BELL TELEPHONE LABORATORIES, INCORPORATED

10-299

COMMON SYSTEMS

FOR USE WITH NO. 3 ESS

ARRANGED WITH 2-WIRE FEATURES

MEMORY ELEMENT TEST

(CDGSD)

PRINTED IN U.S.A.

SECTION DICTIONARY

NUMBER	NAME	MAXIMUM	ORIGIN	TYP	ADDRESS-MODIFICATION
01	CSTDT1	0000537		C	
02	CSTDT2	0000214		C	
03	CSTDT3	0000214		C	
04	CSTDT4	0000214		C	
05	CSTDT5	0000214		C	
06	CSTDT6	0000214		C	
07	CSTDT7	0000214		C	
08	CSTDT8	0000214		C	
09	RUNTST	0000316		C	
0A	UPDATE	0000077		C	
0B	CPATCH	0000000		C	
0C	CPATCH1	0000312		C	
0D	CPATCH2	0000000		C	
0E	CPATCH3	0000000		C	
0F	CPATCH7	0000000		C	
10	TFAPCH2	0000000		C	
11	TPATCH	0000000		C	

```
              01        DBNAM    N033E3I3.OFF.DATABASE
              02        RELNAM   N03ESS
              03        GETLIB   LIBRARY,MEMBER=MOPTBL
              04        GETLIB   LIBRARY,MEMBER=SYSMAC
              05        GETLIB   LIBRARY,MEMBER=SYSSYM
              06        GETLIB   LIBRARY,MEMBER=PATCH2
0032355       07        FIRSTOPTSS
0032355       08        VERSION 3ACC,FIELD,ESS2E
0032355       09        PATCHINIT
              10 N033E3I3.OFF.OPMS(0) DECK
              11        DSQUAL   N033E3I3
              12        LISTING N,CRUNCH=Y,SYSOUT=N
              13 ###################
              14 ##
              15 ## UNIX ID = N03PAG
              16 ##
              17 ###############
              18 #############################################
              19 ###
              20 #### pid  date     time   rel.
              21 ###
              22 #### cdgsd 1/24/81 17:08:56 7.1.1.1
              23 ###
              24 #############################################
```

```
              31 #   THIS DATA SET WAS EDITED FOR UNIX ON 5/24/78.
```

```
01          GETLIB  MEMBER=MEMDGM
02          NAME    CDGSD


06 ## The following is a list of the valid csects for program CDGSD

0032355     08 CSTDT1 CSECT
0033744     09 CSTDT2 CSECT
0034160     10 CSTDT3 CSECT
0034374     11 CSTDT4 CSECT
0034610     12 CSTDT5 CSECT
0035024     13 CSTDT6 CSECT
0035240     14 CSTDT7 CSECT
0035454     15 CSTDT8 CSECT
0033114     16 RUNTST CSECT
0013325     17 UPDATE CSECT


20 ## The following csects are necessary for patching

0111432     22 CPATCH CSECT
0112562     23 CPATCH1 CSECT
0114107     24 CPATCH2 CSECT
0115073     25 CPATCH3 CSECT
0121236     26 CPATCH7 CSECT

0116774     28 TFAPCH2 CSECT

0600000     30 TPATCH CSECT
```

```
                    01          GETLIB   MEMBER=TTYMAC
                    02          GETLIB   MEMBER=CTVTAB
                    03          GETLIB   MEMBER=BSAIMAC
                    04          GETLIB   MEMBER=DGNMAC        # SELECT FIELD MACROS
0600000             05          BEGIN_DIAG DGSD,3ACC          # RUN ON 3ACC
         -001- 06 CDGNM   EXTERN   NMICRO
         -001- 07 CDGNM   EXTERN   NRETRN
         -001- 08 CDGNM   EXTERN   N2RETRN
         -001- 09 CDGNM   EXTERN   NSTRT
         -001- 10 CDGNM   EXTERN   NSTOP
         -001- 11 CDGNM   EXTERN   NDISABA
         -001- 12 CDGNM   EXTERN   NDISABB
         -001- 13 CDGNM   EXTERN   NSTRTCLK
         -001- 14 CDGNM   EXTERN   NSTPCLK
         -001- 15 CDGNM   EXTERN   NTGCLK
         -001- 16 CDGNM   EXTERN   NRESCLK
         -001- 17 CDGNM   EXTERN   NZERO_ER
         -001- 18 CDGNM   EXTERN   NPROS
         -001- 19 CDGNM   EXTERN   NTESTSEG
         -001- 20 CDGNM   EXTERN   NFAILTST
         -001- 21 CDGNM   EXTERN   NTTY
         -001- 22 CDGNM   EXTERN   NMASK
         -001- 23 CDGNM   EXTERN   NPASSTST
         -001- 24 CDGNM   EXTERN   NSEND
         -001- 25 CDGNM   EXTERN   N2SEND
         -001- 26 CDGNM   EXTERN   NADD_OFF
         -001- 27 CDGNM   EXTERN   NADMIC
         -001- 28 CDGNM   EXTERN   NLDMIR
         -001- 29 CDGNM   EXTERN   NEXECUTE
         -001- 30 CDGNM   EXTERN   NCOMPARE
         -001- 31 CDGNM   EXTERN   NFRZ
         -001- 32 CDGNM   EXTERN   NBEGIN
         -001- 33 CDGNM   EXTERN   NLP_END
         -001- 34 CDGNM   EXTERN   NSKIP
         -001- 35 CDGNM   EXTERN   NABT
         -001- 36 CDGNM   EXTERN   NRDMICRO
         -001- 37 CDGNM   EXTERN   NCLRMS
         -001- 38 CDGNM   EXTERN   NNO3CD
         -001- 39 CDGNM   EXTERN   NTMTEST
         -001- 40 CDGNM   EXTERN   NZERPY
         -001- 41 CDGNM   EXTERN   NFLBITS
         -001- 42 CDGNM   DIRECT   INTRPNO3
         -001- 43 CDGNM   EXTERN   NBGN
         -001- 44 CDGNOF  EXTERN   PASSOFF
         -001- 45 CDGNOF  EXTERN   FAILOFF
         -001- 46 CDGNM   EXTERN   SLDMCHBF
         -001- 47 CDGNM   EXTERN   SLDMIRLF
         -001- 48 CDGNM   EXTERN   SMCHF
         -001- 49 CDGNM   EXTERN   NRTNBLM
```

-001- 01 CDGNM   EXTERN   NWDTST

```
-001- 01 #   THIS DIAGNOSTIC PROGRAM IS ALL OR PARTIALLY WRITTEN IN A MACRO
-001- 02 #   LANGUAGE WHICH PRODUCES TABLES WHICH ARE INTERPRETED BY THE
-001- 03 #   DIAGNOSTIC MONITOR PROGRAM.  FOR INFORMATION REGARDING THE
-001- 04 #   STRUCTURE OF THE TABLES,  SEE THE SECTION OF PROGRAM CDGNM (PR-1C910-01)
-001- 05 #   ENTITLED "DIAGNOSTIC TABLE INTERPRETER".  FOR A GENERAL DESCRIPTION
-001- 06 #   OF THE DIAGNOSTIC PHILOSOPHY AND THE DATAILED REPAIR PROCEEDURE,
-001- 07 # . SEE THE TROUBLE LOCATION MANUAL (TLM-1C900) SECTION B.
```

```
                              01 MASACS EXTERN   DGNMSG
                              02 MASACS EXTERN   MASONOFF
                              03 MASACS EXTERN   TRBLMSG

0600000                       06          SYMLIB
```

```
-002- 01 # EXTERNS REQUIRED BY STORE DIAGNOSTIC TESTS:

-002- 04 MASACS EXTERN  MASCIOSC

-002- 06 CBLM    EXTERN  PRTMASER
-002- 07 CBLM    EXTERN  WAIT

-002- 09 CDGNM   EXTERN  LOOPIND
-002- 10 CDGNM   EXTERN  NOSTPMES
-002- 11 CDGNM   EXTERN  PASSTST
-002- 12 CTSD    EXTERN  DGNLIM

-002- 14 CDGSBS  EXTERN  MEMOP
-002- 15 CDGSBS  EXTERN  MEMOPI

-002- 17 CDGSFA  EXTERN  FOBNDX

-002- 19 CDGSIO  DIRECT  MASIOM
-002- 20 CDGSIO  EXTERN  MD$ELMSK
-002- 21 CDGSIO  EXTERN  MODSIZE
-002- 22 CDGSIO  EXTERN  STRSIZE
-002- 23 CDGSIO  EXTERN  STSELMSK
-002- 24 CDGSIO  EXTERN  FINAL
-002- 25 CDGSIO  EXTERN  CONTPREP

-002- 27 CDGS3A  EXTERN  FLXT
-002- 28 CDGS3A  EXTERN  MASERS
-002- 29 CDGS3A  EXTERN  MEMTST
-002- 30 CDGS3A  EXTERN  PASSXT
-002- 31 CDGS3A  EXTERN  PRFLXT
-002- 32 CDGS3A  EXTERN  TESTSIZE
-002- 33 CDGS3A  EXTERN  WDFLXT
-002- 34 CDGS3A  EXTERN  CALOFL6

-002- 36 CSYSUB  EXTERN  EXCOFLPG
-002- 37 CSYSUB  EXTERN  INIT_OCC
-002- 38 CSYSUB  EXTERN  INITOST
-002- 39 CSYSUB  EXTERN  INSYNC
-002- 40 CSYSUB  EXTERN  RGCHKADR
-002- 41 CSYSUB  EXTERN  UPD_OTS

-002- 43 CTSD    EXTERN  MASERCNT
-002- 44 CTSD    EXTERN  PAGSCR
-002- 45 CTSD    EXTERN  DGREQ
```

```
-002- 01 MASACS EXTERN  MASONOFF

-002- 03 TDATA  EXTERN  STRLIM
-002- 04 TDATA  EXTERN  WDSTR
-002- 05 TDATA  EXTERN  WPTBL
```

```
                     -002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS


     0000010        -002- 04 CHKNDX EQUR    8              # INDEX REGISTER FOR REFRESH SELECT CHECK
     0000010        -002- 05 FOBCNT EQUR    8              # SCRATCH REG FOR CURRENT FANOUT BOARD
                                                           COUNT
     0000011        -002- 07 RANGE  EQUR    9              # NUMBER OF OFF-LINE WORDS TO BE TESTED



                    -002- 11 # REGISTER SYMBOLS USED IN THE MEMORY MODULE TEST:
     0000000        -002- 12 PATBAK EQUR    R0             # DATA READ/WRITTEN VIA OTHER-STORE
     0000001        -002- 13 HIPATBAK EQUR  R1             # HIGH DATA READ/WRITTEN VIA OTHER-STORE
                    -002- 14 HIPATBAK%T SYN R1%T           # DEFINE FOR IGNORANT MIMODE MACRO
     0000002        -002- 15 BLKMSK EQUR    R2             # MASK TO BLOCK INTERRUPTS & CHECKS
     0000003        -002- 16 STRSTAT EQUR   R3             # SAVE (WIDE) STORE STATUS
     0000004        -002- 17 LSTPAT EQUR    R4             # PATTERN PREVIOUSLY WRITTEN
     0000005        -002- 18 NXTPAT EQUR    .R5            # PATTERN CURRENTLY BEING WRITTEN
     0000006        -002- 19 PATNDX EQUR    R6             # NUMBER OF TEST PATTERN BEING MATCHED
     0000007        -002- 20 MNRNDX EQUR    R7             # MINOR LOOP INDEX
     0000010        -002- 21 ERSAVE EQUR    R8             # ERROR REGISTER AFTER OTHER-STORE READ
     0000010        -002- 22 PARSLT EQUR    R8             # PARITY TEST RESULTS - FIELD ONLY
     0000014        -002- 23 MEMADDR0 EQUR  R12            # UPPER ADDRESS BITS OF MEMORY TEST AREA
     0000015        -002- 24 MEMADDR1 EQUR  R13            # LOWER ADDRESS BITS OF MEMORY TEST AREA
     0000014        -002- 25 MEMADDR EQURA  RA0            # BASE ADDRESS OF MEMORY TEST AREA
     0000016        -002- 26 PATADDR EQURA  RA1            # ADDRESS OF TEST PATTERN TABLE
```

```
-002- 01 # FUNCTION OF BITS WITHIN I/O MESSAGE SENT TO STORE:
-002- 02 CIOBUF LAYOUT


-002- 05 CINIT   ITEM    1              # MAIN STORE CONTROLLER INITIALIZATION
-002- 06 CKSTP   ITEM    1              # CONTROLLER CLOCK STEP
-002- 07 CKHLT   ITEM    1              # CONTROLLER CLOCK HALT
-002- 08 REFST   ITEM    1              # STORE REFRESH STOP
-002- 09 STORDER ITEM    8              # 4/8 MAINTENANCE STATE CODE
-002- 10 010TM   ITEM    1              # 0-10 BIT TIMING SHIFTER FAKE
-002- 11 LDFG    ITEM    1              # ORDER CHECKER EXCLUSIVE-OR LOAD
-002- 12 FSEL    ITEM    1              # STORE SELECT FORCE ON TIMING BOARD A
-002- 13 FBTO9   ITEM    1              # FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14         LOEND
-005- 15 #
```

```
CIOBUF
001| FBTO9 | FSEL | LDFG | 010TM |                   STORDER                   | REFST | CKHLT | CKSTP | CINIT |
  |        |      |      |       |            4/8 MAINTENANCE STATE CODE        |       |       |       |       |
  |   15   |  14  |  13  |  12   |  11  |  10  |  9  |  8  |  7  |  6  |  5  |  4  |   3   |   2   |   1   |   0   |
```

-002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS

0000010	-002- 04 CHKNDX EQUR	8	# INDEX REGISTER FOR REFRESH SELECT CHECK
0000010	-002- 05 FOBCNT EQUR	8	# SCRATCH REG FOR CURRENT FANOUT BOARD COUNT
0000011	-002- 07 RANGE EQUR	9	# NUMBER OF OFF-LINE WORDS TO BE TESTED

-002- 11 # REGISTER SYMBOLS USED IN THE MEMORY MODULE TEST:

0000000	-002- 12 PATBAK EQUR	R0	# DATA READ/WRITTEN VIA OTHER-STORE
0000001	-002- 13 HIPATBAK EQUR	R1	# HIGH DATA READ/WRITTEN VIA OTHER-STORE
	-002- 14 HIPATBAK%T SYN	R1%T	# DEFINE FOR IGNORANT MIMODE MACRO
0000002	-002- 15 BLKMSK EQUR	R2	# MASK TO BLOCK INTERRUPTS & CHECKS
0000003	-002- 16 STRSTAT EQUR	R3	# SAVE (WIDE) STORE STATUS
0000004	-002- 17 LSTPAT EQUR	R4	# PATTERN PREVIOUSLY WRITTEN
0000005	-002- 18 NXTPAT EQUR	R5	# PATTERN CURRENTLY BEING WRITTEN
0000006	-002- 19 PATNDX EQUR	R6	# NUMBER OF TEST PATTERN BEING MATCHED
0000007	-002- 20 MNRNDX EQUR	R7	# MINOR LOOP INDEX
0000010	-002- 21 ERSAVE EQUR	R8	# ERROR REGISTER AFTER OTHER-STORE READ
0000010	-002- 22 PARSLT EQUR	R8	# PARITY TEST RESULTS - FIELD ONLY
0000014	-002- 23 MEMADDR0 EQUR	R12	# UPPER ADDRESS BITS OF MEMORY TEST AREA
0000015	-002- 24 MEMADDR1 EQUR	R13	# LOWER ADDRESS BITS OF MEMORY TEST AREA
0000014	-002- 25 MEMADDR EQURA	RA0	# BASE ADDRESS OF MEMORY TEST AREA
0000016	-002- 26 PATADDR EQURA	RA1	# ADDRESS OF TEST PATTERN TABLE

```
-002- 01 # FUNCTION OF BITS WITHIN I/O MESSAGE SENT TO STORE:
-002- 02 CIOBUF LAYOUT

-002- 05 CINIT   ITEM    1               # MAIN STORE CONTROLLER INITIALIZATION
-002- 06 CKSTP   ITEM    1               # CONTROLLER CLOCK STEP
-002- 07 CKHLT   ITEM    1               # CONTROLLER CLOCK HALT
-002- 08 REFST   ITEM    1               # STORE REFRESH STOP
-002- 09 STORDER ITEM    8               # 4/8 MAINTENANCE STATE CODE
-002- 10 O10TM   ITEM    1               # 0-10 BIT TIMING SHIFTER FAKE
-002- 11 LDFG    ITEM    1               # ORDER CHECKER EXCLUSIVE-OR LOAD
-002- 12 FSEL    ITEM    1               # STORE SELECT FORCE ON TIMING BOARD A
-002- 13 FBT09   ITEM    1               # FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14         LOEND
-005- 15 #
```

```
CIOBUF
001| FBT09 | FSEL | LDFG | O10TM |              STORDER            | REFST | CKHLT | CKSTP | CINIT |
   |       |      |      |       |        4/8 MAINTENANCE STATE CODE|       |       |       |       |
   |  15   |  14  |  13  |  12   | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 |   3   |   2   |   1   |   0   |
```

```
          -002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS


0000010   -002- 04 CHKNDX EQUR   8              # INDEX REGISTER FOR REFRESH SELECT CHECK
0000010   -002- 05 FOBCNT EQUR   8              # SCRATCH REG FOR CURRENT FANOUT BOARD
                                                  COUNT
0000011   -002- 07 RANGE  EQUR   9              # NUMBER OF OFF-LINE WORDS TO BE TESTED


          -002- 11 # REGISTER SYMBOLS USED IN THE MEMORY MODULE TEST:
0000000   -002- 12 PATBAK EQUR   R0             # DATA READ/WRITTEN VIA OTHER-STORE
0000001   -002- 13 HIPATBAK EQUR R1             # HIGH DATA READ/WRITTEN VIA OTHER-STORE
          -002- 14 HIPATBAK%T SYN R1%T          # DEFINE FOR IGNORANT MIMODE MACRO
0000002   -002- 15 BLKMSK EQUR   R2             # MASK TO BLOCK INTERRUPTS & CHECKS
0000003   -002- 16 STRSTAT EQUR  R3             # SAVE (WIDE) STORE STATUS
0000004   -002- 17 LSTPAT EQUR   R4             # PATTERN PREVIOUSLY WRITTEN
0000005   -002- 18 NXTPAT EQUR   .R5            # PATTERN CURRENTLY BEING WRITTEN
0000006   -002- 19 PATNDX EQUR   R6             # NUMBER OF TEST PATTERN BEING MATCHED
0000007   -002- 20 MNRNDX EQUR   R7             # MINOR LOOP INDEX
0000010   -002- 21 ERSAVE EQUR   R8             # ERROR REGISTER AFTER OTHER-STORE READ
0000010   -002- 22 PARSLT EQUR   R8             # PARITY TEST RESULTS - FIELD ONLY
0000014   -002- 23 MEMADDR0 EQUR R12            # UPPER ADDRESS BITS OF MEMORY TEST AREA
0000015   -002- 24 MEMADDR1 EQUR R13            # LOWER ADDRESS BITS OF MEMORY TEST AREA
0000014   -002- 25 MEMADDR EQURA  RA0           # BASE ADDRESS OF MEMORY TEST AREA
0000016   -002- 26 PATADDR EQURA  RA1           # ADDRESS OF TEST PATTERN TABLE
```

```
-002- 01 # FUNCTION OF BITS WITHIN I/O MESSAGE SENT TO STORE:
-002- 02 CIOBUF LAYOUT

-002- 05 CINIT   ITEM    1                      # MAIN STORE CONTROLLER INITIALIZATION
-002- 06 CKSTP   ITEM    1                      # CONTROLLER CLOCK STEP
-002- 07 CKHLT   ITEM    1                      # CONTROLLER CLOCK HALT
-002- 08 REFST   ITEM    1                      # STORE REFRESH STOP
-002- 09 STORDER ITEM    8                      # 4/8 MAINTENANCE STATE CODE
-002- 10 O10TM   ITEM    1                      # 0-10 BIT TIMING SHIFTER FAKE
-002- 11 LDFG    ITEM    1                      # ORDER CHECKER EXCLUSIVE-OR LOAD
-002- 12 FSEL    ITEM    1                      # STORE SELECT FORCE ON TIMING BOARD A
-002- 13 FBT09   ITEM    1                      # FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14         LOEND
-005- 15 #
```

```
CIOBUF
00| FBT09 | FSEL | LDFG | O10TM |                    STORDER                 | REFST | CKHLT | CKSTP | CINIT |
  |       |      |      |       |             4/8 MAINTENANCE STATE CODE      |       |       |       |       |
  |  15   |  14  |  13  |  12   |  11 |  10 |  9  |  8  |  7  |  6  |  5  |  4  |   3   |   2   |   1   |   0   |
```

```
                                                         23:24:58    2/05/81   ****

                                                            CDGSD          W77D

        -002- 01 # LAYOUT OF DIAGNOSTIC REQUEST WORD (DGREQ) WITH TEST NUMBER REQUESTED
        -002- 02 #       NOTES: 1. REST OF BITS (CONTROLBITS) ARE DEFINED BY DGREQIP LAYOUT
        -002- 03 #                  FOUND IN PROLOGUE OF DIAGNOSTIC MONITOR (CDGNM)
        -002- 04 #               2. IF TEST NUMBER (TSTNUM) IS ZERO, THE ENTIRE DIAGNOSTIC
        -002- 05 #                  TEST SEQUENCE HAS BEEN REQUESTED
        -002- 06 #               3. STORAGE SPACE FOR DGREQ IS ALLOCATED IN CTSD


        -002- 09 TSTNUM ITEM   7                          # DIAGNOSTIC TEST NUMBER REQUESTED
        -002- 10 SPARE  ITEM   2
        -002- 11 CONTROLBITS ITEM 7
        -002- 12       LOEND
DGREQLO
        -005- 13 #
001 |                CONTROLBITS              |     SPARE     |              TSTNUM              |
    |                                         |              |    DIAGNOSTIC TEST NUMBER REQUESTED |
    |   15  |  14  |  13  |  12  |  11  |  10  |   9  |   8  |   7  |   6  |   5  |   4  |   3  |   2  |   1  |   0  |
```
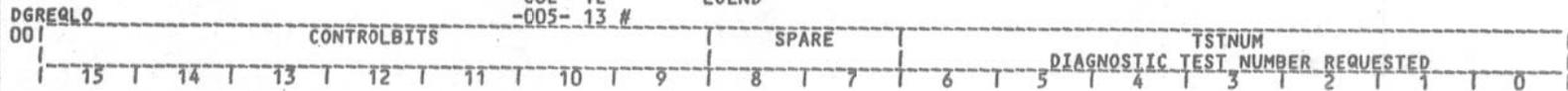
-002- 01 # STORAGE FORMAT FOR MAIN STORE (MY & OTHER) SUBCHANNEL ADDRESS:

```
-002- 04 MSSC0   ITEM   16              #  ADDRESS OF MY STORE SUBCHANNEL 0
-002- 05 OSSC0   ITEM   16              #  ADDRESS OF OTHER STORE SUBCHANNEL 0
-002- 06 MSSC1   ITEM   16              #  ADDRESS OF MY STORE SUBCHANNEL 1
-002- 07 OSSC1   ITEM   16              #  ADDRESS OF OTHER STORE SUBCHANNEL 1
-002- 08 MSSC2   ITEM   16              #  ADDRESS OF MY STORE SUBCHANNEL 2
-002- 09 OSSC2   ITEM   16              #  ADDRESS OF OTHER STORE SUBCHANNEL 2
-002- 10 MSSC3   ITEM   16              #  ADDRESS OF MY STORE SUBCHANNEL 3
-002- 11 OSSC3   ITEM   16              #  ADDRESS OF OTHER STORE SUBCHANNEL 3
-002- 12         LOEND
-005- 13 #
```

MASCIOSC

```
00 |---------------------------------------------------------------------|
   |                              MSSC0                                  |
   |                  ADDRESS OF MY STORE SUBCHANNEL 0                   |
01 |---------------------------------------------------------------------|
   |                              OSSC0                                  |
   |                ADDRESS OF OTHER STORE SUBCHANNEL 0                  |
02 |---------------------------------------------------------------------|
   |                              MSSC1                                  |
   |                  ADDRESS OF MY STORE SUBCHANNEL 1                   |
03 |---------------------------------------------------------------------|
   |                              OSSC1                                  |
   |                ADDRESS OF OTHER STORE SUBCHANNEL 1                  |
04 |---------------------------------------------------------------------|
   |                              MSSC2                                  |
   |                  ADDRESS OF MY STORE SUBCHANNEL 2                   |
05 |---------------------------------------------------------------------|
   |                              OSSC2                                  |
   |                ADDRESS OF OTHER STORE SUBCHANNEL 2                  |
06 |---------------------------------------------------------------------|
   |                              MSSC3                                  |
   |                  ADDRESS OF MY STORE SUBCHANNEL 3                   |
07 |---------------------------------------------------------------------|
   |                              OSSC3                                  |
   |                ADDRESS OF OTHER STORE SUBCHANNEL 3                  |
   |---------------------------------------------------------------------|
   | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
```

```
-002- 01 # WORDS IN PAGING BUFFER USED BY STORE DIAGNOSTIC TESTS:
-002- 02 LOOPSUB ITEM    16                      # ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY
                                                   TROUBLE MESSAGE
-002- 04 IOADDR ITEM     16                      # I/O SUBCHANNEL ADDRESS FOR CURRENT
                                                   STORE CONTROLLER
-002- 06 FOBNUM ITEM     16                      # NUMBER OF MEMORY MODULES (OR FANOUT
                                                   BOARDS) IN STORE CURRENTLY UNDER TEST
-002- 08 TIMSAV ITEM     16                      # SAVE TIMING CONSTANT FOR TIMOUT
                                                   SUBROUTINE
-002- 10 UPADDR ITEM     ADDR                    # ADDRESS OF NEXT BLOCK OF MEMORY TO BE
                                                   UPDATED AFTER MEMORY PATTERN TEST
-002- 12 BASADDR ITEM    ADDR                    # BASE ADDRESS OF STORE/MOD UNDER TEST


-002- 15       LOEND
-005- 16 #
```

```
PAGSCR
24 |                                          LOOPSUB
   |---------ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY TROUBLE MESSAGE-----------------
25 |                                          IOADDR
   |---------I/O SUBCHANNEL ADDRESS FOR CURRENT STORE CONTROLLER---------------------
26 |                                          FOBNUM
   |------NUMBER OF MEMORY MODULES (OR FANOUT BOARDS) IN STORE CURRENTLY UNDER TEST--
27 |                                          TIMSAV
   |---------SAVE TIMING CONSTANT FOR TIMOUT SUBROUTINE-----------------------------
28 |                                                                       |        UPADDR
   |*****************************************************************************|
29 |
   |---------------------------------------------------------------------------------
30 |                                                                       |        BASADDR
   |*****************************************************************************|
31 |
   |--------------------------------------------------------------------------------
      15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
```

MEMORY ELEMENT TEST   PR-1C929-50

```
-002- 01 # STORE ERROR REGISTER (SER) BIT ASSIGNMENT:
-002- 02 #      NOTE: THESE INPUTS ARE ENABLED BY BIT09 OF THE MAIN SHIFTER


-002- 05 SER     LAYOUT
-002- 06 FOBTERB ITEM    1                          # STORE TIMING ERROR FROM UNSELECTED FOB
-002- 07 MPXER   ITEM    1                          # MULTIPLEXOR ERROR DETECTED BY CHECK
                                                      BOARD
-002- 09 CHDIF   ITEM    1                          # ERROR INDICATED BY STORE COMMAND
                                                      CHECKER
-002- 11 SCMER   ITEM    1                          # PREMATURE STORE COMPLETE(SCM)
-002- 12 SHER    ITEM    1                          # ERROR IN MAIN SHIFTER OPERATION
-002- 13 MODER   ITEM    1                          # ALL-SEEMS-WELL SIGNAL NOT RECEIVED FROM
                                                      MODULE(FOB) ACCESSED DURING NORMAL CYCL
-002- 15 RSELER  ITEM    1                          # ALL MEMORY MODULES(FOBS) NOT SELECTED
                                                      DURING REFRESH
-002- 17 FOBTERA ITEM    1                          # STORE TIMING ERROR FROM SELECTED FOB
-002- 18 FOBPARER ITEM   1                          # PARITY ERROR DETECTED IN ADDRESS
                                                      REACHING FANOUT BOARD(S)
-004- 20 #*#*#*#*#*#*# FOBPARER WILL APPEAR AS FOBPARE IN PICTURES
-002- 21 DHPER   ITEM    1                          # ERROR IN PARITY OVER HIGH DATA BITS
-002- 22 PWER    ITEM    1                          # ERROR IN PARITY FOR WIDE STORE
-002- 23 TBER    ITEM    1                          # ERROR DETECTED ON TIMING BOARD
-002- 24         ITEM    1                          # SPARE
-002- 25 DLPER   ITEM    1                          # ERROR IN PARITY OVER LOW DATA BITS
-002- 26         ITEM    1                          # SPARE
-002- 27         ITEM    1                          # RESERVED
-002- 28         LOEND
-005- 29 #
```

```
SER
001|----------------------------------------------------------------------------------------------------------|
   |      |      | DLPER |      | TBER | PWER | DHPER |FOBPARE|FOBTERA|RSELER| MODER | SHER | SCMER | CHDIF | MPXER |FOBTERB|
   |      |SPARE |       |SPARE |      |      |       |       |       |      |       |      |       |       |       |       |
   |--15--|--14--|--13---|--12--|--11--|--10--|---9---|---8---|---7---|--6---|---4---|---3--|---2---|---1---|---0---|
```

```
-002- 01 # STORE BUS CHECK BIT ASSIGNMENTS IN RESPONSE MESSAGE:
-002- 02 #    NOTE: THESE INPUTS ARE ENABLED BY ISOLATE CHECK(ISOCHK) I/O ORDER
-002- 03 #             W/ LOAD F & G(LDFG) OPTION SET


-002- 06 ISOBTS ITEM    7              # SD0-6,SD8-14 ISOLATE TEST RESULTS
-002- 07 RSVD0  ITEM    1              # SD7,SD15 ISOLATE TEST RESULT - ONLY
                                         GATED INTO BY LOAD I/O DECODER CHECK
                                         (LOADCHK) OPTION
-002- 10 WDISOL ITEM    4              # RESULTS OF WIDE DATA(SD16-23) ISOLATE
-002- 11 SDPCK  ITEM    1              # RESULT OF STORE DATA PARITY ISOLATION
-002- 12 2EPCK  ITEM    1              # RESULT OF EXTENDED(3 BIT) PARITY
                                         ISOLATE
-002- 14 CTRLCK ITEM    1              # RESULT OF STORE CONTROL LEADS ISOLATION
-002- 15 FXORG  ITEM    1              # I/O ORDER CHECKER EXCLUSIVE-OR RESULT
-002- 16        LOEND
-005- 17 #
```

```
CHKWRD
001| FXORG |CTRLCK | 2EPCK | SDPCK |      WDISOL      | RSVD0 |              ISOBTS
  |       |       |       |       |                 |       |     SD0-6,SD8-14 ISOLATE TEST RESULTS
  |-------|-------|-------|-------|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|
  |  15   |  14   |  13   |  12   | 11  | 10  |  9  |  8  |  7  |  6  |  5  |  4  |  3  |  2  |  1  |  0  |
```

```
-002- 01 #     REFRESH SELECT CHECK BIT ASSIGNMENTS IN STORE ERROR REGISTER
-002- 02 #               NOTE: THESE INPUTS ARE ENABLED BY EXTERNAL-ERROR-LOAD(EXERLD) ORDER


-002- 05 RSEL06 ITEM    7              # REFRESH SELECTS FROM FANOUT BOARDS 0-6
-002- 06 RSVD1  ITEM    1              # RESERVED - FOBTERA IS SET AFTER INIT
-002- 07 SAPHLP ITEM    1              # STORE ADDRESS PARITY HIGH LOOP RESULT
-002- 08 SA17LP ITEM    1              # STORE ADDRESS BIT 17 LOOP RESULT
-002- 09 STRSLP ITEM    1              # STORE SELECT ADDRESS BITS LOOP RESULT
-002- 10        ITEM    1              # SPARE
-002- 11 RSEL7  ITEM    1              # REFRESH SELECT FROM FANOUT BOARD 7
-002- 12        ITEM    3              # SPARE BITS
-002- 13        LOEND
-005- 14 #
```

```
RSLCHK_____
001 |            |       | RSEL7 |       | STRSLP | SA17LP | SAPHLP | RSVD1 |                       RSEL06
    |    SPARE BITS       |         | SPARE  |        |        |        |       |      REFRESH SELECTS FROM FANOUT BOARDS 0-6
    | 15  |  14   |  13   |  12   |   11   |  10   |   9   |   8   |   7   |   6   |   5   |   4   |   3   |   2   |   1   |   0   |
```
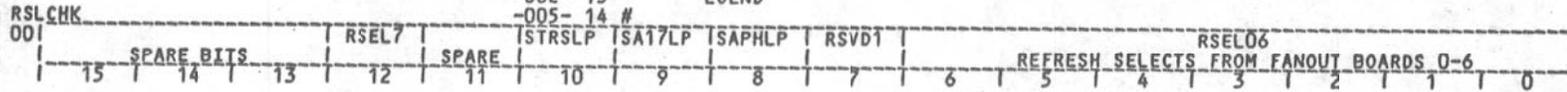
```
0010177    -002- 22 RSELBTS  EQU   M(RSEL06)|M(RSEL7)    # MASK FOR REFRESH SELECT BITS
0167600    -002- 23 RSELBTSN EQU   (¬RSELBTS)&B(1111111111111111)
```

```
-002- 01 # STORE STATUS REGISTER LAYOUT -- INCL BITS USED IN FIELD VERSION(S) OF TESTS
-002- 02 PLBAK   ITEM    1                          # PARITY LOW VALUE READ BACK
-002- 03 PHBAK   ITEM    1                          # PARITY HIGH VALUE READ BACK
-002- 04         ITEM    2                          # UNUSED
-002- 05 OWDSTRO ITEM    1                          # WIDE STORE INDICATOR BIT
-002- 06 SNGBTER ITEM    1                          # SINGLE BIT ERROR FLAG
-002- 07 PASBT   ITEM    1                          # REPEAT PASS THRU TEST INDICATOR
-002- 08         ITEM    9                          # UNUSED
-002- 09         LOEND
-005- 10 #
```

```
STRSTAT
001 |
    |------------------------------------------| PASBT | SNGBTER | OWDSTRO |----------------| PHBAK | PLBAK |
    |                   UNUSED                 |       |         |         |      UNUSED     |       |       |
    |  15  |  14  |  13  |  12  |  11  |  10  |  9  |  8  |  7  |  6  |  5  |  4  |  3  |  2  |  1  |  0  |
```

```
          -002- 01 #     STORE DIAGNOSTIC SYMBOL LIBRARY:


  0000000     -002- 05 BIT0      EQU     0
  0000001     -002- 06 BIT1      EQU     1
  0000002     -002- 07 BIT2      EQU     2
  0000003     -002- 08 BIT3      EQU     3
  0000004     -002- 09 BIT4      EQU     4
  0000005     -002- 10 BIT5      EQU     5
  0000006     -002- 11 BIT6      EQU     6
  0000007     -002- 12 BIT7      EQU     7
  0000010     -002- 13 BIT8      EQU     8
  0C00011     -002- 14 BIT9      EQU     9
  0000012     -002- 15 BIT10     EQU     10
  0000013     -002- 16 BIT11     EQU     11
  0000014     -002- 17 BIT12     EQU     12
  0000015     -002- 18 BIT13     EQU     13
  0000016     -002- 19 BIT14     EQU     14
  0000017     -002- 20 BIT15     EQU     15
  0000020     -002- 21 BIT16     EQU     16
  0000021     -002- 22 BIT17     EQU     17
  0000022     -002- 23 BIT18     EQU     18
  0000023     -002- 24 BIT19     EQU     19
  0000004     -002- 25 FOUR      EQU     4
              -002- 26 IOBRK     TEXT    'I&'              # DELIMITERS FOR I/O ORDER STRINGS
  0000000     -002- 27 MOD0      EQU     0
  0000001     -002- 28 MOD1      EQU     1
  0000002     -002- 29 MOD2      EQU     2
  0000003     -002- 30 MOD3      EQU     3
  0000004     -002- 31 MOD4      EQU     4
  0000005     -002- 32 MOD5      EQU     5
  0000006     -002- 33 MOD6      EQU     6
  0000007     -002- 34 MOD7      EQU     7
  0000001     -002- 35 ONE       EQU     1
  0177777     -002- 36 ONES      EQU     0(177777)         # ALL ONE'S REGISTER
  0000200     -002- 37 OFLNCHNK  EQU     B(10000000)       # ON-LINE TESTS 128 WORDS/MINOR LOOP
  0007760     -002- 38 OFLNDONE  EQU     B(111111110000)   # SIGNAL THAT OFF-LINE MEMORY TEST IS
                                                             DONE

              -002- 41 # NOTE: THE FOLLOWING CONSTANTS ALLOW GENERATION OF ARBITRARY PARITY. APPLICABLE
              -002- 42 #        BITS ARE 0 & 1 SUCH THAT BIT 0 = VALUE FOR PARITY LOW
              -002- 43 #                              BIT 1 = VALUE FOR PARITY HIGH
              -002- 44                                       #  DATA BITS (23-16)(15-8) (7-0)
  0000020     -002- 45 PRHOL0    EQU     B(10000)          # SET PARITY (WIDE=)HIGH=0 LOW=0
  0000005     -002- 46 PRHOL1    EQU     B(00101)          # SET PARITY (WIDE=)HIGH=0 LOW=1
  0000012     -002- 47 PRH1L0    EQU     B(01010)          # SET PARITY (WIDE=)HIGH=1 LOW=0
  0000017     -002- 48 PRH1L1    EQU     B(01111)          # SET PARITY (WIDE=)HIGH=1 LOW=1
  0000002     -002- 49 PRWOH1LO  EQU     B(00010)          # SET PARITY WIDE=0 HIGH=1 LOW=0
```

0600000

```
0000007     -002- 01 PRWOH1L1 EQU   B(00111)      # SET PARITY WIDE=0 HIGH=1 LOW=1
0000010     -002- 02 PRW1HOLO EQU   B(01000)      # SET PARITY WIDE=1 HIGH=0 LOW=0
0000015     -002- 03 PRW1HOL1 EQU   B(01101)      # SET PARITY WIDE=1 HIGH=0 LOW=1

0000003     -002- 05 THREE    EQU   3
0000002     -002- 06 TWO      EQU   2
0010000     -002- 07 WPBLKSZE EQU   0(10000)      # WRITE PROTECT BLOCK SIZE = 4K (4096)
0000000     -002- 08 ZERO     EQU   0
0000000     -002- 09 ZEROS    EQU   0             # ZERO CONSTANT
0000000     -002- 10 OTEST    EQU   0             # VALUES FOR
0000001     -002- 11 1TEST    EQU   1             #           TEST MACRO



            -002- 18 # MAIN MEMORY STATUS CONSTANTS ASSUMING FOLLOWING CONDITIONS:
            -002- 19 #    1. MY STORE BUS PORT IS ISOLATED FROM INPUT FROM OTHER PROCESSOR
            -002- 20 #    2. MAIN MEMORY CONTROLLER IS NOT UPDATING OTHER STORE
            -002- 21 #    3. MY STORE BUS PORT IS ACCESSING MY STORE, E. NOT REVERSED

0106263     -002- 24 MTCRD    EQU   0(106263)     # MAIN MEMORY STATUS FOR MAINTENANCE READ
                                                    OPERATION
0106203     -002- 26 MTCWR    EQU   0(106203)     # MAIN MEMORY STATUS FOR MAINTENANCE
                                                    WRITE OPERATION
0106260     -002- 28 NMLRD    EQU   0(106260)     # MAIN MEMORY STATUS FOR NORMAL READ
                                                    OPERATION
0106200   . -002- 30 NMLWR    EQU   0(106200)     # MAIN MEMORY STATUS FOR NORMAL WRITE
                                                    OPERATION
0106274     -002- 32 SPRRD    EQU   0(106274)     # MAIN MEMORY STATUS FOR SPARE READ
                                                    OPERATION
0106214     -002- 34 SPRWR    EQU   0(106214)     # MAIN MEMORY STATUS FOR SPARE WRITE
                                                    OPERATION
```

```
                -002- 01 # MAIN STORE I/O ORDERS:

0020016         -002- 04 ALLZERO  EQU   0(20016)
                -002- 05 ALLZEROT TEXT  'APPLY ERRONEOUS ORDER(0/8) TO CHECKER'
0063476         -002- 06 BADCODE  EQU   0(63476)
                -002- 07 BADCODET TEXT  'APPLY ERRONEOUS ORDER(5/8) TO CHECKER'
0047214         -002- 08 BUSCHK   EQU   0(47214)
                -002- 09 BUSCHKT  TEXT  'CHECK BUS ISOLATION USING SER'
0040374         -002- 10 CKTINIT  EQU   0(40374)              # STORE CONTROLLER INITIALIZATION (W/O
                                                                WRITE PROTECT CLEAR)
                -002- 12 CKTINITT TEXT  'INITIALIZE ALL STORE CONTROLLER CIRCUITS'
0043310         -002- 13 CLRSER   EQU   0(43310)
                -002- 14 CLRSERT  TEXT  'CLEAR STORE ERROR REGISTER'
0046074         -002- 15 CLKSTOP  EQU   0(46074)
                -002- 16 CLKSTOPT TEXT  'DISABLE STORE CONTROLLER CLOCK OUTPUT'
0046070         -002- 17 CLKSTRT  EQU   0(46070)
                -002- 18 CLKSTRTT TEXT  'ENABLE STORE CONTROLLER CLOCK OUTPUT'
0146074         -002- 19 ERCOLL   EQU   0(146074)
                -002- 20 ERCOLLT  TEXT  'COLLECT ERRORS IN STORE ERROR REG'
0145454         -002- 21 EXERLD   EQU   0(145454)             # FAST REFRESH WITH REFRESH & CLOCK
                                                                STOPPED
                -002- 23 EXERLDT  TEXT  'ENABLE EXTERNAL LOAD OF STORE ERROR REG'
0145454         -002- 24 EXLDB15  EQU   0(145454)
                -002- 25 EXLDB15T TEXT  'ENABLE EXTERNAL LOAD OF STORE ERROR REG W/ ERROR COLLECT OPTION'
0005440         -002- 26 FASTREF  EQU   0(5440)
                -002- 27 FASTREFT TEXT  'PERFORM FAST REFRESH ON STORE'
0045454         -002- 28 FASTRNC  EQU   0(45454)
                -002- 29 FASTRNCT TEXT  'FORCE FAST REFRESH W/O CLOCK'
0145454         -002- 30 FFRMB15  EQU   0(145454)
                -002- 31 FFRMB15T TEXT  'FORCE FAST REFRESH & BIT 15'
0146074         -002- 32 FBIT09   EQU   0(146074)             # FORCE BIT 09 (COMMON ERROR STROBE)
                                                                ACTIVE
                -002- 34 FBIT09T  TEXT  'COLLECT ERRORS IN STORE ERROR REGISTER'
0146064         -002- 35 FBIT09R  EQU   0(146064)
                -002- 36 FBIT09RT TEXT  'COLLECT ERRORS IN SER W/ REFRESH ON'
0146076         -002- 37 FBRMB15  EQU   0(146076)
                -002- 38 FBRMB15T TEXT  'FANOUT BOARD REFRESH W/ ERROR COLLECT'
0046314         -002- 39 FCHKBT   EQU   0(46314)              # FORCE MAIN SHIFTER CHECK BIT ACTIVE
                -002- 40 FCHKBTT  TEXT  'ACTIVATE MAIN SHIFTER CHECK BIT'
0046304         -002- 41 FCHKBTR  EQU   0(46304)
                -002- 42 FCHKBTRT TEXT  'ACTIVATE SHIFTER CHECK BIT W/ REFRESH ENABLED'
0040574         -002- 43 FCHKOS   EQU   0(40574)
                -002- 44 FCHKOST  TEXT  'FORCE ZEROS TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT
                                         XOR CHECK CIRCUITS'
0041274         -002- 46 FCHK1S   EQU   0(41274)
                -002- 47 FCHK1ST  TEXT  'FORCE ONES  TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT
                                         XOR CHECK CIRCUITS'
0140574         -002- 49 FCK0S15  EQU   0(140574)
```

