985
	5994#	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176	6203
	6212#	6214	6219	6289	6291	6293									
MFPS	4934#	5228	5305	5323	5392	5410	5489	5507	5577	5595	5677	5695	5772	5790	5858
	5876#	6105	6126	6169	6207										
MTPS	4920#	5215	5236	5270	5284	5358	5372	5454	5468	5542	5556	5640	5654	5737	5751
	5823#	5837	6006	6019	6034	6056	6080	6094	6118	6198	6254				
MULT	3460#														
NEWST	1026#	4697#	5100	5144	5184	5209	5245	5251	5257	5263	5292	5333	5339	5345	5351
	5379#	5418	5429	5435	5441	5447	5476	5517	5523	5529	5535	5564	5603	5615	5621
	5627#	5633	5662	5712	5718	5724	5730	5759	5797	5803	5809	5816	5845	5885	5894
	5904#	5915	5927	5944	5957	5975	5986	5998	6027	6052	6067	6087	6138	6180	6217
	6221#														
POP	1477#														
PUSH	1469#														
REPORT	4445#														
SETUP	901#														
SKIP	1125#														
SLASH	926#														
STARS	895#	4695#	5054	5055	5056	5100	5144	5184	5209	5245	5251	5257	5263	5292	5333
	5339#	5345	5351	5379	5418	5429	5435	5441	5447	5476	5517	5523	5529	5535	5564
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	6138#	6180	6217	6221											
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TYPDEC	1383#														
TYPNAM	1171#														
TYPNUM	1350#														
TYPOCS	1303#														
TYPOCT	1266#														
TYPTXT	1220#														
SSERCD	4660#	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	5186

.MAIN. MACY11 2717321 25-AUG-76 12:49 PAGE 60-2
DYKADA.P11 CROSS REFERENCE TABLE -- MACRO NAMES

*** SEQ 0059

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.SOIV	3562#
.SECP	1529#
.SERRJ	1941#
.SERRT	2134#
.SMULT	2498#
.SPOWE	3217#
.SRAND	3280#
.SRDOE	2913#
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.SREAO	2607#
.SR2AZ	3928#
.SSAVE	2989#
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.SSCOP	1733#
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.STRAP	3089#
.STYPB	2522#
.STYPC	2444#
.STYPE	2222#
.STYPO	2347#
.S4CCA	515#