B04

```
          -002- 01 FCK0S15T TEXT   'FORCE ZEROS TO CHECK CKTS W/ ERROR COLLECT'
0141274   -002- 02 FCK1S15  EQU    0(141274)
          -002- 03 FCK1S15T TEXT   'FORCE ONES   TO CHECK CKTS W/ ERROR COLLECT'
0043074   -002- 04 FDISIDLE EQU    0(43074)
          -002- 05 FDISIDLET TEXT  'FORCE DISABLE OF IDLE FLOP'
0046156   -002- 06 FLSH0    EQU    0(46156)                    # FORCE LOAD THE SHIFTER WITH ZERO
                                                                 (W/CLOCK)
          -002- 08 FLSH0T   TEXT   'START ZERO INTO MAIN SHIFTER'
0046154   -002- 09 FLSH0NC  EQU    0(46154)                    # PUT ZERO ON INPUT OF SHIFTER (W/O
                                                                 CLOCK)
          -002- 11 FLSH0NCT TEXT   'PRESENT ZERO TO INPUT OF MAIN SHIFTER'
0045434   -002- 12 FNOWRT   EQU    0(45434)
          -002- 13 FNOWRTT  TEXT   'FORCE WRITING OF ALL-ONES DATA'
0045430   -002- 14 FNOWRTC  EQU    0(45430)
          -002- 15 FNOWRTCT TEXT   'FORCE WRITING OF ONES W/ CLOCK RUNNING'
0044474   -002- 16 FNOTIM   EQU    0(44474)                    # DISABLE TRANSMISSION OF TIMING SIGNALS
                                                                 TO FANOUT BOARDS
          -002- 18 FNOTIMT  TEXT   'INHIBIT TIMING SIGNALS TO FANOUT BOARDS'
0044470   -002- 19 FNOTIMC  EQU    0(44470)
          -002- 20 FNOTIMCT TEXT   'BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)'
0041550   -002- 21 FOBMT    EQU    0(41550)
          -002- 22 FOBMTT   TEXT   'FANOUT BOARD MAINTENANCE TEST'
0041474   -002- 23 FRFSEL0  EQU    0(41474)                    # FORCE REFRESH SELECT SIGNAL FROM FOB0
          -002- 24 FRFSEL0T TEXT   'CANCEL SELECT FROM FOB0 DURING REFRESH'
0042334   -002- 25 FRFSEL1  EQU    0(42334)                    # FORCE REFRESH SELECT SIGNAL FROM FOB1
          -002- 26 FRFSEL1T TEXT   'CANCEL SELECT FROM FOB1 DURING REFRESH'
0042534   -002- 27 FRFSEL2  EQU    0(42534)                    # FORCE REFRESH SELECT SIGNAL FROM FOB2
          -002- 28 FRFSEL2T TEXT   'CANCEL SELECT FROM FOB2 DURING REFRESH'
0043234   -002- 29 FRFSEL3  EQU    0(43234)                    # FORCE REFRESH SELECT SIGNAL FROM FOB3
          -002- 30 FRFSEL3T TEXT   'CANCEL SELECT FROM FOB3 DURING REFRESH'
0043434   -002- 31 FRFSEL4  EQU    0(43434)                    # FORCE REFRESH SELECT SIGNAL FROM FOB4
          -002- 32 FRFSEL4T TEXT   'CANCEL SELECT FROM FOB4 DURING REFRESH'
0044354   -002- 33 FRFSEL5  EQU    0(44354)                    # FORCE REFRESH SELECT SIGNAL FROM FOB5
          -002- 34 FRFSEL5T TEXT   'CANCEL SELECT FROM FOB5 DURING REFRESH'
0044554   -002- 35 FRFSEL6  EQU    0(44554)                    # FORCE REFRESH SELECT SIGNAL FROM FOB6
          -002- 36 FRFSEL6T TEXT   'CANCEL SELECT FROM FOB6 DURING REFRESH'
0045254   -002- 37 FRFSEL7  EQU    0(45254)                    # FORCE REFRESH SELECT SIGNAL FROM FOB7
          -002- 38 FRFSEL7T TEXT   'CANCEL SELECT FROM FOB7 DURING REFRESH'
0044334   -002- 39 FRREQA   EQU    0(44334)                    # SET REFRESH REQUEST FLOP (DFFRREQ) ON
                                                                 TIMING BOARD (FA1071)
          -002- 41 FRREQAT  TEXT   'SET REFRESH REQUEST ON TIMING BOARD (FA1071)'
0040674   -002- 42 FRREQB   EQU    0(40674)                    # SET REFRESH REQUEST FLOP (RREQB) ON
                                                                 CHECK BOARD A (FA1062)
          -002- 44 FRREQBT  TEXT   'SET REFRESH REQ COPY ON CHECK BOARD A (FA1062)''
0040664   -002- 45 FRREQBR  EQU    0(40664)
          -002- 46 FRREQBRT TEXT   'SET REFRESH REQUEST ON FA1062 W/ REFRESH ENABLED'
0046074   -002- 47 FSELA    EQU    0(46074)
          -002- 48 FSELAT   TEXT   'FORCE STORE SELECT(ISOLATE) SIGNAL ON FA1071'
0006074   -002- 49 NSELA    EQU    0(6074)
```

```
            -002- 01 NSELAT  TEXT    'RESET STORE SELECT(ISOLATE) SIGNAL ON FA1071'
0004714     -002- 02 FSELB   EQU     0(4714)                    # FORCE STORE SELECT (TBBSEL) FROM CHECK
                                                                  BOARD A (FA1062)
            -002- 04 FSELBT  TEXT    'FORCE DUPLICATED STORE SELECT(SELB) ACTIVE'
0004710     -002- 05 FSELBC  EQU     0(4710)
            -002- 06 FSELBCT TEXT    'FORCE DUPLICATED STORE SELECT(SELB) W/ CLOCK'
0046516     -002- 07 FSTFBRM EQU     0(46516)
            -002- 08 FSTFBRMT TEXT   'FORCE CONTROLLER & FANOUT BOARDS TO REFRESH'
0042354     -002- 09 FSTNM   EQU     0(42354)                   # FORCE MODE FLOP TO NORMAL STATE
            -002- 10 FSTNMT  TEXT    'FORCE MODE FLOP TO NORMAL STATE'
0052354     -002- 11 FSTNMFR EQU     0(52354)
            -002- 12 FSTNMFRT TEXT   'FORCE NORMAL MODE IN CONTROLLER & REFRESH TO FANOUT BOARDS'
0042344     -002- 13 FSTNMR  EQU     0(42344)
            -002- 14 FSTNMRT TEXT    'FORCE MODE TO NORMAL W/ REFRESH ENABLED'
0046514     -002- 15 FSTRM   EQU     0(46514)                   # FORCE MODE FLOP TO REFRESH STATE
            -002- 16 FSTRMT  TEXT    'FORCE MODE FLOP TO REFRESH STATE'
0046234     -002- 17 FTINWP  EQU     0(46234)
            -002- 18 FTINWPT TEXT    'FORCE IN-WRITE-PROTECT INHIBIT'
0006220     -002- 19 IOGO    EQU     0(6220)
            -002- 20 IOGOT   TEXT    'ENABLE ON-LINE I/O ACCESS TO OFF-LINE STORE'
0125252     -002- 21 IOTSTA  EQU     0(125252)
            -002- 22 IOTSTAT TEXT    'I/O TEST PATTERN #1'
0052525     -002- 23 IOTST5  EQU     0(52525)
            -002- 24 IOTST5T TEXT    'I/O TEST PATTERN #2'
0067214     -002- 25 ISOCHK  EQU     0(67214)                   # CHECK ISOLATION FROM HIGHER STORES -
                                                                  PUT RESULTS OF TEST INTO STORE ERROR
                                                                  REGISTER (SER)
            -002- 28 ISOCHKT TEXT    'ISOLATE FROM FAR STORES & VERIFY VIA SER'
0027214     -002- 29 ISOCHKU EQU     0(27214)
            -002- 30 ISOCHKUT TEXT   'APPLY ONES TO STORE DATA BUS(W/O ISOLATE)'
0043454     -002- 31 KILL12  EQU     0(43454)                   # WIPE OUT SHIFTER BIT AT POSITION 12
            -002- 32 KILL12T TEXT    'CLEAR SHIFTER BIT IN POSITION 12'
0046071     -002- 33 MASCINT EQU     0(46071)
            -002- 34 MASCINTT TEXT   'INITIALIZE STORE CONTROLLER'
0006071     -002- 35 MSCITNS EQU     0(6071)
            -002- 36 MSCITNST TEXT   'INITIALIZE STORE CONTROLLER W/O FORCE SELECT'
0046076     -002- 37 MASCLK  EQU     0(46076)                   # ACTIVATE STORE CONTROLLER CLOCK (CK)
                                                                  SIGNAL
            -002- 39 MASCLKT TEXT    'FAKE FIRST HALF OF STORE CLOCK CYCLE'
0046074     -002- 40 MASCLKN EQU     0(46074)
            -002- 41 MASCLKNT TEXT   'FAKE SECOND HALF OF STORE CLOCK CYCLE'
0047410     -002- 42 RDAD    EQU     0(47410)
            -002- 43 RDADT   TEXT    'GATE STORE ADDRESS BUS(SA0-16,PL) TO STORE DATA BUS(SD0-15,PL,PH
                                     ) W/ CLOCK'
0047414     -002- 45 RDADNC  EQU     0(47414)
            -002- 46 RDADNCT TEXT    'GATE STORE ADDRESS BITS TO STORE DATA BUS'
0006070     -002- 47 REFSTOP EQU     0(6070)
            -002- 48 REFSTOPT TEXT   'INHIBIT REFRESHING OF STORE'
0006060     -002- 49 REFSTRT EQU     0(6060)
```

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              -002- 01 REFSTRTT TEXT    'RESUME REGULAR REFRESHING OF STORE'
0046060       -002- 02 RFWISOL  EQU     0(46060)
              -002- 03 RFWISOLT TEXT    'RESUME REGULAR REFRESH W/ STORE ISOLATED'.
0047214       -002- 04 RTNADHI  EQU     0(47214)                  # RETURN UPPER ADDRESS (SA16-19) BITS &
                                                                    SELECTED CONTROL SIGNALS VIA I/O CHANNE
              -002- 06 RTNADHIT TEXT    'LOAD SA17 & SAPH INTO SER'
0044714       -002- 07 SPAREA   EQU     0(44714)
              -002- 08 SPAREAT  TEXT    'SPARE I/O ORDER'
0047114       -002- 09 SERREAD  EQU     0(47114)                  # STORE ERROR REGISTER (SER) READ
              -002- 10 SERREADT TEXT    'READ BACK STORE ERROR REGISTER(SER)'
0041634       -002- 11 STSBY    EQU     0(41634)
              -002- 12 STSBYT   TEXT    'SET STORE BUSY(SBY) SIGNAL'
0041630       -002- 13 STSBYCL  EQU     0(41630)
              -002- 14 STSBYCLT TEXT    'SET STORE BUSY(SBY) W/ CLOCK'
0007114       -002- 15 USERRED  EQU     0(7114)
              -002- 16 USERREDT TEXT    'READ STORE ERROR REG (W/O ISOLATE)'
0046061       -002- 17 WPCLR    EQU     0(46061)
              -002- 18 WPCLRT   TEXT    'STORE INITIALIZE, INCL. WRITE PROTECT'
0052354       -002- 19 010NOR   EQU     0(52354)                  # FORCE 0-10 (010TIM) SIGNAL & RESET
                                                                    REFRESH REQUEST FLOP
              -002- 21 010NORT  TEXT    '0-10 TIMING(010TIM)THEN REFRESH REQUEST CLEAR'
0054334       -002- 22 010REF   EQU     0(54334)                  # FORCE 0-10 (010TIM) SIGNAL & SET
                                                                    REFRESH REQUEST FLOP
              -002- 24 010REFT  TEXT    '0-10 TIMING(010TIM)THEN REFRESH REQUEST SET'
0056074       -002- 25 010TIM   EQU     0(56074)
              -002- 26 010TIMT  TEXT    'FORCE 0-10 TIMING SIGNAL ACTIVE'




              -002- 33 # STORE MAINTENANCE ORDER OPTIONS:


0010000       -002- 36 FAK010   EQU     0(10000)                  # FAKE 0-10 TIMING SIGNAL
              -002- 37 # NOTE: NEXT OPTION BIT IS SHARED
0020000       -002- 38 FBUSRDN  EQU     0(20000)                  # FORCE BUS READ INACTIVE TO BIT-SLICES
0020000       -002- 39 LOADCHK  EQU     0(20000)                  # LOAD I/O ORDER CHECK RESULTS
0040000       -002- 40 ISOLATE  EQU     0(40000)                  # ISOLATE THIS STORE FROM HIGHER STORES
0100000       -002- 41 FSBIT09  EQU     0(100000)                 # FORCE SHIFTER BIT 09 ACTIVE
0000001       -002- 42 INITBIT  EQU     0(1)                      # INITIALIZE STORE CONTROLLER
              -002- 43 # NOTE: NEXT OPTION BIT IS SHARED
0000002       -002- 44 FFOBRM   EQU     0(2)                      # FORCE FANOUT BOARDS TO REFRESH MODE
0000002       -002- 45 STEPCLK  EQU     0(2)                      # HALF-CYCLE OF STORE CLOCK
0000004       -002- 46 HALTCLK  EQU     0(4)                      # DISABLE STORE CONTROLLER CLOCK
0000010       -002- 47 STOPREF  EQU     0(10)                     #DISABLE AUTONOMOUS REFRESH
```

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          0177771    -002- 01 CLOCKON EQU    0(177771)         # MASK OUT CLOCK OFF OPTIONS
          0020016    -002- 02 FGLDNCFR EQU   0(20016)          # LOAD I/O ORDER CHECK RESULTS WITH CLOCK
                                                                 STOPPED AND FANOUT BOARDS IN REFRESH
                                                                 MODE


                            09 # STORE TEST CONSTANTS (THESE TESTS ONLY):

          0000000          11 RPTMD    EQU    0
          0000012          12 S(RPTMD) EQU    10
          0010000          13 OFLTST   EQU    B(1000000000000)  # ADDRESS OF OFF-LINE MEMORY TEST
0600000                    14                                  #     (SECOND WRITE PROTECT BLOCK)
          0000400          15 UPDATBLK EQU    0(400)            # SIZE OF OFF-LINE STORE UPDATE BLOCK
                           16 # THIS CONSTANT MUST BE A POWER OF TWO (2) THAT IS NOT GREATER THAN 4096.
```

TEST 57   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                         -001- 01 #     **********************************************************************
                                         -001- 02 #     **********************************************************************
                                         -001- 03 #     **                                                                  **
                                         -001- 04 #     **      CU DIAGNOSTIC TEST NO. 57, MAIN_STORE_MEMORY_MODULE          **
                                         -001- 05 #     **                                                                  **
                                         -001- 06 #     **********************************************************************
                                         -001- 07 #     **********************************************************************
```

0032355   -001- 10 CSTDT1 CSECT

0032355 01 000D00 000145 ------ CDGNM   -001- 14   VFD   1,0 2,0 2,0 2,0 3,1 6,NBGN

```
                                 18 # SEGMENT 1
                                 19 #     THIS SEGMENT CHECKS OUT THE ENTIRE FIRST MEMORY MODULE(MOD0) OVER THE
                                 20 # STORE BUS USING THE OTHER-STORE INSTRUCTIONS. BECAUSE THIS OPERATION IS
                                 21 # VERY LENGTHY, EACH MINOR LOOP IS PUNCTUATED BY A CALL TO THE WAIT SUBROUTINE.
                                 22 # THE FIRST MAJOR LOOP MERELY WRITES THE INITIAL TEST PATTERN. THE FOLLOWING
                                 23 # LOOPS READ SUCCESSIVE MEMORY LOCATIONS AND COMPARE THEIR CONTENTS TO THE
                                 24 # PREVIOUSLY WRITTEN TEST PATTERN. IF A MISMATCH IS DETECTED, A TRANSFER IS MADE
                                 25 # TO THE APPROPRIATE FAILURE RESOLUTION ROUTINE FOLLOWING THESE LOOPS. IF
                                 26 # EVERY BIT COMPARE AND NO BUS PARITY ERROR WAS DETECTED WHILE READING IN THE
                                 27 # DATA, THEN THE NEXT DATA TEST PATTERN IS WRITTEN INTO THAT LOCATION.
```

```
TEST 57                                                                  23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD        W77D

                                        01 CSTDT1 OW       0(1)                 # 12434
                              -001- 02          NOTE      ************** THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

                              -001- 05 #       SEND
                              -001- 06 #       SEND 0(0000001) TO OFF-LINE MCHB.
                              -001- 07 #       PARITY IS 0(2).
0032356 .01 000001 047707 ------ CDGNM   -001- 08          VFD       1,0 2,2 7,B(0111111) 6,N2SEND
0032357  01 000002 000040 000001         -001- 09          ADDR      0(00000001),0(2)

                              -001- 11 #       MICRO
                              -001- 12 #       PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                              -001- 13 #       TO FIELD = MS%T   FROM FIELD = MCHB%F
0032361  01 000004 020005 ------ CDGNM   -001- 14          VFD       1,0 2,1 7,0 6,NMICRO
0032362  01 000005 106631 ------         -001- 15          VFD       8,MS%T 8,MCHB%F

                              -001- 17 #       NO3_CODE
                              -001- 18 #       PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0032363  01 000006 040043 000000 CDGNM   -001- 19          VFD       1,0 2,2 7,0 6,NNO3CD
0032364  01. 000007 000000 032366 0032366 -001- 20         ADDR      *+2

0032366  01 000011 103501 000151 TTYTBL       22 # SUSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT.
0032370  01 000013 034500 043132 CTSD         23          LI        R4,M%AS
                                              24          STL       R4,PAGSCR+24
                                              25 # USE THE DIAGNOSTIC LOOP INDEX (LOOPIND) TO ACCESS PROPER I/O
                                              26 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/O SUBCHANNEL TABLE
                                              27 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT (IOADDR) IN PAGSCR.
                                              28 # IF DGNLIM IS EQUAL TO ZERO THIS IS AN ABBRIEVIATED DIAGNOSTIC REQUEST
                                              29 # TO UPDATE BUT NOT DIAGNOSE THIS MOD.
0032372  01 000015 031000 043144 CTSD         30          LAL       R0,DGNLIM,RAO
0032374  01 000017 040021 ------             31          L         R1,1(RAO)
0032375  01 000020 003402 000017             32          NI        R0,0(17)               # IGNOR THE WIDE STORE BIT.
0032377  01 000022 014420 ------             33          OR        R1,R0                  # IS DGNLIM ZERO?
                                             34 CSTDT1 OW       0(23)                 # 13775
                              -001- 35          NOTE      ************** THE FIRST ADDRESS OVERWRITTEN IS 000023 **********

0032400  01 000023 050000 032726 0C32726      38          BCL       MODOXT
0032402                                       39          EOW                             # 13775
                              -001- 40          NOTE      *************** THE LAST ADDRESS OVERWRITTEN IS 000024 **********

0032402  01 000025 003240 ------             43          ZR        LOOPIND
0032403  01 000026 004257 ------             44          SN        LOOPIND,1
0032404                                      45          CALL      CONTPREP               # PREPARE THE LOOP INDEX
0032404  01 000027 037020 012757 CDGSIO  -001- 46          BSA       CONTPREP
0032406                                      47 BKCSTDT1                                   # RETURN POINT FOR THE FINALE MACRO
                                             48 CPATCH1 BGNP     0(162)                 # 12434
0032406  01 000031 137000 112744 0000162 -001- 49         BL        %%%311
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 57                                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                              CDGSD        W77D

                                       -001- 01        NOTE    CPATCH1 'CSECT'
                                       -001- 02        NOTE    ****************** PATCH AREA BEGINS AT 000162 ********* *******

0112744                                -001- 05 XXX311 PATCHAREA
0112744 14 000162 172652 ------ CDGNM        06        HN      LOOPIND,LOOPIND
0112745                                      07        CALL    INITOST
0112745 14 000163 037020 110443 CSYSUB -001- 08        BSA     INITOST
0112747                                      09        RTN_TBL RTN_57
0112747 14 000165 171400 ------        -001- 10        GA
0112750 14 000166 031000 032410 0000033 -001- 11       LAL     R0,RTN_57,RA0
0112752 14 000170 037000 011162 CDGNM  -001- 12        BL      INTRPNO3

0112754                                      14        ENDP    NR              # 12434
                                       -001- 15        NOTE    ************ LAST PATCH ADDRESS USED IS 000171 ****************
                                       -001- 16        NOTE    ***** NUMBER OF PATCH WORDS USED IS 8 (DECIMAL) ********

0032410                                      19 RTN_57
0032410                                      20        EOW                     # 12434
                                       -001- 21        NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********
```

TEST 57   SEGMENT 1   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                    -001- 01 #    ********************************************************
                                    -001- 02 #         *                                          *
                                    -001- 03 #         *    TEST 57    SEGMENT 1                   *
                                    -001- 04 #         *                                          *
                                    -001- 05 #    ********************************************************

0032410 01 000033 000100 ------ CDGNM    -001- 08         VFD    1,0 2,0 2,0 5,D(1) 6,NTESTSEG


                                    11 #    THIS SEGMENT CHECKS OUT THE ENTIRE FIRST MEMORY MODULE(MOD0) OVER THE
                                    12 # STORE BUS USING THE OTHER-STORE INSTRUCTIONS. BECAUSE THIS OPERATION IS
                                    13 # VERY LENGTHY, EACH MINOR LOOP IS PUNCTUATED BY A CALL TO THE WAIT SUBROUTINE.
                                    14 # THE FIRST MAJOR LOOP MERELY WRITES THE INITIAL TEST PATTERN. THE FOLLOWING
                                    15 # LOOPS READ SUCCESSIVE MEMORY LOCATIONS AND COMPARE THEIR CONTENTS TO THE
                                    16 # PREVIOUSLY WRITTEN TEST PATTERN. IF A MISMATCH IS DETECTED, A TRANSFER IS MADE
                                    17 # TO THE APPROPRIATE FAILURE RESOLUTION ROUTINE FOLLOWING THESE LOOPS. IF
                                    18 # EVERY BIT COMPARES AND NO BUS PARITY ERROR WAS DETECTED WHILE READING IN THE
                                    19 # DATA, THEN THE NEXT DATA TEST PATTERN IS WRITTEN INTO THAT LOCATION.
0032411                             20
                                    21 # NOTE: THE ELAPSED TIME IN SECONDS FOR THIS TEST CAN BE COMPUTED BY THE FORMULA
                                    22 #            (64 SEC/TEST PATTERN X N TEST PATTERNS) + 12.8 SEC FOR UPDATE


                                    -001- 26 #    NO3_CODE
                                    -001- 27 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD0TST.
0032411 01 000034 040043 000000 CDGNM    -001- 28         VFD    1,0 2,2 7,0 6,NNO3CD
0032412 01 000035 000000 032414 0032414  -001- 29         ADDR   MOD0TST


0032414                             33 MOD0TST
                                    34 CSTDT1 OW     0(37)                    # 13775
                                    -001- 35         NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000037 **********


0032414                             38
                                    39 # INITIALIZE REGISTERS AND BLOCK HARDWARE CHECKS AND INTERRUPTS.
0032414                             40
0032414                             41         CALL   INIT_OCC              # UNISOLATE OFF-LINE STORE BUS
0032414 01 000037 137020 111240 CSYSUB   -001- 42         BSA    INIT_OCC
0032416                             43         TAKEOUT 7
0032416 01 000041 106000 -------  -001- 44         LR     0,0
0032417 01 000042 006000 -------  -001- 45         LR     0,0
0032420 01 000043 006000 -------  -001- 46         LR     0,0
0032421 01 000044 006000 -------  -001- 47         LR     0,0
0032422 01 000045 006000 -------  -001- 48         LR     0,0
0032423 01 000046 006000 -------  -001- 49         LR     0,0
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 57  SEGMENT 1                                                    23:24:58    2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                          CDGSD      W77D

0032424 01 000047 006000 -------          -001- 01    LR    0,0
0032425 01 000050 003441 000006                 02    LI    BLKMSK,M(BIN)|M(BHC)     # MASK TO BLOCK INTERRUPTS & CHECKS
0032427 01 000052 030462 021637 TDATA ·         03    LL    STRSTAT,STRLIM.          # PREPARE FOR WIDE STORE STATUS TEST
0032431 01 000054 003100 -------                04    ZR    LSTPAT                   # CLEAR LAST PATTERN REGISTER
0032432 01 000055 003140 -------                05    ZR    PATNDX                   # INITIALIZE TEST PATTERN INDEX
0032433 01 000056 030700 043140 CTSD            06    LL    MEMADDR0,BASADDR         # ADDRESS OF STORE UNDER TEST
0032435 01 000060 031520 032635 0032635         07    LAL   NXTPAT,DATPATBL,PATADDR  # LOAD FIRST TEST PATTERN & TABLE POINTER
0032437 01 000062 003320 -------                08    ZR    MEMADDR1                 # POINT TO FIRST LOCATION IN MODULE 0
0032440 01 000063 003561 077777                 09    LI    MNRNDX,0(77777)          # FOR INITIAL LOOP.
0032442                                         10
                                                11 # READ BACK OFFLINE MEMORY CONTENTS AND COMPARE TO LAST PATTERN WRITTEN.
                                                12 # SKIP TO WRITE ROUTINE IF THIS IS THE 1ST TIME THRU THE LOOP.
0032442                                         13
0032442                                         14 REDCOMP
0032442                                         15       TAKEOUT 2
0032442 01 000065 106000 -------          -001- 16    LR    0,0
0032443 01 000066 006000 -------          -001- 17    LR    0,0
0032444 01 000067 007722 -------                18    LSR   SS_S,BLKMSK
0032445 01 000070 014104 -------                19    TZ    LSTPAT                   # IS THIS FIRST PATTERN?
0032446 01 000071 054060 ------- 0032526        20    BC    WRITPAT                  # IF SO, SKIP READ & COMPARE ROUTINE
0032447                                         21 PASTWO
0032447                                         22    LOSX  MNRNDX(MEMADDR),PC=NO,AC=NO
E0032447 01 000072 100447 -------         -001- 23    MSTFX MNRNDX(MEMADDR)
0032450 01 000073 106160 -------          -001- 24    DATA  B(1000110001110000)
0032451                                         25    MIMODE L SDR1,R13                # CORRECT POTENTIALLY BAD PARITY
0032451 01 000074 013000 -------          -001- 26    MIS   0
0032452 01 000075 162113 -------          -002- 27          VFD    8,SDR1%T 8,R13%F
0032453                                         28 HIPATSKP
0032453                                         29    EOW                             # 13775
                                          -001- 30    NOTE  **************** THE LAST ADDRESS OVERWRITTEN IS 000075 **********


                                                33 CSTDT1 OW   0(76)                   # 13328
                                          -001- 34    NOTE  ************** THE FIRST ADDRESS OVERWRITTEN IS 000076 **********


                                                37 DDELETE NOTE  1
0032453 01 000076 057000 -------                38    TRPL  PATBAK
0032454 01 000077 030060 -------                39    ICF   STRSTAT,0                # SAVE VALUE OF PARITY LOW
0032455 01 000100 057020 -------                40    TRPH  PATBAK
0032456 01 000101 030061 -------                41    ICF   STRSTAT,1                # SAVE VALUE OF PARITY HIGH
0032457 01 000102 057004 -------                42    TRPL  LSTPAT
0032460 01 000103 030200 -------                43    ICF   PARSLT,S(PLBAK)          # PARITY LOW WRITTEN
0032461 01 000104 057024 -------                44    TRPH  LSTPAT
0032462 01 000105 030201 -------                45    ICF   PARSLT,S(PHBAK)          # PARITY HIGH WRITTEN
0032463 01 000106 015070 -------                46    XR    STRSTAT,PARSLT           # PARITY READ = PARITY WRITTEN?
0032464 01 000107 015004 -------                47    XR    PATBAK,LSTPAT            # PATTERN READ = PATTERN WRITTEN?
0032465 01 000110 054004 ------- 0032471        48    BC    WDCOMP                   # IF SO, GO TO WIDE DATA COMPARE
0032466                                         49    CALL  FNDBTS

MEMORY ELEMENT TEST                                                          PR-1C929-50
```

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0032466 01 000111 037020 033030 0033030  -001- 01        BSA     FNDBTS
0032470 01 000113 153160 ------ 0032650        02        B       DLFLXT              #GO TO FAULT RESOLUTION ROUTINE
0032471                                        03 WDCOMP
0032471 01 000114 124064 ------ TDATA          04        TBN     STRSTAT,S(WDSTR)    # IS THIS A WIDE STORE?
0032472 01 000115 055017 ------ 0032511        05        BNC     PRTYTEST            # IF NOT, GO TO PARITY TEST
0032473                                        06        LOSX    MNRNDX(MEMADDR),PC=NO,AC=NO
E0032473 01 000116 000447 ------         -001- 07        MSTFX   MNRNDX(MEMADDR)
0032474 01 000117 106160 ------          -001- 08        DATA    B(1000110001110000)
0032475                                        09        MIMODE
0032475 01 000120 013400 ------          -001- 10        MI      0
0032476                                        11        L       RO,SDR1
0032476 01 000121 051455 ------          -001- 12            VFD    8,RO%T 8,SDR1%F
0032477                                        13        L       SDR1,R13
0032477 01 000122 162113 ------          -001- 14            VFD    8,SDR1%T 8,R13%F
0032500                                        15        ZMINT
0032500 01 000123 026750 ------          -001- 16            DATA    ZMINT%
0032501 01 000124 015004 ------                17        XR      PATBAK,LSTPAT       # WIDE DATA READ = WIDE DATA WRITTEN?
0032502 01 000125 016400 177400                18        LRM     PATBAK,PATBAK,O(177400) # MASK FOR WIDE DATA BITS (SD16-23)
0032504 01 000127 014000 ------                19        TZ      PATBAK              #ANY MISMATCHES
0032505 01 000130 054004 ------ 0032511        20        BC      PRTYTEST            # IF NOT, GO TO PARITY TEST
0032506                                        21        CALL    FNDHIBTS
0032506 01 000131 037020 033033 0033033  -001- 22        BSA     FNDHIBTS
0032510 01 000133 153170 ------ 0032700        23        B       DHFLXT              # GO TO FAULT RESOLUTION ROUTINE
0032511                                        24 PRTYTEST
0032511 01 000134 124060 ------                25        TBN     STRSTAT,S(PLBAK)    # PL READ = PL WRITTEN?
0032512 01 000135 006020 ------                26        LR      R1,RO               # SAVE MISMATCH PATTERN
0032513 01 000136 055005 ------ 0032520        27        BNC     TSTPH               # IF SO, GO TO TEST OF PARITY HIGH
0032514 01 000137 003214 ------                28        LN      R8,12               # INDEX FOR FAULTY PARITY BIT INTO
                                                                                       MASERCNT
0032515                                        30        CALL    TSTNRCRD
0032515 01 000140 037020 033061 0033061  -001- 31        BSA     TSTNRCRD
0032517 01 000142 153131 ------ 0032650        32        B       DLFLXT              # GO TO FAULT RESOLUTION ROUTINE
0032520                                        33 TSTPH
0032520 01 000143 124061 ------                34        TBN     STRSTAT,S(PHBAK)    # PH READ = PH WRITTEN?
                                               35 CSTDT1 OW      O(144)              # 13775
                                         -001- 36        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000144 **********

0032521 01 000144 055005 ------ 0032526        39        BNC     WRITPAT
0032522                                        40        EOW                         # 13775
                                         -001- 41        NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000144 **********

0032522 01 000145 003214 ------                44        LN      R8,12               # INDEX FOR FAULTY PARITY BIT
0032523                                        45        CALL    TSTNRCRD
0032523 01 000146 037020 033061 0033061  -001- 46        BSA     TSTNRCRD
0032525 01 000150 153123 ------ 0032650        47        B       DLFLXT              # GO TO FAULT RESOULUTION ROUTINE.
0032526                                        48        EOW                         # 13328
                                         -001- 49        NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000150 **********
```

MEMORY ELEMENT TEST   PR-1C929-50

TEST 57 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                    03 CSTDT1 OW       O(151)                    # 13775
                               -001- 04        NOTE     ************** THE FIRST ADDRESS OVERWRITTEN IS 000151 **********

0032526                              07
                                     08 # WRITE NEXT DATA PATTERN INTO THIS MEMORY LOCATION
0032526                              09
0032526                              10 WRITPAT
0032526 01 000151 106005 ------      11        LR       RO,NXTPAT              # PREPARE NEXT DATA PATTERN.
0032527                              12        MIMODE   L SDR1,RO              # LOAD SDR1 WITH NXTPAT
0032527 01 000152 013000 ------ -001- 13       MIS      0
0032530 01 000153 162123 ------ -002- 14           VFD       8,SDR1%T 8,RO%F
0032531                              15        STOSX    MNRNDX(MEMADDR)        # WRITE NEXT DATA PATTERN.
E0032531 01 000154 D00447 ------ -001- 16       MSTFX    MNRNDX(MEMADDR)
0032532 01 000155 136100 ------ -001- 17       DATA     B(1011110001000000)
0032533                              18
                                     19 # PREPARE TO TAKE A REALTIME BREAK.  CLEAN UP ERROR INTERRUPTS, ERROR
                                     20 # REGISTER AND ALLOW INTERRUPTS AND HARWARE CHECKS.
0032533                              21
0032533                              22        MIMODE   DATA=S(ERRI)
0032533 01 000156 013405 ------ -001- 23       MI       S(ERRI)
0032534                              24        ZER
0032534 01 000157 025750 ------ -001- 25           DATA      ZER%
0032535                              26        L        IS_R,YT
0032535 01 000160 033322 ------ -001- 27           VFD       8,IS_R%T 8,YT%F
0032536                              28        ZMINT
0032536 01 000161 026750 ------ -001- 29           DATA      ZMINT%
0032537 01 000162 007762 ------      30        LSR      SS_R,BLKMSK           # REENABLE INTERRUPTS & HARDWARE CHECKS.
0032540                              31
                                     32 # INCREMENT OR DECREMENT THE VALUE OF MNRNDX DEPENDING ON THE VALUE
                                     33 # OF PATNDX BEING ODD OR EVEN.
0032540                              34
0032540 01 000163 024140 ------      35        TBN      PATNDX,0              # ODD OR EVEN?
0032541 01 000164 054005 ------ 0032546 36     BC       INCNDX
0032542 01 000165 014167 ------      37        TZ       MNRNDX
0032543 01 000166 054010 ------ 0032553 38     BC       NEWPAT
0032544 01 000167 004177 ------      39        SN       MNRNDX,1
0032545 01 000170 053035 ------ 0032602 40 .   B        TIMCHCK
0032546                              41 INCNDX
0032546 01 000171 103565 077777     42        CI       MNRNDX,O(77777)
0032550 01 000173 054003 ------ 0032553 43     BC       NEWPAT
0032551 01 000174 004561 ------      44        AN       MNRNDX,1
0032552 01 000175 053030 ------ 0032602 45     B        TIMCHCK
0032553                              46
                                     47 # AT THIS POINT A PATTERN HAS BEEN COMPLETLY WRITTEN.  IF THIS WAS NOT
                                     48 # THE LAST PATTERN LOAD THE NEXT ONE.  THEN TURN OFF REFRESH FOR 2
                                     49 # MILLISECONDS AND CONTINUE.
```

MEMORY ELEMENT TEST   PR-1C929-50

TEST 57 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0032553                                            01
0032553                                            02 NEWPAT
0032553 01 000176 104541 ------                    03        AN      PATNDX,1             # INCREMENT TEST PATTERN INDEX.
0032554 01 000177 003545 000004                    04        CI      PATNDX,PATOTAL       # WAS THAT THE LAST PATTERN?
0032556 01 000201 054150 ------ 0032726            05        BC      MODOXT               # IF SO, TEST IS FINISHED.
0032557 01 000202 006105 ------                    06        LR      LSTPAT,NXTPAT        # NEXT PATTERN BECOMES LAST PATTERN.
0032560 01 000203 042526 ------                    07        LX      NXTPAT,PATNDX(PATADDR) # GET NEXT TEST PATTERN
0032561 01 000204 007722 ------                    08        LSR     SS_S,BLKMSK          # INTERRUPTS MUST BE BLOCKED WHEN REFRESH
                                                                                          #   IS SHUT OFF.
0032562                                            10        SIOM    REFSTOP              # TURN OFF REFRESH.
0032562 01 000205 037020 012667 CDGSIO     -002- 11        BSA     MASIOM
0032564 01 000207 006070 ------            -001- 12        DATA    REFSTOP              # INHIBIT REFRESHING OF STORE
0032565                                            13
                                                   14 # DELAY FOR 2 MILLISECONDS.
0032565                                            15
0032565 01 000210 103401 001345                    16        LI      R0,741               # FOR 2 MILISECONDS DELAY.
0032567                                            17 DELAY
0032567 01 000212 136000 032567 0032567            18        BX      R0,DELAY
0032571                                            19        SIOM    REFSTRT              # TURN ON REFRESH.
0032571 01 000214 037020 012667 CDGSIO     -002- 20        BSA     MASIOM
0032573 01 000216 006060 ------            -001- 21        DATA    REFSTRT              # RESUME REGULAR REFRESHING OF STORE
0032574                                            22
                                                   23 # PREPARE TO TAKE A REAL TIME BREAK.  CLEAN UP ERROR INTERRUPTS, ERROR
                                                   24 # REGISTER AND ALLOW INTERRUPTS AND HARDWARE CHECKS.
0032574                                            25
0032574                                            26        MIMODE  DATA=S(ERRI)
0032574 01 000217 113405 ------            -001- 27        MI      S(ERRI)
0032575                                            28        ZER
0032575 01 000220 025750 ------            -001- 29            DATA    ZERX
0032576                                            30        L       IS_R,YT
0032576 01 000221 033322 ------            -001- 31            VFD     8,IS_RXT 8,YTXF
0032577                                            32        ZMINT
0032577 01 000222 026750 ------            -001- 33            DATA    ZMINTX
0032600 01 000223 007762 ------                    34        LSR     SS_R,BLKMSK          # REENABLE INTERRUPTS & HARDWARE CHECKS.
0032601 01 000224 053004 ------ 0032605            35        B       RTBREAK
0032602                                            36
                                                   37 # AFTER 64 LOOPS REENABLE INTERRUPTS AND TAKE A REAL TIME BREAK.
0032602                                            38
0032602                                            39 TIMCHCK
0032602 01 000225 117560 037400                    40        CIRM    MNRNDX,0,0,63
0032604 01 000227 055636 ------ 0032442            41        BNC     REDCOMP              # CONTINUE THRU LOOP.
0032605                                            42 RTBREAK
0032605                                            43        CALL    WAIT                 # TAKE A REAL TIME BREAK.
0032605 01 000230 173025 ------            -001- 44        BSAI    WXAIT                # SUBROUTINE WAIT IS IN PROGRAM CBLM
0032606 01 000231 153634 ------ 0032442    -001- 45        B       REDCOMP              # CONTINUE WITH LOOP.
0032607                                            46        TAKEOUT 22
0032607 01 000232 006000 ------            -001- 47        LR      0,0
0032610 01 000233 006000 ------            -001- 48        LR      0,0
0032611 01 000234 006000 ------            -001- 49        LR      0,0
```

MEMORY ELEMENT TEST   PR-1C929-50

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0032612 01 000235 006000 -------        -001- 01      LR      0,0
0032613 01 000236 006000 -------        -001- 02      LR      0,0
0032614 01 000237 006000 -------        -001- 03      LR      0,0
0032615 01 000240 006000 -------        -001- 04      LR      0,0
0032616 01 000241 006000 -------        -001- 05      LR      0,0
0032617 01 000242 006000 -------        -001- 06      LR      0,0
0032620 01 000243 006000 -------        -001- 07      LR      0,0
0032621 01 000244 006000 -------        -001- 08      LR      0,0
0032622 01 000245 006000 -------        -001- 09      LR      0,0
0032623 01 000246 006000 -------        -001- 10      LR      0,0
0032624 01 000247 006000 -------        -001- 11      LR      0,0
0032625 01 000250 006000 -------        -001- 12      LR      0,0
0032626 01 000251 006000 -------        -001- 13      LR      0,0
0032627 01 000252 006000 -------        -001- 14      LR      0,0
0032630 01 000253 006000 -------        -001- 15      LR      0,0
0032631 01 000254 006000 -------        -001- 16      LR      0,0
0032632 01 000255 006000 -------        -001- 17      LR      0,0
0032633 01 000256 006000 -------        -001- 18      LR      0,0
0032634 01 000257 006000 -------        -001- 19      LR      0,0
0032635                                       20 DATPATBL
0032635                                       21
0032635                                       22 # TABLE OF DATA TEST PATTERNS FOR MEMORY MODULE TESTS.
0032635                                       23
0032635 01 000260 077377 -------              24      DATA    B(0111111011111111)   # PH=1,PL=1 -- PATTERN 1
0032636 01 000261 110001 -------              25      DATA    B(1001000000000001)   # PH=1,PL=0 -- PATTERN 2
0032637 01 000262 047714 -------              26      DATA    B(0100111111001100)   # PH=0,PL=1 -- PATTERN 3
0032640                                       27 PATBLND
0032640                                       28      BSS     8
0032650                                       29      EOW                           # 13775
                                       -001- 30      NOTE    **************** THE LAST ADDRESS OVERWRITTEN IS 000272 **********


                    0000004                   33 PATOTAL EQU     PATBLND-DATPATBL+1    # NUMBER OF TEST PASSES REQUIRED
                                              34 # RESOLVE FAULTS TO A PARTICULAR BIT-SLICED MEMORY PLANE

0032650                                       36 DLFLXT
0032650                                       37      MIMODE  DATA=S(ERRI)
0032650 01 000273 113405 -------        -001- 38      MI      S(ERRI)
0032651                                       39      L       SDR1,R13              #CORRECT BAD PARITY IN SDR1
0032651 01 000274 162113 -------        -001- 40      VFD     8,SDR1%T 8,R13%F
0032652                                       41      ZER
0032652 01 000275 025750 -------        -001- 42      DATA    ZER%
0032653                                       43      L       IS_R,YT               # RESET ERROR INTERRUPT BIT
0032653 01 000276 033322 -------        -001- 44      VFD     8,IS_R%T 8,YT%F
0032654                                       45      ZMINT
0032654 01 000277 026750 -------        -001- 46      DATA    ZMINT%
0032655 01 000300 007762 -------              47      LSR     SS_R,BLKMSK           # REENABLE INTERRUPTS & HARDWARE CHECKS
0032656 01 000301 001727 -------              48      AR      MEMADDR1,MNRNDX       # FORM ADDRESS OF FAILING LOCATION
0032657 01 000302 034720 043112 CTSD          49      STL     MEMADDR1,PAGSCR+8     # SAVE ADDRESS FOR PRINTOUT - DATA(LEFT)
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 57  SEGMENT 1                                                          23:24:58   2/05/81   ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                           CDGSD        W77D

0032661 01 000304 034420 043113 CTSD           01      STL    HIPATBAK,PAGSCR+9    # SAVE MISMATCH FOR PRINTOUT-DATA(RIGHT)
0032663 01 000306 007461 ------               02      LSR    MCHB,HIPATBAK        # PREPARE FOR COMPARE
0032664           ,                           03      RTN_TBL *+4
0032664 01 000307 071400 ------       -001-   04      GA
0032665 01 000310 031000 032671 0032671 -001- 05      LAL    R0,*+4,RA0
0032667 01 000312 037000 011162 CDGNM  -001-  06      BL     INTRPNO3

                                      -001-   08 #       COMPARE
                                      -001-   09 #     COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                      -001-   10 #     IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0032671 01 000314 050014 ------ CDGNM  -001-  11      VFD    1,LPINDX 2,2 1,1 1,SUCCES      5,0 6,NCOMPARE
0032672 01 000315 000000 000000       -001-   12      ADDR   0(0000000)

                                      -001-   14 #       FAILBIT
                                      -001-   15 #     FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSDOXX
                                      -001-   16 #     WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0032674 01 000317 020220 ------ CDGNM  -001-  17      VFD    1,0 2,1 5,0 2,2 6,NFLBITS
0032675 01 000320 000002 ------       -001-   18      VFD    16,FLTSD0

                                              20 # A DATA BIT(SD0-15) IS STUCK-AT-ONE/ZERO IN MEMORY MODULE 0

                                      -001-   23 #       FAILTST
                                      -001-   24 #     FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD0PR.
                                      -001-   25 #     DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0032676 01 000321 020217 ------ CDGNM  -001-  26      VFD    1,0 2,1 5,0 2,2 6,NFAILTST
0032677 01 000322 000032 ------       -001-   27      VFD    16,FLTSD0PR

                                              29 # DATA PARITY BIT IS STUCK-AT-ONE/ZERO IN MEMORY MODULE 0

0032700                                       33 DHFLXT
0032700                                       34      MIMODE  DATA=S(ERRI)
0032700 01 000323 113405 ------       -001-   35      MI     S(ERRI)
0032701                                       36      L      SDR1,R13              # CORRECT BAD PARITY IN SDR1
0032701 01 000324 162113 ------       -001-   37      VFD     8,SDR1%T 8,R13%F
0032702                                       38      ZER
0032702 01 000325 025750 ------       -001-   39      DATA   ZER%
0032703                                       40      L      IS_R,YT               # RESET ERROR INTERRUPT BIT
0032703 01 000326 033322 ------       -001-   41      VFD     8,IS_R%T 8,YT%F
0032704                                       42      ZMINT
0032704 01 000327 026750 ------       -001-   43      DATA   ZMINT%
0032705 01 000330 007762 ------               44      LSR    SS_R,BLKMSK          # REENABLE INTERRUPTS & HARDWARE CHECKS
0032706 01 000331 001727 ------               45      AR     MEMADDR1,MNRNDX      # FORM ADDRESS OF FAILING LOCATION
0032707 01 000332 034720 043112 CTSD          46      STL    MEMADDR1,PAGSCR+8    # SAVE ADDRESS FOR PRINTOUT - DATA(LEFT)
0032711 01 000334 034420 043113 CTSD          47      STL    HIPATBAK,PAGSCR+9    # SAVE MISMATCH FOR PRINTOUT - DATA(RIGHT
                                                                                  )
0032713 01 000336 007461 ------               49      LSR    MCHB,HIPATBAK        # PREPARE FOR COMPARE
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 57  SEGMENT 1                                                        23:24:58   2/05/81  ****

    MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                           CDGSD        W77D

0032714                                              01        RTN_TBL *+4
0032714 01 000337 071400 ------        -001- 02        GA
0032715 01 000340 031000 032721 0032721 -001- 03       LAL     R0,*+4,RA0
0032717 01 000342 037000 011162 CDGNM  -001- 04        BL      INTRPN03

                                       -001- 06 #      COMPARE
                                       -001- 07 #      COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                       -001- 08 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0032721 01 000344 050014 ------ CDGNM  -001- 09        VFD     1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0032722 01 000345 000000 000000        -001- 10        ADDR    0(0000000)

                                       -001- 12 #      FAILBIT
                                       -001- 13 #      FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD0+8XX
                                       -001- 14 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0032724 01 000347 020220 ------ CDGNM  -001- 15        VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0032725 01 000350 000012 ------        -001- 16        VFD     16,FLTSD0+8

                                             18 # A WIDE DATA BIT(SD16-23) IS STUCK-AT-ONE/ZERO IN MEMORY MODULE 0


                                             22 CSTDT1 OW      0(351)                   # 13775
                                       -001- 23        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000351 **********


0032726                                      26
                                             27 # UPDATE OFF LINE MEMORY MODULE 0.
0032726                                      28
0032726                                      29 MOD0XT
0032726 01 000351 131000 043140 CTSD         30        LAL     R0,BASADDR,RA0
0032730 01 000353 030420 012756 CDGSIO       31        LL      R1,STSELMSK
0032732 01 000355 014001 ------              32        NR      R0,R1                    # EXTRACT STORE SELECT BITS.
0032733 01 000356 044000 ------              33        ST      R0,0(RA0)
0032734 01 000357 030420 012754 CDGSIO       34        LL      R1,MODSIZE
0032736 01 000361 004037 ------              35        SN      R1,1                     # LAST LOCATION IN MOD 0
0032737 01 000362 044021 ------              36        ST      R1,1(RA0)
0032740 01 000363 035400 043136 CTSD         37        STAL    R0,UPADDR,RA1
0032742 01 000365 003000 ------              38        ZR      R0
0032743 01 000366 044401 ------              39        ST      R0,1(RA1)                # UPADDR MUST EQUAL BEGINING OF MOD 0.
0032744                                      40 PASCK
0032744                                      41        CALL    UPDATE
0032744 01 000367 137020 013325 0013325 -001- 42      BSA     UPDATE
0032746                                      43        TAKEOUT 43
0032746 01 000371 106000 ------        -001- 44        LR      0,0
0032747 01 000372 006000 ------        -001- 45        LR      0,0
0032750 01 000373 006000 ------        -001- 46        LR      0,0
0032751 01 000374 006000 ------        -001- 47        LR      0,0
0032752 01 000375 006000 ------        -001- 48        LR      0,0
0032753 01 000376 006000 ------        -001- 49        LR      0,0
```

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TEST 57  SEGMENT 1                                                23:24:58   2/05/81  ****

     MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                              CDGSD         W77D

0032754 01 000377 006000 ------           -001- 01      LR      0,0
0032755 01 000400 006000 ------           -001- 02      LR      0,0
0032756 01 000401 006000 ------           -001- 03      LR      0,0
0032757 01 000402 006000 ------           -001- 04      LR      0,0
0032760 01 000403 006000 ------           -001- 05      LR      0,0
0032761 01 000404 006000 ------           -001- 06      LR      0,0
0032762 01 000405 006000 ------           -001- 07      LR      0,0
0032763 01 000406 006000 ------           -001- 08      LR      0,0
0032764 01 000407 006000 ------           -001- 09      LR      0,0
0032765 01 000410 006000 ------           -001- 10      LR      0,0
0032766 01 000411 006000 ------           -001- 11      LR      0,0
0032767 01 000412 006000 ------           -001- 12      LR      0,0
0032770 01 000413 006000 ------           -001- 13      LR      0,0
0032771 01 000414 006000 ------           -001- 14      LR      0,0
0032772 01 000415 006000 ------           -001- 15      LR      0,0
0032773 01 000416 006000 ------           -001- 16      LR      0,0
0032774 01 000417 006000 ------           -001- 17      LR      0,0
0032775 01 000420 006000 ------           -001- 18      LR      0,0
0032776 01 000421 006000 ------           -001- 19      LR      0,0
0032777 01 000422 006000 ------           -001- 20      LR      0,0
0033000 01 000423 006000 ------           -001- 21      LR      0,0
0033001 01 000424 006000 ------           -001- 22      LR      0,0
0033002 01 000425 006000 ------           -001- 23      LR      0,0
0033003 01 000426 006000 ------           -001- 24      LR      0,0
0033004 01 000427 006000 ------           -001- 25      LR      0,0
0033005 01 000430 006000 ------           -001- 26      LR      0,0
0033006 01 000431 006000 ------           -001- 27      LR      0,0
0033007 01 000432 006000 ------           -001- 28      LR      0,0
0033010 01 000433 006000 ------           -001- 29      LR      0,0
0033011 01 000434 006000 ------           -001- 30      LR      0,0
0033012 01 000435 006000 ------           -001- 31      LR      0,0
0033013 01 000436 006000 ------           -001- 32      LR      0,0
0033014 01 000437 006000 ------           -001- 33      LR      0,0
0033015 01 000440 006000 ------           -001- 34      LR      0,0
0033016 01 000441 006000 ------           -001- 35      LR      0,0
0033017 01 000442 006000 ------           -001- 36      LR      0,0
0033020 01 000443 006000 ------           -001- 37      LR      0,0
0033021                                         38      EOW                    # 13775
                                          -001- 39      NOTE    **************** THE LAST ADDRESS OVERWRITTEN IS 000443 **********

0033021                                       42 NOUPDTE
```

TEST 57 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                    01 CSTDT1 OW        0(444),0(446)          # 12434
                          -001- 02           NOTE      ************** THE FIRST ADDRESS OVERWRITTEN IS 000444 ***********

0033021                            05        FINALE    DT1INIT
0033021 01 000444 137020 012771 CDGSIO  -002- 06       BSA       FINAL
0033023 01 000446 137000 032406 0032406 -001- 07       BL        BKCSTDT1
0033025 01 000450 171400 -------        -001- 08       GA
0033026 01 000451 037000 011725 CDGNM   -001- 09       BL        PASSTST              # TEST COMPLETED
0033030                            10        EOW                                      # 12434
                          -001- 11           NOTE      *************** THE LAST ADDRESS OVERWRITTEN IS 000452 **********
```

```
TEST 57  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD          W77D

                                    01 CSTDT1 OW      O(453)                  # 13328
                            -001- 02        NOTE     ************** THE FIRST ADDRESS OVERWRITTEN IS 000453 **********

                                    05 # DESCRIPTION:
                                    06 #    THIS SUBROUTINE FORMS THE INPUT CONDITIONS FOR THE CALL TO "DGNMSG".
                                    07 # THE MISMATCH PATTERN IS APASSED IN R0 AND CHECKS ARE MADE TO DETERMINE
                                    08 # IF THE FAULT IS A SINGLE BIT ERROR.  IF IT IS DETERMINED THAT THERE IS
                                    09 # MORE THAN ONE FAULTY BIT , "DGNMSG" SUBROUTINE IS NOT CALLED AND THE
                                    10 # "DGN MAS ERR" MESSAGE IS NOT PRINTED.  IF THE DIAGNOSTIC TEST IS BEING
0033030                             11 # RUN IN THE REPEAT MODE THE MESSAGE IS ALSO NOT OUTPUTTED.
                                    12
                                    13 # ENTRY POINTS:
                                    14 #             FNDBTS - MISMATCH IN BITS 0-15.
                                    15 #             FNDHIBTS - MIMATCH IN BITS 16-23.
                                    16 #             TSTNRCRD - MIMATCH IN EITHER PARITY BIT.
0033030                             17
                                    18 # ENTRY CONDITIONS:
                                    19 #             R0 - DATA MISMATCH PATTERN (FNDBTS AND FNDHIBTS ONLY).
                                    20 #             R3 - CONTAINS WIDE STORE PARITY MISMATCH (TSTNRCRD ONLY).
                                    21 # EXIT CONDITIONS:
                                    22 #             HIPATBAK - MISMATCH PATTERN FOR RESOLUTION ROUTINE

0033030                             25 FNDBTS
0033030                             26        BEGIN
0033030 01 000453 171420 ------            -002- 27        HA
0033031 01 000454 022064 ------ TDATA      28        IBN     R3,S(WDSTR)            # TEST LOW BITS ONLY (SD0-15)
0033032 01 000455 053002 ------ 0033034    29        B       FNDBGN
0033033                             30 FNDHIBTS
0033033                             31        ABEGIN
0033033 01 000456 171420 ------     -001- 32        HA
0033034                             33 FNDBGN
0033034 01 000457 106100 ------     34        LR      R4,R0                  # SAVE DATA MISMATCH IN R4
0033035 01 000460 015400 ------     35        COM     R0
0033036 01 000461 020412 ------     36        FLZ     R0,R10
0033037 01 000462 015400 ------     37        COM     R0
0033040 01 000463 014000 ------     38        TZ      R0                     # ONLY ONE MISMATCH BIT SET?
                                    39 DDELETE NOTE    1
0033041 01 000464 050400 112703 0000121  40        BNCL    MULTXT            # IF NOT EXIT IMMEDIATELY.
                                    41 DINSERT NOTE    BNC MULTXT            # IF NOT EXIT IMMEDIATELY.
0033043 01 000466 024064 ------ TDATA      42        TBN     R3,S(WDSTR)     # FAULT IN HIGH DATA BITS ?
0033044 01 000467 054002 ------ 0033046    43        BC      WDBTCK          # IF SO GO TO WIDE BIT CHECK.
0033045 01 000470 053030 ------ 0033075    44        B       FORMDATA
0033046                             45 WDBTCK
0033046 01 000471 124242 ------     46        TBN     R10,2                  # SD16-19 OR SD20-23?
0033047 01 000472 054005 ------ 0033054    47        BC      WDPHCK          # IF SD20-23 GO TO WIDE DATA PARITY HIGH
                                                                             #   CHECK.
0033050                             49 WDPLCK
```

MEMORY ELEMENT TEST   PR-1C929-50

TEST 57 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0033050 01 000473 124060 ------             01      TBN      R3,S(PLBAK)        # CORRESPONDING PARITY LOW MISMATCH.
                                            02 DDELETE NOTE   1
0033051 01 000474 050400 112703 0000121     03      BNCL     MULTXT
                                            04 DINSERT NOTE   BNC MULTXT
0033053 01 000476 053004 ------ 0033057     05      B        WDINDX
0033054                                     06 WDPHCK
0033054 01 000477 124061 ------             07      TBN      R3,S(PHBAK)        # CORRESPONDING PARITY HIGH MISMATCH?
                                            08 DDELETE NOTE   1
0033055 01 000500 050400 112703 0000121     09      BNCL     MULTXT
                                            10 DINSERT NOTE   BNC MULTXT
0033057                                     11 WDINDX
                                            12 # SET R8=INDEX OF FAILING BIT SLICE.
0033057 01 000502 104650 ------             13      AN       R10,8              # ADJUST R10 TO CORRECT THE BIT POSITION.
0033060 01 000503 053015 ------ 0033075     14      B        FORMDATA
0033061                                     15 TSTNRCRD                         # ENTRY FOR PARITY BIT MISMATCH.
0033061                                     16      ABEGIN
0033061 01 000504 171420 ------    -001-    17      HA
0033062 01 000505 003100 ------             18      ZR       R4                 # FLAG FOR LATER DATA ANALYSIS.
0033063 01 000506 024060 ------             19      TBN      R3,S(PLBAK)        # IS FAILURE IN PH OR PL?
0033064 01 000507 054004 ------ 0033070     20      BC       PLBAD
0033065 01 000510 003641 000031             21      LI       R10,25             # PH=25
0033067 01 000512 053006 ------ 0033075     22      B        FORMDATA
0033070                                     23 PLBAD
0033070 01 000513 124061 ------             24      TBN      R3,S(PHBAK)        # IF PH IS BAD THIS IS A MULTIPLE
                                                                                  FAILURE.
                                            26 DDELETE NOTE   1
0033071 01 000514 050000 112703 0000121     27      BCL      MULTXT
                                            28 DINSERT NOTE   BC MULTXT
0033073 01 000516 003641 000030             29      LI       R10,24             # PL=24
0033075                                     30 FORMDATA
                                            31 # SET-UP INPUT CONDITIONS FOR DGNMSG SUBROUTINE:
                                            32 # R0(7-0) = BAD BIT NO.
                                            33 # R0(15) = CU NO. OF BAD DATA.
                                            34 # R6(7-0) =BAD DATA BITS (23-16)
                                            35 # R7 = BAD DATA BITS (15-0)
                                            36 # R8(7-0) = GOOD DATA BITS (23-16)
                                            37 # R9 = GOOD DATA BITS (15-0)
                                            38 # RA1 = MAS ADDRESS.
                                            39 # FORM THE DATA FOR DGNMSG SUBROUTINE.
0033075 01 000520 172224 ------             40      GN       R9,LSTPAT          # USE LAST PATTERN AS GOOD DATA
0033076 01 000521 006211 ------             41      LR       R8,R9
0033077 01 000522 010610 ------             42      RRN      R8,8               # THE HIGH 8 BITS OF LAST PATTERN ARE
                                                                                  SD16-23 GOOD DATA.
0033100                                     44 FORMADDR
0033100 01 000523 106354 ------             45      LR       RA1,MEMADDR0
0033101 01 000524 072367 ------             46      GN       RA1+1,MNRNDX
0033102 01 000525 001775 ------             47      AR       RA1+1,MEMADDR1
                                            48 # GET THE BAD DATA AGAIN SINCE IT WAS NOT SAVED BY MAIN ROUTINE.
0033103 01 000526 003044 ------             49      LN       R2,M(BIN)
```

MEMORY ELEMENT TEST   PR-1C929-50

```
0033104 01 000527 007722 -------           01        LSR     SS_S,R2
0033105 01 000530 030420 043144 CTSD       02        LL      R1,DGNLIM
0033107                                    03        LOS     0(RA1),AC=NO
0033107 01 000532 076020 -------   -001- 04        STAF    0(RA1)
0033110 01 000533 106160 -------   -001- 05        DATA    B(1000110001110000)
0033111 01 000534 024024 ------- TDATA     06        TBN     R1,S(WDSTR)
                                           07 CPATCH1 BGNP   0(72)                   # 13328
0033112 01 000535 037000 112654 0000072 -001- 08        BL      %%%407
                                   -001- 09        NOTE    CPATCH1 'CSECT'
                                   -001- 10        NOTE    ****************** PATCH AREA BEGINS AT 000072 *****************


0112654                            -001- 13 %%%407 PATCHAREA
0112654                                    14        TAKEOUT 1
0112654 14 000072 106000 -------   -001- 15        LR      0,0
0112655 14 000073 055004 ------- 0112661   16        BNC     CLRSS
0112656                                    17        MIMODE  L R6,SDR1             # PUT BAD DATA HIGH BITS IN R6.
0112656 14 000074 013000 -------   -001- 18        MIS     0
0112657 14 000075 061455 -------   -002- 19                VFD     8,R6%T 8,SDR1%F
0112660 14 000076 010550 -------           20        RRN     R6,8                 # RIGHT ADJUST R6.
0112661                                    21 CLRSS
                                           22 # THE ON-LINE MUST BE CLEANED UP BEFORE CALLING ANY SUBROUTINES.
0112661                                    23        MIMODE  DATA=S(ERRI)
0112661 14 000077 113405 -------   -001- 24        MI      S(ERRI)
0112662                                    25        L       SDR1,R13             # CORRECT PARITY IN SDR1
0112662 14 000100 162113 -------   -001- 26                VFD     8,SDR1%T 8,R13%F
0112663                                    27        ZER
0112663 14 000101 025750 -------   -001- 28                DATA    ZER%
0112664                                    29        L       IS_R,YT              # RESET ERROR INTERRUPTS.
0112664 14 000102 033322 -------   -001- 30                VFD     8,IS_R%T 8,YT%F
0112665                                    31        ZMINT
0112665 14 000103 026750 -------   -001- 32                DATA    ZMINT%
0112666 14 000104 007762 -------           33        LSR     SS_R,R2              # CLEAR BIN.
0112667 14 000105 006160 -------           34        LR      R7,R0                # PUT BAD DATA LOW BITS IN R7.
                                           35 # BAD BIT AND CU NO. GO INTO R0.
0112670 14 000106 006012 -------           36        LR      R0,R10
0112671 14 000107 057417 -------           37        TSRPL   SS
0112672 14 000110 030017 -------           38        ICF     R0,15                # BAD CU NO.
0112673 14 000111 030440 043055 CTSD       39        LL      R2,DGREQ
0112675 14 000113 024052 -------           40        TBN     R2,S(RPTMD)          # IS DIAGNOSTIC IN REPEAT MODE? IF SO
                                                                                   DONT PRINT MESSAGE.
0112676 14 000114 054003 ------- 0112701   42        BC      NOPRINT
0112677                                    43        CALL    DGNMSG               # PRINT THE "DGN MAS ERR" MESSAGE
0112677 14 000115 037021 016036 MASACS -001- 44        BSA     DGNMSG
0112701                                    45 NOPRINT
                                           46 # SET BIN FOR NEXT READ IN MAIN PROGRAM
0112701 14 000117 103204 -------           47        LN      R8,M(BIN)
0112702 14 000120 007730 -------           48        LSR     SS_S,R8
0112703                                    49 MULTXT
```

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TEST 57  SEGMENT 1                                                     23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                          CDGSD      W77D

0112703 14 000121 106024 ------              01      LR      HIPATBAK,R4           # MISMATCH PATTERN FOR RESOLUTION
                                                                                    ROUTINES.
0112704                                      03      RETURN
0112704 14 000122 056420 ------       -001-  04      BTSAG
0112705                                      05      ENDP    NR                    # 13328
                                      -001- 06.      NOTE    ************ LAST PATCH ADDRESS USED IS 000122 ****************
                                      -001- 07       NOTE    ***** NUMBER OF PATCH WORDS USED IS 25 (DECIMAL) ********


0112705                                      10      EOW                           # 13328
                                      -001- 11       NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000536 **********
```

```
                                -001- 01  #     ***********************************************************************
                                -001- 02  #     ***********************************************************************
                                -001- 03  #     **                                                                 **
                                -001- 04  #     **     CU DIAGNOSTIC TEST NO. 58, MAIN_STORE_MEMORY_MODULE
                                -001- 05  #     **                                                                 **
                                -001- 06  #     ***********************************************************************
                                -001- 07  #     ***********************************************************************


0033744                          -001- 10  CSTDT2 CSECT


0033744 02 000000 000145 ------- CDGNM  -001- 14          VFD     1,0 2,0 2,0 2,0 3,1 6,NBGN


                                18  # SEGMENT 1
                                19  #      THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                                20  # IF MEMORY MODULE 1 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                                21  # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                                22  # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                                23  # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                                24  # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                                25  # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                                26  # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                                27  # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                                28  # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                                29  # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                                30  # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                                31  # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                                32  # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                                33  #               1. A LOW DATA BIT (SD0-15) FAILURE
                                34  #               2. A HIGH DATA BIT (SD16-23) FAILURE
                                35  #               3. A PARITY BIT (SDPL,SDPH) FAILURE
                                36  #               4. ALL TEST (PATTERNS) PASS
                                37  #               5. THIS MEMORY MODULE IS NOT EQUIPPED
                                38  #               6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                                39  # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                                40  # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

```
TEST 58                                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                           CDGSD      W77D

                                    01 CSTDT2 OW      0(1),0(16)                # 12708
                              -001- 02        NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0033745                             05 DT2INIT PREPARE
                              -002- 06 #      RTN_BLM
                              -002- 07 #      TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0033745 02 000001 000144 ------ CDGNM  -002- 08        VFD    1,0 2,0 6,0 1,1 6,NRTNBLM

                              -002- 10 #      SEND
                              -002- 11 #      SEND 0(0000001) TO OFF-LINE MCHB.
                              -002- 12 #      PARITY IS 0(2).
0033746 02 000002 047707 ------ CDGNM  -002- 13        VFD    1,0 2,2 7,B(0111111) 6,N2SEND
0033747 02 000003 000040 000001       -002- 14        ADDR   0(0000001),0(2)

                              -002- 16 #      MICRO
                              -002- 17 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                              -002- 18 #      TO FIELD = MS%T    FROM FIELD = MCHB%F
0033751 02 000005 020005 ------ CDGNM  -002- 19        VFD    1,0 2,1 7,0 6,NMICRO
0033752 02 000006 106631 ------       -002- 20        VFD    8,MS%T 8,MCHB%F

                              -002- 22 #      NO3_CODE
                              -002- 23 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0033753 02 000007 040043 000000 CDGNM  -002- 24        VFD    1,0 2,2 7,0 6,NNO3CD
0033754 02 000010 000000 033756 0033756 -002- 25        ADDR   *+2

                              -001- 27 # SUBSTITUTE 'MAS' FOR'LOOP' IN TROUBLE PRINTOUT
0033756 02 000012 103501 000151 TTYTBL  -002- 28        LI     R4,M%AS
0033760 02 000014 034500 043132 CTSD    -001- 29        STL    R4,PAGSCR+24
                              -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                              -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                              -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0033762 02 000016 103240 ------       -001- 34        ZR     LOOPIND
0033763 02 000017 004257 ------       -001- 35        SN     LOOPIND,1            #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                    PROCEEDING WITH TEST
0033764 02 000020 072652 ------ CDGNM  -001- 37        HN     LOOPIND,LOOPIND
0033765 02 000021 037020 012757 CDGSIO -002- 38        BSA    CONTPREP
0033767 02 000023 172652 ------ CDGNM  -001- 39        HN     LOOPIND,LOOPIND
0033770 02 000024 137020 110443 CSYSUB -002- 40        BSA    INITOST

0033772 02 000026 171400 ------       -002- 42        GA
0033773 02 000027 031000 033777 0033777 -002- 43        LAL    R0,*+4,RA0
0033775 02 000031 037000 011162 CDGNM  -002- 44        BL     INTRPNO3
```

TEST 58   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0033777
                                                01   EOW   # 12708
                                     -001- 02   NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********

MEMORY ELEMENT TEST   PR-1C929-50

    23:24:58   2/05/81   TRADE SECRET — SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE   44

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TEST 58  SEGMENT 1                                                                    23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                           CDGSD        W77D

                                         -001- 01 #      ************************************************************
                                         -001- 02 #      *                                                        *
                                         -001- 03 #      *   TEST 58    SEGMENT 1                                  *
                                         -001- 04 #      *                                                        *
                                         -001- 05 #      ************************************************************

0033777 02 000033 000100 ------ CDGNM    -001- 08          VFD     1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                         -001- 13 #       NO3_CODE
                                         -001- 14 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD1TST.
0034000 02 000034 040043 000000 CDGNM    -001- 15          VFD     1,0 2,2 7,0 6,NNO3CD
0034001 02 000035 000000 034003 0034003  -001- 16          ADDR    MOD1TST

0034003                                       18 MOD1TST

                                              20 CSTDT2 OW    0(37),0(124)               #13775
                                         -001- 21          NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000037 **********

0034003                                       24          MODTST  MOD1

                                         -001- 26 #      THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                         -001- 27 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                         -001- 28 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0034003 02 000037 103421 000001          -001- 31          LI      R1,MOD1                   # OFF-LINE MEMORY MODULE TO BE TESTED
0034005 02 000041 037020 033114 0033114  -002- 32          BSA     RUNTST
0034007 02 000043 156000 ------          -003- 33          BPAX    R0
0034010 02 000044 153016 ------ 0034026  -003- 34          B       LDF444
0034011 02 000045 153031 ------ 0034042  -003- 35          B       HDF444
0034012 02 000046 153047 ------ 0034061  -003- 36          B       PRF444
0034013 02 000047 153055 ------ 0034070  -003- 37          B       UPD444
0034014 02 000050 153135 ------ 0034151  -003- 38          B       MOD1XT

0034015 02 000051 137020 011031 CDGNM    -002- 41          BSA     NOSTPMES

0034017 02 000053 171400 ------          -002- 43          GA      R0
0034020 02 000054 031000 034024 0034024  -002- 44          LAL     R0,*+4,RA0
0034022 02 000056 037000 011162 CDGNM    -002- 45          BL      INTRPNO3
```

```
                                          -002- 01 #      FAILTST
                                          -002- 02 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD1WT.
                                          -002- 03 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0034024 02 000060 020017 ------ CDGNM     -002- 04      VFD    1,0 2,1 5,0 2,0 6,NFAILTST
0034025 02 000061 000033 ------           -002- 05      VFD    16,FLTSD1WT

                                          -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


0034026                                   -001- 10 LDF444
0034026                                   -001- 11      RTN_TBL *+4
0034026 02 000062 171400 ------           -002- 12      GA
0034027 02 000063 031000 034033 0034033   -002- 13      LAL    RO,*+4,RAO
0034031 02 000065 037000 011162 CDGNM     -002- 14      BL     INTRPNO3

0034033                                   -001- 16      RETRN  RO              # RETRIEVE DATA (SDO-15) MISMATCH
                                                                                 INFORMATION
                                          -002- 18 #    RETRN
0034033                                   -002- 19
                                          -002- 20 #   RETURN OFF-LINE GENERAL REGISTER RO TO ON-LINE MCHB.
0034033 02 000067 037611 ------ CDGNM     -002- 21      VFD    1,0 2,1 7,B(1111110) 6,N2RETRN
0034034 02 000070 114523 ------           -002- 22      VFD    8,MCHB%T 8,RO%F

                                          -002- 24 #    COMPARE
                                          -002- 25 #   COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                          -002- 26 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034035 02 000071 050014 ------ CDGNM     -002- 27      VFD    1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
0034036 02 000072 000000 000000           -002- 28      ADDR   0(0000000)

                                          -002- 30 #    FAILBIT
                                          -002- 31 #   FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD1XX
                                          -002- 32 #   WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034040 02 000074 020220 ------ CDGNM     -002- 33      VFD    1,0 2,1 5,0 2,2 6,NFLBITS
0034041 02 000075 000002 ------           -002- 34      VFD    16,FLTSD1

                                          -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SDO-15) OF MEMORY MODULE 1


0034042                                   -001- 39 HDF444
0034042                                   -001- 40      RTN_TBL *+4
0034042 02 000076 171400 ------           -002- 41      GA
0034043 02 000077 031000 034047 0034047   -002- 42      LAL    RO,*+4,RAO
0034045 02 000101 037000 011162 CDGNM     -002- 43      BL     INTRPNO3

0034047                                   -001- 45      RETRN  R1  ·           # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                 INFO
                                          -002- 47 #    RETRN
0034047                                   -002- 48
                                          -002- 49 #   RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.
```

MEMORY ELEMENT TEST   PR-1C929-50

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TEST 58  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                       CDGSD        W77D

0034047 02 000103 037611 ------ CDGNM   -002- 01      VFD      1,0 2,1 7,B(1111110) 6,N2RETRN
0034050 02 000104 114525 ------         -002- 02      VFD      8,MCHB%T 8,R1%F

                                        -002- 04 #    MASK
                                        -002- 05 #    MASK CONTENTS OF ON-LINE MCHB WITH 0(0177400).
0034051 02 000105 040013 ------ CDGNM   -002- 06      VFD      1,0 2,2 7,0 6,NMASK
0034052 02 000106 000000 177400         -002- 07      ADDR     0(0177400)

                                        -002- 09 #    COMPARE
                                        -002- 10 #    COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                        -002- 11 #    IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034054 02 000110 050014 ------ CDGNM   -002- 12      VFD      1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
0034055 02 000111 000000 000000         -002- 13      ADDR     0(0000000)

                                        -002- 15 #    FAILBIT
                                        -002- 16 #    FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD1+8XX
                                        -002- 17 #    WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034057 02 000113 020220 ------ CDGNM   -002- 18      VFD      1,0 2,1 5,0 2,2 6,NFLBITS
0034060 02 000114 000012 ------         -002- 19      VFD      16,FLTSD1+8

                                        -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 1


0034061                                 -001- 25 PRF444
0034061                                 -001- 26      RTN_TBL *+4
0034061 02 000115 171400 ------         -002- 27      GA
0034062 02 000116 031000 034066 0034066 -002- 28      LAL      R0,*+4,RA0
0034064 02 000120 037000 011162 CDGNM   -002- 29      BL       INTRPNO3

                                        -002- 31 #    FAILTST
                                        -002- 32 #    FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD1PR.
                                        -002- 33 #    DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0034066 02 000122 020217 ------ CDGNM   -002- 34      VFD      1,0 2,1 5,0 2,2 6,NFAILTST
0034067 02 000123 000032 ------         -002- 35      VFD      16,FLTSD1PR

                                        -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 1


                                        -001- 40 #
                                        -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                        -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                        -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                        -001- 44 #
0034070                                 -001- 45 UPD444
0034070 02 000124 131000 043140 CTSD    -001- 46      LAL      R0,BASADDR,RA0
0034072 02 000126 030420 012754 CDGSIO  -001- 47      LL       R1,MODSIZE
0034074 02 000130 004037 ------         -001- 48      SN       R1,1                    # LAST LOCATION IN MOD
0034075 02 000131 040041 ------         -001- 49      L        R2,1(RA0)

MEMORY ELEMENT TEST                                                           PR-1C929-50

   23:24:58  2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD    ISSUE  06    PAGE   47
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TEST 58  SEGMENT 1                                                          23:24:58   2/05/81  ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                              CDGSD        W77D

0034076 02 000132 014422 ------            -001- 01      OR    R1,R2              # ADD LOWEST MOD SELECT BIT.
0034077 02 000133 044021 ------            -001- 02      ST    R1,1(RAO)
0034100 02 000134 035400 043136 CTSD       -001- 03      STAL  RO,UPADDR,RA1      # STORE BEGINING ADDRESS OF MOD IN
                                                                                  UPADDR.
0034102 02 000136 030420 012753 CDGSIO     -001- 05      LL    R1,MDSELMSK
0034104 02 000140 014041 ------            -001- 06      NR    R2,R1              # ZERO ALL BUT ONE MOD SELECT BIT.
0034105 02 000141 044441 ------            -001- 07      ST    R2,1(RA1)
0034106                                     -001- 08      CALL  UPDATE
0034106 02 000142 037020 013325 0013325    -002- 09      BSA   UPDATE
                                           -001- 10 #
                                           -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE 0 THAT WAS OVERWRITTEN BY MEMORY TEST.
                                           -001- 12 #
0034110 02 000144 131000 043140 CTSD       -001- 13      LAL   RO,BASADDR,RAO
0034112 02 000146 030420 012756 CDGSIO     -001- 14      LL    R1,STSELMSK
0034114 02 000150 014001 ------            -001- 15      NR    RO,R1              # EXTRACT STORE SELECT BITS.
0034115 02 000151 044000 ------            -001- 16      ST    RO,O(RAO)
0034116 02 000152 003421 010000            -001- 17      LI    R1,OFLTST          # ADDRESS OF OFF LINE MEMORY TEST.
0034120 02 000154 044021 ------            -001- 18      ST    R1,1(RAO)
0034121 02 000155 035400 043136 CTSD       -001- 19      STAL  RO,UPADDR,RA1
0034123 02 000157 003420 000312 CDGS3A     -001- 20      AI    R1,TESTSIZE        # LAST ADDRESS TO BE UPDATED.
0034125 02 000161 044421 ------            -001- 21      ST    R1,1(RA1)
0034126                                     -001- 22      CALL  UPDATE
0034126 02 000162 037020 013325 0013325.   -002- 23      BSA   UPDATE
0034130    .                                -001- 24      TAKEOUT 17
0034130                                     -002- 25      DO    .S,3.2=1,17
                                           -002- 26 .S LR 0,0
0034130 02 000164 106000 ------            -002- 27      LR    0,0
0034131 02 000165 006000 ------            -002- 28      LR    0,0
0034132 02 000166 006000 ------            -002- 29      LR    0,0
0034133 02 000167 006000 ------            -002- 30      LR    0,0
0034134 02 000170 006000 ------            -002- 31      LR    0,0
0034135 02 000171 006000 ------            -002- 32      LR    0,0
0034136 02 000172 006000 ------            -002- 33      LR    0,0
0034137 02 C00173 006000 ------            -002- 34      LR    0,0
0034140 02 000174 006000 ------            -002- 35      LR    0,0
0034141 02 000175 006000 ------            -002- 36      LR    0,0
0034142 02 000176 006000 ------            -002- 37      LR    0,0
0034143 02 C00177 006000 ------            -002- 38      LR    0,0
0034144 02 000200 006000 ------            -002- 39      LR    0,0
0034145 02 000201 006000 ------            -002- 40      LR    0,0
0034146 02 000202 006000 ------            -002- 41      LR    0,0
0034147 02 000203 006000 ------            -002- 42      LR    0,0
0034150 02 000204 006000 ------            -002- 43      LR    0,0
```

TEST 58 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0034151   -001- 01 MOD1XT

0034151   04   EOW   # 13775
                                               -001- 05   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********

```
                                        01 CSTDT2 OW     O(205),O(207)          # 12708
                                  -001- 02          NOTE   *************** THE FIRST ADDRESS OVERWRITTEN IS 000205 **********

0034151                                 05         FINALE DT2INIT
0034151 02 000205 137020 012771 CDGSIO  -002- 06          BSA    FINAL
0034153 02 000207 137000 033767 0033767 -001- 07          BL     BKCSTDT2
0034155 02 000211 171400 ------         -001- 08          GA
0034156 02 000212 037000 011725 CDGNM   -001- 09          BL     PASSTST                # TEST COMPLETED
0034156                                 10         EOW                                   # 12708
                                  -001- 11          NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

```
TEST 59                                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                            CDGSD        W77D

                                 -001- 01 #   *********************************************************************
                                 -001- 02 #   *********************************************************************
                                 -001- 03 #   **                                                                 **
                                 -001- 04 #   **     CU DIAGNOSTIC TEST NO. 59, MAIN_STORE_MEMORY_MODULE
                                 -001- 05 #   **                                                                 **
                                 -001- 06 #   *********************************************************************
                                 -001- 07 #   *********************************************************************

0034160                          -001- 10 CSTDT3 CSECT


0034160 03 000000 000145 ------ CDGNM   -001- 14        VFD      1,0 2,0 2,0 2,0 3,1 6,NBGN


                                 18 # SEGMENT 1
                                 19 #      THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                                 20 # IF MEMORY MODULE 2 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                                 21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                                 22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                                 23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                                 24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                                 25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                                 26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                                 27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                                 28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                                 29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                                 30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                                 31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                                 32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                                 33 #               1. A LOW DATA BIT (SD0-15) FAILURE
                                 34 #               2. A HIGH DATA BIT (SD16-23) FAILURE
                                 35 #               3. A PARITY BIT (SDPL,SDPH) FAILURE
                                 36 #               4. ALL TEST (PATTERNS) PASS
                                 37 #               5. THIS MEMORY MODULE IS NOT EQUIPPED
                                 38 #               6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                                 39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                                 40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

```
                                              01 CSTDT3 OW        0(1),0(16)                    # 12708
                                       -001- 02        NOTE      ************* THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0034161                                       05 DT3INIT PREPARE
                                       -002- 06 #       RTN_BLM
                                       -002- 07 #    TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0034161 03 000001 000144 ------ CDGNM  -002- 08        VFD       1,0 2,0 6,0 1,1 6,NRTNBLM

                                       -002- 10 #       SEND
                                       -002- 11 #    SEND 0(0000001) TO OFF-LINE MCHB.
                                       -002- 12 #    PARITY IS 0(2).
0034162 03 000002 047707 ------ CDGNM  -002- 13        VFD       1,0 2,2 7,B(0111111) 6,N2SEND
0034163 03 000003 000040 000001       -002- 14        ADDR      0(0000001),0(2)

                                       -002- 16 #       MICRO
                                       -002- 17 #    PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                       -002- 18 #    TO FIELD = MS%T   FROM FIELD = MCHB%F
0034165 03 000005 020005 ------ CDGNM  -002- 19        VFD       1,0 2,1 7,0 6,NMICRO
0034166 03 000006 106631 ------        -002- 20        VFD       8,MS%T 8,MCHB%F

                                       -002- 22 #       NO3_CODE
                                       -002- 23 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0034167 03 000007 040043 000000 CDGNM  -002- 24        VFD       1,0 2,2 7,0 6,NNO3CD
0034170 03 000010 000000 034172 0034172 -002- 25       ADDR      *+2

0034172 03 000012 103501 000151 TTYTBL -001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0034174 03 000014 034500 043132 CTSD   -002- 28        LI        R4,M%AS
                                       -001- 29        STL       R4,PAGSCR+24
                                       -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/O
                                       -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/O SUBCHANNEL TABLE
                                       -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0034176 03 000016 103240 ------        -001- 34        ZR        LOOPIND
0034177 03 000017 004257 ------        -001- 35        SN        LOOPIND,1                 #ASSURE THAT LOOPIND IS ZERO BEFORE
0034200 03 000020 072652 ------ CDGNM  -001- 37        HN        LOOPIND,LOOPIND                  PROCEEDING WITH TEST
0034201 03 000021 037020 012757 CDGSIO -002- 38        BSA       CONTPREP
0034203 03 000023 172652 ------ CDGNM  -001- 39        HN        LOOPIND,LOOPIND
0034204 03 000024 137020 110443 CSYSUB -002- 40        BSA       INITOST

0034206 03 000026 171400 ------        -002- 42        GA
0034207 03 000027 031000 034213 0034213 -002- 43       LAL       R0,*+4,RAO
0034211 03 000031 037000 011162 CDGNM  -002- 44        BL        INTRPNO3
```

TEST 59   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0034213   01   EOW   # 12708
                    ,   -001- 02   NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000032 ***** *****

```
                                   -001- 01 #      *******************************************************
                                   -001- 02 #      *                                                    *
                                   -001- 03 #      *   TEST 59    SEGMENT 1                              *
                                   -001- 04 #      *                                                    *
                                   -001- 05 #      *******************************************************


0034213 03 000033 000100 ------ CDGNM  -001- 08        VFD     1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                   -001- 13 #      NO3_CODE
                                   -001- 14 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD2TST.
0034214 03 000034 040043 000000 CDGNM  -001- 15        VFD     1,0 2,2 7,0 6,NNO3CD
0034215 03 000035 000000 034217 0034217 -001- 16      ADDR    MOD2TST

0034217                                         18 MOD2TST

                                                20 CSTDT3 OW     0(37),0(124)              # 13775
                                   -001- 21        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000037 **********

0034217                                         24         MODTST  MOD2

                                   -001- 26 #      THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                   -001- 27 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                   -001- 28 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0034217 03 000037 103421 000002         -001- 31        LI      R1,MOD2                 # OFF-LINE MEMORY MODULE TO BE TESTED
0034221 03 000041 037020 033114 0033114 -002- 32        BSA     RUNTST
0034223 03 000043 156000 ------         -003- 33        BPAX    R0
0034224 03 000044 153016 ------ 0034242 -003- 34        B       LDF493
0034225 03 000045 153031 ------ 0034256 -003- 35        B       HDF493
0034226 03 000046 153047 ------ 0034275 -003- 36        B       PRF493
0034227 03 000047 153055 ------ 0034304 -003- 37        B       UPD493
0034230 03 000050 153135 ------ 0034365 -003- 38        B       MOD2XT


0034231 03 000051 137020 011031 CDGNM  -002- 41        BSA     NOSTPMES

0034233 03 000053 171400 ------         -002- 43        GA
0034234 03 000054 031000 034240 0034240 -002- 44        LAL     R0,*+4,RA0
0034236 03 000056 037000 011162 CDGNM  -002- 45        BL      INTRPNO3
```

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TEST 59  SEGMENT 1                                                           23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                              CDGSD      W77D

                                        -002- 01 #      FAILTST
                                        -002- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD2WT.
                                        -002- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
   0034240 03 000060 020017 ------ CDGNM -002- 04      VFD    1,0 2,1 5,0 2,0 6,NFAILTST
   0034241 03 000061 000033 -------      -002- 05      VFD    16,FLTSD2WT

                                        -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


   0034242                              -001- 10 LDF493
   0034242                              -001- 11      RTN_TBL *+4
   0034242 03 000062 171400 -------      -002- 12      GA
   0034243 03 000063 031000 034247 0034247 -002- 13    LAL    R0,*+4,RA0
   0034245 03 000065 037000 011162 CDGNM -002- 14      BL     INTRPNO3

   0034247                              -001- 16      RFTRN   R0                       # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                        INFORMATION
                                        -002- 18 #      RETRN
   0034247                              -002- 19 #
                                        -002- 20 #    RETURN OFF-LINE GENERAL REGISTER R0 TO ON-LINE MCHB.
   0034247 03 000067 037611 ------ CDGNM -002- 21      VFD    1,0 2,1 7,B(1111110) 6,N2RETRN
   0034250 03 000070 114523 -------      -002- 22      VFD    8,MCHB%T 8,R0%F

                                        -002- 24 #      COMPARE
                                        -002- 25 #    COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                        -002- 26 #    IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
   0034251 03 G00071 050014 ------ CDGNM -002- 27      VFD    1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
   0034252 03 000072 000000 000000      -002- 28      ADDR   0(00U0000)

                                        -002- 30 #      FAILBIT
                                        -002- 31 #    FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD2XX
                                        -002- 32 #    WHERE XX IS THE LOWEST FAILING BIT NUMBER.
   0034254 03 000074 020220 ------ CDGNM -002- 33      VFD    1,0 2,1 5,0 2,2 6,NFLBITS
   0034255 03 000075 000002 -------      -002- 34      VFD    16,FLTSD2

                                        -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 2


   0034256                              -001- 39 HDF493
   0034256                              -001- 40      RTN_TBL *+4
   0034256 03 000076 171400 -------      -002- 41      GA
   0034257 03 000077 031000 034263 0034263 -002- 42    LAL    R0,*+4,RA0
   0034261 03 000101 037000 011162 CDGNM -002- 43      BL     INTRPNO3

   0034263                              -001- 45      RETRN   R1                       # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                        INFO
                                        -002- 47 #      RETRN
   0034263                              -002- 48 #
                                        -002- 49 #    RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.


   MEMORY ELEMENT TEST                                                                  PR-1C929-50
```

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0034263 03 000103 037611 ------ CDGNM        -002- 01       VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0034264 03 000104 114525 ------              -002- 02       VFD     8,MCHB%T 8,R1%F

                                             -002- 04 #     MASK
                                             -002- 05 #     MASK CONTENTS OF ON-LINE MCHB WITH 0(0177400).
0034265 03 000105 040013 ------ CDGNM        -002- 06       VFD     1,0 2,2 7,0 6,NMASK
0034266 03 000106 000000 177400              -002- 07       ADDR    0(0177400)

                                             -002- 09 #     COMPARE
                                             -002- 10 #     COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER TO 0(0000000).
                                             -002- 11 #     IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034270 03 000110 050014 ------ CDGNM        -002- 12       VFD     1,LPINDX 2,2 1,1 1,SUCCES      5,0 6,NCOMPARE
0034271 03 000111 000000 000000              -002- 13       ADDR    0(0000000)

                                             -002- 15 #     FAILBIT
                                             -002- 16 #     FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD2+8XX
                                             -002- 17 #     WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034273 03 000113 020220 ------ CDGNM        -002- 18       VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0034274 03 000114 000012 ------              -002- 19       VFD     16,FLTSD2+8

                                             -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 2


0034275                                      -001- 25 PRF493
0034275                                      -001- 26       RTN_TBL *+4
0034275 03 000115 171400 ------              -002- 27       GA
0034276 03 000116 031000 034302 0034302      -002- 28       LAL     R0,*+4,RA0
0034300 03 000120 037000 011162 CDGNM        -002- 29       BL      INTRPN03

                                             -002- 31 #     FAILTST
                                             -002- 32 #     FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD2PR.
                                             -002- 33 #     DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0034302 03 000122 020217 ------ CDGNM        -002- 34       VFD     1,0 2,1 5,0 2,2 6,NFAILTST
0034303 03 000123 000032 ------              -002- 35       VFD     16,FLTSD2PR

                                             -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 2


                                             -001- 40 #
                                             -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                             -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                             -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                             -001- 44 #
0034304                                      -001- 45 UPD493
0034304 03 000124 131000 043140 CTSD         -001- 46       LAL     R0,BASADDR,RA0
0034306 03 000126 030420 012754 CDGSIO       -001- 47       LL      R1,MODSIZE
0034310 03 000130 004037 ------              -001- 48       SN      R1,1              # LAST LOCATION IN MOD
0034311 03 000131 040041 ------              -001- 49       L       R2,1(RA0)
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 59  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD      W77D

0034312 03 000132 014422 ------          -001- 01        OR     R1,R2                   # ADD LOWEST MOD SELECT BIT.
0034313 03 000133 044021 ------          -001- 02        ST     R1,1(RA0)
0034314 03 000134 035400 043136 CTSD     -001- 03        STAL   R0,UPADDR,RA1           # STORE BEGINING ADDRESS OF MOD I/
                                                                                          UPADDR.
0034316 03 000136 030420 012753 CDGSIO   -001- 05        LL     R1,MDSELMSK
0034320 03 000140 014041 ------          -001- 06        NR     R2,R1                   # ZERO ALL BUT ONE MOD SELECT BIT.
0034321 03 000141 044441 ------          -001- 07        ST     R2,1(RA1)
0034322                                  -001- 08        CALL   UPDATE
0034322 03 000142 037020 013325 0013325  -002- 09        BSA    UPDATE
                                         -001- 10 #
                                         -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE O THAT WAS OVERWRITTEN BY MEMORY TEST.
                                         -001- 12 #
0034324 03 000144 131000 043140 CTSD     -001- 13        LAL    R0,BASADDR,RA0
0034326 03 000146 030420 012756 CDGSIO   -001- 14        LL     R1,STSELMSK
0034330 03 000150 014001 ------          -001- 15        NR     R0,R1                   # EXTRACT STORE SELECT BITS.
0034331 03 000151 044000 ------          -001- 16        ST     R0,0(RA0)
0034332 03 000152 003421 010000          -001- 17        LI     R1,OFLTST               # ADDRESS OF OFF LINE MEMORY TEST.
0034334 03 000154 044021 ------          -001- 18        ST     R1,1(RA0)
0034335 03 000155 035400 043136 CTSD     -001- 19        STAL   R0,UPADDR,RA1
0034337 03 000157 003420 000312 CDGS3A   -001- 20        AI     R1,TESTSIZE             # LAST ADDRESS TO BE UPDATED.
0034341 03 000161 044421 ------          -001- 21        ST     R1,1(RA1)
0034342                                  -001- 22        CALL   UPDATE
0034342 03 000162 037020 013325 0013325  -002- 23        BSA    UPDATE
0034344                                  -001- 24        TAKEOUT 17
0034344                                  -002- 25     .S DO     .S,3.2=1,17
                                         -002- 26 .S LR 0,0
0034344 03 000164 106000 ------          -002- 27        LR     0,0
0034345 03 000165 006000 ------          -002- 28        LR     0,0
0034346 03 000166 006000 ------          -002- 29        LR     0,0
0034347 03 000167 006000 ------          -002- 30        LR     0,0
0034350 03 000170 006000 ------          -002- 31        LR     0,0
0034351 03 000171 006000 ------          -002- 32        LR     0,0
0034352 03 000172 006000 ------          -002- 33        LR     0,0
0034353 03 000173 006000 ------          -002- 34        LR     0,0
0034354 03 000174 006000 ------          -002- 35        LR     0,0
0034355 03 000175 006000 ------          -002- 36        LR     0,0
0034356 03 000176 006000 ------          -002- 37        LR     0,0
0034357 03 000177 006000 ------          -002- 38        LR     0,0
0034360 03 000200 006000 ------          -002- 39        LR     0,0
0034361 03 000201 006000 ------          -002- 40        LR     0,0
0034362 03 000202 006000 ------          -002- 41        LR     0,0
0034363 03 000203 006000 ------          -002- 42        LR     0,0
0034364 03 000204 006000 ------          -002- 43        LR     0,0
```

TEST 59 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0034365   -001- 01 MOD2XT

0034365   04   EOW   # 13775
                                     -001- 05   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********

```
TEST 59  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                       CDGSD      W77D

                                       01 CSTDT3 OW    0(205),0(207)        # 12708
                                  -001- 02        NOTE   *************** THE FIRST ADDRESS OVERWRITTEN IS 000205 ****.*****

       MEMORY ELEMENT TEST:
0034365                                05        FINALE DT3INIT
0034365 03 000205 137020 012771 CDGSIO  -002- 06        BSA    FINAL
0034367 03 000207 137000 034203 0034203 -001- 07        BL     BKCSTDT3
0034371 03 000211 171400 -------        -001- 08        GA
0034372 03 000212 037000 011725 CDGNM   -001- 09        BL     PASSTST           # TEST COMPLETED
0034372                                 10        EOW                      # 12708
                                  -001- 11        NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

TEST 60   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                -001- 01 #    ******************************************************************
                                -001- 02 #    ******************************************************************
                                -001- 03 #    **                                                            **
                                -001- 04 #    **      CU DIAGNOSTIC TEST NO. 60, MAIN_STORE_MEMORY_MODULE    **
                                -001- 05 #    **                                                            **
                                -001- 06 #    ******************************************************************
                                -001- 07 #    ******************************************************************
```

0034374   -001- 10 CSTDT4 CSECT

0034374 04 000000 000145 ------ CDGNM   -001- 14   VFD   1,0 2,0 2,0 2,0 3,1 6,NBGN

```
                                18 # SEGMENT 1
                                19 #      THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                                20 # IF MEMORY MODULE 3 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                                21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                                22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                                23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                                24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                                25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                                26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                                27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                                28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                                29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                                30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                                31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                                32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                                33 #              1. A LOW DATA BIT (SD0-15) FAILURE
                                34 #              2. A HIGH DATA BIT (SD16-23) FAILURE
                                35 #              3. A PARITY BIT (SDPL,SDPH) FAILURE
                                36 #              4. ALL TEST (PATTERNS) PASS
                                37 #              5. THIS MEMORY MODULE IS NOT EQUIPPED
                                38 #              6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                                39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                                40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

```
TEST 60                                                                    23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                CDGSD      W77D

                                         01 CSTDT4  OW       0(1),0(16)           # 12708
                              -001- 02        NOTE      ************* THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0034375                                  05 DT4INIT PREPARE
                              -002- 06 #      RTN_BLM
                              -002- 07 #   TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0034375 04 000001 000144 ------ CDGNM     -002- 08      VFD      1,0 2,0 6,0 1,1 6,NRTNBLM

                              -002- 10 #      SEND
                              -002- 11 #   SEND 0(0000001) TO OFF-LINE MCHB.
                              -002- 12 #   PARITY IS 0(2).
0034376 04 000002 047707 ------ CDGNM     -002- 13      VFD      1,0 2,2 7,B(0111111) 6,N2SEND
0034377 04 000003 000040 000001          -002- 14      ADDR     0(0000001),0(2)

                              -002- 16 #      MICRO
                              -002- 17 #   PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                              -002- 18 #   TO FIELD = MS%T    FROM FIELD = MCHB%F
0034401.04 000005 020005 ------ CDGNM     -002- 19      VFD      1,0 2,1 7,0 6,NMICRO
0034402 04 000006 106631 ------          -002- 20      VFD      8,MS%T 8,MCHB%F

                              -002- 22 #      NO3_CODE
                              -002- 23 #   PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0034403 04 000007 040043 000000 CDGNM     -002- 24      VFD      1,0 2,2 7,0 6,NNO3CD
0034404 04 000010 000000 034406 0034406   -002- 25      ADDR     *+2

                              -001- 27 # SUBSTITUTE 'MAS' FOR'LOOP' IN TROUBLE PRINTOUT
0034406 04 000012 103501 000151 TTYTBL    -002- 28      LI       R4,M%AS
0034410 04 000014 034500 043132 CTSD      -001- 29      STL      R4,PAGSCR+24
                              -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                              -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                              -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0034412 04 000016 103240 ------          -001- 34      ZR       LOOPIND
0034413 04 000017 004257 ------          -001- 35      SN       LOOPIND,1           #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                      PROCEEDING WITH TEST
0034414 04 000020 072652 ------ CDGNM     -001- 37      HN       LOOPIND,LOOPIND
0034415 04 00002: 037020 012757 CDGSIO    -002- 38      BSA      CONTPREP
0034417 04 000023 172652 ------ CDGNM     -001- 39      HN       LOOPIND,LOOPIND
0034420 04 000024 137020 110443 CSYSUB    -002- 40      BSA      INITOST

0034422 04 000026 171400 ------          -002- 42      GA
0034423 04 000027 031000 034427 0034427   -002- 43      LAL      R0,*+4,RA0
0034425 04 000031 037000 011162 CDGNM     -002- 44      BL       INTRPNO3
```

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TEST 60                                                              23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD          W77D

0034427                                                                    # 12708
                              01      EOW
                       -001- 02      NOTE    **************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********
```

```
TEST 60  SEGMENT 1                                                          23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD        W77D

                                         -001- 01 #      *************************************************
                                         -001- 02 #      *                                              *
                                         -001- 03 #      *   TEST 60    SEGMENT 1                        *
                                         -001- 04 #      *                                              *
                                         -001- 05 #      *************************************************


   0034427 04 000033 000100 ------- CDGNM   -001- 08         VFD     1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                         -001- 13 #      NO3_CODE
                                         -001- 14 #   PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD3TST.
   0034430 04 000034 040043 000000 CDGNM   -001- 15         VFD     1,0 2,2 7,0 6,NNO3CD
   0034431 04 000035 000000 034433 0034433 -001- 16         ADDR    MOD3TST