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BCCS	5241	5319	5406	5503	5591	5691	5786	5872								
BEO	5073	5078	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	
	5186	5189	5193	5196	5198	5204	5243	5256	5262	5277	5291	5310	5317	5330	5344	
	5350	5365	5378	5397	5404	5417	5440	5446	5461	5475	5494	5501	5514	5528	5534	
	5549	5563	5582	5589	5602	5626	5632	5647	5661	5682	5689	5702	5723	5729	5744	
	5758	5777	5784	5796	5808	5814	5830	5844	5863	5870	5882	5903	5912	5924	5937	
	5940	5942	5955	5972	6064	6066	6110	6131	6162	6174	6176	6212	6214	6231	6237	
	6242	6245	6275	6289	6291	6293	6295									
BHIS	5426	5611														
BIC	5329	5415	5512	5600	5700	6028	6183	6215								
BIS	5079	5232	6099	6122	6193											
BISB	5074															
BIT	5077	5309	5396	5493	5581	5681	5776	5984	6063	6065	6230	6236	6241			
BITB	5072	6263	6328													
BLOS	6150															
BMI	5244	5316	5403	5500	5588	5688	5783	5869								
BNE	5069	5100	5144	5184	5201	5207	5209	5221	5245	5251	5257	5263	5292	5299	5333	
	5339	5345	5351	5379	5386	5418	5429	5435	5441	5447	5476	5483	5517	5523	5529	
	5535	5564	5571	5603	5615	5621	5627	5633	5662	5671	5712	5718	5724	5730	5759	
	5766	5797	5803	5809	5816	5845	5852	5885	5894	5904	5915	5927	5944	5957	5975	
	5985	5986	5998	6027	6052	6067	6087	6138	6180	6182	6217	6221	6229	6235	6240	
	6262	6264	6269	6329	6334											
BPL	5222	5298	5385	5482	5570	5670	5765	5851	6000	6188	6191	6267	6271	6332	6336	
BR	6141	6233	6238	6243												
BVC	5220	5300	5387	5484	5572	5672	5767	5853								
BVS	5242	5318	5405	5502	5590	5690	5785	5871								
CCC	5224	5274	5362	5458	5546	5644	5741	5827								
CLR	5062	5070	5071	5085	5086	5087	5101	5111	5116	5117	5122	5123	5128	5129	5134	
	5135	5211	5215	5228	5236	5266	5270	5284	5295	5305	5323	5332	5354	5358	5372	
	5382	5392	5410	5428	5450	5454	5468	5479	5489	5507	5516	5538	5542	5556	5567	
	5577	5595	5613	5636	5640	5654	5665	5677	5695	5704	5733	5737	5751	5762	5772	
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	6006	6015	6019	6026	6034	6046	6047	6056	6076	6080	6085	6094	6105	6114	6118	
	6126	6132	6144	6145	6169	6178	6186	6194	6198	6207	6250	6254	6282			
CMP	5100	5103	5108	5113	5119	5125	5131	5137	5142	5144	5150	5158	5166	5174	5182	
	5184	5209	5245	5251	5255	5257	5261	5263	5276	5290	5292	5329	5333	5339	5343	
	5345	5349	5351	5364	5377	5379	5416	5418	5425	5429	5435	5439	5441	5445	5447	
	5460	5474	5476	5513	5517	5523	5527	5529	5533	5535	5548	5562	5564	5601	5603	
	5610	5615	5621	5625	5627	5631	5633	5646	5660	5662	5701	5712	5718	5722	5724	
	5728	5730	5743	5757	5759	5795	5797	5803	5807	5809	5813	5816	5829	5843	5845	
	5881	5885	5894	5902	5904	5911	5915	5927	5944	5957	5975	5986	5998	6027	6052	
	6067	6087	6109	6138	6149	6161	6175	6180	6213	6217	6221	6228	6234	6239	6244	
	6288	6290	6294													
CMPB	5118	5124	5130	5136	5141	5185	5188	5191	5195	5197	5200	5203	5206			
DEC	5939	6153	6220													
ENT	5520	5526	5532	5547	5561	5568	5586	5607								
HALT	4954	4982	4984	4986	4988	4990	4992	4994	4996	4998	5000	5002	5004	5006	5008	
	5010	5012	5014	5016	5018	5020	5022	5024	5026	5028	5030	5032	5034	5036	5038	
	5040	5042	5044	5046	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	
	5175	5183	5186	5189	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	
	5242	5243	5244	5249	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	
	5318	5319	5330	5337	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	
	5405	5406	5417	5423	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	
	5501	5502	5503	5514	5521	5528	5534	5549	5563	5570	5571	5572	5573	5582	5588	

INC	5589	5590	5591	5602	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682
	5688	5689	5690	5691	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777
	5783	5784	5785	5786	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863
	5869	5870	5871	5872	5882	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970
	5972	5983	5985	5994	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162
	6174	6176	6203	6212	6214	6219	6289	6291	6293	6311	6312	6313	6314	6315	6324
	5100	5104	5109	5114	5120	5126	5132	5138	5143	5144	5151	5159	5167	5175	5183
	5184	5186	5189	5193	5196	5198	5201	5204	5207	5209	5219	5220	5221	5222	5241
	5242	5243	5244	5245	5249	5251	5256	5257	5262	5263	5277	5291	5292	5298	5299
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	5365	5378	5379	5385	5386	5387	5388	5397	5403	5404	5405	5406	5417	5418	5423
	5424	5429	5433	5435	5440	5441	5446	5447	5461	5475	5476	5482	5483	5484	5485
	5494	5500	5501	5502	5503	5514	5517	5521	5523	5528	5529	5534	5535	5549	5563
	5564	5570	5571	5572	5573	5582	5588	5589	5590	5591	5602	5603	5608	5609	5615
	5613	5621	5626	5627	5632	5633	5647	5661	5662	5670	5671	5672	5673	5682	5688
	5689	5690	5691	5702	5712	5716	5718	5723	5724	5729	5730	5744	5758	5759	5765
	5766	5767	5768	5777	5783	5784	5785	5786	5796	5797	5801	5803	5808	5809	5814
	5816	5830	5844	5845	5851	5852	5853	5854	5863	5869	5870	5871	5872	5882	5885
	5892	5894	5901	5903	5904	5912	5915	5924	5927	5935	5936	5938	5941	5942	5944
	5951	5952	5955	5957	5970	5971	5972	5975	5983	5985	5986	5994	5998	6024	6025
	6027	6045	6052	6064	6066	6067	6075	6087	6101	6110	6131	6138	6151	6160	6162
	6174	6176	6180	6203	6212	6214	6217	6219	6221	6247	6260	6289	6291	6293	
INCB	6261														
IOT	5432	5438	5444	5459	5473	5480	5498	5969	6044						
JMP	5060	5063	5088	5715	5721	5727	5742	5756	5763	5781	6218	6258	6283	6296	6337
JSR	5800	5806	5812	5828	5842	5849	5867	6277							
MOV	5066	5067	5076	5083	5084	5104	5106	5109	5114	5120	5126	5132	5138	5140	5143
	5145	5146	5147	5148	5151	5153	5154	5155	5156	5159	5161	5162	5163	5164	5167
	5169	5170	5171	5172	5175	5177	5178	5179	5180	5183	5186	5189	5193	5196	5199
	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243	5244	5246	5247	5249	5252
	5253	5256	5258	5259	5262	5264	5265	5277	5278	5279	5280	5291	5293	5294	5298
	5299	5300	5301	5310	5311	5312	5313	5316	5317	5318	5319	5327	5330	5331	5334
	5335	5337	5340	5341	5344	5346	5347	5350	5352	5353	5365	5366	5367	5368	5378
	5380	5381	5385	5386	5387	5388	5397	5398	5399	5400	5403	5404	5405	5406	5414
	5417	5419	5420	5421	5423	5427	5430	5431	5433	5436	5437	5440	5442	5443	5446
	5448	5449	5461	5462	5463	5464	5475	5477	5478	5482	5483	5484	5485	5494	5495
	5496	5497	5500	5501	5502	5503	5511	5514	5515	5518	5519	5521	5524	5525	5528
	5530	5531	5534	5536	5537	5549	5550	5551	5552	5563	5565	5566	5570	5571	5572
	5573	5582	5583	5584	5585	5588	5589	5590	5591	5599	5602	5604	5605	5606	5608
	5612	5616	5617	5619	5622	5623	5626	5628	5629	5632	5634	5635	5647	5648	5649
	5650	5661	5663	5664	5670	5671	5672	5673	5682	5683	5684	5685	5688	5689	5690
	5691	5699	5702	5703	5713	5714	5716	5719	5720	5723	5725	5726	5729	5731	5732
	5744	5745	5746	5747	5758	5760	5761	5765	5766	5767	5768	5777	5778	5779	5780
	5783	5784	5785	5786	5794	5796	5798	5799	5801	5804	5805	5808	5810	5811	5814
	5817	5818	5830	5831	5832	5833	5844	5846	5847	5851	5852	5853	5854	5862	5863
	5864	5865	5866	5869	5870	5871	5872	5880	5882	5883	5886	5887	5888	5889	5892
	5895	5896	5897	5898	5901	5903	5905	5906	5907	5908	5912	5917	5919	5920	5921
	5924	5928	5929	5930	5931	5932	5938	5942	5945	5946	5947	5948	5952	5955	5960
	5961	5962	5965	5966	5967	5970	5972	5973	5974	5976	5977	5979	5980	5983	5985
	5987	5988	5989	5990	5994	5996	6001	6002	6010	6011	6012	6013	6014	6024	6025
	6029	6030	6038	6039	6040	6041	6042	6045	6048	6049	6050	6060	6061	6064	6066
	6068	6069	6070	6071	6075	6084	6089	6090	6098	6101	6110	6112	6113	6131	6133
	6146	6147	6151	6154	6156	6157	6158	6162	6174	6176	6177	6184	6195	6189	6192
	6203	6212	6214	6216	6219	6222	6223	6224	6225	6226	6227	6246	6248	6249	6265
	6273	6274	6281	6289	6291	6293	6323	6326	6327	6330					
MOVB	5102	5107	5112	5149	5157	5165	5173	5181	6268	6333					