   0034433                                        18 MOD3TST

                                                  20 CSTDT4 OW     O(37),O(124)            # 13775
                                         -001- 21         NOTE    ************* THE FIRST ADDRESS OVERWRITTEN IS 000037 **********

   0034433                                        24         MODTST  MOD3

                                         -001- 26 #    THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                         -001- 27 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                         -001- 28 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

   0034433 04 000037 103421 000003         -001- 31         LI      R1,MOD3                # OFF-LINE MEMORY MODULE TO BE TESTED
   0034435 04 000041 037020 033114 0033114 -002- 32         BSA     RUNTST
   0034437 04 000043 156000 -------        -003- 33         BPAX    R0
   0034440 04 000044 153016 ------- 0034456 -003- 34         B       LDF542
   0034441 04 000045 153031 ------- 0034472 -003- 35         B       HDF542
   0034442 04 000046 153047 ------- 0034511 -003- 36         B       PRF542
   0034443 04 000047 153055 ------- 0034520 -003- 37         B       UPD542
   0034444 04 000050 153135 ------- 0034601 -003- 38         B       MOD3XT


   0034445 04 000051 137020 011031 CDGNM   -002- 41         BSA     NOSTPMES

   0034447 04 000053 171400 -------        -002- 43         GA
   0034450 04 000054 031000 034454 0034454 -002- 44         LAL     R0,*+4,RAO
   0034452 04 000056 037000 011162 CDGNM   -002- 45         BL      INTRPNO3




   MEMORY ELEMENT TEST                                                           PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD     ISSUE 06     PAGE   63
```

TEST 60   SEGMENT 1   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                          -002- 01 #     FAILTST
                                          -002- 02 #     FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD3WT.
                                          -002- 03 #     DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0034454 04 000060 020017 ------ CDGNM     -002- 04       VFD     1,0 2,1 5,0 2,0 6,NFAILTST
0034455 04 000061 000033 ------            -002- 05       VFD     16,FLTSD3WT

                                          -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


0034456                                   -001- 10 LDF542
0034456                                   -001- 11       RTN_TBL *+4
0034456 04 000062 171400 ------            -002- 12       GA
0034457 04 000063 031000 034463 0034463   -002- 13       LAL     R0,*+4,RA0
0034461 04 000065 037000 011162 CDGNM     -002- 14       BL      INTRPN03

0034463                                   -001- 16       RETRN   R0                  # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                       INFORMATION
                                          -002- 18 #     RETRN
0034463 .                                 -002- 19
                                          -002- 20 #     RETURN OFF-LINE GENERAL REGISTER R0 TO ON-LINE MCHB.
0034463 04 000067 037611 ------ CDGNM     -002- 21       VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0034464 04 000070 114523 ------            -002- 22       VFD     8,MCHB%T 8,R0%F

                                          -002- 24 #     COMPARE
                                          -002- 25 #     COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                          -002- 26 #     IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034465 04 000071 050014 ------ CDGNM     -002- 27       VFD     1,LPINDX 2,2 1,1 1,SUCCES       5,0 6,NCOMPARE
0034466 04 000072 000000 000000           -002- 28       ADDR  . 0(0000000)

                                          -002- 30 #     FAILBIT
                                          -002- 31 #     FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD3XX
                                          -002- 32 #     WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034470 04 000074 020220 ------ CDGNM     -002- 33       VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0034471 04 000075 000002 ------            -002- 34       VFD     16,FLTSD3

                                          -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 3


0034472                                   -001- 39 HDF542
0034472                                   -001- 40       RTN_TBL *+4
0034472 04 000076 171400 ------            -002- 41       GA
0034473 04 000077 031000 034477 0034477   -002- 42       LAL     R0,*+4,RA0
0034475 04 000101 037000 011162 CDGNM     -002- 43       BL      INTRPN03

0034477                                   -001- 45       RETRN   R1                  # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                       INFO
                                          -002- 47 #     RETRN
0034477                                   -002- 48
                                          -002- 49 #     RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 60  SEGMENT 1                                                      23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                         CDGSD      W77D

0034477 04 000103 037611 ------ CDGNM    -002- 01      VFD      1,0 2,1 7,B(1111110) 6,N2RETRN
0034500 04 000104 114525 ------          -002- 02      VFD      8,MCHBXT 8,R1XF

                                         -002- 04 #     MASK
                                         -002- 05 #  MASK CONTENTS OF ON-LINE MCHB WITH 0(0177400).
0034501 04 000105 040013 ------ CDGNM    -002- 06      VFD      1,0 2,2 7,0 6,NMASK
0034502 04 000106 000000 177400          -002- 07      ADDR     0(0177400)

                                         -002- 09 #     COMPARE
                                         -002- 10 #  COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                         -002- 11 #  IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034504 04 000110 050014 ------ CDGNM    -002- 12      VFD      1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
0034505 04 000111 000000 000000          -002- 13      ADDR     0(0000000)

                                         -002- 15 #     FAILBIT
                                         -002- 16 #  FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD3+8XX
                                         -002- 17 #  WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034507 04 000113 020220 ------ CDGNM    -002- 18      VFD      1,0 2,1 5,0 2,2 6,NFLBITS
0034510 04 000114 000012 ------          -002- 19      VFD      16,FLTSD3+8

                                         -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 3


0034511                                  -001- 25 PRF542
0034511                                  -001- 26      RTN_TBL  *+4
0034511 04 000115 171400 ------          -002- 27      GA
0034512 04 000116 031000 034516 0034516  -002- 28      LAL      R0,*+4,RA0
0034514 04 000120 037000 011162 CDGNM    -002- 29      BL       INTRPN03

                                         -002- 31 #     FAILTST
                                         -002- 32 #  FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD3PR.
                                         -002- 33 #  DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0034516 04 000122 020217 ------ CDGNM    -002- 34      VFD      1,0 2,1 5,0 2,2 6,NFAILTST
0034517 04 000123 000032 ------          -002- 35      VFD      16,FLTSD3PR

                                         -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 3


                                         -001- 40 #
                                         -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                         -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                         -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                         -001- 44 #
0034520                                  -001- 45 UPD542
0034520 04 000124 131000 043140 CTSD     -001- 46      LAL      R0,BASADDR,RA0
0034522 04 000126 030420 012754 CDGSIO   -001- 47      LL       R1,MODSIZE
0034524 04 000130 004037 ------          -001- 48      SN       R1,1                 # LAST LOCATION IN MOD
0034525 04 000131 040041 ------          -001- 49      L        R2,1(RA0)

   MEMORY ELEMENT TEST                                                          PR-1C929-50

      23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE  06   PAGE   65
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TEST 60  SEGMENT 1                                                      23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                           CDGSD      W77D

0034526 04 000132 014422 ------           -001- 01        OR      R1,R2            # ADD LOWEST MOD SELECT BIT.
0034527 04 000133 044021 ------           -001- 02        ST      R1,1(RA0)
0034530 04 000134 035400 043136 CTSD      -001- 03        STAL    R0,UPADDR,RA1    # STORE BEGINING ADDRESS OF MOD IN
                                                                                     UPADDR.
0034532 04 000136 030420 012753 CDGSIO    -001- 05        LL      R1,MDSELMSK
0034534 04 000140 014041 ------           -001- 06        NR      R2,R1            # ZERO ALL BUT ONE MOD SELECT BIT.
0034535 04 000141 044441 ------           -001- 07        ST      R2,1(RA1)
0034536                                    -001- 08        CALL    UPDATE
0034536 04 000142 037020 013325 0013325   -002- 09        BSA     UPDATE
                                           -001- 10 #
                                           -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE 0 THAT WAS OVERWRITTEN BY MEMORY TEST.
                                           -001- 12 #
0034540 04 000144 131000 043140 CTSD      -001- 13        LAL     R0,BASADDR,RA0
0034542 04 000146 030420 012756 CDGSIO    -001- 14        LL      R1,STSELMSK
0034544 04 000150 014001 ------           -001- 15        NR      R0,R1            # EXTRACT STORE SELECT BITS.
0034545 04 000151 044000 ------           -001- 16        ST      R0,0(RA0)
0034546 04 000152 003421 010000           -001- 17        LI      R1,OFLTST        # ADDRESS OF OFF LINE MEMORY TEST.
0034550 04 000154 044021 ------           -001- 18        ST      R1,1(RA0)
0034551 04 000155 035400 043136 CTSD      -001- 19        STAL    R0,UPADDR,RA1
0034553 04 000157 003420 000312 CDGS3A    -001- 20        AI      R1,TESTSIZE      # LAST ADDRESS TO BE UPDATED.
0034555 04 000161 044421 ------           -001- 21        ST      R1,1(RA1)
0034556                                    -001- 22        CALL    UPDATE
0034556 04 000162 037020 013325 0013325   -002- 23        BSA     UPDATE
0034560                                    -001- 24        TAKEOUT 17
0034560                                    -002- 25        DO      .S,3.2=1,17
                                           -002- 26 .S LR 0,0
0034560 04 000164 106000 ------           -002- 27        LR      0,0
0034561 04 000165 006000 ------           -002- 28        LR      0,0
0034562 04 000166 006000 ------           -002- 29        LR      0,0
0034563 04 000167 006000 ------           -002- 30        LR      0,0
0034564 04 000170 006000 ------           -002- 31        LR      0,0
0034565 04 000171 006000 ------           -002- 32        LR      0,0
0034566 04 000172 006000 ------           -002- 33        LR      0,0
0034567 04 000173 006000 ------           -002- 34        LR      0,0
0034570 04 000174 006000 ------           -002- 35        LR      0,0
0034571 04 000175 006000 ------           -002- 36        LR      0,0
0034572 04 000176 006000 ------           -002- 37        LR      0,0
0034573 04 000177 006000 ------           -002- 38        LR      0,0
0034574 04 000200 006000 ------           -002- 39        LR      0,0
0034575 04 000201 006000 ------           -002- 40        LR      0,0
0034576 04 000202 006000 ------           -002- 41        LR      0,0
0034577 04 000203 006000 ------           -002- 42        LR      0,0
0034600 04 000204 006000 ------           -002- 43        LR      0,0
```

TEST 60 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0034601   -001- 01 MOD3XT

0034601   04   EOW   # 13775
                                         -001- 05   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********

```
TEST 60  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD       W77D

                                         01 CSTDT4 OW    0(205),0(207)          # 12708
                                 -001- 02         NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000205 **********

0034601                                  05        FINALE DT4INIT
0034601 04 000205 137020 012771 CDGSIO  -002- 06   BSA    FINAL
0034603 04 000207 137000 034417 0034417 -001- 07   BL     BKCSTDT4
0034605 04 000211 171400 ------         -001- 08   GA
0034606 04 000212 037000 011725 CDGNM   -001- 09   BL     PASSTST            # TEST COMPLETED
0034606                                  10        EOW                       # 12708
                                 -001- 11         NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                              -001- 01 #    ****************************************************************************
                              -001- 02 #    ****************************************************************************
                              -001- 03 #    **                                                                      **
                              -001- 04 #    **     CU DIAGNOSTIC TEST NO. 61, MAIN_STORE_MEMORY_MODULE             **
                              -001- 05 #    **                                                                      **
                              -001- 06 #    ****************************************************************************
                              -001- 07 #    ****************************************************************************


0034610                       -001- 10 CSTDT5 CSECT


0034610 05 000000 000145 ------ CDGNM   -001- 14        VFD      1,0 2,0 2,0 2,0 3,1 6,NBGN


                       18 # SEGMENT 1
                       19 #     THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                       20 # IF MEMORY MODULE 4 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                       21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                       22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                       23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                       24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                       25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                       26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                       27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                       28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                       29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                       30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                       31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                       32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                       33 #              1. A LOW DATA BIT (SD0-15) FAILURE
                       34 #              2. A HIGH DATA BIT (SD16-23) FAILURE
                       35 #              3. A PARITY BIT (SDPL,SDPH) FAILURE
                       36 #              4. ALL TEST (PATTERNS) PASS
                       37 #              5. THIS MEMORY MODULE IS NOT EQUIPPED
                       38 #              6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                       39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                       40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

MEMORY ELEMENT TEST   PR-1C929-50

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TEST 61                                                              23:24:58   2/05/81  ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

                                          01 CSTDT5 OW      0(1),0(16)              # 12708
                                 -001- 02    NOTE     ************* THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0034611 .                                 05 DT5INIT PREPARE
                                 -002- 06 #    RTN_BLM
                                 -002- 07 #    TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0034611 05 000001 000144 ------ CDGNM     -002- 08    VFD      1,0 2,0 6,0 1,1 6,NRTNBLM

                                 -002- 10 #    SEND
                                 -002- 11 #    SEND 0(0000001) TO OFF-LINE MCHB.
                                 -002- 12 #    PARITY IS 0(2).
0034612 05 000002 047707 ------ CDGNM     -002- 13    VFD      1,0 2,2 7,B(0111111) 6,N2SEND
0034613 05 000003 000040 000001           -002- 14    ADDR     0(00000001),0(2)

                                 -002- 16 #    MICRO
                                 -002- 17 #    PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                 -002- 18 #    TO FIELD = MS%T   FROM FIELD = MCHB%F
0034615 05 000005 020005 ------ CDGNM     -002- 19    VFD      1,0 2,1 7,0 6,NMICRO
0034616 05 000006 106631 ------           -002- 20    VFD      8,MS%T 8,MCHB%F

                                 -002- 22 #    NO3_CODE
                                 -002- 23 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0034617 05 000007 040043 000000 CDGNM     -002- 24    VFD      1,0 2,2 7,0 6,NNO3CD
0034620 05 000010 000000 034622 0034622   -002- 25    ADDR     *+2

                                 -001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0034622 05 000012 103501 000151 TTYTBL    -002- 28    LI       R4,M%AS
0034624 05 000014 034500 043132 CTSD      -001- 29    STL      R4,PAGSCR+24
                                 -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/O
                                 -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/O SUBCHANNEL TABLE
                                 -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0034626 05 000016 103240 ------           -001- 34    ZR       LOOPIND
0034627 05 000017 004257 ------           -001- 35    SN       LOOPIND,1              #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                       PROCEEDING WITH TEST
0034630 05 000020 072652 ------ CDGNM     -001- 37    HN       LOOPIND,LOOPIND
0034631 05 000021 037020 012757 CDGSIO    -002- 38    BSA      CONTPREP
0034633 05 000023 172652 ------ CDGNM     -001- 39    HN       LOOPIND,LOOPIND
0034634 05 000024 137020 110443 CSYSUB    -002- 40    BSA      INITOST

0034636 05 000026 171400 ------           -002- 42    GA
0034637 05 000027 031000 034643 0034643   -002- 43    LAL      R0,*+4,RA0
0034641 05 000031 037000 011162 CDGNM     -002- 44    BL       INTRPNO3




  MEMORY ELEMENT TEST                                                   PR-1C929-50

    23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD     ISSUE 06     PAGE  70
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TEST 61   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0034643
                                01   EOW   # 12708
                        -001- 02   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000032 * *********

```
TEST 61   SEGMENT 1                                              23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                   CDGSD        W77D

                                        -001- 01  #      ***************************************************
                                        -001- 02  #      *                                               *
                                        -001- 03  #      *   TEST 61    SEGMENT 1                         *
                                        -001- 04  #      *                                               *
                                        -001- 05  #      ***************************************************

0034643 05 000033 000100 ------ CDGNM   -001- 08        VFD     1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                        -001- 13  #      NO3_CODE
                                        -001- 14  #      PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD4TST.
0034644 05 000034 040043 000000 CDGNM   -001- 15        VFD     1,0 2,2 7,0 6,NNO3CD
0034645 05 000035 000000 034647 0034647 -001- 16        ADDR    MOD4TST


0034647 ·                                 19 MOD4TST

                                          21 CSTDT5 OW    0(37),0(124)            # 13775
                                        -001- 22        NOTE    ************* THE FIRST ADDRESS OVERWRITTEN IS 000037 **********


0034647                                   25        MODTST  MOD4

                                        -001- 27  #      THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                        -001- 28  # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                        -001- 29  # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0034647 05 000037 103421 000004         -001- 32        LI      R1,MOD4                # OFF-LINE MEMORY MODULE TO BE TESTED
0034651 05 000041 037020 033114 0033114 -002- 33        BSA     RUNTST
0034653 05 000043 156000 ------         -003- 34        BPAX    R0
0034654 05 000044 153016 ------ 0034672 -003- 35        B       LDF591
0034655 05 000045 153031 ------ 0034706 -003- 36        B       HDF591
0034656 05 000046 153047 ------ 0034725 -003- 37        B       PRF591
0034657 05 000047 153055 ------ 0034734 -003- 38        B       UPD591
0034660 05 000050 153135 ------ 0035015 -003- 39        B       MOD4XT


0034661 05 000051 137020 011031 CDGNM   -002- 42        BSA     NOSTPMES

0034663 05 000053 171400 ------         -002- 44        GA
0034664 05 000054 031000 034670 0034670 -002- 45        LAL     R0,*+4,RA0
0034666 05 000056 037000 011162 CDGNM   -002- 46        BL      INTRPNO3
```

TEST 61   SEGMENT 1   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                          ,                    -002- 01 #     FAILTST
                                               -002- 02 #     FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD4WT.
                                               -002- 03 #     DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0034670 05 000060 020017 ------ CDGNM          -002- 04       VFD    1,0 2,1 5,0 2,0 6,NFAILTST
0034671 05 000061 000033 ------                -002- 05       VFD    16,FLTSD4WT

                                               -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED

0034672                                        -001- 10 LDF591
0034672                                        -001- 11       RTN_TBL *+4
0034672 05 000062 171400 ------                -002- 12       GA
0034673 05 000063 031000 034677 0034677        -002- 13       LAL    RO,*+4,RAO
0034675 05 000065 037000 011162 CDGNM          -002- 14       BL     INTRPNO3

0034677                                        -001- 16       RETRN  RO                          # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                                   INFORMATION
0034677                                        -002- 18 #     RETRN
                                               -002- 19
                                               -002- 20 #  RETURN OFF-LINE GENERAL REGISTER RO TO ON-LINE MCHB.
0034677 05 000067 037611 ------ CDGNM          -002- 21       VFD    1,0 2,1 7,B(1111110) 6,N2RETRN
0034700 05 000070 114523 ------                -002- 22       VFD    8,MCHB%T 8,RO%F

                                               -002- 24 #     COMPARE
                                               -002- 25 #  COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                               -002- 26 #  IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034701 05 000071 050014 ------ CDGNM          -002- 27       VFD    1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
0034702 05 000072 000000 000000                -002- 28       ADDR   0(0000000)

                                               -002- 30 #     FAILBIT
                                               -002- 31 #  FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD4XX
                                               -002- 32 #  WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034704 05 000074 020220 ------ CDGNM          -002- 33       VFD    1,0 2,1 5,0 2,2 6,NFLBITS
0034705 05 000075 000002 ------                -002- 34       VFD    16,FLTSD4

                                               -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 4

0034706                                        -001- 39 HDF591
0034706                                        -001- 40       RTN_TBL *+4
0034706 05 000076 171400 ------                -001- 41       GA
0034707 05 000077 031000 034713 0034713        -002- 42       LAL    RO,*+4,RAO
0034711 05 000101 037000 011162 CDGNM          -002- 43       BL     INTRPNO3

0034713                                        -001- 45       RETRN  R1                          # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                                   INFO
                                               -002- 47 #     RETRN
0034713                                        -002- 48
                                               -002- 49 #  RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.
```

MEMORY ELEMENT TEST   PR-1C929-50

TEST 61 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
0034713 05 000103 037611 ------ CDGNM    -002- 01       VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0034714 05 000104 114525 ------          -002- 02       VFD     8,MCHBXT 8,R1XF

                                         -002- 04 #      MASK
                                         -002- 05 #      MASK CONTENTS OF ON-LINE MCHB WITH 0(0177400).
0034715 05 000105 040013 ------ CDGNM    -002- 06       VFD     1,0 2,2 7,0 6,NMASK
0034716 05 000106 000000 177400          -002- 07       ADDR    0(0177400)

                                         -002- 09 #      COMPARE
                                         -002- 10 #      COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                         -002- 11 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0034720 05 000110 050014 ------ CDGNM    -002- 12       VFD     1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0034721 05 000111 000000 000000          -002- 13       ADDR    0(0000000)

                                         -002- 15 #      FAILBIT
                                         -002- 16 #      FAILURE EXIT.   SYMBOLIC TROUBLE NUMBER IS FLTSD4+8XX
                                         -002- 17 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0034723 05 000113 020220 ------ CDGNM    -002- 18       VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0034724 05 000114 000012 ------          -002- 19       VFD     16,FLTSD4+8

                                         -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 4


0034725                                  -001- 25 PRF591
0034725                                  -001- 26       RTN_TBL *+4
0034725 05 000115 171400 ------          -002- 27       GA
0034726 05 000116 031000 034732 0034732  -002- 28       LAL     R0,*+4,RA0
0034730 05 000120 037000 011162 CDGNM    -002- 29       BL      INTRPN03

                                         -002- 31 #      FAILTST
                                         -002- 32 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD4PR.
                                         -002- 33 #      DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0034732 05 000122 020217 ------ CDGNM    -002- 34       VFD     1,0 2,1 5,0 2,2 6,NFAILTST
0034733 05 000123 000032 ------          -002- 35       VFD     16,FLTSD4PR

                                         -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 4


                                         -001- 40 #
                                         -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                         -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                         -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                         -001- 44 #
0034734                                  -001- 45 UPD591
0034734 05 000124 131000 043140 CTSD     -001- 46       LAL     R0,BASADDR,RA0
0034736 05 000126 030420 012754 CDGSIO   -001- 47       LL      R1,MODSIZE
0034740 05 000130 004037 ------          -001- 48       SN      R1,1            # LAST LOCATION IN MOD
0034741 05 000131 040041 ------          -001- 49       L       R2,1(RA0)
```

MEMORY ELEMENT TEST   PR-1C929-50

```
TEST 61  SEGMENT 1                                                          23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                             CDGSD        W77D

0034742 05 000132 014422 ------          -001- 01        OR      R1,R2              # ADD LOWEST MOD SELECT BIT.
0034743 05 000133 044021 ------          -001- 02        ST      R1,1(RAO)
0034744 05 000134 035400 043136 CTSD     -001- 03        STAL    RO,UPADDR,RA1      # STORE BEGINING ADDRESS OF MOD IN
                                                                                      UPADDR.
0034746 05 000136 030420 012753 CDGSIO   -001- 05        LL      R1,MDSELMSK
0034750 05 000140 014041 ------          -001- 06        NR      R2,R1              # ZERO ALL BUT ONE MOD SELECT BIT.
0034751 05 000141 044441 ------          -001- 07        ST      R2,1(RA1)
0034752                                  -001- 08        CALL    UPDATE
0034752 05 000142 037020 013325 0013325  -002- 09        BSA     UPDATE
                                         -001- 10 #
                                         -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE O THAT WAS OVERWRITTEN BY MEMORY TEST.
                                         -001- 12 #
0034754 05 000144 131000 043140 CTSD     -001- 13        LAL     RO,BASADDR,RAO
0034756 05 000146 030420 012756 CDGSIO   -001- 14        LL      R1,STSELMSK
0034760 05 000150 014001 ------          -001- 15        NR      RO,R1              # EXTRACT STORE SELECT BITS.
0034761 05 000151 044000 ------          -001- 16        ST      RO,0(RAO)
0034762 05 000152 003421 010000          -001- 17        LI      R1,OFLTST          # ADDRESS OF OFF LINE MEMORY TEST.
0034764 05 000154 044021 ------          -001- 18        ST      R1,1(RAO)
0034765 05 000155 035400 043136 CTSD     -001- 19        STAL    RO,UPADDR,RA1
0034767 05 000157 003420 000312 CDGS3A   -001- 20        AI      R1,TESTSIZE        # LAST ADDRESS TO BE UPDATED.
0034771 05 000161 044421 ------          -001- 21        ST      R1,1(RA1)
0034772                                  -001- 22        CALL    UPDATE
0034772 05 000162 037020 013325 0013325  -002- 23        BSA     UPDATE
0034774                                  -001- 24        TAKEOUT 17
0034774                                  -002- 25        DO      .S,3.2=1,17
                                         -002- 26 .S LR 0,0
0034774 05 000164 106000 ------          -002- 27        LR      0,0
0034775 05 000165 006000 ------          -002- 28        LR      0,0
0034776 05 000166 006000 ------          -002- 29        LR      0,0
0034777 05 000167 006000 ------          -002- 30        LR      0,0
0035000 05 000170 006000 ------          -002- 31        LR      0,0
0035001 05 000171 006000 ------          -002- 32        LR      0,0
0035002 05 000172 006000 ------          -002- 33        LR      0,0
0035003 05 000173 006000 ------          -002- 34        LR      0,0
0035004 05 000174 006000 ------          -002- 35        LR      0,0
0035005 05 000175 006000 ------          -002- 36        LR      0,0
0035006 05 000176 006000 ------          -002- 37        LR      0,0
0035007 05 000177 006000 ------          -002- 38        LR      0,0
0035010 05 000200 006000 ------          -002- 39        LR      0,0
0035011 05 000201 006000 ------          -002- 40        LR      0,0
0035012 05 000202 006000 ------          -002- 41        LR      0,0
0035013 05 000203 006000 ------          -002- 42        LR      0,0
0035014 05 000204 006000 ------          -002- 43        LR      0,0
```

0035015   -001- 01 MOD4XT

0035015   04   EOW   # 13775
                                     -001- 05   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********

```
TEST 61  SEGMENT 1                                                        23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                             CDGSD        W77D

                                          01 CSTDT5 OW      0(205),0(207)        # 12708
                                  -001- 02        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000205 ***********

0035015                                   05       FINALE  DT5INIT
0035015 05 000205 137020 012771 CDGSIO -002- 06   BSA     FINAL
0035017 05 000207 137000 034633 0034633 -001- 07  BL      BKCSTDT5
0035021 05 000211 171400 ------          -001- 08  GA
0035022 05 000212 037000 011725 CDGNM  -001- 09   BL      PASSTST            # TEST COMPLETED
0035022                                   10       EOW                       # 12708
                                  -001- 11        NOTE    ************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
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TEST 62                                                          23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

                              -001- 01 #    **************************************************************
                              -001- 02 #    **************************************************************
                              -001- 03 #    **                                                         **
                              -001- 04 #    **     CU DIAGNOSTIC TEST NO. 62, MAIN_STORE_MEMORY_MODULE
                              -001- 05 #    **                                                         **
                              -001- 06 #    **************************************************************
                              -001- 07 #    **************************************************************


0035024                       -001- 10 CSTDT6 CSECT


0035024 06 00000C 000145 ------ CDGNM  -001- 14        VFD      1,0 2,0 2,0 2,0 3,1 6,NBGN.


                              18 # SEGMENT 1
                              19 #     THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                              20 # IF MEMORY MODULE 5 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                              21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                              22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                              23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                              24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                              25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                              26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                              27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                              28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                              29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                              30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                              31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                              32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                              33 #             1. A LOW DATA BIT (SD0-15) FAILURE
                              34 #             2. A HIGH DATA BIT (SD16-23) FAILURE
                              35 #             3. A PARITY BIT (SDPL,SDPH) FAILURE
                              36 #             4. ALL TEST (PATTERNS) PASS
                              37 #             5. THIS MEMORY MODULE IS NOT EQUIPPED
                              38 #             6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                              39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                              40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.


MEMORY ELEMENT TEST                                                           PR-1C929-50

    23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE   78
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TEST 62                                                                          23:24:58    2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                CDGSD        W77D

                                              01 CSTDT6 OW      0(1),0(16)              # 12708
                                      -001- 02           NOTE     ************* THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0035025                                       05 DT6INIT PREPARE
                                      -002- 06 #      RTN_BLM
                                      -002- 07 #    TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0035025 06 000001 000144 ------ CDGNM -002- 08       VFD     1,0 2,0 6,0 1,1 6,NRTNBLM

                                      -002- 10 #      SEND
                                      -002- 11 #    SEND 0(0000001) TO OFF-LINE MCHB.
                                      -002- 12 #    PARITY IS 0(2).
0035026 06 000002 047707 ------ CDGNM -002- 13       VFD     1,0 2,2 7,B(0111111) 6,N2SEND
0035027 06 000003 000040 000001      -002- 14       ADDR    0(0000001),0(2)

                                      -002- 16 #      MICRO
                                      -002- 17 #    PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                      -002- 18 #    TO FIELD = MS%T   FROM FIELD = MCHB%F
0035031 06 000005 020005 ------ CDGNM -002- 19       VFD     1,0 2,1 7,0 6,NMICRO
0035032 06 000006 106631 ------      -002- 20       VFD     8,MS%T 8,MCHB%F

                                      -002- 22 #      NO3_CODE
                                      -002- 23 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0035033 06 000007 040043 000000 CDGNM -002- 24       VFD     1,0 2,2 7,0 6,NNO3CD
0035034 06 000010 000000 035036 0035036 -002- 25     ADDR    *+2

                                      -001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0035036 06 000012 103501 000151 TTYTBL -002- 28       LI      R4,M%AS
0035040 06 000014 034500 043132 CTSD  -001- 29       STL     R4,PAGSCR+24
                                      -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                                      -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                                      -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0035042 06 000016 103240 ------      -001- 34       ZR      LOOPIND
0035043 06 000017 004257 ------      -001- 35       SN      LOOPIND,1              #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                    PROCEEDING WITH TEST
0035044 06 000020 072652 ------ CDGNM -001- 37       HN      LOOPIND,LOOPIND
0035045 06 000021 037020 012757 CDGSIO -002- 38      BSA     CONTPREP
0035047 06 000023 172652 ------ CDGNM -001- 39       HN      LOOPIND,LOOPIND
0035050 06 000024 137020 110443 CSYSUB -002- 40      BSA     INITOST

0035052 06 000026 171400 ------      -002- 42       GA
0035053 06 000027 031000 035057 0035057 -002- 43     LAL     R0,*+4,RA0
0035055 06 000031 037000 011162 CDGNM -002- 44       BL      INTRPNO3

   MEMORY ELEMENT TEST                                                                    PR-1C929-50
      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  79
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TEST 62   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0035057   01   EOW   # 12708
                                       -001- 02   NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********

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TEST 62  SEGMENT 1                                                       23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                             CDGSD     W77D

                                      -001- 01 #     ************************************************************
                                      -001- 02 #     *                                                        *
                                      -001- 03 #     *  TEST 62     SEGMENT 1                                  *
                                      -001- 04 #     *                                                        *
                                      -001- 05 #     ************************************************************

0035057 06 000033 000100 ------ CDGNM  -001- 08       VFD      1,0 2,0 2,0 5,D(1) 6,NTESTSEG


                                      -001- 13 #      NO3_CODE
                                      -001- 14 #   PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD5TST.
0035060 06 000034 040043 000000 CDGNM  -001- 15       VFD      1,0 2,2 7,0 6,NNO3CD
0035061 06 000035 000000 035063 0035063 -001- 16     ADDR     MOD5TST

0035063                                      18 MOD5TST

                                             20 CSTDT6 OW     0(37),0(124)              # 13775
                                      -001- 21      NOTE     ************* THE FIRST ADDRESS OVERWRITTEN IS 000037 **********

0035063                                      24       MODTST  MOD5

                                      -001- 26 #      THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                      -001- 27 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                      -001- 28 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0035063 06 000037 103421 000005        -001- 31       LI      R1,MOD5                  # OFF-LINE MEMORY MODULE TO BE TESTED
0035065 06 000041 037020 033114 0033114 -002- 32      BSA     RUNTST
0035067 06 000043 156000 ------        -003- 33       BPAX    R0
0035070 06 000044 153016 ------ 0035106 -003- 34      B       LDF640
0035071 06 000045 153031 ------ 0035122 -003- 35      B       HDF640
0035072 06 000046 153047 ------ 0035141 -003- 36      B       PRF640
0035073 06 000047 153055 ------ 0035150 -003- 37      B       UPD640
C035074 06 000050 153135 ------ 0035231 -003- 38      B       MOD5XT


0035075 06 000051 137020 011031 CDGNM  -002- 41       BSA     NOSTPMES

0035077 06 000053 171400 ------        -002- 43       GA
0035100 06 000054 031000 035104 0035104 -002- 44      LAL     R0,*+4,RA0
0035102 06 000056 037000 011162 CDGNM  -002- 45       BL      INTRPNO3




MEMORY ELEMENT TEST                                                              PR-1C929-50

  23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  81
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TEST 62  SEGMENT 1                                                           23:24:58   2/05/81  ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                       CDGSD          W77D

                                           -002- 01 #      FAILTST
                                           -002- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD5WT.
                                           -002- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
   0035104 06 000060 020017 ------ CDGNM    -002- 04        VFD       1,0 2,1 5,0 2,0 6,NFAILTST
   0035105 06 000061 000033 ------          -002- 05        VFD       16,FLTSD5WT

                                           -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


   0035106                                  -001- 10 LDF640
   0035106                                  -001- 11        RTN_TBL   *+4
   0035106 06 000062 171400 ------          -002- 12        GA
   0035107 06 000063 031000 035113 0035113  -002- 13        LAL       RO,*+4,RAO
   0035111 06 000065 037000 011162 CDGNM    -002- 14        BL        INTRPNO3

   0035113                                  -001- 16        RETRN     RO                    # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                              INFORMATION
                                           -002- 18 #      RETRN
   0035113                                  -002- 19
                                           -002- 20 #      RETURN OFF-LINE GENERAL REGISTER RO TO ON-LINE MCHB.
   0035113 06 000067 037611 ------ CDGNM    -002- 21        VFD       1,0 2,1 7,B(1111110) 6,N2RETRN
   0035114 06 000070 114523 ------          -002- 22        VFD       8,MCHB%T 8,RO%F

                                           -002- 24 #      COMPARE.
                                           -002- 25 #      COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                           -002- 26 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
   0035115 06 000071 050014 ------ CDGNM    -002- 27        VFD       1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
   0035116 06 000072 000000 000000          -002- 28        ADDR      0(0000000)

                                           -002- 30 #      FAILBIT
                                           -002- 31 #      FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD5XX
                                           -002- 32 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
   0035120 06 000074 020220 ------ CDGNM    -002- 33        VFD       1,0 2,1 5,0 2,2 6,NFLBITS
   0035121 06 000075 000002 ------          -002- 34        VFD       16,FLTSD5

                                           -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 5


   0035122                                  -001- 39 HDF640
   0035122                                  -001- 40        RTN_TBL   *+4
   0035122 06 000076 171400 ------          -002- 41        GA
   0035123 06 000077 031000 035127 0035127  -002- 42        LAL       RO,*+4,RAO
   0035125 06 000101 037000 011162 CDGNM    -002- 43        BL        INTRPNO3

   0035127                                  -001- 45        RETRN     R1                    # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                              INFO
                                           -002- 47 #      RETRN
   0035127                                  -002- 48
                                           -002- 49 #      RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.
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MEMORY ELEMENT TEST   PR-1C929-50

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TEST 62  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                    CDGSD        W77D

0035127 06 000103 037611 ------ CDGNM      -002- 01         VFD      1,0 2,1 7,B(1111110) 6,N2RETRN
0035130 06 '000104 114525 ------           -002- 02         VFD      8,MCHB%T 8,R1%F

                                           -002- 04 #       MASK
                                           -002- 05 #   MASK CONTENTS OF ON-LINE MCHB WITH O(0177400).
0035131 06 000105 040013 ------ CDGNM      -002- 06         VFD      1,0 2,2 7,0 6,NMASK
0035132 06 000106 000000 177400            -002- 07         ADDR     O(0177400)

                                           -002- 09 #       COMPARE
                                           -002- 10 #   COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO O(0000000).
                                           -002- 11 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0035134 06 000110 050014 ------ CDGNM      -002- 12         VFD      1,LPINDX 2,2 1,1 1,SUCCES    5,0 6,NCOMPARE
0035135 06 000111 000000 000000            -002- 13         ADDR     O(0000000)

                                           -002- 15 #       FAILBIT
                                           -002- 16 #   FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD5+8XX
                                           -002- 17 #   WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0035137 06 000113 020220 ------ CDGNM      -002- 18         VFD      1,0 2,1 5,0 2,2 6,NFLBITS
0035140 06 000114 000012 ------            -002- 19         VFD      16,FLTSD5+8

                                           -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 5


0035141                                    -001- 25 PRF640
0035141                                    -001- 26         RTN_TBL *+4
0035141 06 000115 171400 ------            -002- 27         GA
0035142 06 000116 031000 035146 0035146    -002- 28         LAL      RO,*+4,RAO
0035144 06 000120 037000 011162 CDGNM      -002- 29         BL       INTRPNO3

                                           -002- 31 #       FAILTST
                                           -002- 32 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD5PR.
                                           -002- 33 #   DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0035146 06 000122 020217 ------ CDGNM      -002- 34         VFD      1,0 2,1 5,0 2,2 6,NFAILTST
0035147 06 000123 000032 ------            -002- 35         VFD      16,FLTSD5PR

                                           -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 5


                                           -001- 40 #
                                           -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                           -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                           -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                           -001- 44 #
0035150                                    -001- 45 UPD640
0035150 06 000124 131000 043140 CTSD       -001- 46         LAL      RO,BASADDR,RAO
0035152 06 000126 030420 012754 CDGSIO     -001- 47         LL       R1,MODSIZE
0035154 06 000130 004037 ------            -001- 48         SN       R1,1                    # LAST LOCATION IN MOD
0035155 06 000131 040041 ------            -001- 49         L        R2,1(RAO)

    MEMORY ELEMENT TEST                                                       PR-1C929-50
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TEST 62  SEGMENT 1                                                    23:24:58   2/05/81   ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                          CDGSD        W77D

0035156 06 000132 014422 -------              -001- 01        OR     R1,R2              # ADD LOWEST MOD SELECT BIT.
0035157 06 000133 044021 -------              -001- 02        ST     R1,1(RA0)
0035160 06 000134 035400 043136 CTSD          -001- 03        STAL   R0,UPADDR,RA1      # STORE BEGINING ADDRESS OF MOD IN
                                                                                           UPADDR.
0035162 06 000136 030420 012753 CDGSIO        -001- 05        LL     R1,MDSELMSK
0035164 06 000140 014041 -------              -001- 06        NR     R2,R1              # ZERO ALL BUT ONE MOD SELECT BIT.
0035165 06 000141 044441 -------              -001- 07        ST     R2,1(RA1)
0035166                                        -001- 08        CALL   UPDATE
0035166 06 000142 037020 013325 0013325       -002- 09        BSA    UPDATE
                                               -001- 10 #
                                               -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE 0 THAT WAS OVERWRITTEN BY MEMORY TEST.
                                               -001- 12 #
0035170 06 000144 131000 043140 CTSD          -001- 13        LAL    R0,BASADDR,RA0
0035172 06 000146 030420 012756 CDGSIO        -001- 14        LL     R1,STSELMSK
0035174 06 000150 014001 -------              -001- 15        NR     R0,R1              # EXTRACT STORE SELECT BITS.
0035175 06 000151 044000 -------              -001- 16        ST     R0,0(RA0)
0035176 06 000152 003421 010000               -001- 17        LI     R1,OFLTST          # ADDRESS OF OFF LINE MEMORY TEST.
0035200 06 000154 044021 -------              -001- 18        ST     R1,1(RA0)
0035201 06 000155 035400 043136 CTSD          -001- 19        STAL   R0,UPADDR,RA1
0035203 06 000157 003420 000312 CDGS3A        -001- 20        AI     R1,TESTSIZE        # LAST ADDRESS TO BE UPDATED.
0035205 06 000161 044421 -------              -001- 21        ST     R1,1(RA1)
0035206                                        -001- 22        CALL   UPDATE
0035206 06 000162 037020 013325 0013325       -002- 23        BSA    UPDATE
0035210                                        -001- 24        TAKEOUT 17
0035210                                        -002- 25        DO     .S,3.2=1,17
                                               -002- 26 .S LR 0,0
0035210 06 000164 106000 -------              -002- 27        LR     0,0
0035211 06 000165 006000 -------              -002- 28        LR     0,0
0035212 06 000166 006000 -------              -002- 29        LR     0,0
0035213 06 000167 006000 -------              -002- 30        LR     0,0
0035214 06 000170 006000 -------              -002- 31        LR     0,0
0035215 06 000171 006000 -------              -002- 32        LR     0,0
0035216 06 000172 006000 -------              -002- 33        LR     0,0
0035217 06 000173 006000 -------              -002- 34        LR     0,0
0035220 06 000174 006000 -------              -002- 35        LR     0,0
0035221 06 000175 006000 -------              -002- 36        LR     0,0
0035222 06 000176 006000 -------              -002- 37        LR     0,0
0035223 06 000177 006000 -------              -002- 38        LR     0,0
0035224 06 000200 006000 -------              -002- 39        LR     0,0
0035225 06 000201 006000 -------              -002- 40        LR     0,0
0035226 06 000202 006000 -------              -002- 41        LR     0,0
0035227 06 000203 006000 -------              -002- 42        LR     0,0
0035230 06 000204 006000 -------              -002- 43        LR     0,0
```

TEST 62 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0035231   -001- 01 MOD5XT

0035231   04   EOW   # 13775
                                           -001- 05   NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********

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TEST 62  SEGMENT 1              .                              23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                              CDGSD        W77D

            .                   01 CSTDT6 OW      0(205),0(207)           # 12708
                         -001- 02        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000205 **********

0035231                         05        FINALE  DT6INIT
0035231 06 000205 137020 012771 CDGSIO  -002- 06 BSA     FINAL
0035233 06 000207 137000 035047 0035047 -001- 07 BL      BKCSTDT6
0035235 06 000211 171400 ------        -001- 08 GA
0035236 06 000212 037000 011725 CDGNM  -001- 09 BL      PASSTST               # TEST COMPLETED
0035236                         10        EOW                               # 12708
                         -001- 11        NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

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TEST 63                                                                    23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                            CDGSD        W77D

                                    -001- 01 #   *************************************************************** :
                                    -001- 02 #   ***************************************************************
                                    -001- G3 #   **                                                         **
                                    -001- 04 #   **    CU DIAGNOSTIC TEST NO. 63, MAIN_STORE_MEMORY_MODULE
                                    -001- 05 #   **                                                         **
                                    -001- 06 #   ***************************************************************
                                    -001- 07 #   ***************************************************************


0035240                             -001- 10 CSTDT7 CSECT


0035240 07 000000 000145 ------ CDGNM   -001- 14      VFD      1,0 2,0 2,0 2,0 3,1 6,NBGN


                                    18 # SEGMENT 1
                                    19 #      THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                                    20 # IF MEMORY MODULE 6 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                                    21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                                    22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                                    23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                                    24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                                    25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                                    26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                                    27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                                    28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                                    29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                                    30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                                    31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                                    32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                                    33 #              1. A LOW DATA BIT (SD0-15) FAILURE
                                    34 #              2. A HIGH DATA BIT (SD16-23) FAILURE
                                    35 #              3. A PARITY BIT (SDPL,SDPH) FAILURE
                                    36 #              4. ALL TEST (PATTERNS) PASS
                                    37 #              5. THIS MEMORY MODULE IS NOT EQUIPPED
                                    38 #              6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                                    39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                                    40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

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TEST 63                                                           23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                              CDGSD      W77D

                                            01 CSTDT7 OW      0(1),0(16)              # 12708
                                  -001- 02       NOTE    ************ THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0035241                                      05 DT7INIT PREPARE
                                  -002- 06 #     RTN_BLM
                                  -002- 07 #  TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0035241 07 000001 000144 ------ CDGNM -002- 08       VFD     1,0 2,0 6,0 1,1 6,NRTNBLM

                                  -002- 10 #     SEND
                                  -002- 11 #  SEND 0(0000001) TO OFF-LINE MCHB.
                                  -002- 12 #  PARITY IS 0(2).
0035242 07 000002 047707 ------ CDGNM -002- 13       VFD     1,0 2,2 7,B(0111111) 6,N2SEND
0035243 07 000003 000040 000001       -002- 14       ADDR    0(0000001),0(2)

                                  -002- 16 #     MICRO
                                  -002- 17 #  PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                  -002- 18 #  TO FIELD = MS%T    FROM FIELD = MCHB%F
0035245 07 000005 020005 ------ CDGNM -002- 19       VFD     1,0 2,1 7,0 6,NMICRO
0035246 07 000006 106631 ------       -002- 20       VFD     8,MS%T 8,MCHB%F

                                  -002- 22 #     NO3_CODE
                                  -002- 23 #  PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0035247 07 000007 040043 000000 CDGNM -002- 24       VFD     1,0 2,2 7,0 6,NNO3CD
0035250 07 000010 000000 035252 0035252 -002- 25     ADDR    *+2

                                  -001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0035252 07 000012 103501 000151 TTYTBL -002- 28      LI      R4,M%AS
0035254 07 000014 034500 043132 CTSD  -001- 29       STL     R4,PAGSCR+24
                                  -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                                  -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                                  -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0035256 07 000016 103240 ------       -001- 34       ZR      LOOPIND
0035257 07 000017 004257 ------       -001- 35       SN      LOOPIND,1             #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                   PROCEEDING WITH TEST
0035260 07 000020 072652 ------ CDGNM -001- 37       HN      LOOPIND,LOOPIND
0035261 07 000021 037020 012757 CDGSIO -002- 38      BSA     CONTPREP
0035263 07 000023 172652 ------ CDGNM -001- 39       HN      LOOPIND,LOOPIND
0035264 07 000024 137020 110443 CSYSUB -002- 40      BSA     INITOST

0035266 07 000026 171400 ------       -002- 42       GA
0035267 07 000027 031000 035273 0035273 -002- 43     LAL     R0,*+4,RAO
0035271 07 000031 037000 011162 CDGNM -002- 44       BL      INTRPNO3
```

TEST 63   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0035273   01   EOW   # 12708
                                  -001- 02   NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********

MEMORY ELEMENT TEST   PR-1C929-50

TEST 63 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                    -001- 01 #    ***************************************************
                                    -001- 02 #    *                                              *
                                    -001- 03 #    *   TEST 63    SEGMENT 1                        *
                                    -001- 04 #    *                                              *
                                    -001- 05 #    ***************************************************


0035273 07 000033 000100 ------ CDGNM  -001- 08        VFD     1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                    -001- 13 #    NO3_CODE
                                    -001- 14 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD6TST.
0035274 07 000034 040043 000000 CDGNM  -001- 15        VFD     1,0 2,2 7,0 6,NNO3CD
0035275 07 000035 000000 035277 0035277 -001- 16       ADDR    MOD6TST


0035277                                22 MOD6TST


                                       22 CSTDT7 OW    0(37),0(124)              # 13775
                                    -001- 23        NOTE    ************* THE FIRST ADDRESS OVERWRITTEN IS 000037 **********


0035277                                26        MODTST MOD6

                                    -001- 28 #    THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                    -001- 29 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                    -001- 30 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0035277 07 000037 103421 000006        -001- 33        LI      R1,MOD6                 # OFF-LINE MEMORY MODULE TO BE TESTED
0035301 07 000041 037020 033114 0033114 -002- 34       BSA     RUNTST
0035303 07 000043 156000 ------        -003- 35        BPAX    R0
0035304 07 000044 153016 ------ 0035322 -003- 36       B       LDF689
0035305 07 000045 153031 ------ 0035336 -003- 37       B       HDF689
0035306 07 000046 153047 ------ 0035355 -003- 38       B       PRF689
0035307 07 000047 153055 ------ 0035364 -003- 39       B       UPD689
0035310 07 000050 153135 ------ 0035445 -003- 40       B       MOD6XT


0035311 07 000051 137020 011031 CDGNM  -002- 43        BSA     NOSTPMES

0035313 07 000053 171400 ------        -002- 45        GA
0035314 07 000054 031000 035320 0035320 -002- 46       LAL     R0,*+4,RAO
0035316 07 000056 037000 011162 CDGNM  -002- 47        BL      INTRPNO3
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MEMORY ELEMENT TEST   PR-1C929-50

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TEST 63  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD       W77D

                                              -002- 01 #      FAILTST
                                              -002- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD6WT.
                                              -002- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0035320 07 000060 020017 ------ CDGNM         -002- 04      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0035321 07 000061 000033 -------              -002- 05      VFD      16,FLTSD6WT

                                              -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


0035322                                       -001- 10 LDF689
0035322                                       -001- 11      RTN_TBL **+4
0035322 07 000062 171400 -------              -002- 12      GA
0035323 07 000063 031000 035327 0035327       -002- 13      LAL      R0,*+4,RA0
0035325 07 000065 037000 011162 CDGNM         -002- 14      BL       INTRPNO3

0035327                                       -001- 16      RETRN    R0                    # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                             INFORMATION
                                              -002- 18 #      RETRN
0035327                                       -002- 19
                                              -002- 20 #  RETURN OFF-LINE GENERAL REGISTER R0 TO ON-LINE MCHB.
0035327 07 000067 037611 ------ CDGNM         -002- 21      VFD      1,0 2,1 7,B(1111110) 6,N2RETRN
0035330 07 000070 114523 -------              -002- 22      VFD      8,MCHB%T 8,R0%F

                                              -002- 24 #      COMPARE
                                              -002- 25 #  COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                              -002- 26 #  IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0035331 07 000071 050014 ------ CDGNM         -002- 27      VFD      1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0035332 07 000072 000000 000000               -002- 28      ADDR     0(0000000)

                                              -002- 30 #      FAILBIT
                                              -002- 31 #  FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD6XX
                                              -002- 32 #  WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0035334 07 000074 020220 ------ CDGNM         -002- 33      VFD      1,0 2,1 5,0 2,2 6,NFLBITS
0035335 07 000075 000002 -------              -002- 34      VFD      16,FLTSD6

                                              -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 6


0035336                                       -001- 39 HDF689
0035336                                       -001- 40      RTN_TBL **+4
0035336 07 000076 171400 -------              -002- 41      GA
0035337 07 000077 031000 035343 0035343       -002- 42      LAL      R0,*+4,RA0
0035341 07 000101 037000 011162 CDGNM         -002- 43      BL       INTRPNO3

0035343                                       -001- 45      RETRN    R1                    # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                             INFO
                                              -002- 47 #      RETRN
0035343                                       -002- 48
                                              -002- 49 #  RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.