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 DVKADA.P11 CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

*** SEQ 0062

NJP	5891	5900	5923	5982	5993	6100	6278	6279	6280						
RESET	6062	6073	6074	6088	6111	6272	6276								
RTI	5990	5899	5909	5950	5981	5991									
RTT	5922	5934	5968	6072											
SCC	5210	5288	5472	5560	5658	5755	5841								
TRAP	5336	5342	5348	5363	5376	5383	5401	5422	6023	6043					
TST	5953	6130	6173	6211	6292										
TSTB	5068	5999	6148	6159	6181	6187	6190	6266	6270	6331	6335				
WAIT	6202														
.ABS	4976														
.ASCIZ	6285	6338													
.BYTE	5055														
.ENABL	4														
.END	6339														
.ENDC	5054	5055	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183
	5186	5189	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243
	5244	5249	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319
	5330	5337	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406
	5417	5423	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	5501	5502
	5503	5514	5521	5528	5534	5549	5563	5570	5571	5572	5573	5582	5588	5589	5590
	5591	5602	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682	5688	5689
	5690	5691	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784
	5785	5786	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870
	5871	5872	5882	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970	5972	5983
	5985	5994	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176
	6203	6212	6214	6219	6289	6291	6293								
.EVEN	5055														
.IF	5054	5055	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183
	5186	5189	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243
	5244	5249	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319
	5330	5337	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406
	5417	5423	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	5501	5502
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	5591	5602	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682	5688	5689
	5690	5691	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784
	5785	5786	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870
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	5985	5994	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176
	6203	6212	6214	6219	6289	6291	6293								
.IFF	5054	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	5186
	5189	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243	5244
	5249	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319	5330
	5337	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406	5417
	5423	5433	5440	5446	5461	5475	5482	5483	5484	5485	5494	5500	5501	5502	5503
	5514	5521	5528	5534	5549	5563	5570	5571	5572	5573	5582	5588	5589	5590	5591
	5602	5608	5619	5626	5632	5647	5661	5670	5671	5672	5673	5682	5688	5689	5690
	5691	5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784	5785
	5786	5796	5801	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870	5871
	5872	5882	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970	5972	5983	5985
	5994	6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176	6203
	6212	6214	6219	6289	6291	6293									
.IFT	5104	5109	5114	5120	5126	5132	5138	5143	5151	5159	5167	5175	5183	5186	5189
	5193	5196	5198	5201	5204	5207	5219	5220	5221	5222	5241	5242	5243	5244	5249
	5256	5262	5277	5291	5298	5299	5300	5301	5310	5316	5317	5318	5319	5330	5337
	5344	5350	5365	5378	5385	5386	5387	5388	5397	5403	5404	5405	5406	5417	5423
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.IIF

.LIST

.MACRO

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5702	5716	5723	5729	5744	5758	5765	5766	5767	5768	5777	5783	5784	5785	5786
5796	5901	5808	5814	5830	5844	5851	5852	5853	5854	5863	5869	5870	5871	5872
5892	5892	5901	5903	5912	5924	5938	5942	5952	5955	5970	5972	5983	5985	5994
6024	6025	6045	6064	6066	6075	6101	6110	6131	6151	6162	6174	6176	6203	6212
6214	6219	6289	6291	6293										
5055	5100	5104	5109	5114	5120	5126	5132	5138	5143	5144	5151	5159	5167	5175
5183	5184	5186	5189	5193	5196	5198	5201	5204	5207	5209	5219	5220	5221	5222
5241	5242	5243	5244	5245	5249	5251	5256	5257	5262	5263	5277	5291	5292	5298
5299	5300	5301	5310	5316	5317	5318	5319	5330	5333	5337	5339	5344	5345	5350
5351	5365	5378	5379	5385	5386	5397	5388	5397	5403	5404	5405	5406	5417	5418
5423	5429	5433	5435	5440	5441	5446	5447	5461	5475	5476	5482	5483	5484	5485
5494	5500	5501	5502	5503	5514	5517	5521	5523	5528	5529	5534	5535	5549	5563
5564	5570	5571	5572	5573	5582	5588	5589	5590	5591	5602	5603	5608	5615	5619
5621	5626	5627	5632	5633	5647	5661	5662	5670	5671	5672	5673	5682	5688	5689
5690	5691	5702	5712	5716	5718	5723	5724	5729	5730	5744	5758	5759	5765	5766
5767	5768	5777	5783	5784	5785	5786	5796	5797	5801	5803	5808	5809	5814	5816
5830	5844	5845	5851	5852	5853	5854	5863	5869	5870	5871	5872	5882	5885	5892
5894	5901	5903	5904	5912	5915	5924	5927	5938	5942	5944	5952	5955	5957	5970
5972	5975	5983	5985	5986	5994	5998	6024	6025	6027	6045	6052	6064	6066	6067
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6219	6221	6289	6291	6293										
2	4631	4669	4713	4918	5047	5055	5100	5104	5109	5114	5120	5126	5132	5138
5143	5144	5151	5159	5167	5175	5183	5184	5186	5189	5193	5196	5198	5201	5204
5207	5209	5213	5214	5215	5218	5219	5220	5221	5222	5226	5227	5228	5231	5234
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5339	5344	5345	5350	5351	5356	5357	5358	5361	5365	5370	5371	5372	5375	5378
5379	5385	5386	5387	5388	5390	5391	5392	5395	5397	5403	5404	5405	5406	5408
5409	5410	5413	5417	5418	5423	5429	5433	5435	5440	5441	5446	5447	5452	5453
5454	5457	5461	5466	5467	5468	5471	5475	5476	5482	5483	5484	5485	5487	5488
5489	5492	5494	5500	5501	5502	5503	5505	5506	5507	5510	5514	5517	5521	5523
5528	5529	5534	5535	5540	5541	5542	5545	5549	5554	5555	5556	5559	5563	5564
5570	5571	5572	5573	5575	5576	5577	5580	5582	5588	5589	5590	5591	5593	5594
5595	5598	5602	5603	5608	5615	5619	5621	5626	5627	5632	5633	5638	5639	5640
5643	5647	5652	5653	5654	5657	5661	5662	5670	5671	5672	5673	5675	5676	5677
5680	5682	5688	5689	5690	5691	5693	5694	5695	5698	5702	5712	5716	5718	5723
5724	5729	5730	5735	5736	5737	5740	5744	5749	5750	5751	5754	5758	5759	5765
5766	5767	5768	5770	5771	5772	5775	5777	5783	5784	5785	5786	5788	5789	5790
5793	5796	5797	5801	5803	5808	5809	5814	5816	5821	5822	5823	5826	5830	5835
5836	5837	5840	5844	5845	5851	5852	5853	5854	5856	5857	5858	5861	5863	5869
5870	5871	5872	5874	5875	5876	5879	5882	5885	5892	5894	5901	5903	5904	5912
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6121	6124	6125	6126	6129	6131	6138	6151	6162	6167	6168	6169	6172	6174	6176
6180	6196	6197	6198	6201	6203	6205	6206	6207	6210	6212	6214	6217	6219	6221
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1091	1104	1125	1138	1171	1220	1266	1303	1350	1383	1413	1469	1477	1529	1733
1941	2134	2222	2347	2444	2522	2607	2821	2913	2989	3099	3217	3280	3342	3460
3498	3562	3660	3745	3784	3847	3885	3928	4026	4074	4358	4405	4445	4521	4633
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.MAIN. MACY11 27(732) 25-AUG-76 12:49 PAGE 61-4
 DVKADA.P11 CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