   MEMORY ELEMENT TEST                                                          PR-1C929-50
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TEST 63  SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                         CDGSD        W77D

0035343 07 000103 037611 ------ CDGNM      -002- 01        VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0035344 07 000104 114525 ------             -002- 02        VFD     8,MCHB%T 8,R1%F

                                            -002- 04 #      MASK
                                            -002- 05 #      MASK CONTENTS OF ON-LINE MCHB WITH 0(0177400).
0035345 07 000105 040013 ------ CDGNM      -002- 06        VFD     1,0 2,2 7,0 6,NMASK
0035346 07 000106 000000 177400            -002- 07        ADDR    0(0177400)

                                            -002- 09 #      COMPARE
                                            -002- 10 #      COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                            -002- 11 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0035350 07 000110 050014 ------ CDGNM      -002- 12        VFD     1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0035351 07 000111 000000 000000            -002- 13        ADDR    0(0000000)

                                            -002- 15 #      FAILBIT
                                            -002- 16 #      FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD6+8XX
                                            -002- 17 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0035353 07 000113 020220 ------ CDGNM      -002- 18        VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0035354 07 000114 000012 ------             -002- 19        VFD     16,FLTSD6+8

                                            -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 6


0035355                                     -001- 25 PRF689
0035355                                     -001- 26        RTN_TBL *+4
0035355 07 000115 171400 ------             -001- 27        GA
0035356 07 000116 031000 035362 0035362    -002- 28        LAL     R0,*+4,RA0
0035360 07 000120 037000 011162 CDGNM      -002- 29        BL      INTRPN03

                                            -002- 31 #      FAILTST
                                            -002- 32 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD6PR.
                                            -002- 33 #      DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0035362 07 000122 020217 ------ CDGNM      -002- 34        VFD     1,0 2,1 5,0 2,2 6,NFAILTST
0035363 07 000123 000032 ------             -002- 35        VFD     16,FLTSD6PR

                                            -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 6


                                            -001- 40 #
                                            -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                            -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                            -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                            -001- 44 #
0035364                                     -001- 45 UPD689
0035364 07 000124 131000 043140 CTSD       -001- 46        LAL     R0,BASADDR,RA0
0035366 07 000126 030420 012754 CDGSIO     -001- 47        LL      R1,MODSIZE
0035370 07 000130 004037 ------             -001- 48        SN      R1,1                        # LAST LOCATION IN MOD
0035371 07 000131 040041 ------             -001- 49        L       R2,1(RA0)


MEMORY ELEMENT TEST                                                              PR-1C929-50

  23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD     ISSUE 06     PAGE  92
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TEST 63  SEGMENT 1                                                          23:24:58   2/05/81  ****

     MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                           CDGSD        W77D

0035372 07 000132 014422 ------              -001- 01        OR    R1,R2              # ADD LOWEST MOD SELECT BIT.
0035373 07 000133 044021 ------              -001- 02        ST    R1,1(RA0)
0035374 07 000134 035400 043136 CTSD         -001- 03        STAL  R0,UPADDR,RA1      # STORE BEGINING ADDRESS OF MOD IN
                                                                                        UPADDR.
0035376 07 000136 030420 012753 CDGSIO       -001- 05        LL    R1,MDSELMSK
0035400 07 000140 014041 ------              -001- 06        NR    R2,R1              # ZERO ALL BUT ONE MOD SELECT BIT.
0035401 07 000141 044441 ------              -001- 07        ST    R2,1(RA1)
0035402                                       -001- 08        CALL  UPDATE
0035402 07 000142 037020 013325 0013325      -002- 09        BSA   UPDATE
                                              -001- 10 #
                                              -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE 0 THAT WAS OVERWRITTEN BY MEMORY TEST.
                                              -001- 12 #
0035404 07 000144 131000 043140 CTSD         -001- 13        LAL   R0,BASADDR,RA0
0035406 07 000146 030420 012756 CDGSIO       -001- 14        LL    R1,STSELMSK
0035410 07 000150 014001 ------              -001- 15        NR    R0,R1              # EXTRACT STORE SELECT BITS.
0035411 07 000151 044000 ------              -001- 16        ST    R0,0(RA0)
0035412 07 000152 003421 010000              -001- 17        LI    R1,OFLTST          # ADDRESS OF OFF LINE MEMORY TEST.
0035414 07 000154 044021 ------              -001- 18        ST    R1,1(RA0)
0035415 07 000155 035400 043136 CTSD         -001- 19        STAL  R0,UPADDR,RA1
0035417 07 000157 003420 000312 CDGS3A       -001- 20        AI    R1,TESTSIZE        # LAST ADDRESS TO BE UPDATED.
0035421 07 000161 044421 ------              -001- 21        ST    R1,1(RA1)
0035422                                       -001- 22        CALL  UPDATE
0035422 07 000162 037020 013325 0013325      -002- 23        BSA   UPDATE
0035424                                       -001- 24        TAKEOUT 17
0035424                                       -002- 25        DO    .S,3.2=1,17
                                              -002- 26 .S LR 0,0
0035424 07 000164 106000 ------              -002- 27        LR    0,0
0035425 07 000165 006000 ------              -002- 28        LR    0,0
0035426 07 000166 006000 ------              -002- 29        LR    0,0
0035427 07 000167 006000 ------              -002- 30        LR    0,0
0035430 07 000170 006000 ------              -002- 31        LR    0,0
0035431 07 000171 006000 ------              -002- 32        LR    0,0
0035432 07 000172 006000 ------              -002- 33        LR    0,0
0035433 07 000173 006000 ------              -002- 34        LR    0,0
0035434 07 000174 006000 ------              -002- 35        LR    0,0
0035435 07 000175 006000 ------              -002- 36        LR    0,0
0035436 07 000176 006000 ------              -002- 37        LR    0,0
0035437 07 000177 006000 ------              -002- 38        LR    0,0
0035440 07 000200 006000 ------              -002- 39        LR    0,0
0035441 07 000201 006000 ------              -002- 40        LR    0,0
0035442 07 000202 006000 ------              -002- 41        LR    0,0
0035443 07 000203 006000 ------              -002- 42        LR    0,0
0035444 07 000204 006000 ------              -002- 43        LR    0,0
```

```
TEST 63  SEGMENT 1                                                            23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                            CDGSD         W77D

0035445          ,                          -001- 01 MOD6XT


0035445                                           04    EOW                            # 13775
                                             -001- 05    NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********
```

TEST 63 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
                                     01 CSTDT7 OW      0(205),0(207)           # 12708
                              -001- 02          NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000205 **********

0035445                              05          FINALE DT7INIT
0035445 07 000205 137020 012771 CDGSIO  -002- 06 BSA    FINAL
0035447 07 000207 137000 035263 0035263 -001- 07 BL     BKCSTDT7
0035451 07 000211 171400 ------        -001- 08 GA
0035452 07 000212 037000 011725 CDGNM  -001- 09 BL     PASSTST                  # TEST COMPLETED
0035452                              10          EOW                            # 12708
                              -001- 11          NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

```
TEST 64                                                              23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

                              -001- 01 #    ************************************************************
                              -001- 02 #    ************************************************************
                              -001- 03 #    **                                                      **
                              -001- 04 #    **    CU DIAGNOSTIC TEST NO. 64, MAIN_STORE_MEMORY_MODULE
                              -001- 05 #    **                                                      **
                              -001- 06 #    ************************************************************
                              -001- 07 #    ************************************************************


0035454                       -001- 10 CSTDT8 CSECT


0035454 10 000000 000145 ------ CDGNM   -001- 14       VFD      1,0 2,0 2,0 2,0 3,1 6,NBGN


                              18 # SEGMENT 1
                              19 #     THE INITIAL PHASES OF THIS TEST ARE PERFORMED BY THE 'RUNTST' SUBROUTINE.
                              20 # IF MEMORY MODULE 7 IS EQUIPPED IN STORE UNDER TEST, THE OFF-LINE MEMORY
                              21 # TEST ROUTINE IS SET UP AND USED TO CHECK THE INTEGRITY OF ITS MEMORY ELEMENTS.
                              22 # THE NUMBER OF EQUIPPED MEMORY MODULES IS OBTAINED FROM THE FANOUT-BOARD-INDEX
                              23 # ROUTINE (FOBNDX) WHICH USES THE STORE LIMIT PARAMETER (STRLIM) TO COMPUTE IT.
                              24 # IF THE TEST DOES NOT TERMINATE BECAUSE THIS MODULE DOES NOT EXIST, THEN THE
                              25 # NEXT FEW STEPS INVOLVE: (1) CLEARING WRITE PROTECT IN THE STORE UNDER TEST;
                              26 # (2) UNISOLATING THE OUT-OF-SERVICE PROCESSOR TO PERMIT THE; (3) WRITING OF
                              27 # THE MEMORY TEST ACROSS THE STORE BUS TO MODULE 0 OF THE STORE UNDER TEST.
                              28 # RUNTST THEN LOADS THE APPROPRIATE PARAMETERS INTO THE OFF-LINE PROCESSOR,
                              29 # INITIATES THE OFF-LINE MEMORY TEST AND BEGINS TIMING FOR ITS COMPLETION.
                              30 # AFTER THE OFF-LINE TEST HAS COMPLETED, RUNTST RETRIEVES THE CONTENTS OF THE
                              31 # OFF-LINE PROCESSOR'S PROGRAM ADDRESS (PA) REGISTER. THE RETURN CODE LEFT
                              32 # IN REGISTER 0 ON EXITING FROM RUNTST INDICATES ONE OF THE FOLLOWING RESULTS:
                              33 #             1. A LOW DATA BIT (SD0-15) FAILURE
                              34 #             2. A HIGH DATA BIT (SD16-23) FAILURE
                              35 #             3. A PARITY BIT (SDPL,SDPH) FAILURE
                              36 #             4. ALL TEST (PATTERNS) PASS
                              37 #             5. THIS MEMORY MODULE IS NOT EQUIPPED
                              38 #             6. A WILD TRANSFER OF THE MEMORY TEST PROGRAM
                              39 # IF EITHER OF THE FIRST TWO RESULTS OCCUR, THEN THE LOCATION OF THE FAILING BIT
                              40 # MUST BE RESOLVED BEFORE EXITING FROM THIS SEGMENT.
```

```
TEST 64                                                                    23:24:58    2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                CDGSD      W77D

                              01 CSTDT8 OW      0(1),0(16)             # 12708
                      -001- 02      NOTE    ************ THE FIRST ADDRESS OVERWRITTEN IS 000001 **********

0035455                       05 DT8INIT PREPARE
                      -002- 06 #     RTN_BLM
                      -002- 07 #     TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0035455 10 000001 000144 ------ CDGNM  -002- 08      VFD     1,0 2,0 6,0 1,1 6,NRTNBLM

                      -002- 10 #     SEND
                      -002- 11 #     SEND 0(0000001) TO OFF-LINE MCHB.
                      -002- 12 #     PARITY IS 0(2).
0035456 10 000002 047707 ------ CDGNM  -002- 13      VFD     1,0 2,2 7,B(0111111) 6,N2SEND
0035457 10 000003 000040 000001        -002- 14      ADDR    0(0000001),0(2)

                      -002- 16 #     MICRO
                      -002- 17 #     PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                      -002- 18 #     TO FIELD = MS%T    FROM FIELD = MCHB%F
0035461 10 000005 020005 ------ CDGNM  -002- 19      VFD     1,0 2,1 7,0 6,NMICRO
0035462 10 000006 106631 ------        -002- 20      VFD     8,MS%T 8,MCHB%F

                      -002- 22 #     NO3_CODE
                      -002- 23 #     PROCESS 3ACC CODED ROUTINE AT ADDRESS *+2.
0035463 10 000007 040043 000000 CDGNM  -002- 24      VFD     1,0 2,2 7,0 6,NNO3CD
0035464 10 000010 000000 035466 0035466 -002- 25     ADDR    *+2

                      -001- 27 # SUBSTITUTE 'MAS' FOR'LOOP' IN TROUBLE PRINTOUT
0035466 10 000012 103501 000151 TTYTBL  -002- 28      LI      R4,M%AS
0035470 10 000014 034500 043132 CTSD    -001- 29      STL     R4,PAGSCR+24
                      -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                      -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                      -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0035472 10 000016 103240 ------        -001- 34      ZR      LOOPIND
0035473 10 000017 004257 ------        -001- 35      SN      LOOPIND,1            #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                                  PROCEEDING WITH TEST
0035474 10 000020 072652 ------ CDGNM  -001- 37      HN      LOOPIND,LOOPIND
0035475 10 000021 037020 012757 CDGSIO -002- 38      BSA     CONTPREP
0035477 10 000023 172652 ------ CDGNM  -001- 39      HN      LOOPIND,LOOPIND
0035500 10 000024 137020 110443 CSYSUB -002- 40      BSA     INITOST

0035502 10 000026 171400 ------        -002- 42      GA
0035503 10 000027 031000 035507 0035507 -002- 43     LAL     R0,*+4,RA0
0035505 10 000031 037000 011162 CDGNM  -002- 44      BL      INTRPNO3


MEMORY ELEMENT TEST                                                         PR-1C929-50

    23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  97
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TEST 64   23:24:58   2/05/81   ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

0035507   01   EOW   # 12708
                                         -001-   02   NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000032 **********

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TEST 64  SEGMENT 1                                                           23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                CDGSD      W77D

                                     -001- 01 #      ****************************************************
                                     -001- 02 #      *                                                *
                                     -001- 03 #      *   TEST 64    SEGMENT 1                          *
                                     -001- 04 #      *                                                *
                                     -001- 05 #      ****************************************************


0035507 10 000033 000100 ------ CDGNM    -001- 08      VFD    1,0 2,0 2,0 5,D(1) 6,NTESTSEG



                                     -001- 13 #    NO3_CODE
                                     -001- 14 #    PROCESS 3ACC CODED ROUTINE AT ADDRESS MOD7TST.
0035510 10 000034 040043 000000 CDGNM    -001- 15      VFD    1,0 2,2 7,0 6,NNO3CD
0035511 10 000035 000000 035513 0035513  -001- 16      ADDR   MOD7TST

0035513                                     18 MOD7TST

                                            20 CSTDT8 OW    0(37),0(124)              # 13775
                                     -001- 21      NOTE   ************* THE FIRST ADDRESS OVERWRITTEN IS 000037 ***********


0035513                                     24         MODTST  MOD7

                                     -001- 26 #    THIS MACRO POINTS TO THE OFF-LINE MEMORY MODULE TO BE TESTED BY THE OFF-
                                     -001- 27 # LINE MEMORY TEST ROUTINE UNDER THE CONTROL OF THE RUNTST SUBROUTINE,
                                     -001- 28 # CALLS THAT SUBROUTINE, AND USES THE RESULTS PASSED BACK TO RESOLVE ANY FAILURE

0035513 10 000037 103421 000007          -001- 31      LI     R1,MOD7              # OFF-LINE MEMORY MODULE TO BE TESTED
0035515 10 000041 037020 033114 0033114  -002- 32      BSA    RUNTST
0035517 10 000043 156000 ------          -003- 33      BPAX   R0
0035520 10 000044 153016 ------ 0035536  -003- 34      B      LDF738
0035521 10 000045 153031 ------ 0035552  -003- 35      B      HDF738
0035522 10 000046 153047 ------ 0035571  -003- 36      B      PRF738
0035523 10 000047 153055 ------ 0035600  -003- 37      B      UPD738
0035524 10 000050 153135 ------ 0035661  -003- 38      B      MOD7XT


0035525 10 000051 137020 011031 CDGNM    -002- 41      BSA    NOSTPMES

0035527 10 000053 171400 ------          -002- 43      GA
0035530 10 000054 031000 035534 0035534  -002- 44      LAL    R0,*+4,RA0
0035532 10 000056 037000 011162 CDGNM    -002- 45      BL     INTRPNO3




MEMORY ELEMENT TEST                                                           PR-1C929-50

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TEST 64   SEGMENT 1                                                    23:24:58   2/05/81   ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

                                       -002- 01 #      FAILTST
                                       -002- 02 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD7WT.
                                       -002- 03 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0035534 10 000060 020017 ------ CDGNM  -002- 04      VFD     1,0 2,1 5,0 2,0 6,NFAILTST
0035535 10 000061 000033 ------        -002- 05      VFD     16,FLTSD7WT

                                       -001- 07 # NO LEGAL FINAL ADDRESS FOR OFF-LINE PROGRAM MEANS WILD TRANSFER OCCURRED


0035536                                -001- 10 LDF738
0035536                                -001- 11      RTN_TBL *+4
0035536 10 000062 171400 ------        -002- 12      GA
0035537 10 000063 031000 035543 0035543 -002- 13     LAL     R0,*+4,RA0
0035541 10 000065 037000 011162 CDGNM  -002- 14      BL      INTRPNO3

0035543                                -001- 16      RETRN   R0                          # RETRIEVE DATA (SD0-15) MISMATCH
                                                                                           INFORMATION
                                       -002- 18 #      RETRN
0035543                                -002- 19
                                       -002- 20 #   RETURN OFF-LINE GENERAL REGISTER R0 TO ON-LINE MCHB.
0035543 10 000067 037611 ------ CDGNM  -002- 21      VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0035544 10 000070 114523 ------        -002- 22      VFD     8,MCHB%T 8,R0%F

                                       -002- 24 #      COMPARE
                                       -002- 25 #   COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO 0(0000000).
                                       -002- 26 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0035545 10 000071 050014 ------ CDGNM  -002- 27      VFD     1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0035546 10 000072 000000 000000        -002- 28      ADDR    0(0000000)

                                       -002- 30 #      FAILBIT
                                       -002- 31 #   FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD7XX
                                       -002- 32 #   WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0035550 10 000074 020220 ------ CDGNM  -002- 33      VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0035551 10 000075 000002 ------        -002- 34      VFD     16,FLTSD7

                                       -001- 36 # RESOLVE FAILURE IN FIRST 16 DATA BITS(SD0-15) OF MEMORY MODULE 7


0035552                                -001- 39 HDF738
0035552                                -001- 40      RTN_TBL *+4
0035552 10 000076 171400 ------        -002- 41      GA
0035553 10 000077 031000 035557 0035557 -002- 42     LAL     R0,*+4,RA0
0035555 10 000101 037000 011162 CDGNM  -002- 43      BL      INTRPNO3

0035557                                -001- 45      RETRN   R1                          # RETRIEVE WIDE DATA (SD16-23) MISMATCH
                                                                                           INFO
                                       -002- 47 #      RETRN
0035557                                -002- 48
                                       -002- 49 #   RETURN OFF-LINE GENERAL REGISTER R1 TO ON-LINE MCHB.


  MEMORY ELEMENT TEST                                                             PR-1C929-50

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TEST 64  SEGMENT 1                                                    23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD        W77D

0035557 10 000103 037611 ------ CDGNM    -002- 01         VFD     1,0 2,1 7,B(1111110) 6,N2RETRN
0035560 10 000104 114525 ------          -002- 02         VFD     8,MCHBXT 8,R1XF

                                         -002- 04 #       MASK
                                         -002- 05 #    MASK CONTENTS OF ON-LINE MCHB WITH O(0177400).
0035561 10 000105 040013 ------ CDGNM    -002- 06         VFD     1,0 2,2 7,0 6,NMASK
0035562 10 000106 000000 177400          -002- 07         ADDR    O(0177400)

                                         -002- 09 #       COMPARE
                                         -002- 10 #    COMPARE ON-LINE MAINTENANCE CHANNEL  BUFFER  TO O(0000000).
                                         -002- 11 #    IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0035564 10 000110 050014 ------ CDGNM    -002- 12         VFD     1,LPINDX 2,2 1,1 1,SUCCES     5,0 6,NCOMPARE
0035565 10 000111 000000 000000          -002- 13         ADDR    O(0000000)

                                         -002- 15 #       FAILBIT
                                         -002- 16 #    FAILURE EXIT.  SYMBOLIC TROUBLE NUMBER IS FLTSD7+8XX
                                         -002- 17 #    WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0035567 10 000113 020220 ------ CDGNM    -002- 18         VFD     1,0 2,1 5,0 2,2 6,NFLBITS
0035570 10 000114 000012 ------          -002- 19         VFD     16,FLTSD7+8

                                         -001- 21 # RESOLVE FAILURE IN WIDE DATA BITS(SD16-23) OF MEMORY MODULE 7


0035571                                  -001- 25 PRF738
0035571                                  -001- 26         RTN_TBL *+4
0035571 10 000115 171400 ------          -002- 27         GA
0035572 10 000116 031000 035576 0035576  -002- 28         LAL     RO,*+4,RA0
0035574 10 000120 037000 011162 CDGNM    -002- 29         BL      INTRPNO3

                                         -002- 31 #       FAILTST
                                         -002- 32 #    FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS FLTSD7PR.
                                         -002- 33 #    DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0035576 10 000122 020217 ------ CDGNM    -002- 34         VFD     1,0 2,1 5,0 2,2 6,NFAILTST
0035577 10 000123 000032 ------          -002- 35         VFD     16,FLTSD7PR

                                         -001- 37 # PARITY FAILURE OCCURRED WHILE RUNNING OFF-LINE MEMORY TEST IN MEMORY MODULE 7


                                         -001- 40 #
                                         -001- 41 # UPDATE THE MOD THAT WAS JUST TESTED BY CALLING SUBROUTINE "UPDATE".
                                         -001- 42 # THE CONTROL WORD BASADDR MUST BE SET TO THE LAST ADDRESS TO BE UPDATED
                                         -001- 43 # AND CONTROL WORD UPADDR MUST BE SET TO THE FIRST WORD TO BE UPDATED.
                                         -001- 44 #
0035600                                  -001- 45 UPD738
0035600 10 000124 131000 043140 CTSD     -001- 46         LAL     RO,BASADDR,RA0
0035602 10 000126 030420 012754 CDGSIO   -001- 47         LL      R1,MODSIZE
0035604 10 000130 004037 ------          -001- 48         SN      R1,1                    # LAST LOCATION IN MOD
0035605 10 000131 040041 ------          -001- 49         L       R2,1(RA0)

   MEMORY ELEMENT TEST                                                            PR-1C929-50

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TEST 64  SEGMENT 1                                                        23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

0035606 10 000132 014422 ------            -001- 01        OR    R1,R2              # ADD LOWEST MOD SELECT BIT.
0035607 10 000133 044021 ------            -001- 02        ST    R1,1(RA0)
0035610 10 000134 035400 043136 CTSD       -001- 03        STAL  R0,UPADDR,RA1      # STORE BEGINING ADDRESS OF MOD IN
                                                                                      UPADDR.
0035612 10 000136 030420 012753 CDGSIO     -001- 05        LL    R1,MDSELMSK
0035614 10 000140 014041 ------            -001- 06        NR    R2,R1              # ZERO ALL BUT ONE MOD SELECT BIT.
0035615 10 000141 044441 ------            -001- 07        ST    R2,1(RA1)
0035616                                    -001- 08        CALL  UPDATE
0035616 10 000142 037020 013325 0013325    -002- 09        BSA   UPDATE
                                           -001- 10 #
                                           -001- 11 # UPDATE PART OF OFF LINE MEMORY MODULE 0 THAT WAS OVERWRITTEN BY MEMORY TEST.
                                           -001- 12 #
0035620 10 000144 131000 043140 CTSD       -001- 13        LAL   R0,BASADDR,RA0
0035622 10 000146 030420 012756 CDGSIO     -001- 14        LL    R1,STSELMSK
0035624 10 000150 014001 ------            -001- 15        NR    R0,R1              # EXTRACT STORE SELECT BITS.
0035625 10 000151 044000 ------            -001- 16        ST    R0,0(RA0)
0035626 10 000152 003421 010000            -001- 17        LI    R1,OFLTST          # ADDRESS OF OFF LINE MEMORY TEST.
0035630 10 000154 044021 ------            -001- 18        ST    R1,1(RA0)
0035631 10 000155 035400 043136 CTSD       -001- 19        STAL  R0,UPADDR,RA1
0035633 10 000157 003420 000312 CDGS3A     -001- 20        AI    R1,TESTSIZE        # LAST ADDRESS TO BE UPDATED.
0035635 10 000161 044421 ------            -001- 21        ST    R1,1(RA1)
0035636                                    -001- 22        CALL  UPDATE
0035636 10 000162 037020 013325 0013325    -002- 23        BSA   UPDATE
0035640                                    -001- 24        TAKEOUT 17
0035640                                    -002- 25        DO    .S,3.2=1,17
                                           -002- 26 .S LR 0,0
0035640 10 000164 106000 ------            -002- 27        LR    0,0
0035641 10 000165 006000 ------            -002- 28        LR    0,0
0035642 10 000166 006000 ------            -002- 29        LR    0,0
0035643 10 000167 006000 ------            -002- 30        LR    0,0
0035644 10 000170 006000 ------            -002- 31        LR    0,0
0035645 10 000171 006000 ------            -002- 32        LR    0,0
0035646 10 000172 006000 ------            -002- 33        LR    0,0
0035647 10 000173 006000 ------            -002- 34        LR    0,0
0035650 10 000174 006000 ------            -002- 35        LR    0,0
0035651 10 000175 006000 ------            -002- 36        LR    0,0
0035652 10 000176 006000 ------            -002- 37        LR    0,0
0035653 10 000177 006000 ------            -002- 38        LR    0,0
0035654 10 000200 006000 ------            -002- 39        LR    0,0
0035655 10 000201 006000 ------            -002- 40        LR    0,0
0035656 10 000202 006000 ------            -002- 41        LR    0,0
0035657 10 000203 006000 ------            -002- 42        LR    0,0
0035660 10 000204 006000 ------            -002- 43        LR    0,0
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MEMORY ELEMENT TEST   PR-1C929-50

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TEST 64  SEGMENT 1                                                      23:24:58   2/05/81  ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                        CDGSD        W77D

0035661                                    -001- 01 MOD7XT


0035661                                          04    EOW                     # 13775
                                           -001- 05    NOTE   **************** THE LAST ADDRESS OVERWRITTEN IS 000204 **********
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TEST 64  SEGMENT 1                                                          23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                            CDGSD        W77D

                                      01 CSTDT8 OW      0(205),0(207)         # 12708
                                -001- 02        NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000205 **********

0035661                               05        FINALE DT8INIT
0035661 10 000205 137020 012771 CDGSIO  -002- 06        BSA    FINAL
0035663 10 000207 137000 035477 0035477 -001- 07        BL     BKCSTDT8
0035665 10 000211 171400 ------         -001- 08        GA
0035666 10 000212 037000 011725 CDGNM   -001- 09        BL     PASSTST              # TEST COMPLETED
0035666                               10        EOW                          # 12708
                                -001- 11        NOTE   *************** THE LAST ADDRESS OVERWRITTEN IS 000213 **********
```

TEST 64   SEGMENT 1   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
01 # RUNTST SUBROUTINE

03 # DESCRIPTION:
04 #       THIS SUBROUTINE ADMINISTERS THE RUNNING OF THE OFF-LINE MEMORY TEST. TO
05 # ACCOMPLISH THIS IT MUST:
06 #                                 1. SET UP TEST PARAMETERS IN OFF-LINE REGISTERS
07 #                                 2. START UP THE OFF-LINE PROGRAM
08 #                                 3. TIME FOR COMPLETION OF OFF-LINE ROUTINE
09 #                                 4. RETRIEVE RESULTS OF COMPLETED MEMORY TEST

11 # ENTRY POINTS:
12 #                 RUNTST

14 # ENTRY CONDITIONS:
15 #             BASADDR = ADDRESS OF MEMORY MODULE TO BE TESTED

17 # EXIT CONDITIONS:
18 #                 PAGSCR+8,9 = ADDRESS OF FAULTY MEMORY LOCATION
19 #             R0(RETURN CODE) = 0  IF LOW DATA(SD0-15) FAILURE
20 #                             = 1  IF HIGH DATA(SD16-23) FAILURE
21 #                             = 2  IF PARITY(SDPL,SDPH) FAILURE
22 #                             = 3  IF TEST PASSES
23 #                             = 4  IF OFF-LINE PROGRAM DOES NOT HALT LEGALLY
```

```
0033114                                          27 RUNTST CSECT
0033114                                          28        BEGIN    ()
0033114                                          29        CALL     FOBNDX
0033114 11 000000 137020 013166 CDGSFA  -001-    30        ESA      FOBNDX
0033116 11 000002 104217 ------                  31        SN       FOBCNT,1          # HIGHEST EQUIPPED MEMORY MODULE
0033117 11 000003 005201 ------                  32        SR       FOBCNT,R1         # COMPARE WITH MOD TEST REQUESTED
F0033120 11 000004 050400 033430 0033430         33        BNCL     NOTST             # IF UNEQUIPPED, SKIP THIS TEST

                                                 35 # SET UP BASE ADDRESS(BASADDR) AND UPDATE ADDRESS(UPADDR) FOR THIS MEMORY MODULE
0033122 11 000006 003320 ------                  36        ZR       R13
0033123 11 000007 031700 043140 CTSD             37        LAL      R12,BASADDR,RA1   # GET CURRENT BASE ADDRESS(HI BITS)
0033125 11 000011 030400 012756 CDGSIO           38        LL       R0,STSELMSK
0033127 11 000013 014300 ------                  39        NR       R12,R0            # CLEAR MODULE SELECT BITS
0033130 11 000014 004037 ------                  40        SN       R1,1              # SET UP LOOP INDEX
0033131 11 000015 030440 012754 CDGSIO           41        LL       R2,MODSIZE        # MEMORY MODULE SIZE
0033133                                          42 ADDRLP
0033133 11 000017 101722 ------                  43        AR       R13,R2            # INCREMENT MEMORY MOD POINTER
0033134 11 000020 055002 ------ 0033136          44        BNC      ADDSKP            # CARRY PAST LOW ADDRESS BITS?
0033135 11 000021 004701 ------                  45        AN       R12,1             # IF SO, INCREMENT HI BITS
0033136                                          46 ADDSKP
0033136 11 000022 136020 033133 0033133          47        BX       R1,ADDRLP
0033140 11 000024 044700 ------                  48        ST       R12,0(RA1)
0033141 11 000025 044721 ------                  49        ST       R13,1(RA1)        # RESTORE CURRENT BASE ADDRESS
```

MEMORY ELEMENT TEST   PR-1C929-50

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  TEST 64   SEGMENT 1                                                        23:24:58   2/05/81   ****

     MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                          CDGSD        W77D

  0033142 11 000026 035700 043136 CTSD          01          STAL    R12,UPADDR,RA1
  0033144 11 000030 044721 ------              02          ST      R13,1(RA1)              # RESTORE CURRENT UPDATE ADDRESS


                                                06 # TO PREPARE FOR MEMORY MODULE TESTING:
                                                07 #          1. LOAD OFF-LINE ADDRESS REGISTER PAIR (RA0=R12/13) WITH THE
                                                08 #             STARTING ADDRESS OF THE OFF-LINE MEMORY MODULE TO BE TESTED;
                                                09 #          2. INITIALIZE & UNISOLATE THE OFF-LINE PROCESSOR; AND
                                                10 #          3. COPY MEMORY ELEMENT TEST INTO OFF-LINE STORE VIA THE STORE BUS.

  0033145                                       12          LMCH    MSTOP
  0033145 11 000031 003401 000321       -001-   13          LI      RO,MSTOP
  0033147                                -001-   14          CALL    SMCH
  0033147 11 000033 073027 ------        -002-   15          BSAI    S%MCH                   # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
                                                16 # STOP OFF-LINE PROCESSOR IN PREPARATION TO RECEIVE MAINTENANCE CHANNEL ORDERS

  0033150 11 000034 130400 043144 CTSD          18          LL      RO,DGNLIM
  0033152 11 000036 024004 ------ TDATA         19          TBN     RO,S(WDSTR)             # IS THIS A WIDE STORE UNDER TEST?
  0033153 11 000037 030304 ------ TDATA         20          ICF     R12,S(WDSTR)            # IF SO, SET FLAG FOR MEMORY TEST
  0033154 11 000040 007414 ------              21          LSR     MCHTR,R12
  0033155                                       22          LMCH    LDMCHB
  0033155                                -001-   23          CALL    SLDMCHB
  0033155 11 000041 037020 111072 CSYSUB -002-   24          BSA     SLDMCHB
  0033157 11 000043 103401 043631              25          LI      RO,R12%T*E(8)+MCHB%F
  0033161 11 000045 007400 ------              26          LSR     MCHTR,RO
  0033162                                       27          LMCH    LDMIRL
  0033162                                -001-   28          CALL    SLDMIRL
  0033162 11 000046 037020 111075 CSYSUB -002-   29          BSA     SLDMIRL
  0033164 11 000050 107415 ------              30          LSR     MCHTR,R13
  0033165                                       31          LMCH    LDMCHB
  0033165                                -001-   32          CALL    SLDMCHB
  0033165 11 000051 037020 111072 CSYSUB -002-   33          BSA     SLDMCHB
  0033167 11 000053 103401 045631              34          LI      RO,R13%T*E(8)+MCHB%F
  0033171 11 000055 007400 ------              35          LSR     MCHTR,RO
  0033172                                       36          LMCH    LDMIRL
  0033172                                -001-   37          CALL    SLDMIRL
  0033172 11 000056 037020 111075 CSYSUB -002-   38          BSA     SLDMIRL


  0033174                                       41          CALL    INIT_OCC
  0033174 11 000060 137020 111240 CSYSUB -001-   42          BSA     INIT_OCC
                                                43 # UNISOLATE OFF-LINE PROCESSOR SO MEMORY TEST CAN BE WRITTEN OVER FROM ON-LINE
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TEST 64  SEGMENT 1                                                          23:24:58    2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                CDGSD      W77D

                      .               01 # LOAD MEMORY ELEMENT TEST INTO OFF-LINE STORE FROM ON-LINE VIA STORE BUS

0033176 11 000062 130700 043140 CTSD      03        LL     R12,BASADDR           # LOAD STORE SELECT BITS
0033200 11 000064 030400 012756 CDGSIO    04        LL     RO,STSELMSK
0033202 11 000066 014300 ------          05        NR     R12,RO                # POINT TO MOD 0 IN THIS STORE
0033203 11 000067 003721 010000          06        LI     R13,0FLTST            # LOCATION FOR OFF-LINE MEMORY TEST
0033205 11 000071 031400 033432 CDGS3A    07        LAL    RO,MEMTST,RA1         # ADDRESS OF MEMORY TEST IN ON-LINE
0033207 11 000073 003621 000312 CDGS3A    08        LI     RANGE,TESTSIZE        # RANGE = OFF-LINE TEST SIZE

0033211                                   10 LODLP
0033211 11 000075 142411 ------          11        LX     RO,RANGE(RA1)         # READ WORD OF MEMORY TEST IN ON-LINE
0033212                                   12        STOSX  RANGE(RAO)            # STORE WORD IN OFF-LINE MEMORY
E0033212 11 000076 000451 ------   -001- 13        MSTFX  RANGE(RAO)
0033213 11 000077 136100 036220   -001- 14        DATA   B(1011110001000000)
0033214 11 000100 036220 033211 0033211  15        BX     RANGE,LODLP
                                          16 RUNTST OW     O(102)                # 13329
                                   -001- 17        NOTE   ************** THE FIRST ADDRESS OVERWRITTEN IS 000102 **********

0033216                                   20        TAKEOUT 35
0033216 11 000102 006000 ------   -001- 21        LR     0,0
0033217 11 000103 006000 ------   -001- 22        LR     0,0
0033220 11 000104 006000 ------   -001- 23        LR     0,0
0033221 11 000105 006000 ------   -001- 24        LR     0,0
0033222 11 000106 006000 ------   -001- 25        LR     0,0
0033223 11 000107 006000 ------   -001- 26        LR     0,0
0033224 11 000110 006000 ------   -001- 27        LR     0,0
0033225 11 000111 006000 ------   -001- 28        LR     0,0
0033226 11 000112 006000 ------   -001- 29        LR     0,0
0033227 11 000113 006000 ------   -001- 30        LR     0,0
0033230 11 000114 006000 ------   -001- 31        LR     0,0
0033231 11 000115 006000 ------   -001- 32        LR     0,0
0033232 11 000116 006000 ------   -001- 33        LR     0,0
0033233 11 000117 006000 ------   -001- 34        LR     0,0
0033234 11 000120 006000 ------   -001- 35        LR     0,0
0033235 11 000121 006000 ------   -001- 36        LR     0,0
0033236 11 000122 006000 ------   -001- 37        LR     0,0
0033237 11 000123 006000 ------   -001- 38        LR     0,0
0033240 11 000124 006000 ------   -001- 39        LR     0,0
0033241 11 000125 006000 ------   -001- 40        LR     0,0
0033242 11 000126 006000 ------   -001- 41        LR     0,0
0033243 11 000127 006000 ------   -001- 42        LR     0,0
0033244 11 000130 006000 ------   -001- 43        LR     0,0
0033245 11 000131 006000 ------   -001- 44        LR     0,0
0033246 11 000132 006000 ------   -001- 45        LR     0,0
0033247 11 000133 006000 ------   -001- 46        LR     0,0
0033250 11 000134 006000 ------   -001- 47        LR     0,0
0033251 11 000135 006000 ------   -001- 48        LR     0,0
0033252 11 000136 006000 ------   -001- 49        LR     0,0

MEMORY ELEMENT TEST                                                          PR-1C929-50

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TEST 64  SEGMENT 1                                                           23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                               CDGSD      W77D

0033253 11 000137 006000 -------         -001- 01       LR      0,0
0033254 11 000140 006000 -------         -001- 02       LR      0,0
0033255 11 000141 006000 -------         -001- 03       LR      0,0
0033256 11 000142 006000 -------         -001- 04       LR      0,0
0033257 11 000143 006000 -------         -001- 05       LR      0,0
0033260 11 000144 006000 -------         -001- 06       LR      0,0
0033261                                        07       EOW                              # 13329
                                         -001- 08       NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000144 **********


0033261 11 000145 003421 000014 CDGS3A         11       LI      R1,CALOFL6
0033263 11 000147 042401 -------               12       LX      R0,R1(14)             # LOAD THE LAL OPCODE
0033264 11 000150 016014 000014               13       IRM     R0,R12,MSK(2,2)       # LOAD THE STORE INCREMENT
0033266                                        14       STOSX   R1(RA0)              # LOAD THE OFFLINE STORE WITH UPDATED
                                                                                      STORE ADDRESS
E0033266 11 000152 000441 -------         -001- 16       MSTFX   R1(RA0)
0033267 11 000153 136100 -------         -001- 17       DATA    B(1011110001000000)


                                         20 # LOAD THE ADDRESS OF THE MEMORY AREA TO BE TESTED INTO OFF-LINE REGISTERS 12/13


                                         24 # START MEMORY TEST(MEMTST) ROUTINE IN OFF-LINE

0033270 11 000154 006354 -------               26       LR      R14,R12
0033271 11 000155 006375 -------               27       LR      R15,R13
0033272                                        28       CALL    EXCOFLPG
0033272 11 000156 037020 111235 CSYSUB   -001- 29       BSA     EXCOFLPG
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TEST 64  SEGMENT 1                                                          23:24:58    2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                               CDGSD         W77D

                                            01 #      THIS NEXT ROUTINE ESSENTIALLY WASTES TIME WHILE WAITING FOR THE OFF-LINE
                                            02 # MEMORY TEST ROUTINE TO COMPLETE.

0033274                                     04          BGNTIM  SEC=5*(PATOTAL-1),TSADDR=TIMSAV # FIVE SECONDS/PATTERN (MAX)
0033274                               -001- 05          CALL    TIMOUT
0033274 11 000160 173022 ------      -002- 06          BSAI    TXIMOUT              # SUBROUTINE TIMOUT IS IN PROGRAM CSYSUB
0033275 11 000161 001131 ------      -001- 07          DATA    601                  # TIMOUT+1
0033276 11 000162 134400 043135 CTSD -001- 08          STL     R0,TIMSAV            #    SAVE TIMOUT CONSTANT.
0033300                                     09 CALLPROC
0033300                                     10          CALL    WAIT                 # RETURN TO CALL-PROCESSING FOR 1 SCAN
0033300 11 000164 173025 ------      -001- 11          BSAI    WXAIT                # SUBROUTINE WAIT IS IN PROGRAM CBLM

0033301                                     13          LMCH    RTNMCHB              # RETRIEVE OFF-LINE MTC CHAN BUFFER
0033301 11 000165 103401 000261      -001- 14          LI      R0,RTNMCHB
0033303                               -001- 15          CALL    SMCH
0033303 11 000167 073027 ------      -002- 16          BSAI    SXMCH                # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033304 11 000170 112403 ------            17          UNPK    MCHB
0033305 11 000171 003465 007760            18          CI      R3,OFLNDONE          # OFF-LINE TEST DONE?
0033307 11 000173 054005 ------ 0033314    19          BC      UPBASAD              # IF SO, UPDATE BASE ADDRESS


                                            22 # IS OFF-LINE MEMORY TEST FINISHED YET?