*** SEQ 0064

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.MEXIT	5055														
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	5207	5209	5212	5215	5216	5217	5219	5220	5221	5222	5225	5228	5229	5230	5233
	5236	5237	5238	5241	5242	5243	5244	5245	5249	5251	5256	5257	5262	5263	5257
	5270	5271	5272	5277	5281	5284	5285	5286	5291	5292	5298	5299	5300	5301	5302
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	5339	5344	5345	5350	5351	5355	5358	5359	5360	5365	5369	5372	5373	5374	5378
	5379	5385	5386	5387	5388	5389	5392	5393	5394	5397	5403	5404	5405	5406	5407
	5410	5411	5412	5417	5418	5423	5429	5433	5435	5440	5441	5446	5447	5451	5454
	5455	5456	5461	5465	5468	5469	5470	5475	5476	5482	5483	5484	5485	5486	5489
	5490	5491	5494	5500	5501	5502	5503	5504	5507	5508	5509	5514	5517	5521	5523
	5528	5529	5534	5535	5539	5542	5543	5544	5549	5553	5556	5557	5558	5563	5564
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	5596	5597	5602	5603	5608	5615	5619	5621	5626	5627	5632	5633	5637	5640	5641
	5642	5647	5651	5654	5655	5656	5661	5662	5670	5671	5672	5673	5674	5677	5678
	5679	5682	5688	5689	5690	5691	5692	5695	5696	5697	5702	5712	5716	5718	5723
	5724	5729	5730	5734	5737	5738	5739	5744	5748	5751	5752	5753	5758	5759	5765
	5766	5767	5768	5769	5772	5773	5774	5777	5783	5784	5785	5786	5787	5790	5791
	5792	5796	5797	5801	5803	5808	5809	5814	5816	5820	5823	5824	5825	5830	5834
	5837	5838	5839	5844	5845	5851	5852	5853	5854	5855	5858	5859	5860	5863	5869
	5870	5871	5872	5873	5876	5877	5878	5882	5885	5892	5894	5901	5903	5904	5912
	5915	5924	5927	5938	5942	5944	5952	5955	5957	5970	5972	5975	5983	5985	5986
	5994	5998	6003	6006	6007	6008	6016	6019	6020	6021	6024	6025	6027	6031	6034
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	6082	6087	6091	6094	6095	6096	6101	6102	6105	6106	6107	6110	6115	6118	6119
	6120	6123	6126	6127	6128	6131	6138	6151	6162	6166	6169	6170	6171	6174	6176
	6180	6195	6198	6199	6200	6203	6204	6207	6208	6209	6212	6214	6217	6219	6221
	6251	6254	6255	6256	6289	6291	6293								
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	5876	6006	6019	6034	6056	6080	6094	6105	6118	6126	6169	6198	6207	6254	
.PAGE	5051	5057													
.REPT	4714	4979													
.SBTTL	5054	5055	5056	5100	5144	5184	5209	5245	5251	5257	5263	5292	5333	5339	5345
	5351	5379	5418	5429	5435	5441	5447	5476	5517	5523	5529	5535	5564	5603	5615
	5621	5627	5633	5662	5712	5718	5724	5730	5759	5797	5803	5809	5816	5845	5885
	5894	5904	5915	5927	5944	5957	5975	5986	5998	6027	6052	6067	6087	6138	6180
	6217	6221													
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	5823	5837	5858	5876	6006	6019	6034	6056	6080	6094	6105	6118	6126	6169	6198
	6207	6254													

ERRORS DETECTED: 0
 DEFAULT GLOBALS GENERATED: 0

*.DVKADA/DS:ERFZ/CRF=DVKADA.SML,DVKADA.P11
 RUN-TIME: 46 58 9 SECONDS
 RUN TIME RATIO: 2054/114=17.9
 CORE USED: 30% (59 PAGES)

Spooler runtime 12 Seconds, 52 KCS, 320 disk reads, 3 disk writes, 62 pages.

1 Date 12-01-76 15:07:22 Modifier JF-0 0070 (103) mcd:mh

[illegible]