0033310                                     24 TIMTST
0033310                                     25          CHKTIM  TSADDR=TIMSAV
0033310 11 000174 130400 043135 CTSD -001- 26          LL      R0,TIMSAV            #    GET TIMOUT CONSTANT.
0033312                               -001- 27          CALL    TIMCHK               #    HAS TIMOUT OCCURRED?
0033312 11 000176 073037 ------      -002- 28          BSAI    TXIMCHK              # SUBROUTINE TIMCHK IS IN PROGRAM CSYSUB
0033313 11 000177 154765 ------ 0033300    29          BC      CALLPROC             # IF NOT, RETURN TO CALL-PROCESSING

                                            31 # IF SO, INCREMENT BASE ADDRESS TO POINT TO NEXT MEMORY MODULE

0033314                                     33 UPBASAD
0033314 11 000200 131700 043140 CTSD       34          LAL     R12,BASADDR,RA1
0033316 11 000202 040721 ------            35          L       R13,1(RA1)           # GET PREVIOUS BASE ADDRESS
0033317 11 000203 030400 012754 CDGSIO     36          LL      R0,MODSIZE
0033321 11 000205 004017 ------            37          SN      R0,1                 # CORRECT FOR LAST ADDRESSABLE LOCATION
0033322 11 000206 001720 ------            38          AR      R13,R0
0033323 11 000207 055002 ------ 0033325    39          BNC     STRBAS               # CARRY PAST LOWER ADDRESS BITS?
0033324 11 000210 004701 ------            40          AN      R12,1                # IF SO, INCREMENT UPPER ADDRESS BITS
0033325                                     41 STRBAS
0033325 11 000211 144700 ------            42          ST      R12,0(RA1)
0033326 11 000212 044721 ------            43          ST      R13,1(RA1)           # TO BE USED BY UPDATE SUBROUTINE # STORE
                                                                                      NEW BASE ADDRESS




MEMORY ELEMENT TEST                                                                   PR-1C929-50

  23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE  06    PAGE  109
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TEST 64  SEGMENT 1                                                                23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                     CDGSD        W77D

                                         01 # CHECK RESULTS OF MEMORY TEST THAT WAS RUN ON NEXT MEMORY MODULE
0033327                                  03        LMCH    MSTOP            # PREPARE OFF-LINE MAINTENANCE CHANNEL
0033327 11 000213 003401 000321   -001- 04        LI      R0,MSTOP
0033331                           -001- 05        CALL    SMCH
0033331 11 000215 073027 ------   -002- 06        BSAI    S%MCH            # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033332                                  07 RSLTCK
0033332                                  08        LMCH    MSTOP            # STOP THE OFF-LINE PROCESSOR
0033332 11 000216 103401 000321   -001- 09        LI      R0,MSTOP
0033334                           -001- 10        CALL    SMCH
0033334 11 000220 073027 ------   -002- 11        BSAI    S%MCH            # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033335 11 000221 103401 114513          12        LI      R0,MCHB%T*E(8)+R13%F
0033337 11 000223 007400 ------          13        LSR     MCHTR,R0
0033340                                  14        LMCH    LDMIRL
0033340                           -001- 15        CALL    SLDMIRL
0033340 11 000224 037020 111075 CSYSUB   -002- 16 BSA     SLDMIRL
0033342                                  17        LMCH    RTNMCHB          # GET LOW ADDRESS BITS OF FAILING
                                                                             LOCATION
0033342 11 000226 103401 000261   -001- 19        LI      R0,RTNMCHB
0033344                           -001- 20        CALL    SMCH
0033344 11 000230 073027 ------   -002- 21        BSAI    S%MCH            # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033345 11 000231 112403 ------          22        UNPK    MCHB
0033346 11 000232 006103 ------          23        LR      R4,R3            # SAVE ADDRESS OF MEMORY BLOCK
0033347 11 000233 003401 114545          24        LI      R0,MCHB%T*E(8)+R7%F
0033351 11 000235 007400 ------          25        LSR     MCHTR,R0
0033352                                  26        LMCH    LDMIRL
0033352                           -001- 27        CALL    SLDMIRL
0033352 11 000236 037020 111075 CSYSUB   -002- 28 BSA     SLDMIRL
0033354                                  29        LMCH    RTNMCHB
0033354 11 000240 103401 000261   -001- 30        LI      R0,RTNMCHB
0033356                           -001- 31        CALL    SMCH
0033356 11 000242 073027 ------   -002- 32        BSAI    S%MCH            # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033357 11 000243 112403 ------          33        UNPK    MCHB
0033360 11 000244 001464 ------          34        AR      R3,R4            # FORM ABSOLUTE ADDRESS OF FAILING
                                                                             LOCATION
0033361 11 000245 035460 043112 CTSD     36        STAL    R3,PAGSCR+8,RA1  # BUFFER FOR TROUBLE PRINTOUT - DATA(1)

0033363 11 000247 103401 114525          38        LI      R0,MCHB%T*E(8)+R1%F  # RETREIVE RESULTS OF DATA PATTERN
                                                                                 EXCLUSIVE-OR
                                         40 RUNTST OW      0(251)           # 12254
                                  -001- 41        NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000251 **********

0033365                                  44        TAKEOUT 1
0033365 11 000251 006000 ------   -001- 45        LR      0,0
0033366                                  46        TAKEOUT 1
0033366 11 000252 006000 ------   -001- 47        LR      0,0
0033367                                  48        EOW                      # 12254
                                  -001- 49        NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000252 **********


     MEMORY ELEMENT TEST                                                              PR-1C929-50
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```
                                              03 DDELETE NOTE    1
0033367 11 000253 107400 ------               04        LSR      MCHTR,RO
0033370                                       05        LMCH     LDMIRL
0033370                               -001- 06          CALL     SLDMIRL
0033370 11 000254 037020 111075 CSYSUB -002- 07         BSA      SLDMIRL
0033372                                       08        LMCH     RTNMCHB
0033372 11 000256 103401 000261      -001- 09           LI       RO,RTNMCHB
0033374                               -001- 10           CALL     SMCH
0033374 11 000260 073027 ------      -002- 11           BSAI     S%MCH          # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033375 11 000261 112403 ------               12        UNPK     MCHB
0033376 11 000262 044461 ------               13        ST       R3,1(RA1)       # BUFFER FOR TROUBLE PRINTOUT - DATA(2)


                                              16 # RETRIEVE CONTENTS OF OFF-LINE PROGRAM ADDRESS(PA) REGISTER

0033377 11 000263 003401 114626               18        LI       RO,MCHB%T*E(8)+PA%F
0033401 11 000265 007400 ------               19        LSR      MCHTR,RO
0033402                                       20        LMCH     LDMIRL
0033402                               -001- 21          CALL     SLDMIRL
0033402 11 000266 037020 111075 CSYSUB -002- 22         BSA      SLDMIRL
0033404                                       23        LMCH     RTNMCHB
0033404 11 000270 103401 000261      -001- 24           LI       RO,RTNMCHB
0033406                               -001- 25           CALL     SMCH
0033406 11 000272 073027 ------      -002- 26           BSAI     S%MCH          # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0033407 11 000273 112403 ------               27        UNPK     MCHB
0033410                                       28 LOTST
0033410 11 000274 103465 010161 CDGS3A        29        CI       R3,OFLTST+FLXT   # LOW DATA FAILURE?
                                              30 RUNTST OW        0(276)          # 13329
                                      -001- 31          NOTE     ************** THE FIRST ADDRESS OVERWRITTEN IS 000276 **********


                                              34 CPATCH1 BGNP    0(172)          # 13329
0033412 11 000276 037000 112754 0000172 -001- 35        BL       %%%824
                                      -001- 36          NOTE     CPATCH1 'CSECT'
                                      -001- 37          NOTE     ***************** PATCH AREA BEGINS AT 000172 ****************


0112754                               -001- 40 %%%824 PATCHAREA
0112754 14 000172 155003 ------ 0112757        41       BNC      HITST
0112755 14 000173 003120 ------                42       LN       R5,0            # RETURN CODE = 0 FOR LOW BIT FAILURE.
0112756 14 000174 053013 ------ 0112771        43       B        FORMINPCN
0112757                                        44 HITST
0112757 14 000175 103465 010165 CDGS3A         45       CI       R3,OFLTST+WDFLXT
0112761 14 000177 055003 ------ 0112764        46       BNC      PRTST
0112762 14 000200 003121 ------                47       LN       R5,1            # RETURN CODE = 1 FOR HIGH DATA BIT
                                                                                   FAILURE
0112763 14 000201 053006 ------ 0112771        49       B        FORMINPCN
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TEST 64   SEGMENT 1                                                    23:24:58   2/05/81  ****

  MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

0112764                                       01 PRTST
0112764 14 000202 103465 010171 CDGS3A        02      CI      R3,OFLTST+PRFLXT
                                              03 DDELETE NOTE   1
0112766 14 000204 050400 033424 0000310       04      BNCL    PASTST
                                              05 DINSERT NOTE   BNC PASTST
0112770 14 000206 003122 ------               06      LN      R5,2                       # RETURN CODE = 2 FOR PARITY BIT FAILURE.
0112771                                       07 FORMINPCN
                                              08 # FORM THE INPUT CONDITIONS FOR THE "DGNMSG" SUBROUTINE:
                                              09 # R0(7-0) = BAD BIT NO.
                                              10 # R0(15) = BAD CU NO.
                                              11 # R6(7-0) = BAD DATA BITS (23-16).
                                              12 # R7 = BAD DATA BITS (15-0).
                                              13 # R8(7-0) = GOOD DATA BITS (23-16).
                                              14 # R9 = GOOD DATA BITS (15-0).
                                              15 # RA1 = MAS ADDRESS.
0112771                                       16
0112771 14 000207 140401 ------               17      L       R0,1(RA1)                  # GET THE BAD DATA PATTERN.
0112772 14 000210 015400 ------               18      COM     R0
0112773 14 000211 020412 ------               19      FLZ     R0,R10                     # R10 = BAD BIT NO.
0112774 14 000212 015400 ------               20      COM     R0                         # MULTIPLE BIT FAILURE ?
                                              21 DDELTE NOTE    1
0112775 14 000213 050400 033422 0000306       22      BNCL    NOPRNT
                                              23 DINSERT NOTE   BNC NOPRNT                # IFSO DONT PRINT DGN ERR MESSAGE.
                                              24 # GET THE LAST PATTERN SENT.
0112777 14 000215 003401 114532               25      LI      R0,MCHB%T*E(8)+R4%F        # R4 CONTAINS THE LAST PATTERN SENT.
0113001 14 000217 007400 ------               26      LSR     MCHTR,R0
0113002                                       27 LMCH   LDMIRL
0113002                                 -001- 28      CALL    SLDMIRL
0113002 14 000220 037020 111075 CSYSUB  -002- 29      BSA     SLDMIRL
0113004                                       30 LMCH   RTNMCHB
0113004 14 000222 103401 000261         -001- 31      LI      R0,RTNMCHB
0113006                                 -001- 32      CALL    SMCH
0113006 14 000224 073027 ------         -002- 33      BSAI    S%MCH                      # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0113007 14 000225 112403 ------               34      UNPK    MCHB
0113010 14 000226 006223 ------               35      LR      R9,R3                      # R9 = GOOD DATA SD0-15.
0113011 14 000227 006203 ------               36      LR      R8,R3
0113012 14 000230 010610 ------               37      RRN     R8,8                       # THE HIGH 8 BITS OF LAST PATTERN ARE
                                                                                         #  GOOD DATA SD16-23.
                                              39 # GET THE FAILING ADDRESS.
0113013 14 000231 030760 043112 CTSD          40      LL      RA1+1,PAGSCR+8             # LOW BITS ARE IN PAGSCR+8.
0113015 14 000233 030740 043136 CTSD          41      LL      RA1,UPADDR                 # GET HIGH BITS OF ADDRESS.
                                              42 # GET THE BAD DATA BY READING IT.
0113017 14 000235 030460 043144 CTSD          43      LL      R3,DGNLIM                  # GET WIDE STORE BIT
0113021                                       44      SBIN
0113021 14 000237 013002 ------         -001- 45      MIS     2
0113022 14 000240 105722 ------         -001- 46      DATA    35794
0113023                                 -001- 47      LOS     0(RA1),AC=NO
0113023 14 000241 076020 ------         -001- 48      STAF    0(RA1)
0113024 14 000242 106160 ------         -001- 49      DATA    B(1000110001110000)


  MEMORY ELEMENT TEST                                                          PR-1C929-50
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TEST 64 SEGMENT 1   23:24:58   2/05/81 ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

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0113025 14 000243 024064 ------ TDATA      01        TBN    R3,S(WDSTR)
0113026 14 000244 055004 ------ 0113032    02        BNC    NARSTR
0113027                                    03    .   MIMODE L R6,SDR1
0113027 14 000245 013000 ------     -001-  04        MIS    0
0113030 14 000246 061455 ------     -002-  05               VFD    8,R6%T 8,SDR1%F
0113031 14 000247 010550 ------            06        RRN    R6,8               # RIGHT ADJUST HIGH BITS.
0113032                                    07 NARSTR
0113032                                    08        ZBIN
0113032 14 000250 113002 ------     -001-  09        MIS    2
0113033 14 000251 107322 ------     -001-  10        DATA   36562
0113034 14 000252 006160 ------            11        LR     R7,R0              # LOW BITS OF BAD DATA
                                           12 # SET R0(7-0) TO BAD BIT NO AND (15) TO BAD CU NO.
0113035 14 000253 056005 ------            13        BPAX   R5
0113036 14 000254 153031 ------ 0113067    14        B      LOWBITF
0113037 14 000255 153025 ------ 0113064    15        B      HIBITF
0113040                                    16 PARBITF
                                           17 # R0 EQUALS 24 IF PL BAD AND 25 IF PH BAD.
0113040 14 000256 103401 114534            18        LI     R0,MCHB%T*E(8)+R5%F
0113042 14 000260 007400 ------            19        LSR    MCHTR,R0
0113043                                    20        LMCH   LDMIRL
0113043                              -001-  21        CALL   SLDMIRL
0113043 14 000261 037020 111075 CSYSUB -002- 22      BSA    SLDMIRL
0113045                                    23        LMCH   RTNMCHB
0113045 14 000263 103401 000261     -001-  24        LI     R0,RTNMCHB
0113047                              -001-  25        CALL   SMCH
0113047 14 000265 073027 ------     -002-  26        BSAI   S%MCH              # SUBROUTINE SMCH. IS IN PROGRAM CSYSUB
0113050 14 000266 112403 ------            27        UNPK   MCHB
0113051 14 000267 024060 ------            28        TBN    R3,S(PLBAK)        # PL OR PH BAD ?
0113052 14 000270 054004 ------ 0113056    29        BC     PLBAD1
0113053 14 000271 003401 000031            30        LI     R0,25              # PH=25
0113055 14 000273 053013 ------ 0113070    31        B      FNDCU
0113056                                    32 PLBAD1
0113056 14 000274 124061 ------            33        TBN    R3,S(PHBAK)
                                           34 DDELETE NOTE  1
0113057 14 000275 050000 033422 0000306    35        BCL    NOPRNT             # IF
                                           36 DINSERT NOTE  BC NOPRNT          # IF BOTH PARITY BITS ARE BAD ITS A MULT.
                                                                                 BIT ERROR.
0113061 14 000277 003401 000030            38        LI     R0,24              # PL=24
0113063 14 000301 053005 ------ 0113070    39        B      FNDCU
0113064                                    40 HIBITF
                                           41 # FAILURE WAS IN HIGH BITS.
0113064 14 000302 106012 ------            42        LR     R0,R10
0113065 14 000303 004410 ------            43        AN     R0,8               # ADJUST FOR HIGH BITS.
0113066 14 000304 053002 ------ 0113070    44        B      FNDCU
0113067                                    45 LOWBITF
                                           46 # FAILURE WAS IN LOW BITS
0113067 14 000305 106012 ------            47        LR     R0,R10
0113070                                    48 FNDCU
0113070 14 000306 157417 ------            49        TSRPL  SS                 # WHICH CU IS BEING DIAGNOSED ?
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MEMORY ELEMENT TEST   PR-1C929-50

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TEST 64  SEGMENT 1                                                        23:24:58   2/05/81  ****

   MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                      CDGSD        W77D

0113071 14 000307 030017 ------              01        ICF     RO,15
0113072                                      02        ENDP                        # 13329
0113072 14 000310 037000 033414 0000300 -001-03        BL      XXX839
                                         -001-04        NOTE    ************ LAST PATCH ADDRESS USED IS 000311 ****************
                                         -001-05        NOTE    ***** NUMBER OF PATCH WORDS USED IS 80 (DECIMAL) ********


0033414                                  -001-08 XXX839 OWCONTINUE
                                              09 # IF TEST IS IN REPEAT MODE DONT PRINT MESSAGE.
0033414 11 000300 130420 043055 CTSD          10        LL      R1,DGREQ
0033416 11 000302 024032 ------               11        TBN     R1,S(RPTMD)
0033417 11 000303 054003 ------ 0033422       12        BC      NOPRNT
0033420                                       13        CALL    DGNMSG                # PRINT "DGN MAS ERR" MESSAGE.
0033420 11 000304 037021 016036 MASACS -001-14        BSA     DGNMSG
0033422                                       15 NOPRNT
                                              16 # LOAD RETURN CODE
0033422 11 000306 106005 ------               17        LR      RO,R5
0033423                                       18        RETURN
0033423 11 000307 056400 ------         -001-19 PASTST  BTSA
0033424                                       20 PASTST
0033424                                       21        EOW                          # 13329
                                         -001-22        NOTE    **************** THE LAST ADDRESS OVERWRITTEN IS 000307 **********


0033424                                       25 PASTST
0033424 11 000310 103465 010175 CDGS3A        26        CI      R3,OFLTST+PASSXT      # TEST PASSED?
0033426 11 000312 055003 ------ 0033431       27        BNC     WLDRET
0033427                                       28        RETURN  3                     # RETURN CODE = 3
0033427 11 000313 056463 ------         -001-29        BTSAN   3
0033430                                       30 NOTST                               # THIS MEMORY MODULE IS NOT EQUIPPED
0033430                                       31        RETURN  4                     # RETURN CODE = 4
0033430 11 000314 156464 ------         -001-32        BTSAN   4
0033431                                       33 WLDRET
0033431                                       34        RETURN  5
0033431 11 000315 156465 ------         -001-35        BTSAN   5
                                              36 # WILD TRANSFER IN OFF-LINE PROGAM -- RETURN CODE = 5
```

TEST 64   SEGMENT 1   23:24:58   2/05/81   ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST   CDGSD   W77D

```
01 # UPDATE SUBROUTINE

03 # DESCRIPTION:
04 #      THIS SUBROUTINE WILL WRITE A SPECIFIED BLOCK OF LOCATIONS IN AN OUT-OF-
05 # SERVICE STORE WITH THE INFORMATION THAT EXISTS AT THAT POINT IN THE ACTIVE
06 # STORE. SINCE THIS ROUTINE WILL NORMALLY TAKE MORE THAN A COUPLE OF MILLI-
07 # SECONDS, THE FIRST STEP IS TO RETURN TO CALL-PROCESSING IN ORDER TO GIVE
08 # EACH PASS OF THE UPDATE ROUTINE THE MAXIMUM ALLOWABLE CHUNK OF REAL-TIME.
09 # (ABOUT 5 MSEC OUT OF A BASE LEVEL SCAN). INTERRUPTS ARE BLOCKED DURING EACH
10 # READ/WRITE PASS OF THE UPDATE LOOP IN ORDER TO PRESERVE THE CONTENTS OF THE
11 # WIDE STORE DATA REGISTER (SDR1) FOR THE CASE OF WIDE (26-BIT) STORES.
12 # THE UPDATE ADDRESS PAIR (UPADDR) AND THE BASE ADDRESS PAIR (BASADDR) THAT
13 # ARE STORED IN THE PAGING BUFFER SCRATCH AREA (PAGSCR+28,29,30,31) SERVE AS
14 # THE POINTERS TO THE FIRST AND LAST OFF-LINE LOCATIONS TO BE UPDATED,
15 # RESPECTIVELY. IF THE BASE ADDRESS IS NOT GREATER THAN THE UPDATE ADDRESS,
16 # THE ROUTINE RETURNS WITHOUT UPDATING ANY OFF-LINE LOCATIONS. THE NUMBER OF
17 # LOCATION UPDATED PER BASE LEVEL SCAN IS CONTROLLED BY THE CONSTANT 'UPDATBLK'.

19 # ENTRY POINT:
20 #                 UPDATE

22 # ENTRY CONDITIONS:
23 #                 UPADDR (PAGSCR+28,29) = FIRST OFF-LINE LOCATION TO BE UPDATED
24 #                 BASADDR (PAGSCR+30,31) = LAST OFF-LINE LOCATION TO BE UPDATED

26 # EXIT CONDITIONS: UPDATE ADDRESS WILL BE GREATER THAN BASE ADDRESS
27 #                 SPECIFIED OFF-LINE LOCATIONS WILL CONTAIN WHATEVER THE
28 #                 CORRESPONDING ON-LINE LOCATION HAD AT THE POINT
29 #                 OF THE UPDATE, I.E., THIS ROUTINE WILL NOT BRING
30 #                 CALL STORE UP-TO-UPDATE
```

```
0013325                             34 UPDATE CSECT
0013325                             35        BEGIN   ()
0013325 12 000000 103461 000004     36        LI     R3,M(BIN)              # BLOCK INTERRUPT (BIN) MASK

0013327                             38 UPSTRT
0013327                             39        CALL   WAIT                   # RETURN TO CALL-PROCESSING
0013327 12 000002 173025 -------  -001- 40    BSAI   W%AIT                  # SUBROUTINE WAIT IS IN PROGRAM CBLM

0013330 12 000003 103501 000377     42        LI     R4,UPDATBLK-1          # SET UP INDEX FOR INITIAL PASS
0013332 12 000005 031340 043136 CTSD 43       LAL    R14,UPADDR,RA0         # ADDRESS OF FIRST LOCATION IN UPDATE
0013334 12 000007 040361 -------    44        L      R15,1(RA0)             # BLOCK

0013335                             46        CALL   RGCHKADR               # IS THIS A CALL STORE BLOCK?
0013335 12 000010 073036 -------  -001- 47    BSAI   rgchkAdr               # SUBROUTINE RGCHKADR IS IN PROGRAM
                                                                            # CSYSUB
                                    49 UPDATE OW     0(11)                  # 13775
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MEMORY ELEMENT TEST   PR-1C929-50

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TEST 64   SEGMENT 1                                                    23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                         CDGSD      W77D

                                  -001- 01        NOTE      ************** THE FIRST ADDRESS OVERWRITTEN IS 000011 **********

0013336 12 000011 154046 ------ 0013404    04        BC        UPDOUT              # RETURN IF OUT OF RANGE ADDRESS.
0013337 12 000012 024001 ------           05        TBN       R0,1                # UN-WRITE-PROTECTED (CALL) STORE?
0013340 12 000013 054031 ------ 0013371    06        BC        UPADINC             # IF SO, SKIP UPDATE OF CALL STORE BLOCK.
0013341                                   07
                                          08 # NOTE: BECAUSE THE RANGE-CHECK-ADDRESS SUBROUTINE ONLY CHECKS THE LOCATION
                                          09 #        THAT IS POINTED TO BY RA1, THE NUMBER OF WORDS INDICATED BY THE
                                          10 # UPDATE-BLOCK CONSTANT (UPDATBLK) MUST BE A POWER OF TWO THAT IS NO GREATER
                                          11 # THAN 4096.  SINCE THE CALL STORE/PROGRAM STORE BOUNDARIES ALL OCCUR AT
                                          12 # 4K (WHERE K=1024) DIVISIONS WITHIN THIS STORE, THIS CONSTRAINT GUARANTEES
                                          13 # THAT NO CALL STORE LOCATIONS ARE UPDATED AND THAT ALL PROGRAM STORE LOCATIONS
                                          14 # ARE UPDATED.  THIS AVOIDS THE PREMATURE SETTING OF THE CALL STORE WORD WHICH
                                          15 # INDICATES THAT THE ENTIRE STORE HAS BEEN BROUGHT UP TO DATE.
0013341                                   16
0013341                                   17 UPLOOP
0013341 12 000014 107723 ------           18        LSR       SS_S,R3
0013342                                   19        L_ONLX    R4(RA1)             # DO A SAFE READ OF ON LINE CU.
0013342 12 000015 076064 ------     -001- 20        STAFX     R4(RA1)
0013343 12 000016 136260 ------     -001- 21        DATA      B(1011110010110000)
0013344 12 000017 055020 ------ 0013364    22        BNC       OK_DATA
0013345                                   23
                                          24 # IF BAD PARITY IS FOUND IN THE ON LINE MAIN STORE, REPORT IT TO THE
                                          25 # MAIN STORE AUDIT PROGRAM (MASACS).
0013345                                   26
0013345 12 000020 006160 ------           27        LR        R7,R0
0013346 12 000021 030540 043144 CTSD       28        LL        R6,DGNLIM
0013350 12 000023 024144 ------ TDATA      29        TBN       R6,S(WDSTR)         # IS SDR1 EQUIPPED?
                                          30 UPDATE OW        O(24)               # 790477
                                  -001- 31        NOTE      ************** THE FIRST ADDRESS OVERWRITTEN IS 000024 **********

0013351 12 000024 055003 ------ 0013354    34        BNC       NAROSTR
0013352                                   35        EOW                           # 790477
                                  -001- 36        NOTE      ************** THE LAST ADDRESS OVERWRITTEN IS 000024 **********

0013352                                   39 MIMODE L R6,SDR1
0013352 12 000025 013000 ------     -001- 40        MIS       0
0013353 12 000026 061455 ------     -002- 41        VFD       8,R6%T 8,SDR1%F
0013354                                   42 NAROSTR
0013354                                   43        ZBIN
0013354 12 000027 113002 ------     -001- 44        MIS       2
0013355 12 000030 107322 ------     -001- 45        DATA      36562
0013356 12 000031 057437 ------           46        TCC1                          # WHICH CU IS ON LINE?
0013357 12 000032 030017 ------           47        ICF       R0,15
0013360 12 000033 001764 ------           48        AR        RA1+1,R4            # UPDATE RA1 TO BAD ADDR, CARRY WILL NOT
                                                                                      OCCUR.

MEMORY ELEMENT TEST                                                        PR-1C929-50

  23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD     ISSUE 06     PAGE  116
```

```
TEST 64  SEGMENT 1                                                        23:24:58    2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                             CDGSD      W77D

0013361                                              01          CALL    TRBLMSG            # REPORT BAD PARITY IN ON LINE CU.
0013361 12 000034 037021 016173 MASACS    -001- 02          BSA     TRBLMSG
0013363 12 000036 105364 ------               03          SR      RA1+1,R4           # RESTORE RA1 POINTRER.
0013364                                              04 OK_DATA
0013364                                              05          STOSX   R4(RA1)
E0013364 12 000037 100464 ------          -001- 06          MSTFX   R4(RA1)
0013365 12 000040 136100 ------           -001- 07          DATA    B(1011110001000000)
0013366 12 000041 007763 ------               08          LSR     SS_R,R3
                                                     09 UPDATE OW     0(42)              # 790123
                                          -001- 10          NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000042 **********

                                                     13 DPATCH NOTE    PUT THE OVER WRITE AFTER THIS LINE
                                                     14 DDELETE NOTE   2
0013367 12 000042 037000 013405 0013405          15          BL      PTCH_UPD
0013371                                              16 PRTN_UPD
0013371                                              17          EOW                        # 790123
                                          -001- 18          NOTE    ************** THE LAST ADDRESS OVERWRITTEN IS 000043 **********

0013371                                              21
                                                     22 # INCREMENT UPDATE POINTER FOR NEXT PASS.
0013371                                              23
0013371                                              24 UPADINC
0013371 12 000044 103760 000400              25          AI      R15,UPDATBLK
0013373 12 000046 044361 ------              26          ST      R15,1(RA0)         # SAVE NEW UPDATE POINTER.
0013374 12 000047 055004 ------ 0013400      27          BNC     PATSKP             # WAS THERE A CARRY?
0013375 12 000050 004741 ------              28          AN      R14,1              # IF SO, INCREMENT HIGH BITS
0013376 12 000051 044340 ------              29          ST      R14,0(RA0)
0013377 12 000052 053005 ------ 0013404      30          B       UPDOUT
0013400                                              31 PATSKP
0013400 12 000053 130660 043141 CTSD            32          LL      R11,BASADDR+1
0013402 12 000055 005277 ------              33          SR      R11,R15
0013403 12 000056 054724 ------ 0013327      34          BC      UPSTRT             # IS NEW UPDATE POINTER GREATER THAN BASE
                                                                                        ADDRESS?
0013404                                              36 UPDOUT
0013404                                              37          RETURN
0013404 12 000057 156400 ------           -001- 38          BTSA
0013405                                              39          EOW                        # 13775
                                          -001- 40          NOTE    ************** THE LAST ADDRESS OVERWRITTEN IS 000057 **********

                                                     43 UPDATE OW     0(60)              # 790123
                                          -001- 44          NOTE    ************** THE FIRST ADDRESS OVERWRITTEN IS 000060 **********
```

```
TEST 64  SEGMENT 1                                                              23:24:58   2/05/81  ****

MAIN_STORE_MEMORY_MODULE DIAGNOSTIC TEST                                                 CDGSD        W77D

                                            01 DPATCH NOTE    THIS CODE SHOULD REPLACE THE BL PTCH_UPD
                                            02 DDELETE NOTE   1
0013405                                     03 PTCH_UPD
0013405 12 000060 155003 ------ 0013410     04       BNC     NOINIT               # IF CF IS SET AN ERROR INTERRUPT OCCURED
0013406                                     05       CALL    INITOST              # UN-WRITE-PROTECT OFF LINE STORE SINCE A
                                                                                    "OTHER STORE ERROR" INTERRUPT WILL
                                                                                    WRITE-PROTECT IT.
0013406 12 000061 037020 110443 CSYSUB -001- 08      BSA     INITOST
0013410                                     09 NOINIT
0013410 12 0C0063 136100 013341 0013341     10       BX      R4,UPLOOP
                                            11 DDELETE NOTE   1
0013412 12 000065 037000 013371 0013371     12       BL      PRTN_UPD
                                            13 DDELETE NOTE   1
0013414 12 000067 003311 ------             14       DATA    0(3311)
0013415                                     15       EOW                          # 790123
                                      -001- 16       NOTE    *************** THE LAST ADDRESS OVERWRITTEN IS 000067 **********


                                            19 DDELETE NOTE   1
0013415                                     20       RETURN
0013415 12 000070 156400 ------       -001- 21       BTSA
0013416                                     22 NOUPDAT
0013416                                     23       GRTNADR RA1
0013416 12 000071 172340 ------       -001- 24       GN      RA1,0
0013417 12 000072 072361 ------       -001- 25       GN      RA1+1,1
0013420 12 000073 041413 ------             26       LA      R0,11(RA1)           # INCREMENT THE RETURN ADDRESS TO BYPASS
                                                                                    A CLLL TO MASION
0013421                                     28       HRTNADR RA1
0013421 12 000074 072740 ------       -001- 29       HN      RA1,0
0013422 12 000075 072761 ------       -001- 30       HN      RA1+1,1
0013423                                     31       RETURN
0013423 12 000076 056400 ------       -001- 32       BTSA
                                            33 CSTDT1 MAXSIZE 0,537
                                            34 CSTDT2 MAXSIZE 0,214
                                            35 CSTDT3 MAXSIZE 0,214
                                            36 CSTDT4 MAXSIZE 0,214
                                            37 CSTDT5 MAXSIZE 0,214
                                            38 CSTDT6 MAXSIZE 0,214
                                            39 CSTDT7 MAXSIZE 0,214
                                            40 CSTDT8 MAXSIZE 0,214
                                            41 RUNTST MAXSIZE 0,316
                                            42 UPDATE MAXSIZE 0,77
```

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

LISTING OF INDIVIDUAL PATCHES                                              CDGSD       W77D


         */*/*/*/012254/*/*/*/*        -002- 01       FBEGIN  PROG=CDGSD  CSECT=RUNTST   ORG=        TRNO=12254  SERNOB=64244
                                             02 # THIS PATCH WILL PREVENT THE CALL TO  THE SPECIAL DIAGNOSTIC
                                             03 # PRINTOUT. THIS PRINTOUT WILL BE USED WHEN THE 16K MODULES
                                             04 # BECOME AVAILABLE.
  0013423                                    05       TCEND
                                       -001- 06       NOTE   ****************************************************************


         */*/*/*/012708/*/*/*/*        -002- 13       PBEGIN  PROG=CDGSD                               TRNO=12708  SERNOB=47347
                                             14 # THIS PATCH CORRECTS THE FOLLOWING PROBLEMS:
                                             15 #     1. INCORRECT STORE NUMBER IN FAIL MESSAGE
                                             16 #        WHEN MORE THAN STORE 0 DEFINED
                                             17 #     2. TESTS WOULD NOT DIAGNOSE ANY STORE
                                             18 #        HIGHER THAN STORE 1
  0013423  .                                 19       TCEND
                                       -001- 20       NOTE   ****************************************************************


         */*/*/*/012444/*/*/*/*        -002- 27       PBEGIN  PROG=CDGSD                               TRNO=12444  SERNOB=60253
                                             28 # THIS PATCH SOLVES TASK FORCE PROBLEM A2.
                                             29 # WITH THIS PATCH, THE UPDATE OF THE OFF-LINE STORE
                                             30 # AFTER THE MOD TESTS (57 THRU 64) DOES A "SAFE" READ
                                             31 # OF THE ON-LINE STORE AND PRINTS A TROUBLE MESSAGE
                                             32 # IF A SINGLE BIT ERROR IS FOUND.
  0013423.                                   33       TCEND
                                       -001- 34       NOTE   ****************************************************************
```

```
              */*/*/*/012434/*/*/*/*      -002- 01        PBEGIN  PROG=CDGSD                    TRNO=12434  SERNOB=59574
                                               02 # THIS PATCH WILL PROVIDE AN ABBRIEVIATED FORM OF THE DIAGNOSTIC BY
                                               03 # ALLOWING THE MESSAGE DGN:CU;ADD:0 0! TO SKIP TEST 57.
0013423                                        04        TCEND
                                          -001- 05        NOTE    **********************************************************



              */*/*/*/013328/*/*/*/*      -002- 12        PBEGIN  PROG=CDGSD                    TRNO=13328  SERNOB=59563
                                               13 # THIS PATCH WILL CALL THE NEW SUBROUTINE IN MASACS TO PRINT DIP
                                               14 # AND STORE TYPE INFO WHEN TEST 57 FAILS.
                                               15 # PATCH TR 12910 TC 60355 MUST PRECEDE THIS PATCH.
0013423                                        16        TCEND
                                          -001- 17        NOTE    **********************************************************



              */*/*/*/013329/*/*/*/*      -002- 24        PBEGIN  PROG=CDGSD                    TRNO=13329  SERNOB=49069
                                               25 # THIS PATCH ADDS THE DIP AND STORE TYPE PRINTOUT ON STORE FAILURES
                                               26 # IN MOD TEST 58 -64.
                                               27 # THIS PATCH COORDINATES WITH TR 13330 TC 49138.
                                               28 # PATCH TR 12910 TC 60355 MUST PRECEDE THIS PATCH.
0013423                                        29        TCEND
                                          -001- 30        NOTE    **********************************************************
```

```
        */*/*/*/013775/*/*/*/*    -002- 01       PBEGIN  PROG=CDGSD                        TRNO=13775  SERNOB=50624
                                       02 # THIS PATCH COORDINATES WITH TR13855,TC50613 AND TR13858,TC56337.
                                       03 # THIS PATCH IMPROVES THE MEMORY DIAGNOSTICS FOR MOD 0 (TEST 57) BY
                                       04 # TURNING OFF REFRESH FOR 2 MILLISECONDS AFTER EACH PATTERN IS WRITTEN
                                       05 # AND REVERSING THE ADDRESSING PATTERN BETWEEN WRITING AND READING THE
                                       06 # TEST PATTERNS.  OTHER IMPROVEMENTS ARE MADE TO THE CODE THAT DOES
                                       07 # THE UPDATE.  SUBROUTINE "UPDATCK" IS ELIMINATED AND RANGE CHECKING
                                       08 # IS DONE BY THE "UPDATE" SUBROUTINE.  THREE PROBLEMS ARE FIXED
                                       09 # IN THE SUBROUTINE "UPDATE":  1) IF AN ON LINE PARITY ERROR IS FOUND
                                       10 # THE "WIDE STORE" BIT IS TESTED BEFORE UNLOADING SDR1.  THIS PEVENTS
                                       11 # A GATING BUS PARITY ERROR AND A MRF IN 16 BIT STORE APPLICATIONS.
                                       12 # 2) IF AN ON LINE PARITY ERROR IS FOUND THE CORRECT ADDRESS IS
                                       13 # REPORTED TO THE MAIN STORE AUDITS.  3) ILLEGAL PATCH AREA IS REMOVED
                                       14 # FROM THIS PROGRAM AND ZEROED OUT BY TR13858, TC56337.
0013423                                15       TCEND
                                  -001- 16       NOTE    *******************************************************************

                                       23 #          MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                       24 #          MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

                                  -002- 27 #& TBL 6402
                                  -002- 28 #& TEST 64
                                  -002- 29 #& SEGMENT 1
                                  -002- 30 #& PR CDGSD
                                  -002- 31 #
                                  -001- 32 #     STORE DATA BIT 00 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                                  -001- 33 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 34 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 35 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 36 #
                                  -001- 37 #          MASCM 03-04  JL2     MAIN STORE PLANE - MOD 0 - BITS 0 & 8
0013423                                38
                                       39 #          PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                       40 # NOTE--3 DMA  02-17  FC392   DMA MY STORE CONTROL
                                       41 # NOTE--3 DMA  02-23  FC388   DMA CC INTERFACE BOARD
                                       42 # NOTE--3 DMA  02-09  FC383   DMA REGISTER BITS 16, 17, 18, 19
                                       43 # NOTE--3 DMA  02-08  FC384   DMA REGISTER BITS PL, PH
                                       44 #         ###### ON-LINE PACKS ######
                                       45 #          PROC  02-08  FA1024  SPECIAL REGISTERS BITS 0 AND 8
                                       46 #          PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                       47 # FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                48
0013423                                49
```

```
PATCH HISTORY                                                    23:24:58    2/05/81  ****
   6402      FLTSD000                                              CDGSD          W77D

0013423                            01 # OPTION A
                                   02
0013423                            03 #         MASCM 03-04  JL16     MAIN STORE PLANE - MOD 0 BITS 0 & 8
                                   04
                                   05 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                   06 # NOTE--3 DMA   02-17  FC392    DMA MY STORE CONTROL
                                   07 # NOTE--3 DMA   02-23  FC388    DMA CC INTERFACE BOARD
                                   08 # NOTE--3 DMA   02-09  FC383    DMA REGISTER BITS 16, 17, 18, 19
                                   09 # NOTE--3 DMA   02-08  FC384    DMA REGISTER BITS PL, PH
                                   10 #      ###### ON-LINE PACKS ######
                                   11 #         PROC  02-08  FA1024   SPECIAL REGISTERS BITS 0 AND 8
                                   12 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                            13 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                   14

                            -002-  17 #8 TBL 6403
                            -002-  18 #8 TEST 64
                            -002-  19 #8 SEGMENT 1
                            -002-  20 #8 PR CDGSD
                            -002-  21 #
                            -001-  22 #    STORE DATA BIT 01 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                            -001-  23 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001-  24 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001-  25 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001-  26 #
0013423                     -001-  27 #         MASCM 03-05  JL2      MAIN STORE PLANE - MOD 0 - BITS 1 & 9
                                   28
                                   29 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                   30 #    ###### ON-LINE PACKS ######
                                   31 #         PROC  02-09  FA1024   SPECIAL REGISTERS BITS 1 AND 9
                                   32 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                            33 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                            34
                                   35
0013423                            36 # OPTION A
                                   37
                                   38 #         MASCM 03-05  JL16     MAIN STORE PLANE - MOD 0 BITS 1 & 9
                                   39 #         MASCM 03-02  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
0013423                            40
                                   41 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                   42 #    ###### ON-LINE PACKS ######
                                   43 #         PROC  02-09  FA1024   SPECIAL REGISTERS BITS 1 AND 9
                                   44 #         PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                            45 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                   46
```

MEMORY ELEMENT TEST   PR-1C929-50

```
                                    -002- 01 #& TBL 6404
                                    -002- 02 #& TEST 64
                                    -002- 03 #& SEGMENT 1
                                    -002- 04 #& PR CDGSD
                                    -002- 05 #
                                    -001- 06 #      STORE DATA BIT 02 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 08 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 09 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 10 #
                                    -001- 11 #        MASCM 03-06   JL2     MAIN STORE PLANE - MOD 0 - BITS 2 &10
0013423                                   12
                                          13 #        PROC  06-07   FB6     FUSES FOR OTHER STORE DATA 0-15
                                          14 #  ###### ON-LINE PACKS ######
                                          15 #        PROC  02-10   FA1024  SPECIAL REGISTERS BITS 2 AND 10
                                          16 #        PROC  06-07   FB6     FUSES FOR OTHER STORE DATA 0-15
                                          17 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                   18
0013423                                   19
                                          20 # OPTION A
0013423                                   21
                                          22 #        MASCM 03-06   JL16    MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423      :                            23
                                          24 #        PROC  06-07   FB6     FUSES FOR OTHER STORE DATA 0-15
                                          25 #  ###### ON-LINE PACKS ######
                                          26 #        PROC  02-10   FA1024  SPECIAL REGISTERS BITS 2 AND 10
                                          27 #        PROC  06-07   FB6     FUSES FOR OTHER STORE DATA 0-15
                                          28 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                   30
```

```
                                        -002- 01 #& TBL 6405
                                        -002- 02 #& TEST 64
                                        -002- 03 #& SEGMENT 1
                                        -002- 04 #& PR CDGSD
                                        -002- 05 #
                                        -001- 06 #     STORE DATA BIT 03 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                        -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                        -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                        -001- 10 #
                                        -001- 11 #        MASCM 03-07  JL2      MAIN STORE PLANE - MOD 0 - BITS 3 &11
0013423                                        12
                                              13 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                              14 #     ###### ON-LINE PACKS ######
                                              15 #        PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
                                              16 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                                        17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                        18
                                              19
                                              20 # OPTION A
0013423                                        21
                                              22 #        MASCM 03-07  JL16     MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                                        23
                                              24 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                              25 #     ###### ON-LINE PACKS ######
                                              26 #        PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
                                              27 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                                        28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                              29
```

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

6406     FLTSD004                                                    CDGSD           W77D

                     -002- 01 #& TBL 6406
                     -002- 02 #& TEST 64
                     -002- 03 #& SEGMENT 1
                     -002- 04 #& PR CDGSD
                     -002- 05 #
                     -001- 06 #     STORE DATA BIT 04 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                     -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                     -001- 08 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                     -001- 09 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                     -001- 10 #
                     -001- 11 #        MASCM 03-08  JL2     MAIN STORE PLANE - MOD 0 - BITS 4 &12
0013423                    12
                           13 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                           14 #     ###### ON-LINE PACKS ######
                           15 #        PROC  02-12  FA1024  SPECIAL REGISTERS BITS 4 AND 12
                           16 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                           17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                    18
0013423                    19
                           20 # OPTION A
0013423                    21
                           22 #        MASCM 03-08  JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423                    23
                           24 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                           25 #     ###### ON-LINE PACKS ######
                           26 #        PROC  02-12  FA1024  SPECIAL REGISTERS BITS 4 AND 12
                           27 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                           28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                    29
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PATCH HISTORY   23:24:58   2/05/81 ****

6407   FLTSD005   CDGSD   W77D

```
                             -002- 01 #& TBL 6407
                             -002- 02 #& TEST 64
                             -002- 03 #& SEGMENT 1
                             -002- 04 #& PR CDGSD
                             -002- 05 #
                             -001- 06 #       STORE DATA BIT 05 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                             -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                             -001- 08 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                             -001- 09 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                             -001- 10 #
                             -001- 11 #       MASCM 03-09  JL2      MAIN STORE PLANE - MOD 0 - BITS 5 &13
0013423                            12
                                   13 #       PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                   14 #   ###### ON-LINE PACKS ######
                                   15 #       PROC  02-13  FA1024   SPECIAL REGISTERS BITS 5 AND 13
                                   16 #       PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                            17 # FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                            18
                                   19
0013423                            20 #-OPTION A
                                   21
                                   22 #       MASCM 03-09  JL16     MAIN STORE PLANE - MOD 0 BITS 5 & 13
0013423                            23
                                   24 #       PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                   25 #   ###### ON-LINE PACKS ######
                                   26 #       PROC  02-13  FA1024   SPECIAL REGISTERS BITS 5 AND 13
                                   27 #       PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                            28 # FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                   29
```

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PATCH HISTORY                                              23:24:58   2/05/81  ****

6408    FLTSD006                                              CDGSD        W77D

                              -002- 01 #& TBL 6408
                              -002- 02 #& TEST 64
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 06 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 #        MASCM 03-10  JL2      MAIN STORE PLANE - MOD 0 - BITS 6 &14
0013423                             12
                                    13 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                    14 #     ###### ON-LINE PACKS ######
                                    15 #        PROC  02-16  FA1024   SPECIAL REGISTERS BITS 6 AND 14
                                    16 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                    17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             18
0013423                             19
                                    20 # OPTION A
0013423                             21
                                    22 #        MASCM 03-10  JL16     MAIN STORE PLANE - MOD 0 BITS 6 & 14
                                    23
0013423                             24 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                    25 #     ###### ON-LINE PACKS ######
                                    26 #        PROC  02-16  FA1024   SPECIAL REGISTERS BITS 6 AND 14
                                    27 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                                    28 #     FIRSTT TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             29
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

6409    FLTSD007                                                       CDGSD          W77D

                          -002- 01 #& TBL 6409
                          -002- 02 #& TEST 64
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 07 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 10 #
                          -001- 11 #         MASCM 03-11  JL2     MAIN STORE PLANE - MOD 0 - BITS 7 &15
0013423                         12
                                13 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                14 #         MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
                                15 #      ###### ON-LINE PACKS ######
                                16 #         PROC  02-17  FA1024  SPECIAL REGISTERS BITS 7 AND 15
                                17 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                18 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                         19
0013423                         20
                                21 # OPTION A
0013423                         22
                                23 #         MASCM 03-11  JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
0013423                         24
                                25 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                26 #         MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
                                27 #      ###### ON-LINE PACKS ######
                                28 #         PROC  02-17  FA1024  SPECIAL REGISTERS BITS 7 AND 15
                                29 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
0013423                         30 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                31
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                          -002- 01 #& TBL 6410
                          -002- 02 #& TEST 64
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #     STORE DATA BIT 08 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 10 #
                          -001- 11 #        MASCM 03-04  JL2    MAIN STORE PLANE - MOD 0 - BITS 0 & 8
0013423                         12
                                13 #        PROC  06-07  FB6    FUSES FOR OTHER STORE DATA 0-15
                                14 #     ###### ON-LINE PACKS ######
                                15 #        PROC  02-08  FA1024  SPECIAL REGISTERS BITS 0 AND 8
                                16 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                         18
0013423                         19
                                20 # OPTION A
0013423                         21
                                22 #        MASCM 03-04  JL16   MAIN STORE PLANE - MOD 0 BITS 0 & 8
                                23
0013423                         24 #        PROC  06-07  FB6    FUSES FOR OTHER STORE DATA 0-15
                                25 #     ###### ON-LINE PACKS ######
                                26 #        PROC  02-08  FA1024  SPECIAL REGISTERS BITS 0 AND 8
                                27 #        PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                         29
```

```
                                   -002- 01 #& TBL 6412
                                   -002- 02 #& TEST 64
                                   -002- 03 #& SEGMENT 1
                                   -002- 04 #& PR CDGSD
                                   -002- 05 #
                                   -001- 06 #      STORE DATA BIT 10 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                                   -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                   -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                   -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                   -001- 10 #
                                   -001- 11 #         MASCM 03-06   JL2      MAIN STORE PLANE - MOD 0 - BITS 2 &10
0013423                                  12
                                         13 #         PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                         14 #   ###### ON-LINE PACKS ######
                                         15 #         PROC  02-10   FA1024   SPECIAL REGISTERS BITS 2 AND 10
                                         16 #         PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                         17 #   FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                  18
0013423                                  19
                                         20 # OPTION A
0013423                                  21
                                         22 #         MASCM 03-06   JL16     MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423                                  23
                                         24 #         PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                         25 #   ###### ON-LINE PACKS ######
                                         26 #         PROC  02-10   FA1024   SPECIAL REGISTERS BITS 2 AND 10
                                         27 #         PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                         28 #   FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                  29
```

```
          -002- 01 #& TBL 6413
          -002- 02 #& TEST 64
          -002- 03 #& SEGMENT 1
          -002- 04 #& PR CDGSD
          -002- 05 #
          -001- 06 #      STORE DATA BIT 11 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
          -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
          -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
          -001- 10 #
          -001- 11 #         MASCM 03-07  JL2     MAIN STORE PLANE - MOD 0 - BITS 3 &11
0013423         12
                13 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                14 #      ###### ON-LINE PACKS ######
                15 #         PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
                16 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                17 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423         18
0013423         19
                20 # OPTION A
0013423         21
                22 #         MASCM 03-07  JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423         23
                24 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                25 #      ###### ON-LINE PACKS ######
                26 #         PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
                27 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15

                29 #      FIRST TIME STORE DATSS BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423         30
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

6412     FLTSD010                                                        CDGSD        W77D

                        -002- 01 #& TBL 6412
                        -002- 02 #& TEST 64
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 10 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 09 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 10 #
                        -001- 11 #        MASCM 03-06  JL2      MAIN STORE PLANE - MOD 0 - BITS 2 &10
0013423                       12
                              13 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                              14 #    ###### ON-LINE PACKS ######
                              15 #        PROC  02-10  FA1024   SPECIAL REGISTERS BITS 2 AND 10
                              16 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                       17 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                       18
                              19
0013423                       20 # OPTION A
                              21
                              22 #        MASCM 03-06  JL16     MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423                       23
                              24 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
                              25 #    ###### ON-LINE PACKS ######
                              26 #        PROC  02-10  FA1024   SPECIAL REGISTERS BITS 2 AND 10
                              27 #        PROC  06-07  FB6      FUSES FOR OTHER STORE DATA 0-15
0013423                       28 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                              29
```

```
-002- 01  #& TBL 6413
-002- 02  #& TEST 64
-002- 03  #& SEGMENT 1
-002- 04  #& PR CDGSD
-002- 05  #
-001- 06  #      STORE DATA BIT 11 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
-001- 07  # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08  #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 09  #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 10  #
-001- 11  #         MASCM 03-07  JL2     MAIN STORE PLANE - MOD 0 - BITS 3 &11
      12
      13  #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
      14  #    ###### ON-LINE PACKS ######
      15  #         PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
      16  #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
      17  #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
      18
      19
      20  # OPTION A
      21
      22  #         MASCM 03-07  JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
      23
      24  #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
      25  #    ###### ON-LINE PACKS ######
      26  #         PROC  02-11  FA1024  SPECIAL REGISTERS BITS 3 AND 11
      27  #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
      
      29  #    FIRST TIME STORE DATSS BUS BETWEEN PROCESSORS HAS BEEN CHECKED
      30
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0013423
0013423
0013423
0013423
0013423
0013423

D02

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              -002- 01 #& TBL 6414
              -002- 02 #& TEST 64
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #     STORE DATA BIT 12 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 10 #
              -001- 11 #         MASCM 03-08  JL2     MAIN STORE PLANE - MOD 0 - BITS 4 &12
0013423             12
                    13 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                    14 #     ###### ON-LINE PACKS ######
                    15 #         PROC  02-12  FA1024  SPECIAL REGISTERS BITS 4 AND 12
                    16 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                    17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423             18
0013423             19
                    20 # OPTION A
0013423             21
                    22 #         MASCM 03-08  JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423             23
                    24 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                    25 #     ###### ON-LINE PACKS ######
                    26 #         PROC  02-12  FA1024  SPECIAL REGISTERS BITS 4 AND 12
                    27 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                    28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423             29
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PATCH HISTORY                                                      23:24:58   2/05/81  ****

   6415    FLTSD013                                                     CDGSD        W77D

                                  -002- 01 #& TBL 6415
                                  -002- 02 #& TEST 64
                                  -002- 03 #& SEGMENT 1
                                  -002- 04 #& PR CDGSD
                                  -002- 05 #
                                  -001- 06 #      STORE DATA BIT 13 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                                  -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 10 #
                                  -001- 11 #      MASCM 03-09  JL2     MAIN STORE PLANE - MOD 0 - BITS 5 &13
0013423                                 12
                                        13 #      PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                        14 #  ###### ON-LINE PACKS ######
                                        15 #      PROC  02-13  FA1024  SPECIAL REGISTERS BITS 5 AND 13
                                        16 #      PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                        17 #  FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                 18
0013423                                 19
                                        20 # OPTION A
0013423                                 21
                                        22 #      MASCM 03-09  JL16    MAIN STORE PLANE - MOD 0 BITS 5 & 13
                                        23
0013423    :                            24 #      PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                        25 #  ###### ON-LINE PACKS ######
                                        26 #      PROC  02-13  FA1024  SPECIAL REGISTERS BITS 5 AND 13
                                        27 #      PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                        28 #  FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                                 29
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                              -002- 01 #& TBL 6416
                              -002- 02 #& TEST 64
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 14 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 #        MASCM 03-10   JL2      MAIN STORE PLANE - MOD 0 - BITS 6 &14
0013423                             12
                                    13 #        PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                    14 #        MASCM 08-02   FA1060   MAIN STORE CONTROLLER - BITS 0 & 8
                                    15 #        MASCM 08-03   FA1060   MAIN STORE CONTROLLER - BITS 1 & 9
                                    16 #        MASCM 08-19   FA1066   MAIN STORE CONTROLLER - CHECK CIRCUIT B
                                    17 #        MASCM 08-18   FA1071   MAIN STORE CONTROLLER  - TIMING GENERATOR
                                    18 #        MASCM 08-04   FA1060   MAIN STORE CONTROLLER - BITS 2 &10
                                    19 #        MASCM 08-08   FA1060   MAIN STORE CONTROLLER - BITS 6 &14
                                    20 #        MASCM 08-09   FA1060   MAIN STORE CONTROLLER - BITS 7 &15
                                    21 #        MASCM 08-17   FA1062   MAIN STORE CONTROLLER - CHECK CIRCUIT A
                                    22 #     ###### ON-LINE PACKS ######
                                    23 #        PROC  02-16   FA1024   SPECIAL REGISTERS BITS 6 AND 14
                                    24 #        PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                    25 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             26
0013423                             27
                                    28 # OPTION A
0013423                             29
                                    30 #        MASCM 03-10   JL16     MAIN STORE PLANE - MOD 0 BITS 6 & 14
                                    31
0013423                             32 #        PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                    33 #        MASCM 03-02   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    34 #        MASCM 08-02   FA1060   MAIN STORE CONTROLLER - BITS 0 & 8
                                    35 #        MASCM 08-03   FA1060   MAIN STORE CONTROLLER - BITS 1 & 9
                                    36 #        MASCM 08-19   FA1066   MAIN STORE CONTROLLER - CHECK CIRCUIT B
                                    37 #        MASCM 08-18   FA1071   MAIN STORE CONTROLLER  - TIMING GENERATOR
                                    38 #        MASCM 08-04   FA1060   MAIN STORE CONTROLLER - BITS 2 &10
                                    39 #        MASCM 08-08   FA1060   MAIN STORE CONTROLLER - BITS 6 &14
                                    40 #        MASCM 08-09   FA1060   MAIN STORE CONTROLLER - BITS 7 &15
                                    41 #        MASCM 08-17   FA1062   MAIN STORE CONTROLLER - CHECK CIRCUIT A
                                    42 #     ###### ON-LINE PACKS ######
                                    43 #        PROC  02-16   FA1024   SPECIAL REGISTERS BITS 6 AND 14
                                    44 #        PROC  06-07   FB6      FUSES FOR OTHER STORE DATA 0-15
                                    45 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHEECKED
0013423                             46
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                              -002- 01 #& TBL 6417
                              -002- 02 #& TEST 64
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 15 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
0013423                       -001- 11 #         MASCM 03-11  JL2     MAIN STORE PLANE - MOD 0 - BITS 7 &15
                                    12
                                    13 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                    14 #      ###### ON-LINE PACKS ######
                                    15 #         PROC  02-17  FA1024  SPECIAL REGISTERS BITS 7 AND 15
                                    16 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
0013423                             17 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             18
                                    19
0013423                             20 # OPTION A
                                    21
0013423                             22 #         MASCM 03-11  JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
                                    23
                                    24 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
                                    25 #      ###### ON-LINE PACKS ######
                                    26 #         PROC  02-17  FA1024  SPECIAL REGISTERS BITS 7 AND 15
                                    27 #         PROC  06-07  FB6     FUSES FOR OTHER STORE DATA 0-15
0013423                             28 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                    29
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PATCH HISTORY                                                    23:24:58    2/05/81   ****

  6418    FLTSD016                                                         CDGSD        W77D

                       -002- 01 #& TBL 6418
                       -002- 02 #& TEST 64
                       -002- 03 #& SEGMENT 1
                       -002- 04 #& PR CDGSD
                       -002- 05 #
                       -001- 06 #     STORE DATA BIT 16 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                       -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                       -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                       -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                       -001- 10 #
                       -001- 11 # NOTE--1 MASCM 03-12  JL2     MAIN STORE PLANE - MOD 0 - BITS 16&20
0013423                      12
                             13 #       PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                             14 #       ###### ON-LINE PACKS ######
                             15 # NOTE--1 PROC 02-06  FA1040  WIDE STORE BUS INTERFACE BITS 22-27
                             16 #       PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423                      17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                      18
                             19
                             20 # OPTION A
0013423                      21
                             22 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 16 & 20
0013423                      23
                             24 #       PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                             25 #       ###### ON-LINE PACKS ######
                             26 # NOTE--1 PROC 02-06  FA1040  WIDE STORE BUS INTERFACE BITS 22-27
                             27 #       PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423                      28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                             29
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-002- 01 #& TBL 6419
-002- 02 #& TEST 64
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #       STORE DATA BIT 17 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #       DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 09 #       DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 10 #
-001- 11 # NOTE--1 MASCM 03-13  JL2      MAIN STORE PLANE - MOD 0 - BITS 17&21
      12
      13 #         PROC  02-04   FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
      14 #      ###### ON-LINE PACKS ######
      15 # NOTE--1 PROC  02-06   FA1040  WIDE STORE.BUS INTERFACE BITS 22-27
      16 #         PROC  02-04   FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
      17 #       FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
      18
      19
      20 # OPTION A
      21
      22 # NOTE--1 MASCM 03-12  JL16     MAIN STORE PLANE - MOD 0 BITS 17 & 21
      23
      24 #         PROC  02-04   FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
      25 #      ###### ON-LINE PACKS ######
      26 # NOTE--1 PROC  02-06   FA1040  WIDE STORE BUS INTERFACE BITS 22-27
      27 #         PROC  02-04   FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
      28 #       FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
      29
```

0013423

0013423
0013423

0013423

0013423

0013423

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              -002- 01 #& TBL 6420
              -002- 02 #& TEST 64
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #     STORE DATA BIT 18 IN MEMORY MODULE O HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 09 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 10 #
              -001- 11 # NOTE--1 MASCM 03-14  JL2    MAIN STORE PLANE - MOD O - BITS 18&22
0013423             12
                    13 #       PROC  02-04  FB6    FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                    14 #       ###### ON-LINE PACKS ######
                    15 # NOTE--1 PROC  02-06  FA1040  WIDE STORE BUS INTERFACE BITS 22-27
                    16 #       PROC  02-04  FB6    FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423             17 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423             18
                    19
0013423             20 # OPTION A
                    21
                    22 # NOTE--1 MASCM 03-14  JL16    MAIN STORE PLANE - MOD O BITS 18 & 22
0013423             23
0013423             24

              -002- 27 #& TBL 6421
              -002- 28 #& TEST 64
              -002- 29 #& SEGMENT 1
              -002- 30 #& PR CDGSD
              -002- 31 #
              -001- 32 #     STORE DATA BIT 19 IN MEMORY MODULE O HAS A STUCK-AT FAULT
              -001- 33 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 34 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 35 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 36 #
              -001- 37 # NOTE--1 MASCM 03-16  JL2    MAIN STORE PLANE - MOD O - BITS 19&23
0013423             38 -
                    39 #       PROC  02-04  FB6    FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                    40 #       ###### ON-LINE PACKS ######
                    41 # NOTE--1 PROC  02-06  FA1040  WIDE STORE BUS INTERFACE BITS 22-27
                    42 #       PROC  02-04  FB6    FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                    43 #    FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423             44
0013423             45
                    46 # OPTION A
0013423             47
                    48 # NOTE--1 MASCM 03-16  JL16    MAIN STORE PLANE - MOD O BITS 19 & 23
0013423             49
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MEMORY ELEMENT TEST   PR-1C929-50

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                              01 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                              02 #        ###### ON-LINE PACKS ######
                              03 # NOTE--1 PROC  02-06  FA1040  WIDE STORE BUS INTERFACE BITS 22-27
                              04 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423                       05 #   FIRST TIME STORE DATA BUS BETWEEN PROCESSOR HAS BEEN CHECKED
                              06

                    -002- 09 #& TBL 6422
                    -002- 10 #& TEST 64
                    -002- 11 #& SEGMENT 1
                    -002- 12 #& PR CDGSD
                    -002- 13 #
                    -001- 14 #    STORE DATA BIT 20 IN MEMORY MODULE O HAS A STUCK-AT FAULT
                    -001- 15 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 16 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 17 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 18 #
0013423             -001- 19 # NOTE--1 MASCM 03-12  JL2     MAIN STORE PLANE - MOD O - BITS 16&20
                              20
                              21 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                              22 #        ###### ON-LINE PACKS ######
                              23 # NOTE--1 PROC  02-07  FA1040  WIDE STORE BUS INTERFACE BITS 28-PH
                              24 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423                       25 #   FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                       26
                              27
0013423                       28 # OPTION A
                              29
0013423                       30 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD O BITS 16 & 20
                              31
                              32 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                              33 #        ###### ON-LINE PACKS ######
                              34 # NOTE--1 PROC  02-07  FA1040  WIDE STORE BUS INTERFACE BITS 28-PH
                              35 #        PROC  02-04  FB6     FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423                       36 #   FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                              37
```

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                              -002- 01 #& TBL 6423
                              -002- 02 #& TEST 64
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 21 IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 # NOTE--1 MASCM 03-13 JL2      MAIN STORE PLANE - MOD 0 - BITS 17&21
0013423                             12
                                    13 #       PROC 02-04   FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                    14 #     ###### ON-LINE PACKS ######
                                    15 # NOTE--1 PROC  02-07   FA1040   WIDE STORE BUS INTERFACE BITS 28-PH
                                    16 #       PROC  02-04   FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                    17 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             18
0013423                             19
                                    20 # OPTION A
0013423                             21
                                    22 # NOTE--1 MASCM 03-12  JL16     MAIN STORE PLANE - MOD 0 BITS 17 & 21
0013423                             23
                                    24 #       PROC  02-04   FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                    25 #     ###### ON-LINE PACKS ######
                                    26 # NOTE--1 PROC  02-07   FA1040   WIDE STORE BUS INTERFACE BITS 28-PH
                                    27 #       PROC  02-04   FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                    28 #     FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                             29
```

PATCH HISTORY

6424   FLTSD022   -002- 01 #& TBL 6424
                                    -002- 02 #& TEST 64
                                    -002- 03 #& SEGMENT 1
                                    -002- 04 #& PR CDGSD
                                    -002- 05 #   STORE DATA BIT 22 IN MEMORY MODULE O HAS A STUCK-AT FAULT
                                    -001- 06 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 07 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 08 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 09 #   MAIN STORE PLANE - MOD O - BITS 18&22
                                    -001- 10 #
                                    -001- 11 # NOTE--1 MASCM 03-14 JL2   MAIN STORE PLANE - MOD O BITS 16-23 AND CONTROL
                                          12   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                          13 #   PROC 02-04 FB6   WIDE STORE BUS INTERFACE BITS 28-PH
0013423   14 #   ###### ON-LINE PACKS ######
                                          15 # NOTE--1 PROC 02-07 FA1040 WIDE STORE BUS INTERFACE BITS 16-23 AND CONTROL
                                          16 #   PROC 02-04 FB6   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                          17 # FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                          18
                                          19
                                          20 # OPTION A   MAIN STORE PLANE - MOD O BITS 18 & 22
0013423   21
0013423   22 # NOTE--1 MASCM 03-14 JL16   MAIN STORE PLANE - MOD O BITS 16-23 AND CONTROL
                                          23   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
0013423   24 #   PROC 02-04 FB6   WIDE STORE BUS INTERFACE BITS 28-PH
                                          24 #   ###### ON-LINE PACKS ######
0013423   :   25 #   FA1040 WIDE STORE BUS INTERFACE BITS 16-23 AND CONTROL
                                          26 # NOTE--1 PROC 02-07   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                          27 #   PROC 02-04 FB6
                                          28

0013423   -002- 31 #& TBL 6425
                                    -002- 32 #& TEST 64
                                    -002- 33 #& SEGMENT 1
                                    -002- 34 #& PR CDGSD
                                    -002- 35 #   STORE DATA BIT 23 IN MEMORY MODULE O HAS A STUCK-AT FAULT
                                    -001- 36 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 37 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 38 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 39 #   MAIN STORE PLANE - MOD O - BITS 19&23
                                    -001- 40 #
                                    -001- 41 # NOTE--1 MASCM 03-16 JL2   MAIN STORE PLANE - MOD O BITS 16-23 AND CONTROL
                                          42   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                          43 #   PROC 02-04 FB6   WIDE STORE BUS INTERFACE BITS 28-PH
                                          44 #   ###### ON-LINE PACKS ######
0013423   45 # NOTE--1 PROC 02-07 FA1040 WIDE STORE BUS INTERFACE BITS 16-23 AND CONTROL
                                          46 #   PROC 02-04 FB6   FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                          47 # FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
                                          48
                                          49   PR-1C929-50

0013423
0013423   CDGSD   ISSUE 06   PAGE 142

MEMORY ELEMENT TEST
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PATCH HISTORY                                                    23:24:58    2/05/81  ****

   6425    FLTSD023                                                         CDGSD        W77D

                                  01 # OPTION A
0013423                           02
                                  03 # NOTE--1 MASCM 03-16  JL16     MAIN STORE PLANE - MOD 0 BITS 19 & 23
0013423                           04
                                  05 #         PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                  06 #      ###### ON-LINE PACKS ######
                                  07 # NOTE--1 PROC 02-07  FA1040  WIDE STORE BUS INTERFACE BITS 28-PH
                                  08 #         PROC 02-04  FB6      FUSES FOR OTHER STORE DATA 16-23 AND CONTROL
                                  09 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                           10


                    -002- 13 #& TBL 6426
                    -002- 14 #& TEST 64
                    -002- 15 #& SEGMENT 1
                    -002- 16 #& PR CDGSD
                    -002- 17 #
                    -001- 18 #      STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 0 HAS A STUCK-AT FAULT
                    -001- 19 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 20 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 21 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 22 #
                    -001- 23 #         MASCM 03-17  JL2      MAIN STORE PLANE - MOD 0 - BITS PL&PH
0013423                   24
                          25 #         PROC 06-05  FB6      FUSES FOR OTHER STORE ADDRESS 16-PH AND CONTROL
                          26 #         MASCM 08-17  FA1062  MAIN STORE CONTROLLER - CHECK CIRCUIT A
                          27 #         MASCM 08-19  FA1066  MAIN STORE CONTROLLER - CHECK CIRCUIT B
                          28 #      ###### ON-LINE PACKS ######
                          29 #         PROC 02-18  FA1024  SPECIAL REGISTERS BITS PL AND PH
                          30 #         PROC 06-05  FB6      FUSES FOR OTHER STORE ADDRESS 16-PH AND CONTROL
                          31 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                   32
0013423                   33
                          34 # OPTION A
0013423                   35
                          36 #         MASCM 03-17  JL16     MAIN STORE PLANE - MOD 0 BITS PL & PH
0013423                   37
                          38 #         PROC 06-05  FB6      FUSES FOR OTHER STORE ADDRESS 16-PH AND CONTROL
                          39 #         MASCM 08-17  FA1062  MAIN STORE CONTROLLER - CHECK CIRCUIT A
                          40 #         MASCM 08-19  FA1066  MAIN STORE CONTROLLER - CHECK CIRCUIT B
                          41 #      ###### ON-LINE PACKS ######
                          42 #         PROC 02-18  FA1024  SPECIAL REGISTERS BITS PL AND PH
                          43 #         PROC 06-05  FB6      FUSES FOR OTHER STORE ADDRESS 16-PH AND CONTROL
                          44 #      FIRST TIME STORE DATA BUS BETWEEN PROCESSORS HAS BEEN CHECKED
0013423                   45


   MEMORY ELEMENT TEST                                                      PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  143
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

    6501      IOPRTYER                                                      CDGSD        W77D

                                      -001- 01 #& TBL 6501
                                      -001- 02 #& TEST 65
                                      -001- 03 #& SEGMENT 0 OR 1
                                      -001- 04 #& PR CDGSD
                                      -001- 05 #
                                            06 #     TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                            07 # TO COMPLETE PROPERLY.
                                            08 #     DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                            09 #  ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
  0013423                                    10
                                            11 #       MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                            12 #       MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                            13 #       MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
  0013423                                    14
  0013423                                    15
  0013423                                    16
  0013423                                    17


                                      -002- 20 #& TBL 6502
                                      -002- 21 #& TEST 65
                                      -002- 22 #& SEGMENT 1
                                      -002- 23 #& PR CDGSD
                                      -002- 24 #
                                      -001- 25 #     STORE DATA BIT 00 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                                      -001- 26 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                      -001- 27 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                      -001- 28 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                      -001- 29 #
                                      -001- 30 #       MASCM 03-31  JL2     MAIN STORE PLANE - MOD 1 - BITS 0 & 8
                                            31 #       PROC  02-18  FA1024  SPECIAL REGISTERS BITS PL AND PH
  0013423                                    32
  0013423                                    33
                                            34 # OPTION A
  0013423                                    35
                                            36 #       MASCM 03-04  JL16    MAIN STORE PLANE - MOD 0 BITS 0 & 8
                                            37 #       PROC  02-18  FA1024  SPECIAL REGISTERS BITS PL AND PH
  0013423                                    38
  0013423                                    39
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    MEMORY ELEMENT TEST                                                       PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD     ISSUE  06     PAGE   144
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                    -002- 01 #& TBL 6503
                    -002- 02 #& TEST 65
                    -002- 03 #& SEGMENT 1
                    -002- 04 #& PR CDGSD
                    -002- 05 #
                    -001- 06 #     STORE DATA BIT 01 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 10 #
                    -001- 11 #         MASCM 03-29  JL2     MAIN STORE PLANE - MOD 1 - BITS 1 & 9
0013423                   12 #         PROC  06-31  FA1025  SYSTEM CLOCK
0013423                   13
                          14
0013423                   15 # OPTION A
                          16
                          17 #         MASCM 03-05  JL16    MAIN STORE PLANE - MOD 0 BITS 1 & 9
                          18 #         PROC  06-31  FA1025  SYSTEM CLOCK
0013423                   19
0013423 .                 20


                    -002- 23 #& TBL 6504
                    -002- 24 #& TEST 65
                    -002- 25 #& SEGMENT 1
                    -002- 26 #& PR CDGSD
                    -002- 27 #
                    -001- 28 #     STORE DATA BIT 02 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                    -001- 29 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 30 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 31 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 32 #
                    -001- 33 #         MASCM 03-28  JL2     MAIN STORE PLANE - MOD 1 - BITS 2 &10
0013423                   34
0013423                   35
                          36 # OPTION A
                          37
0013423                   38 #         MASCM 03-06  JL16    MAIN STORE PLANE - MOD 0 BITS 2 & 10
                          39
0013423                   40
0013423
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                              -002- 01 #& TBL 6505
                              -002- 02 #& TEST 65
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 03 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 #        MASCM 03-27  JL2      MAIN STORE PLANE - MOD 1 - BITS 3 &11
0013423                            12
0013423                            13
                                   14 # OPTION A
0013423                            15
                                   16 #        MASCM 03-07  JL16     MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                            17
0013423                            18


                              -002- 21 #& TBL 6506
                              -002- 22 #& TEST 65
                              -002- 23 #& SEGMENT 1
                              -002- 24 #& PR CDGSD
                              -002- 25 #
                              -001- 26 #     STORE DATA BIT 04 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 30 #
                              -001- 31 #        MASCM 03-26  JL2      MAIN STORE PLANE - MOD 1 - BITS 4 &12
                                   32 #        PROC  06-12  FA1010   GENERAL REGISTERS BITS 3 AND 11
                                   33 #        PROC  02-20  FA1030   MISC. DEC. - REGISTERS BITS 17 AND 19
                                   34 #        PROC  02-32  FA1022   MICRO CONTROL 7
                                   35 #        PROC  02-25  FA1032   MISCELLANEOUS CIRCUIT BOARD
0013423                            36
0013423                            37
                                   38 # OPTION A
0013423                            39
                                   40 #        MASCM 03-08  JL16     MAIN STORE PLANE - MOD 0 BITS 4 & 12
                                   41 #        PROC  06-12  FA1010   GENERAL REGISTERS BITS 3 AND 11
                                   42 #        PROC  02-20  FA1030   MISC. DEC. - REGISTERS BITS 17 AND 19
                                   43 #        PROC  02-32  FA1022   MICRO CONTROL 7
                                   44 #        PROC  02-25  FA1032   MISCELLANEOUS CIRCUIT BOARD
0013423                            45
0013423                            46
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PATCH HISTORY                                                    23:24:58   2/05/81   ****

6507      FLTSD105                                                          CDGSD        W77D

                                    -002- 01 #& TBL 6507
                                    -002- 02 #& TEST 65
                                    -002- 03 #& SEGMENT 1
                                    -002- 04 #& PR CDGSD
                                    -002- 05 #
                                    -001- 06 #      STORE DATA BIT 05 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 10 #
                                    -001- 11 #         MASCM 03-25  JL2     MAIN STORE PLANE - MOD 1 - BITS 5 &13
                                          12 #         MASCM 08-17  FA1062  MAIN STORE CONTROLLER - CHECK CIRCUIT A
0013423                                   13
0013423                                   14
                                          15 # OPTION A
0013423                                   16
                                          17 #         MASCM 03-09  JL16    MAIN STORE PLANE - MOD 0 BITS 5 & 13
                                          18 #         MASCM 08-17  FA1062  MAIN STORE CONTROLLER - CHECK CIRCUIT A
0013423                                   19
0013423                                   20


                                    -002- 23 #& TBL 6508
                                    -002- 24 #& TEST 65
                                    -002- 25 #& SEGMENT 1
                                    -002- 26 #& PR CDGSD
                                    -002- 27 #
                                    -001- 28 #      STORE DATA BIT 06 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                                    -001- 29 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 30 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 31 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 32 #
                                    -001- 33 #         MASCM 03-24  JL2     MAIN STORE PLANE - MOD 1 - BITS 6 &14
0013423                                   34
0013423                                   35
                                          36 # OPTION A
0013423                                   37
                                          38 #         MASCM 03-10  JL16    MAIN STORE PLANE - MOD 0 BITS 6 & 14
0013423                                   39
0013423                                   40
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                          -002- 01 #& TBL 6509
                          -002- 02 #& TEST 65
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #     STORE DATA BIT 07 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 10 #
                          -001- 11 #         MASCM 03-23  JL2     MAIN STORE PLANE - MOD 1 - BITS 7 &15
0013423                         12
0013423                         13
                                14 # OPTION A
0013423                         15
                                16 #         MASCM 03-11  JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
0013423                         17
0013423                         18


                          -002- 21 #& TBL 6510
                          -002- 22 #& TEST 65
                          -002- 23 #& SEGMENT 1
                          -002- 24 #& PR CDGSD
                          -002- 25 #
                          -001- 26 #     STORE DATA BIT 08 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                          -001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 30 #
                          -001- 31 #         MASCM 03-31  JL2     MAIN STORE PLANE - MOD 1 - BITS 0 & 8
                                32 #         MASCM 08-08  FA1060  MAIN STORE CONTROLLER - BITS 6 &14
                                33 #         PROC  06-19  FA1020  MICRO CONTROL 5
0013423                         34
0013423                         35
                                36 # OPTION A
0013423                         37
                                38 #         MASCM 03-04  JL16    MAIN STORE PLANE - MOD 0 BITS 0 & 8
                                39 #         MASCM 08-08  FA1060  MAIN STORE CONTROLLER - BITS 6 &14
                                40 #         PROC  06-19  FA1020  MICRO CONTROL 5
0013423                         41
0013423                         42
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

  6511     FLTSD109                                                       CDGSD        W77D

                              -002- 01 #& TBL 6511
                              -002- 02 #& TEST 65
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 09 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
   0013423                    -001- 11 #         MASCM 03-29  JL2     MAIN STORE PLANE - MOD 1 - BITS 1 & 9
   0013423                          12
                                    13
                                    14 # OPTION A
   0013423                          15
                                    16 #         MASCM 03-05  JL16   MAIN STORE PLANE - MOD 0 BITS 1 & 9
   0013423                          17


                              -002- 20 #& TBL 6512
                              -002- 21 #& TEST 65
                              -002- 22 #& SEGMENT 1
                              -002- 23 #& PR CDGSD
                              -002- 24 #
                              -001- 25 #     STORE DATA BIT 10 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 26 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 27 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 28 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 29 #
   0013423                    -001- 30 #         MASCM 03-28  JL2     MAIN STORE PLANE - MOD 1 - BITS 2 &10
   0013423                          31
                                    32
                                    33 # OPTION A
   0013423                          34
                                    35 #         MASCM 03-06  JL16   MAIN STORE PLANE - MOD 0 BITS 2 & 10
   0013423                          36
   0013423                          37
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

6513    FLTSD111                                                           CDGSD        W77D

                        -002- 01 #& TBL 6513
                        -002- 02 #& TEST 65
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #     STORE DATA BIT 11 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 10 #
                        -001- 11 #          MASCM 03-27  JL2     MAIN STORE PLANE - MOD 1 - BITS 3 &11
0013423                       12
0013423                       13
                              14 # OPTION A
0013423                       15
                              16 #          MASCM 03-07  JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                       17
0013423                       18


                        -002- 21 #& TBL 6514
                        -002- 22 #& TEST 65
                        -002- 23 #& SEGMENT 1
                        -002- 24 #& PR CDGSD
                        -002- 25 #
                        -001- 26 #     STORE DATA BIT 12 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                        -001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 30 #
                        -001- 31 #          MASCM 03-26  JL2     MAIN STORE PLANE - MOD 1 - BITS 4 &12
0013423                       32
0013423                       33
                              34 # OPTION A
0013423                       35
                              36 #          MASCM 03-08  JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423                       37
0013423                       38
```

PATCH HISTORY   23:24:58   2/05/81   ****

6515   FLTSD113   CDGSD   W77D

```
-002- 01 #& TBL 6515
-002- 02 #& TEST 65
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #      STORE DATA BIT 13 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 10 #
-001- 11 #         MASCM 03-25  JL2      MAIN STORE PLANE - MOD 1 - BITS 5 &13
      12
      13
      14 # OPTION A
      15
      16 #         MASCM 03-09  JL16     MAIN STORE PLANE - MOD 0 BITS 5 & 13
      17
      18

-002- 21 #& TBL 6516
-002- 22 #& TEST 65
-002- 23 #& SEGMENT 1
-002- 24 #& PR CDGSD
-002- 25 #
-001- 26 #      STORE DATA BIT 14 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
-001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 30 #
-001- 31 #         MASCM 03-24  JL2      MAIN STORE PLANE - MOD 1 - BITS 6 &14
      32
      33
      34 # OPTION A
      35
      36 #         MASCM 03-10  JL16     MAIN STORE PLANE - MOD 0 BITS 6 & 14
      37
      38
```

0013423
0013423

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0013423

MEMORY ELEMENT TEST   PR-1C929-50

```
                                        -002- 01 #& TBL 6517
                                        -002- 02 #& TEST 65
                                        -002- 03 #& SEGMENT 1
                                        -002- 04 #& PR CDGSD
                                        -002- 05 #
                                        -001- 06 #     STORE DATA BIT 15 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                        -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                        -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                        -001- 10 #
0013423                                 -001- 11 #         MASCM 03-23   JL2      MAIN STORE PLANE - MOD 1 - BITS 7 &15
0013423                                       12
                                              13
                                              14 # OPTION A
0013423                                       15
                                              16 #         MASCM 03-11   JL16     MAIN STORE PLANE - MOD 0 BITS 7 & 15
0013423                                       17
0013423                                       18


                                        -002- 21 #& TBL 6518
                                        -002- 22 #& TEST 65
                                        -002- 23 #& SEGMENT 1
                                        -002- 24 #& PR CDGSD
                                        -002- 25 #
                                        -001- 26 #     STORE DATA BIT 16 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                                        -001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                        -001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                        -001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                        -001- 30 #
                                        -001- 31 # NOTE--1 MASCM 03-22   JL2      MAIN STORE PLANE - MOD 1 - BITS 16&20
0013423                                       32
0013423                                       33
                                              34 # OPTION A
0013423                                       35
                                              36 # NOTE--1 MASCM 03-12   JL16     MAIN STORE PLANE - MOD 0 BITS 16 & 20
0013423                                       37
0013423                                       38
```

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

6519    FLTSD117                                                                 CDGSD       W77D

                              -002- 01 #& TBL 6519
                              -002- 02 #& TEST 65
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 17 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 # NOTE--1 MASCM 03-21  JL2      MAIN STORE PLANE - MOD 1 - BITS 17&21
                                    12 #           PROC  06-33  FA1011  "FROM" FIELD DECODER
                                    13 #           PROC  06-19  FA1020  MICRO CONTROL 5
0013423                             14 #           PROC  06-34  FA1045  "TO" FIELD DECODER
0013423                             15
                                    16
0013423                             17 # OPTION A
                                    18
                                    19 # NOTE--1 MASCM 03-12  JL16     MAIN STORE PLANE - MOD 0 BITS 17 & 21
                                    20 #           PROC  06-33  FA1011  "FROM" FIELD DECODER
                                    21 #           PROC  06-19  FA1020  MICRO CONTROL 5
                                    22 #           PROC  06-34  FA1045  "TO" FIELD DECODER
0013423                             23
0013423                             24

                              -002- 27 #& TBL 6520
                              -002- 28 #& TEST 65
                              -002- 29 #& SEGMENT 1
                              -002- 30 #& PR CDGSD
                              -002- 31 #
                              -001- 32 #      STORE DATA BIT 18 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 33 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 34 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 35 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 36 #
                              -001- 37 # NOTE--1 MASCM 03-20  JL2      MAIN STORE PLANE - MOD 1 - BITS 18&22
0013423                             38
0013423                             39
                                    40 # OPTION A
0013423                             41
                                    42 # NOTE--1 MASCM 03-14  JL16     MAIN STORE PLANE - MOD 0 BITS 18 & 22
0013423                             43
0013423                             44
```

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              -002- 01 #& TBL 6521
              -002- 02 #& TEST 65
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #     STORE DATA BIT 19 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 10 #
              -001- 11 # NOTE--1 MASCM 03-19  JL2      MAIN STORE PLANE - MOD 1 - BITS 19&23
                    12
0013423             13
0013423             14 # OPTION A
                    15
0013423             16 # NOTE--1 MASCM 03-16  JL16    MAIN STORE PLANE - MOD 0 BITS 19 & 23
                    17
0013423             18
0013423

              -002- 21 #& TBL 6522
              -002- 22 #& TEST 65
              -002- 23 #& SEGMENT 1
              -002- 24 #& PR CDGSD
              -002- 25 #
              -001- 26 #     STORE DATA BIT 20 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
              -001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 30 #
              -001- 31 # NOTE--1 MASCM 03-22  JL2      MAIN STORE PLANE - MOD 1 - BITS 16&20
                    32
0013423             33
0013423             34 # OPTION A
                    35
0013423             36 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 16 & 20
                    37
0013423             38
0013423
```

```
-002- 01 #& TBL 6523
-002- 02 #& TEST 65
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #      STORE DATA BIT 21 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 09 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 10 #
-001- 11 # NOTE--1 MASCM 03-21  JL2      MAIN STORE PLANE - MOD 1 - BITS 17&21
0013423    12
0013423    13
           14 # OPTION A
0013423    15
           16 # NOTE--1 MASCM 03-12  JL16     MAIN STORE PLANE - MOD 0 BITS 17 & 21
0013423    17
0013423    18


-002- 21 #& TBL 6524
-002- 22 #& TEST 65
-002- 23 #& SEGMENT 1
-002- 24 #& PR CDGSD
-002- 25 #
-001- 26 #      STORE DATA BIT 22 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
-001- 27 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 28 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 29 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 30 #
-001- 31 # NOTE--1 MASCM 03-20  JL2      MAIN STORE PLANE - MOD 1 - BITS 18&22
0013423    32
0013423    33
           34 # OPTION A
0013423    35
           36 # NOTE--1 MASCM 03-14  JL16     MAIN STORE PLANE - MOD 0 BITS 18 & 22
0013423    37
0013423    38
```

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PATCH HISTORY                                              23:24:58   2/05/81   ****

6525     FLTSD123                                           CDGSD          W77D

                              -002- 01 #& TBL 6525
                              -002- 02 #& TEST 65
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 23 IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 09 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 10 #
                              -001- 11 # NOTE--1 MASCM 03-19  JL2     MAIN STORE PLANE - MOD 1 - BITS 19&23
0013423                             12
0013423                             13
                                    14 #    OPTION A
                                    15 # NOTE--1 MASCM 03-16  JL16    MAIN STORE PLANE - MOD 0 BITS 19 & 23
0013423                             16
0013423  .                          17


                              -002- 20 #& TBL 6526
                              -002- 21 #& TEST 65
                              -002- 22 #& SEGMENT 1
                              -002- 23 #& PR CDGSD
                              -002- 24 #
                              -001- 25 #      STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 1 HAS A STUCK-AT FAULT
                              -001- 26 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 27 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 28 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 29 #
                              -001- 30 #         MASCM  03-18  JL2     MAIN STORE PLANE - MOD 1 - BITS PL&PH
                                    31 #         PROC   06-26  FA1015  DML0 ROTATE AND PARITY GENERATOR
                                    32 #         PROC   06-23  FA1015  DML1 ROTATE AND PARITY GENERATOR
                                    33 # THE ABOVE TWO PACKS CONTAIN UNDIAGNOSED PARITY GENERATION CIRCUITRY
                                    34 #         PROC   10-23  FA1027  ERROR REG/DISPLAY BUFFER LOW BITS
                                    35 #         PROC   06-20  FA1026  GATING BUS PARITY CHECK AND DML MATCH
0013423                             36
0013423                             37
                                    38 #    OPTION A
                                    39 #         PROC   06-26  FA1015  DML0 ROTATE AND PARITY GENERATOR
                                    40 #         PROC   06-23  FA1015  DML1 ROTATE AND PARITY GENERATOR
                                    41 #         MASCM  03-17  JL16    MAIN STORE PLANE - MOD 0 BITS PL & PH
                                    42 #         PROC   10-23  FA1027  ERROR REG/DISPLAY BUFFER LOW BITS
                                    43 #         PROC   06-20  FA1026  GATING BUS PARITY CHECK AND DML MATCH
0013423                             44
0013423                             45




    MEMORY ELEMENT TEST                                             PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  156
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6527   FLTSD1WT   CDGSD   W77D

```
                                 -001- 01 #& TBL 6527
                                 -001- 02 #& TEST 65
                                 -001- 03 #& SEGMENT 1
                                 -001- 04 #& PR CDGSD
                                 -001- 05 #
                                       06 #     OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
                                       07 # MEMORY MODULE 1. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
                                       08 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
                                       09 # IS THE PROCESSOR BUS CONTROLLER.
                                       10 #     DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
0013423                                11
                                       12 #       PROC  02-21  FA1029  MAIN STORE CONTROL 0
                                       13 #       PROC  02-35  FA1016  MICRO CONTROL 1
                                       14 #       PROC  06-33  FA1011  "FROM" FIELD DECODER
                                       15 #       PROC  06-19  FA1020  MICRO CONTROL 5
                                       16 #       PROC  06-35  FA1021  MICRO CONTROL 6
                                       17 #       PROC  06-34  FA1045  "TO" FIELD DECODER
                                       18 #       PROC  06-06  FA1034  CONSOLE AND STATUS PANEL INTERFACE
                                       19 #       PROC  02-33  FA1018  MICRO CONTROL 3
                                       20 #       PROC  02-22  FA1029  MAIN STORE CONTROL 1
                                       21 #       PROC  06-14  FA1010  GENERAL REGISTERS BITS 5 AND 13
                                       22 #       PROC  06-17  FA1010  GENERAL REGISTERS BITS 7 AND 15
                                       23 #       PROC  02-08  FA1024  SPECIAL REGISTERS BITS 0 AND 8
                                       24 #       PROC  02-23  FA1046  DOUBLE STORE READ
                                       25 #       MASCM 08-02  FA1060  MAIN STORE CONTROLLER - BITS 0 & 8
                                       26 #       MASCM 08-18  FA1071  MAIN STORE CONTROLLER  - TIMING GENERATOR
                                       27 #       PROC  02-32  FA1022  MICRO CONTROL 7
                                       28 #       PROC  02-20  FA1030  MISC. DEC. - REGISTERS BITS 17 AND 19

                                 -001- 31 #& TBL 6601
                                 -001- 32 #& TEST 66
                                 -001- 33 #& SEGMENT 0 OR 1
                                 -001- 34 #& PR CDGSD
                                 -001- 35 #
                                       36 #     TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                       37 # TO COMPLETE PROPERLY.
                                       38 #     DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                       39 #  ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
0013423                                40
                                       41 #       MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                       42 #       MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                       43 #       MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
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MEMORY ELEMENT TEST   PR-1C929-50

```
-002- 01 #& TBL 6602
-002- 02 #& TEST 66
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #     STORE DATA BIT 00 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #          MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
-001- 13 #          MASMA 03-04   JL2     MAIN STORE PLANE - MOD 2 - BITS 0 & 8
      14
      15
      16 # OPTION A
      17
      18 #          MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      19 #          MASCM 03-04   JL16    MAIN STORE PLANE - MOD 0 BITS 0 & 8
      20
      21


-002- 24 #& TBL 6603
-002- 25 #& TEST 66
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #     STORE DATA BIT 01 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #          MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
-001- 36 #          MASMA 03-05   JL2     MAIN STORE PLANE - MOD 2 - BITS 1 & 9
      37
      38
      39 # OPTION A
      40
      41 #          MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      42 #          MASCM 03-05   JL16    MAIN STORE PLANE - MOD 0 BITS 1 & 9
      43
      44
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0013423
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0013423

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PATCH HISTORY                                                    23:24:58   2/05/81   ****

6604     FLTSD202                                                         CDGSD          W77D

                                    -002- 01 #& TBL 6604
                                    -002- 02 #& TEST 66
                                    -002- 03 #& SEGMENT 1
                                    -002- 04 #& PR CDGSD
                                    -002- 05 #
                                    -001- 06 #     STORE DATA BIT 02 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 11 #
                                    -001- 12 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                                    -001- 13 #        MASMA 03-06   JL2     MAIN STORE PLANE - MOD 2 - BITS 2 &10
0013423                                  14
0013423                                  15
                                         16 # OPTION A
0013423                                  17
                                         18 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                         19 #        MASCM 03-06   JL16    MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423                                  20
0013423                                  21


                                    -002- 24 #& TBL 6605
                                    -002- 25 #& TEST 66
                                    -002- 26 #& SEGMENT 1
                                    -002- 27 #& PR CDGSD
                                    -002- 28 #
                                    -001- 29 #     STORE DATA BIT 03 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                                    -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 34 #
                                    -001- 35 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                                    -001- 36 #        MASMA 03-07   JL2     MAIN STORE PLANE - MOD 2 - BITS 3 &11
0013423                                  37
0013423                                  38
                                         39 # OPTION A
0013423                                  40
                                         41 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                         42 #        MASCM 03-07   JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                                  43
0013423                                  44
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                              -002- 01 #& TBL 6606
                              -002- 02 #& TEST 66
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #       STORE DATA BIT 04 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #     OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #          MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 13 #          MASMA 03-08   JL2     MAIN STORE PLANE - MOD 2 - BITS 4 &12
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #          MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    19 #          MASCM 03-08   JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423                             20
0013423                             21


                              -002- 24 #& TBL 6607
                              -002- 25 #& TEST 66
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #       STORE DATA BIT 05 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #     OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #          MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 36 #          MASMA 03-09   JL2     MAIN STORE PLANE - MOD 2 - BITS 5 &13
0013423                             37
0013423                             38
                                    39 # OPTION A
0013423                             40
                                    41 #          MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    42 #          MASCM 03-09   JL16    MAIN STORE PLANE - MOD 0 BITS 5 & 13
0013423                             43
0013423                             44
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

  6608     FLTSD206                                                              CDGSD      W77D

                                  -002- 01 #& TBL 6608
                                  -002- 02 #& TEST 66
                                  -002- 03 #& SEGMENT 1
                                  -002- 04 #& PR CDGSD
                                  -002- 05 #
                                  -001- 06 #     STORE DATA BIT 06 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                                  -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 11 #
                                  -001- 12 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                                  -001- 13 #        MASMA 03-10   JL2     MAIN STORE PLANE - MOD 2 - BITS 6 &14
 0013423                              14
 0013423                              15
                                      16 # OPTION A
 0013423                              17
                                      18 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                      19 #        MASCM 03-10   JL16    MAIN STORE PLANE - MOD 0 BITS 6 & 14
 0013423                              20
 0013423                              21


                                  -002- 24 #& TBL 6609
                                  -002- 25 #& TEST 66
                                  -002- 26 #& SEGMENT 1
                                  -002- 27 #& PR CDGSD
                                  -002- 28 #
                                  -001- 29 #     STORE DATA BIT 07 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                                  -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 34 #
                                  -001- 35 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                                  -001- 36 #        MASMA 03-11   JL2     MAIN STORE PLANE - MOD 2 - BITS 7 &15
 0013423                              37
 0013423                              38
                                      39 # OPTION A
 0013423                              40
                                      41 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                      42 #        MASCM 03-11   JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
 0013423                              43
 0013423                              44
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   6610    FLTSD208                                                       CDGSD        W77D

                              -002- 01 #& TBL 6610
                              -002- 02 #& TEST 66
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #    STORE DATA BIT 08 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #         MASMA 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 13 #         MASMA 03-04  JL2    MAIN STORE PLANE - MOD 2 - BITS 0 & 8
   0013423                          14
   0013423                          15
                                    16 # OPTION A
   0013423                          17
                                    18 #         MASCM 03-02  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    19 #         MASCM 03-04  JL16   MAIN STORE PLANE - MOD 0 BITS 0 & 8
   0013423                          20
   0013423                          21


                              -002- 24 #& TBL 6611
                              -002- 25 #& TEST 66
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #    STORE DATA BIT 09 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #         MASMA 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 36 #         MASMA 03-05  JL2    MAIN STORE PLANE - MOD 2 - BITS 1 & 9
   0013423                          37
   0013423                          38
                                    39 # OPTION A
   0013423                          40
                                    41 #         MASCM 03-02  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    42 #         MASCM 03-05  JL16   MAIN STORE PLANE - MOD 0 BITS 1 & 9
   0013423                          43
   0013423                          44




   MEMORY ELEMENT TEST                                                   PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE  162
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

  6612    FLTSD210                                                 CDGSD          W77D

                        -002- 01 #& TBL 6612
                        -002- 02 #& TEST 66
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #       STORE DATA BIT 10 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #       MASMA 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 2
                        -001- 13 #       MASMA 03-06  JL2    MAIN STORE PLANE - MOD 2 - BITS 2 &10
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #       MASCM 03-02  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                              19 #       MASCM 03-06  JL16   MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423                       20
0013423                       21


                        -002- 24 #& TBL 6613
                        -002- 25 #& TEST 66
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #       STORE DATA BIT 11 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #       MASMA 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 2
                        -001- 36 #       MASMA 03-07  JL2    MAIN STORE PLANE - MOD 2 - BITS 3 &11
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #       MASCM 03-02  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                              42 #       MASCM 03-07  JL16   MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                       43
0013423                       44




  MEMORY ELEMENT TEST                                              PR-1C929-50

    23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE 163
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              -002- 01 #& TBL 6614
              -002- 02 #& TEST 66
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #      STORE DATA BIT 12 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #  OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 11 #
              -001- 12 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
              -001- 13 #        MASMA 03-08   JL2     MAIN STORE PLANE - MOD 2 - BITS 4 &12
0013423             14
0013423             15
                    16 # OPTION A
0013423             17
                    18 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    19 #        MASCM 03-08   JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423             20
0013423             21


              -002- 24 #& TBL 6615
              -002- 25 #& TEST 66
              -002- 26 #& SEGMENT 1
              -002- 27 #& PR CDGSD
              -002- 28 #
              -001- 29 #      STORE DATA BIT 13 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 31 #  OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 34 #
              -001- 35 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
              -001- 36 #        MASMA 03-09   JL2     MAIN STORE PLANE - MOD 2 - BITS 5 &13
0013423             37
0013423             38
                    39 # OPTION A
0013423             40
                    41 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    42 #        MASCM 03-09   JL16    MAIN STORE PLANE - MOD 0 BITS 5 & 13
0013423             43
0013423             44
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   6616    FLTSD214                                                          CDGSD      W77D

                         -002- 01 #& TBL 6616
                         -002- 02 #& TEST 66
                         -002- 03 #& SEGMENT 1
                         -002- 04 #& PR CDGSD
                         -002- 05 #
                         -001- 06 #     STORE DATA BIT 14 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                         -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                         -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                         -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                         -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                         -001- 11 #
                         -001- 12 #       MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                         -001- 13 #       MASMA 03-10   JL2     MAIN STORE PLANE - MOD 2 - BITS 6 &14
0013423                        14
0013423                        15
                               16 # OPTION A
0013423                        17
                               18 #       MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                               19 #       MASCM 03-10   JL16    MAIN STORE PLANE - MOD 0 BITS 6 & 14
0013423                        20
0013423                        21


                         -002- 24 #& TBL 6617
                         -002- 25 #& TEST 66
                         -002- 26 #& SEGMENT 1
                         -002- 27 #& PR CDGSD
                         -002- 28 #
                         -001- 29 #     STORE DATA BIT 15 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                         -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                         -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                         -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                         -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                         -001- 34 #
                         -001- 35 #       MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                         -001- 36 #       MASMA 03-11   JL2     MAIN STORE PLANE - MOD 2 - BITS 7 &15
0013423                        37
0013423                        38
                               39 # OPTION A
0013423                        40
                               41 #       MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                               42 #       MASCM 03-11   JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
0013423                        43
0013423                        44
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-002- 01 #& TBL 6618
-002- 02 #& TEST 66
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #       STORE DATA BIT 16 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #        MASMA 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
-001- 13 # NOTE--1 MASMA 03-12  JL2     MAIN STORE PLANE - MOD 2 - BITS 16&20
      14
      15
      16 # OPTION A
      17
      18 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      19 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 16 & 20
      20
      21

-002- 24 #& TBL 6619
-002- 25 #& TEST 66
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #       STORE DATA BIT 17 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #        MASMA 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
-001- 36 # NOTE--1 MASMA 03-13  JL2     MAIN STORE PLANE - MOD 2 - BITS 17&21
      37
      38
      39 # OPTION A
      40
      41 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      42 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 17 & 21
      43
      44
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0013423
0013423

0013423

0013423
0013423

0013423
0013423

0013423

0013423
0013423

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PATCH HISTORY                                              23:24:58   2/05/81  ****

    6620    FLTSD218                                           CDGSD        W77D

                              -002- 01 #& TBL 6620
                              -002- 02 #& TEST 66
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 18 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 13 # NOTE--1 MASMA 03-14  JL2     MAIN STORE PLANE - MOD 2 - BITS 18&22
    0013423                         14
    0013423                         15
                                    16 # OPTION A
    0013423                         17
                                    18 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    19 # NOTE--1 MASCM 03-14  JL16    MAIN STORE PLANE - MOD 0 BITS 18 & 22
    0013423                         20
    0013423                         21


                              -002- 24 #& TBL 6621
                              -002- 25 #& TEST 66
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #      STORE DATA BIT 19 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #        MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 36 # NOTE--1 MASMA 03-16  JL2     MAIN STORE PLANE - MOD 2 - BITS 19&23
    0013423                         37
    0013423                         38
                                    39 # OPTION A
    0013423                         40
                                    41 #        MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    42 # NOTE--1 MASCM 03-16  JL16    MAIN STORE PLANE - MOD 0 BITS 19 & 23
    0013423                         43
    0013423                         44




    MEMORY ELEMENT TEST                                          PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  167
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                              -002- 01 #& TBL 6622
                              -002- 02 #& TEST 66
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 20 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #        MASMA 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
0013423                       -001- 13 # NOTE--1 MASMA 03-12  JL2    MAIN STORE PLANE - MOD 2 - BITS 16&20
0013423                            14
                                   15
0013423                            16 # OPTION A
                                   17
                                   18 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
0013423                            19 # NOTE--1 MASCM 03-12  JL16   MAIN STORE PLANE - MOD 0 BITS 16 & 20
0013423                            20
                                   21


                              -002- 24 #& TBL 6623
                              -002- 25 #& TEST 66
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #     STORE DATA BIT 21 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #        MASMA 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 36 # NOTE--1 MASMA 03-13  JL2    MAIN STORE PLANE - MOD 2 - BITS 17&21
0013423                            37
0013423                            38
                                   39 # OPTION A
0013423                            40
                                   41 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                   42 # NOTE--1 MASCM 03-12  JL16   MAIN STORE PLANE - MOD 0 BITS 17 & 21
0013423                            43
0013423                            44
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PATCH HISTORY                                                      23:24:58   2/05/81  ****

6624     FLTSD222                                                          CDGSD        W77D

                          -002- 01 #& TBL 6624
                          -002- 02 #& TEST 66
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 22 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #         MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                          -001- 13 # NOTE--1 MASMA 03-14   JL2     MAIN STORE PLANE - MOD 2 - BITS 18&22
0013423                         14
0013423                         15
                                16 # OPTION A
0013423                         17
                                18 #         MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                19 # NOTE--1 MASCM 03-14   JL16    MAIN STORE PLANE - MOD 0 BITS 18 & 22
0013423                         20
0013423                         21


                          -002- 24 #& TBL 6625
                          -002- 25 #& TEST 66
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #      STORE DATA BIT 23 IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #         MASMA 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 2
                          -001- 36 # NOTE--1 MASMA 03-16   JL2     MAIN STORE PLANE - MOD 2 - BITS 19&23
0013423                         37
0013423                         38
                                39 # OPTION A
                                40
0013423                         41 #         MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                42 # NOTE--1 MASCM 03-16   JL16    MAIN STORE PLANE - MOD 0 BITS 19 & 23
0013423                         43
0013423                         44


    MEMORY ELEMENT TEST                                                      PR-1C929-50

      23:24:58  2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE 169
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                              -002- 01 #& TBL 6626
                              -002- 02 #& TEST 66
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 2 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #         MASMA 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 2
                              -001- 13 #         MASMA 03-17  JL2    MAIN STORE PLANE - MOD 2 - BITS PL&PH
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #         MASCM 03-02  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    19 #         MASCM 03-17  JL16   MAIN STORE PLANE - MOD 0 BITS PL & PH
0013423                             20
0013423                             21


                              -001- 24 #& TBL 6627
                              -001- 25 #& TEST 66
                              -001- 26 #& SEGMENT 1
                              -001- 27 #& PR CDGSD
                              -001- 28 #
                                    29 #      OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
                                    30 # MEMORY MODULE 2. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
                                    31 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
                                    32 # IS THE PROCESSOR BUS CONTROLLER.
                                    33 #      DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
0013423                             34
                                    35 #         PROC  02-21  FA1029  MAIN STORE CONTROL 0
```

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PATCH HISTORY                                                    23:24:58   2/05/81   ****

   6701    IOPRTYER                                                           CDGSD        W77D

                              -001- 01 #& TBL 6701
                              -001- 02 #& TEST 67
                              -001- 03 #& SEGMENT 0 OR 1
                              -001- 04 #& PR CDGSD
                              -001- 05 #
                                    06 #      TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                    07 # TO COMPLETE PROPERLY.
                                    08 #      DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                    09 #   ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
   0013423                          10
                                    11 #        MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                    12 #        MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                    13 #        MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE


                              -002- 16 #& TBL 6702
                              -002- 17 #& TEST 67
                              -002- 18 #& SEGMENT 1
                              -002- 19 #& PR CDGSD
                              -002- 20 #
                              -001- 21 #      STORE DATA BIT 00 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                              -001- 22 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 23 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY.
                              -001- 24 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 25 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 26 #
                              -001- 27 #        MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                              -001- 28 #        MASMA 03-31  JL2     MAIN STORE PLANE - MOD 3 - BITS 0 & 8
   0013423                          29
   0013423                          30
                                    31 # OPTION A
   0013423                          32
                                    33 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    34 #        MASCM 03-04  JL16    MAIN STORE PLANE - MOD 0 BITS 0 & 8
   0013423                          35
   0013423                          36


   MEMORY ELEMENT TEST                                                        PR-1C929-50

      23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  171
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-002- 01 #& TBL 6703
-002- 02 #& TEST 67
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #        STORE DATA BIT 01 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #        MASMA 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 13 #        MASMA 03-29   JL2      MAIN STORE PLANE - MOD 3 - BITS 1 & 9
      14
      15
      16 # OPTION A
      17
      18 #        MASCM 03-02   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
      19 #        MASCM 03-05   JL16     MAIN STORE PLANE - MOD 0 BITS 1 & 9
      20
      21


-002- 24 #& TBL 6704
-002- 25 #& TEST 67
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #        STORE DATA BIT 02 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #        MASMA 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 36 #        MASMA 03-28   JL2      MAIN STORE PLANE - MOD 3 - BITS 2 &10
      37
      38
      39 # OPTION A
      40
      41 #        MASCM 03-02   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
      42 #        MASCM 03-06   JL16     MAIN STORE PLANE - MOD 0 BITS 2 & 10
      43
      44
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0013423
0013423

0013423

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0013423

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0013423

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0013423
0013423

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

6705    FLTSD303                                                        CDGSD        W77D

                        -002- 01 #& TBL 6705
                        -002- 02 #& TEST 67
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 03 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                        -001- 13 #         MASMA 03-27  JL2     MAIN STORE PLANE - MOD 3 - BITS 3 &11
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                              19 #         MASCM 03-07  JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                       20
0013423                       21


                        -002- 24 #& TBL 6706
                        -002- 25 #& TEST 67
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #      STORE DATA BIT 04 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                        -001- 36 #         MASMA 03-26  JL2     MAIN STORE PLANE - MOD 3 - BITS 4 &12
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                              42 #         MASCM 03-08  JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423                       43
0013423                       44


MEMORY ELEMENT TEST                                                  PR-1C929-50

  23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  173
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-002- 01 #& TBL 6707
-002- 02 #& TEST 67
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #     STORE DATA BIT 05 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #         MASMA 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 13 #         MASMA 03-25   JL2      MAIN STORE PLANE - MOD 3 - BITS 5 &13
       14
       15
       16 # OPTION A
       17
       18 #         MASCM 03-02   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
       19 #         MASCM 03-09   JL16     MAIN STORE PLANE - MOD 0 BITS 5 & 13
       20
       21


-002- 24 #& TBL 6708
-002- 25 #& TEST 67
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #     STORE DATA BIT 06 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #         MASMA 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 36 #         MASMA 03-24   JL2      MAIN STORE PLANE - MOD 3 - BITS 6 &14
       37
       38
       39 # OPTION A
       40
       41 #         MASCM 03-02   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 0
       42 #         MASCM 03-10   JL16     MAIN STORE PLANE - MOD 0 BITS 6 & 14
       43
       44
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Left margin annotations:
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0013423
0013423

0013423

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0013423


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0013423
0013423
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              -002- 01 #& TBL 6709
              -002- 02 #& TEST 67
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #      STORE DATA BIT 07 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 11 #
              -001- 12 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
              -001- 13 #         MASMA 03-23  JL2     MAIN STORE PLANE - MOD 3 - BITS 7 &15
0013423             14
0013423             15
                    16 # OPTION A
0013423             17
                    18 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    19 #         MASCM 03-11  JL16    MAIN STORE PLANE - MOD 0 BITS 7 & 15
0013423             20
0013423             21


              -002- 24 #& TBL 6710
              -002- 25 #& TEST 67
              -002- 26 #& SEGMENT 1
              -002- 27 #& PR CDGSD
              -002- 28 #
              -001- 29 #      STORE DATA BIT 08 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 34 #
              -001- 35 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
              -001- 36 #         MASMA 03-31  JL2     MAIN STORE PLANE - MOD 3 - BITS 0 & 8
0013423             37
0013423             38
                    39 # OPTION A
0013423             40
                    41 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    42 #         MASCM 03-04  JL16    MAIN STORE PLANE - MOD 0 BITS 0 & 8
0013423             43
0013423             44
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              -002- 01 #& TBL 6711
              -002- 02 #& TEST 67
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #     STORE DATA BIT 09 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 11 #
              -001- 12 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
              -001- 13 #         MASMA 03-29  JL2     MAIN STORE PLANE - MOD 3 - BITS 1 & 9
0013423             14
0013423             15
                    16 # OPTION A
0013423             17
                    18 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    19 #         MASCM 03-05  JL16    MAIN STORE PLANE - MOD 0 BITS 1 & 9
0013423             20
0013423             21


              -002- 24 #& TBL 6712
              -002- 25 #& TEST 67
              -002- 26 #& SEGMENT 1
              -002- 27 #& PR CDGSD
              -002- 28 #
              -001- 29 #     STORE DATA BIT 10 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 34 #
              -001- 35 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
              -001- 36 #         MASMA 03-28  JL2     MAIN STORE PLANE - MOD 3 - BITS 2 &10
0013423             37
0013423             38
                    39 # OPTION A
0013423             40
                    41 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                    42 #         MASCM 03-06  JL16    MAIN STORE PLANE - MOD 0 BITS 2 & 10
0013423             43
0013423             44
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PATCH HISTORY                                                        23:24:58   2/05/81  ****

   6713     FLTSD311                                                        CDGSD          W77D

                          -002- 01 #& TBL 6713
                          -002- 02 #& TEST 67
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 11 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                          -001- 13 #         MASMA 03-27  JL2     MAIN STORE PLANE - MOD 3 - BITS 3 &11
0013423                         14
0013423                         15
                                16 # OPTION A
0013423                         17
                                18 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                19 #         MASCM 03-07  JL16    MAIN STORE PLANE - MOD 0 BITS 3 & 11
0013423                         20
0013423                         21


                          -002- 24 #& TBL 6714
                          -002- 25 #& TEST 67
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #      STORE DATA BIT 12 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                          -001- 36 #         MASMA 03-26  JL2     MAIN STORE PLANE - MOD 3 - BITS 4 &12
0013423                         37
0013423                         38
                                39 # OPTION A
0013423                         40
                                41 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                42 #         MASCM 03-08  JL16    MAIN STORE PLANE - MOD 0 BITS 4 & 12
0013423                         43
0013423                         44
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                                     -002- 01 #& TBL 6715
                                     -002- 02 #& TEST 67
                                     -002- 03 #& SEGMENT 1
                                     -002- 04 #& PR CDGSD
                                     -002- 05 #
                                     -001- 06 #      STORE DATA BIT 13 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                                     -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 11 #
                                     -001- 12 #         MASMA 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                                     -001- 13 #         MASMA 03-25   JL2     MAIN STORE PLANE - MOD 3 - BITS 5 &13
0013423                                    14
0013423                                    15
                                           16 # OPTION A
0013423                                    17
                                           18 #         MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                           19 #         MASCM 03-09   JL16    MAIN STORE PLANE - MOD 0 BITS 5 & 13
0013423                                    20
0013423                                    21


                                     -002- 24 #& TBL 6716
                                     -002- 25 #& TEST 67
                                     -002- 26 #& SEGMENT 1
                                     -002- 27 #& PR CDGSD
                                     -002- 28 #
                                     -001- 29 #      STORE DATA BIT 14 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                                     -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 34 #
                                     -001- 35 #         MASMA 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                                     -001- 36 #         MASMA 03-24   JL2     MAIN STORE PLANE - MOD 3 - BITS 6 &14
0013423                                    37
0013423                                    38
                                           39 # OPTION A
0013423                                    40
                                           41 #         MASCM 03-02   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                           42 #         MASCM 03-10   JL16    MAIN STORE PLANE - MOD 0 BITS 6 & 14
0013423                                    43
0013423                                    44
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PATCH HISTORY                                                      23:24:58   2/05/81  ****
    6717    FLTSD315                                                  CDGSD        W77D

                               -002- 01 #& TBL 6717
                               -002- 02 #& TEST 67
                               -002- 03 #& SEGMENT 1
                               -002- 04 #& PR CDGSD
                               -002- 05 #
                               -001- 06 #     STORE DATA BIT 15 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                               -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                               -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                               -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                               -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                               -001- 11 #
                               -001- 12 #         MASMA 03-33   JK3    MAIN STORE FANOUT BOARD FOR MODULE 3
                               -001- 13 #         MASMA 03-23   JL2    MAIN STORE PLANE - MOD 3 - BITS 7 &15
    0013423                          14
    0013423                          15
                                     16 # OPTION A
    0013423                          17
                                     18 #         MASCM 03-02   JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                     19 #         MASCM 03-11   JL16   MAIN STORE PLANE - MOD 0 BITS 7 & 15
    0013423                          20
    0013423                          21


                               -002- 24 #& TBL 6718
                               -002- 25 #& TEST 67
                               -002- 26 #& SEGMENT 1
                               -002- 27 #& PR CDGSD
                               -002- 28 #
                               -001- 29 #     STORE DATA BIT 16 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                               -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                               -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                               -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                               -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                               -001- 34 #
                               -001- 35 #         MASMA 03-33   JK3    MAIN STORE FANOUT BOARD FOR MODULE 3
                               -001- 36 # NOTE--1 MASMA 03-22   JL2    MAIN STORE PLANE - MOD 3 - BITS 16&20
    0013423                          37
    0013423                          38
                                     39 # OPTION A
    0013423                          40
                                     41 #         MASCM 03-02   JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                     42 # NOTE--1 MASCM 03-12   JL16   MAIN STORE PLANE - MOD 0 BITS 16 & 20
    0013423                          43
    0013423                          44
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                              -002- 01 #& TBL 6719
                              -002- 02 #& TEST 67
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 17 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                              -001- 13 # NOTE--1 MASMA 03-21  JL2     MAIN STORE PLANE - MOD 3 - BITS 17&21
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    19 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 17 & 21
0013423                             20
0013423                             21


                              -002- 24 #& TBL 6720
                              -002- 25 #& TEST 67
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #      STORE DATA BIT 18 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #         MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
                              -001- 36 # NOTE--1 MASMA 03-20  JL2     MAIN STORE PLANE - MOD 3 - BITS 18&22
0013423                             37
0013423                             38
                                    39 # OPTION A
0013423                             40
                                    41 #         MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                    42 # NOTE--1 MASCM 03-14  JL16    MAIN STORE PLANE - MOD 0 BITS 18 & 22
0013423                             43
0013423                             44
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      6721    FLTSD319                                           CDGSD           W77D

                                  -002- 01 #& TBL 6721
                                  -002- 02 #& TEST 67
                                  -002- 03 #& SEGMENT 1
                                  -002- 04 #& PR CDGSD
                                  -002- 05 #
                                  -001- 06 #      STORE DATA BIT 19 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                                  -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 11 #
                                  -001- 12 #          MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
      0013423                     -001- 13 # NOTE--1 MASMA 03-19  JL2     MAIN STORE PLANE - MOD 3 - BITS 19&23
      0013423                           14
                                        15
      0013423                           16 # OPTION A
                                        17
                                        18 #          MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      0013423                           19 # NOTE--1 MASCM 03-16  JL16    MAIN STORE PLANE - MOD 0 BITS 19 & 23
      0013423                           20
                                        21


                                  -002- 24 #& TBL 6722
                                  -002- 25 #& TEST 67
                                  -002- 26 #& SEGMENT 1
                                  -002- 27 #& PR CDGSD
                                  -002- 28 #
                                  -001- 29 #      STORE DATA BIT 20 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                                  -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 34 #
                                  -001- 35 #          MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
      0013423                     -001- 36 # NOTE--1 MASMA 03-22  JL2     MAIN STORE PLANE - MOD 3 - BITS 16&20
      0013423                           37
                                        38
      0013423                           39 # OPTION A
                                        40
                                        41 #          MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      0013423                           42 # NOTE--1 MASCM 03-12  JL16    MAIN STORE PLANE - MOD 0 BITS 16 & 20
      0013423                           43
                                        44
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                            -002- 01 #& TBL 6723
                            -002- 02 #& TEST 67
                            -002- 03 #& SEGMENT 1
                            -002- 04 #& PR CDGSD
                            -002- 05 #
                            -001- 06 #      STORE DATA BIT 21 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                            -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 11 #
                            -001- 12 #        MASMA 03-33   JK3    MAIN STORE FANOUT BOARD FOR MODULE 3
                            -001- 13 # NOTE--1 MASMA 03-21   JL2    MAIN STORE PLANE - MOD 3 - BITS 17&21
0013423                           14
0013423                           15
                                  16 # OPTION A
0013423                           17
                                  18 #        MASCM 03-02   JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                  19 # NOTE--1 MASCM 03-12   JL16   MAIN STORE PLANE - MOD 0 BITS 17 & 21
0013423                           20
0013423                           21


                            -002- 24 #& TBL 6724
                            -002- 25 #& TEST 67
                            -002- 26 #& SEGMENT 1
                            -002- 27 #& PR CDGSD
                            -002- 28 #
                            -001- 29 #      STORE DATA BIT 22 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
                            -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 34 #
                            -001- 35 #        MASMA 03-33   JK3    MAIN STORE FANOUT BOARD FOR MODULE 3
                            -001- 36 # NOTE--1 MASMA 03-20   JL2    MAIN STORE PLANE - MOD 3 - BITS 18&22
0013423                           37
0013423                           38
                                  39 # OPTION A
0013423                           40
                                  41 #        MASCM 03-02   JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
                                  42 # NOTE--1 MASCM 03-14   JL16   MAIN STORE PLANE - MOD 0 BITS 18 & 22
0013423                           43
0013423                           44
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-002- 01 #& TBL 6725
-002- 02 #& TEST 67
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #       STORE DATA BIT 23 IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #        MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 13 # NOTE--1 MASMA 03-19  JL2    MAIN STORE PLANE - MOD 3 - BITS 19&23
      14
      15
      16 # OPTION A
      17
      18 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      19 # NOTE--1 MASCM 03-16  JL16   MAIN STORE PLANE - MOD 0 BITS 19 & 23
      20
      21


-002- 24 #& TBL 6726
-002- 25 #& TEST 67
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #       STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 3 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #        MASMA 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 3
-001- 36 #        MASMA 03-18  JL2     MAIN STORE PLANE - MOD 3 - BITS PL&PH
      37
      38
      39 # OPTION A
      40
      41 #        MASCM 03-02  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 0
      42 #        MASCM 03-17  JL16    MAIN STORE PLANE - MOD 0 BITS PL & PH
      43
      44
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Left margin patch numbers:
0013423
0013423
0013423
0013423
0013423

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0013423
0013423
0013423

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-001- 01 #& TBL 6727
-001- 02 #& TEST 67
-001- 03 #& SEGMENT 1
-001- 04 #& PR CDGSD
-001- 05 #
      06 #      OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
      07 # MEMORY MODULE 3. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
      08 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
      09 # IS THE PROCESSOR BUS CONTROLLER.
      10 #      DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
      11
      12 #          PROC  02-21  FA1029  MAIN STORE CONTROL 0


-001- 15 #& TBL 6801
-001- 16 #& TEST 68
-001- 17 #& SEGMENT 0 OR 1
-001- 18 #& PR CDGSD
-001- 19 #
      20 #      TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
      21 # TO COMPLETE PROPERLY.
      22 #      DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
      23 #      ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
      24
      25 #          MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
      26 #          MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
      27 #          MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE


-002- 30 #& TBL 6802
-002- 31 #& TEST 68
-002- 32 #& SEGMENT 1
-002- 33 #& PR CDGSD
-002- 34 #
-001- 35 #      STORE DATA BIT 00 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
-001- 36 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 37 # OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 38 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 39 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 40 #
-001- 41 #          MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
-001- 42 #          MASMB 03-04  JL2     MAIN STORE PLANE - MOD 4 - BITS 0 & 8
      43 #          MASCM 08-02  FA1060  MAIN STORE CONTROLLER - BITS 0 & 8
      44
      45
      46 # OPTION A
      47
      48 #          MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
      49 #          MASCM 03-31  JL16    MAIN STORE PLANE - MOD 1 BITS 0 & 8
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0013423

0013423

0013423
0013423

0013423

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   6802    FLTSD400                                                    CDGSD        W77D

                                    01 #       MASCM 08-02  FA1060  MAIN STORE CONTROLLER - BITS 0 & 8
0013423                             02
0013423                             03


              -002- 06 #& TBL 6803
              -002- 07 #& TEST 68
              -002- 08 #& SEGMENT 1
              -002- 09 #& PR CDGSD
              -002- 10 #
              -001- 11 #      STORE DATA BIT 01 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
              -001- 12 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 13 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 14 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 15 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 16 #
              -001- 17 #       MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
              -001- 18 #       MASMB 03-05  JL2    MAIN STORE PLANE - MOD 4 - BITS 1 & 9
                    19 #       MASCM 08-03  FA1060  MAIN STORE CONTROLLER - BITS 1 & 9
0013423             20
0013423             21
                    22 # OPTION A
0013423             23
                    24 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                    25 #       MASCM 03-29  JL16   MAIN STORE PLANE - MOD 1 BITS 1 & 9
                    26 #       MASCM 08-03  FA1060  MAIN STORE CONTROLLER - BITS 1 & 9
0013423             27
0013423             28


              -002- 31 #& TBL 6804
              -002- 32 #& TEST 68
              -002- 33 #& SEGMENT 1
              -002- 34 #& PR CDGSD
              -002- 35 #
              -001- 36 #      STORE DATA BIT 02 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
              -001- 37 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 38 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 39 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 40 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 41 #
              -001- 42 #       MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
              -001- 43 #       MASMB 03-06  JL2    MAIN STORE PLANE - MOD 4 - BITS 2 &10
                    44 #       MASCM 08-04  FA1060  MAIN STORE CONTROLLER - BITS 2 &10
0013423             45
0013423             46
                    47 # OPTION A
0013423             48
                    49 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1


   MEMORY ELEMENT TEST                                              PR-1C929-50

    23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  185
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   6804    FLTSD402                                                        CDGSD        W77D

                                      01 #        MASCM 03-28  JL16   MAIN STORE PLANE - MOD 1 BITS 2 & 10
                                      02 #        MASCM 08-04  FA1060 MAIN STORE CONTROLLER - BITS 2 &10
 0013423                              03
 0013423                              04

                          -002- 07 #& TBL 6805
                          -002- 08 #& TEST 68
                          -002- 09 #& SEGMENT 1
                          -002- 10 #& PR CDGSD
                          -002- 11 #
                          -001- 12 #     STORE DATA BIT 03 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                          -001- 13 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 14 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 15 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 16 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 17 #
                          -001- 18 #        MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
                          -001- 19 #        MASMB 03-07  JL2    MAIN STORE PLANE - MOD 4 - BITS 3 &11
                                20 #        MASCM 08-05  FA1060 MAIN STORE CONTROLLER - BITS 3 &11
 0013423                        21
 0013423                        22
                                23 # OPTION A
 0013423                        24
                                25 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                26 #        MASCM 03-27  JL16   MAIN STORE PLANE - MOD 1 BITS 3 & 11
                                27 #        MASCM 08-05  FA1060 MAIN STORE CONTROLLER - BITS 3 &11
 0013423                        28
 0013423                        29
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MEMORY ELEMENT TEST                                                          PR-1C929-50

   23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE 186
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PATCH HISTORY                                                      23:24:58   2/05/81  ****

6806    FLTSD404                                                          CDGSD        W77D

              -002- 01 #& TBL 6806
              -002- 02 #& TEST 68
              -002- 03 #& SEGMENT 1
              -002- 04 #& PR CDGSD
              -002- 05 #
              -001- 06 #      STORE DATA BIT 04 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 11 #
              -001- 12 #        MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
              -001- 13 #        MASMB 03-08  JL2    MAIN STORE PLANE - MOD 4 - BITS 4 &12
                        14 #        MASCM 08-06  FA1060 MAIN STORE CONTROLLER - BITS 4 &12
0013423                   15
0013423                   16
0013423                   17 # OPTION A
                          18
                          19 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                          20 #        MASCM 03-26  JL16   MAIN STORE PLANE - MOD 1 BITS 4 & 12
0013423                   21 #        MASCM 08-06  FA1060 MAIN STORE CONTROLLER - BITS 4 &12
0013423                   22
                          23

              -002- 26 #& TBL 6807
              -002- 27 #& TEST 68
              -002- 28 #& SEGMENT 1
              -002- 29 #& PR CDGSD
              -002- 30 #
              -001- 31 #      STORE DATA BIT 05 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
              -001- 32 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
              -001- 33 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
              -001- 34 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
              -001- 35 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
              -001- 36 #
              -001- 37 #        MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
              -001- 38 #        MASMB 03-09  JL2    MAIN STORE PLANE - MOD 4 - BITS 5 &13
                        39 #        MASCM 08-07  FA1060 MAIN STORE CONTROLLER - BITS 5 &13
0013423                   40
0013423                   41
                          42 # OPTION A
0013423                   43
                          44 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                          45 #        MASCM 03-25  JL16   MAIN STORE PLANE - MOD 1 BITS 5 & 13
                          46 #        MASCM 08-07  FA1060 MAIN STORE CONTROLLER - BITS 5 &13
0013423                   47
0013423                   48
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PATCH HISTORY                                                        23:24:58    2/05/81  ****

   6808    FLTSD406                                                          CDGSD        W77D

                                 -002- 01 #& TBL 6808
                                 -002- 02 #& TEST 68
                                 -002- 03 #& SEGMENT 1
                                 -002- 04 #& PR CDGSD
                                 -002- 05 #
                                 -001- 06 #      STORE DATA BIT 06 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                 -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                 -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                 -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                 -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                 -001- 11 #
                                 -001- 12 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                 -001- 13 #        MASMB 03-10  JL2     MAIN STORE PLANE - MOD 4 - BITS 6 &14
                                       14 #        MASCM 08-08  FA1060  MAIN STORE CONTROLLER - BITS 6 &14
                                       15 #        MASCM 08-19  FA1066  MAIN STORE CONTROLLER - CHECK CIRCUIT B
   0013423                             16
   0013423                             17
                                       18 # OPTION A
   0013423                             19
                                       20 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       21 #        MASCM 03-24  JL16    MAIN STORE PLANE - MOD 1 BITS 6 & 14
                                       22 #        MASCM 08-08  FA1060  MAIN STORE CONTROLLER - BITS 6 &14
                                       23 #        MASCM 08-19  FA1066  MAIN STORE CONTROLLER - CHECK CIRCUIT B
   0013423                             24
   0013423                             25


                                 -002- 28 #& TBL 6809
                                 -002- 29 #& TEST 68
                                 -002- 30 #& SEGMENT 1
                                 -002- 31 #& PR CDGSD
                                 -002- 32 #
                                 -001- 33 #      STORE DATA BIT 07 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                 -001- 34 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                 -001- 35 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                 -001- 36 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                 -001- 37 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                 -001- 38 #
                                 -001- 39 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                 -001- 40 #        MASMB 03-11  JL2     MAIN STORE PLANE - MOD 4 - BITS 7 &15
                                       41 #        MASCM 08-09  FA1060  MAIN STORE CONTROLLER - BITS 7 &15
   0013423                             42
   0013423                             43
                                       44 # OPTION A
   0013423                             45
                                       46 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       47 #        MASCM 03-23  JL16    MAIN STORE PLANE - MOD 1 BITS 7 & 15
                                       48 #        MASCM 08-09  FA1060  MAIN STORE CONTROLLER - BITS 7 &15
   0013423                             49


   MEMORY ELEMENT TEST                                                        PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06    PAGE  188
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

  6809    FLTSD407                                                      CDGSD        W77D

 0013423                                    01


                                     -002- 04 #& TBL 6810
                                     -002- 05 #& TEST 68
                                     -002- 06 #& SEGMENT 1
                                     -002- 07 #& PR CDGSD
                                     -002- 08 #
                                     -001- 09 #     STORE DATA BIT 08 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                     -001- 10 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 11 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 12 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 13 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 14 #
                                     -001- 15 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                     -001- 16 #        MASMB 03-04  JL2     MAIN STORE PLANE - MOD 4 - BITS 0 & 8
 0013423                                    17
 0013423                                    18
                                            19 # OPTION A
 0013423                                    20
                                            21 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                            22 #        MASCM 03-31  JL16    MAIN STORE PLANE - MOD 1 BITS 0 & 8
 0013423                                    23
 0013423                                    24


                                     -002- 27 #& TBL 6811
                                     -002- 28 #& TEST 68
                                     -002- 29 #& SEGMENT 1
                                     -002- 30 #& PR CDGSD
                                     -002- 31 #
                                     -001- 32 #     STORE DATA BIT 09 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                     -001- 33 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 34 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 35 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 36 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 37 #
                                     -001- 38 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                     -001- 39 #        MASMB 03-05  JL2     MAIN STORE PLANE - MOD 4 - BITS 1 & 9
 0013423                                    40
 0013423                                    41
                                            42 # OPTION A
 0013423                                    43
                                            44 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                            45 #        MASCM 03-29  JL16    MAIN STORE PLANE - MOD 1 BITS 1 & 9
 0013423                                    46
 0013423                                    47



  MEMORY ELEMENT TEST                                                   PR-1C929-50

   23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE  189
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   6812     FLTSD410                                              : CDGSD         W77D

                               -002- 01 #& TBL 6812
                               -002- 02 #& TEST 68
                               -002- 03 #& SEGMENT 1
                               -002- 04 #& PR CDGSD
                               -002- 05 #
                               -001- 06 #      STORE DATA BIT 10 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                               -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                               -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                               -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                               -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                               -001- 11 #
                               -001- 12 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                               -001- 13 #        MASMB 03-06  JL2     MAIN STORE PLANE - MOD 4 - BITS 2 &10
0013423                           14
0013423                           15
                                  16 # OPTION A
0013423                           17
                                  18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  19 #        MASCM 03-28  JL16    MAIN STORE PLANE - MOD 1 BITS 2 & 10
0013423                           20
0013423                           21


                               -002- 24 #& TBL 6813
                               -002- 25 #& TEST 68
                               -002- 26 #& SEGMENT 1
                               -002- 27 #& PR CDGSD
                               -002- 28 #
                               -001- 29 #      STORE DATA BIT 11 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                               -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                               -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                               -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                               -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                               -001- 34 #
                               -001- 35 #        MASMB 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                               -001- 36 #        MASMB 03-07  JL2     MAIN STORE PLANE - MOD 4 - BITS 3 &11
0013423                           37
0013423                           38
                                  39 # OPTION A
0013423                           40
                                  41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  42 #        MASCM 03-27  JL16    MAIN STORE PLANE - MOD 1 BITS 3 & 11
0013423                           43
0013423                           44
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-002- 01 #& TBL 6814
-002- 02 #& TEST 68
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #       STORE DATA BIT 12 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #       DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #       DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #          MASMB 03-02   JK3        MAIN STORE FANOUT BOARD FOR MODULE 4
-001- 13 #          MASMB 03-08   JL2        MAIN STORE PLANE - MOD 4 - BITS 4 &12
       14
       15
       16 # OPTION A
       17
       18 #          MASCM 03-33   JK25       MAIN MEMORY FANOUT BOARD FOR MODULE 1
       19 #          MASCM 03-26   JL16       MAIN STORE PLANE - MOD 1 BITS 4 & 12
       20
       21


-002- 24 #& TBL 6815
-002- 25 #& TEST 68
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #       STORE DATA BIT 13 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #       DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #       DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #          MASMB 03-02   JK3        MAIN STORE FANOUT BOARD FOR MODULE 4
-001- 36 #          MASMB 03-09   JL2        MAIN STORE PLANE - MOD 4 - BITS 5 &13
       37
       38
       39 # OPTION A
       40
       41 #          MASCM 03-33   JK25       MAIN MEMORY FANOUT BOARD FOR MODULE 1
       42 #          MASCM 03-25   JL16       MAIN STORE PLANE - MOD 1 BITS 5 & 13
       43
       44
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Left column patch numbers:
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0013423
0013423

0013423


0013423
0013423




0013423
0013423

0013423


0013423
0013423
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PATCH HISTORY                                                        23:24:58    2/05/81  ****

6816    FLTSD414                                                             CDGSD         W77D

                              -002- 01 #& TBL 6816
                              -002- 02 #& TEST 68
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 14 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #       MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
                              -001- 13 #       MASMB 03-10  JL2    MAIN STORE PLANE - MOD 4 - BITS 6 &14
0013423                            14
0013423                            15
                                16 # OPTION A
0013423                            17
                                18 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                19 #       MASCM 03-24  JL16   MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                            20
0013423                            21


                              -002- 24 #& TBL 6817
                              -002- 25 #& TEST 68
                              -C02- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #     STORE DATA BIT 15 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #       MASMB 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 4
                              -001- 36 #       MASMB 03-11  JL2    MAIN STORE PLANE - MOD 4 - BITS 7 &15
0013423                            37
0013423                            38
                                39 # OPTION A
0013423                            40
                                41 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                42 #       MASCM 03-23  JL16   MAIN STORE PLANE - MOD 1 BITS 7 & 15
0013423                            43
0013423                            44
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

6818    FLTSD416                                                               CDGSD       W77D

                              -002- 01 #& TBL 6818
                              -002- 02 #& TEST 68
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #      STORE DATA BIT 16 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #          MASMB 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 4
                              -001- 13 # NOTE--1 MASMB 03-12   JL2      MAIN STORE PLANE - MOD 4 - BITS 16&20
                                    14 # NOTE--1 MASCM 08-10   FA1060   MAIN STORE CONTROLLER - BITS 16&20
0013423                             15
0013423                             16
                                    17 # OPTION A
0013423                             18
                                    19 #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    20 # NOTE--1 MASCM 03-22   JL16     MAIN STORE PLANE - MOD 1 BITS 16 & 20
                                    21 # NOTE--1 MASCM 08-10   FA1060   MAIN STORE CONTROLLER - BITS 16&20
0013423                             22
0013423                             23

                              -002- 26 #& TBL 6819
                              -002- 27 #& TEST 68
                              -002- 28 #& SEGMENT 1
                              -002- 29 #& PR CDGSD
                              -002- 30 #
                              -001- 31 #      STORE DATA BIT 17 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                              -001- 32 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 33 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 34 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 35 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 36 #
                              -001- 37 #          MASMB 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 4
                              -001- 38 # NOTE--1 MASMB 03-13   JL2      MAIN STORE PLANE - MOD 4 - BITS 17&21
0013423                             39
0013423                             40
                                    41 # OPTION A
0013423                             42
                                    43 #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    44 # NOTE--1 MASCM 03-21   JL16     MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                             45
0013423                             46


MEMORY ELEMENT TEST                                                          PR-1C929-50

   23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  193
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PATCH HISTORY                                                          23:24:58    2/05/81   ****

6820      FLTSD418                                                                    CDGSD        W77D

                        -002- 01 #& TBL 6820
                        -002- 02 #& TEST 68
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #       STORE DATA BIT 18 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #         MASMB 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 4
                        -001- 13 # NOTE--1 MASMB 03-14  JL2      MAIN STORE PLANE - MOD 4 - BITS 18&22
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #         MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 # NOTE--1 MASCM 03-20  JL16     MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                       20
0013423                       21

                        -002- 24 #& TBL 6821
                        -002- 25 #& TEST 68
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #       STORE DATA BIT 19 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #         MASMB 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 4
                        -001- 36 # NOTE--1 MASMB 03-16  JL2      MAIN STORE PLANE - MOD 4 - BITS 19&23
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #         MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 # NOTE--1 MASCM 03-19  JL16     MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423                       43
0013423                       44
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                          -002- 01 #& TBL 6822
                          -002- 02 #& TEST 68
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 20 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #         MASMB 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                          -001- 13 # NOTE--1 MASMB 03-12   JL2     MAIN STORE PLANE - MOD 4 - BITS 16&20
0013423                         14 # NOTE--1 MASCM 08-10   FA1060  MAIN STORE CONTROLLER - BITS 16&20
0013423                         15
                                16
0013423                         17 # OPTION A
                                18
                                19 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                20 # NOTE--1 MASCM 03-22   JL16    MAIN STORE PLANE - MOD 1 BITS 16 & 20
                                21 # NOTE--1 MASCM 08-10   FA1060  MAIN STORE CONTROLLER - BITS 16&20
0013423                         22
0013423                         23


                          -002- 26 #& TBL 6823
                          -002- 27 #& TEST 68
                          -002- 28 #& SEGMENT 1
                          -002- 29 #& PR CDGSD
                          -002- 30 #
                          -001- 31 #      STORE DATA BIT 21 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                          -001- 32 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 33 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 34 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 35 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 36 #
                          -001- 37 #         MASMB 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                          -001- 38 # NOTE--1 MASMB 03-13   JL2     MAIN STORE PLANE - MOD 4 - BITS 17&21
0013423                         39
0013423                         40
                                41 # OPTION A
0013423                         42
                                43 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                44 # NOTE--1 MASCM 03-21   JL16    MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                         45
0013423                         46
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PATCH HISTORY                                                    23:24:58    2/05/81   ****

6824     FLTSD422                                                          CDGSD        W77D

                                  -002- 01 #& TBL 6824
                                  -002- 02 #& TEST 68
                                  -002- 03 #& SEGMENT 1
                                  -002- 04 #& PR CDGSD
                                  -002- 05 #
                                  -001- 06 #      STORE DATA BIT 22 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                  -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 11 #
                                  -001- 12 #           MASMB 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                  -001- 13 # NOTE--1 MASMB 03-14   JL2     MAIN STORE PLANE - MOD 4 - BITS 18&22
0013423                                14
0013423                                15
                                       16 # OPTION A
0013423                                17
                                       18 #           MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       19 # NOTE--1 MASCM 03-20   JL16    MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                                20
0013423                                21

                                  -002- 24 #& TBL 6825
                                  -002- 25 #& TEST 68
                                  -002- 26 #& SEGMENT 1
                                  -002- 27 #& PR CDGSD
                                  -002- 28 #
                                  -001- 29 #      STORE DATA BIT 23 IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                                  -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 34 #
                                  -001- 35 #           MASMB 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 4
                                  -001- 36 # NOTE--1 MASMB 03-16   JL2     MAIN STORE PLANE - MOD 4 - BITS 19&23
0013423                                37
0013423                                38
                                       39 # OPTION A
0013423                                40 3
                                       41 #           MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       42 # NOTE--1 MASCM 03-19   JL16    MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423                                43
0013423                                44
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

  6826    FLTSD4PR                                                              CDGSD        W77D

                              -002- 01 #& TBL 6826
                              -002- 02 #& TEST 68
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #       STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 4 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #         MASMB 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 4
                              -001- 13 #         MASMB 03-17  JL2      MAIN STORE PLANE - MOD 4 - BITS PL&PH
0013423                             14 #         MASCM 08-16  FA1060   MAIN STORE CONTROLLER - BITS PL&PH
0013423                             15
                                    16
0013423                             17 # OPTION A
                                    18
                                    19 #         MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    20 #         MASCM 03-17  JL16     MAIN STORE PLANE - MOD 0 BITS PL & PH
                                    21 # NOTE--1 MASCM 03-18  JL16     MAIN STORE PLANE - MOD 1 BITS PL & PH
0013423                             22 #         MASCM 08-16  FA1060   MAIN STORE CONTROLLER - BITS PL&PH
                                    23


                              -001- 27 #& TBL 6827
                              -001- 28 #& TEST 68
                              -001- 29 #& SEGMENT 1
                              -001- 30 #& PR CDGSD
                              -001- 31 #
                                    32 #       OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
                                    33 # MEMORY MODULE 4. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
                                    34 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
                                    35 # IS THE PROCESSOR BUS CONTROLLER.
                                    36 #     DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
0013423                             37
                                    38 #         PROC  02-21  FA1029   MAIN STORE CONTROL 0
                                    39 #         MASCM 08-17  FA1062   MAIN STORE CONTROLLER - CHECK CIRCUIT A
0013423                             40
                                    41 # OPTION A
0013423                             42
                                    43 #         MASCM 03-08  JL16     MAIN STORE PLANE - MOD 0 BITS 4 & 12
                                    44 #         MASCM 03-11  JL16     MAIN STORE PLANE - MOD 0 BITS 7 & 15
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

6901     IOPRTYER                                                                CDGSD        W77D

                              -001- 01 #& TBL 6901
                              -001- 02 #& TEST 69
                              -001- 03 #& SEGMENT 0 OR 1
                              -001- 04 #& PR CDGSD
                              -001- 05 #
                                    06 #      TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                    07 # TO COMPLETE PROPERLY.
                                    08 #      DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                    09 #      ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
0013423                               10
                                    11 #         MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                    12 #         MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                    13 #         MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE


                              -002- 16 #& TBL 6902
                              -002- 17 #& TEST 69
                              -002- 18 #& SEGMENT 1
                              -002- 19 #& PR CDGSD
                              -002- 20 #
                              -001- 21 #      STORE DATA BIT 00 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                              -001- 22 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 23 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 24 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 25 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 26 #
                              -001- 27 #         MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                              -001- 28 #         MASMB 03-31  JL2     MAIN STORE PLANE - MOD 5 - BITS 0 & 8
0013423                               29
0013423                               30
                                    31 # OPTION A
0013423                               32
                                    33 #         MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    34 #         MASCM 03-31  JL16    MAIN STORE PLANE - MOD 1 BITS 0 & 8
0013423                               35
0013423                               36
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

  6903    FLTSD501                                                       CDGSD        W77D

                        -002- 01 #& TBL 6903
                        -002- 02 #& TEST 69
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #       STORE DATA BIT 01 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #          MASMB 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                        -001- 13 #          MASMB 03-29  JL2      MAIN STORE PLANE - MOD 5 - BITS 1 & 9
  0013423                     14 # NOTE--3 CTI   02-14  FA1211   CTI BOARD 5
  0013423                     15
                              16
  0013423                     17 # OPTION A
                              18
                              19 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              20 #          MASCM 03-29  JL16     MAIN STORE PLANE - MOD 1 BITS 1 & 9
  0013423                     21 # NOTE--3 CTI   02-14  FA1211   CTI BOARD 5
  0013423                     22
                              23

                        -002- 26 #& TBL 6904
                        -002- 27 #& TEST 69
                        -002- 28 #& SEGMENT 1
                        -002- 29 #& PR CDGSD
                        -002- 30 #
                        -001- 31 #       STORE DATA BIT 02 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                        -001- 32 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 33 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 34 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 35 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 36 #
                        -001- 37 #          MASMB 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                        -001- 38 #          MASMB 03-28  JL2      MAIN STORE PLANE - MOD 5 - BITS 2 &10
  0013423                     39
  0013423                     40
                              41 # OPTION A
                              42
                              43 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              44 #          MASCM 03-28  JL16     MAIN STORE PLANE - MOD 1 BITS 2 & 10
  0013423                     45
  0013423                     46

   MEMORY ELEMENT TEST                                                         PR-1C929-50

    23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  199
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PATCH HISTORY                                                              23:24:58   2/05/81  ****

   6905     FLTSD503                                                                    CDGSD        W77D

                                        -002- 01 #& TBL 6905
                                        -002- 02 #& TEST 69
                                        -002- 03 #& SEGMENT 1
                                        -002- 04 #& PR CDGSD
                                        -002- 05 #
                                        -001- 06 #      STORE DATA BIT 03 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                        -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                        -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                        -001- 11 #
                                        -001- 12 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                                        -001- 13 #        MASMB 03-27  JL2     MAIN STORE PLANE - MOD 5 - BITS 3 &11
   0013423                                     14
   0013423                                     15
                                               16 # OPTION A
   0013423                                     17
                                               18 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                               19 #        MASCM 03-27  JL16   MAIN STORE PLANE - MOD 1 BITS 3 & 11
   0013423                                     20
   0013423                                     21


                                        -002- 24 #& TBL 6906
                                        -002- 25 #& TEST 69
                                        -002- 26 #& SEGMENT 1
                                        -002- 27 #& PR CDGSD
                                        -002- 28 #
                                        -001- 29 #      STORE DATA BIT 04 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                        -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                        -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                        -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                        -001- 34 #
                                        -001- 35 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                                        -001- 36 #        MASMB 03-26  JL2     MAIN STORE PLANE - MOD 5 - BITS 4 &12
   0013423                                     37
   0013423                                     38
                                               39 # OPTION A
   0013423                                     40
                                               41 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                               42 #        MASCM 03-26  JL16   MAIN STORE PLANE - MOD 1 BITS 4 & 12
   0013423                                     43
   0013423                                     44



   MEMORY ELEMENT TEST                                                              PR-1C929-50

      23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD     ISSUE  06     PAGE   200
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PATCH HISTORY                                                      23:24:58   2/05/81  ****

6907    FLTSD505                                                            CDGSD        W77D

                          -002- 01 #& TBL 6907
                          -002- 02 #& TEST 69
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #       STORE DATA BIT 05 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #          MASMB 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                          -001- 13 #          MASMB 03-25  JL2      MAIN STORE PLANE - MOD 5 - BITS 5 &13
0013423                         14
0013423                         15
                                16 # OPTION A
0013423                         17
                                18 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                19 #          MASCM 03-25  JL16     MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423                         20
0013423                         21


                          -002- 24 #& TBL 6908
                          -002- 25 #& TEST 69
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #       STORE DATA BIT 06 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #          MASMB 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                          -001- 36 #          MASMB 03-24  JL2      MAIN STORE PLANE - MOD 5 - BITS 6 &14
0013423                         37
0013423                         38
                                39 # OPTION A
0013423                         40
                                41 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                42 #          MASCM 03-24  JL16     MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                         43
0013423                         44



MEMORY ELEMENT TEST                                                     PR-1C929-50

   23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE  06   PAGE   201
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

6909     FLTSD507                                                         CDGSD         W77D

                              -002- 01 #& TBL 6909
                              -002- 02 #& TEST 69
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #       STORE DATA BIT 07 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #       MASMB 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 5
                              -001- 13 #       MASMB 03-23  JL2    MAIN STORE PLANE - MOD 5 - BITS 7 &15
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    19 #       MASCM 03-23  JL16   MAIN STORE PLANE - MOD 1 BITS 7 & 15
0013423                             20
0013423                             21


                              -002- 24 #& TBL 6910
                              -002- 25 #& TEST 69
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #       STORE DATA BIT 08 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #       MASMB 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 5
                              -001- 36 #       MASMB 03-31  JL2    MAIN STORE PLANE - MOD 5 - BITS 0 & 8
0013423                             37
0013423                             38
                                    39 # OPTION A
0013423                             40
                                    41 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    42 #       MASCM 03-31  JL16   MAIN STORE PLANE - MOD 1 BITS 0 & 8
0013423                             43
0013423                             44
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

  6911    FLTSD509                                                              CDGSD      W77D

                        -002- 01 #& TBL 6911
                        -002- 02 #& TEST 69
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 09 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #        MASMB 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                        -001- 13 #        MASMB 03-29   JL2     MAIN STORE PLANE - MOD 5 - BITS 1 & 9
  0013423                     14
  0013423                     15
                              16 # OPTION A
  0013423                     17
                              18 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 #        MASCM 03-29   JL16    MAIN STORE PLANE - MOD 1 BITS 1 & 9
  0013423                     20
  0013423                     21


                        -002- 24 #& TBL 6912
                        -002- 25 #& TEST 69
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #      STORE DATA BIT 10 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #        MASMB 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                        -001- 36 #        MASMB 03-28   JL2     MAIN STORE PLANE - MOD 5 - BITS 2 &10
  0013423                     37
  0013423                     38
                              39 # OPTION A
  0013423                     40
                              41 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 #        MASCM 03-28   JL16    MAIN STORE PLANE - MOD 1 BITS 2 & 10
  0013423                     43
  0013423                     44
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                            -002- 01 #& TBL 6913
                            -002- 02 #& TEST 69
                            -002- 03 #& SEGMENT 1
                            -002- 04 #& PR CDGSD
                            -002- 05 #
                            -001- 06 #       STORE DATA BIT 11 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                            -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 09 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 10 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 11 #
                            -001- 12 #       MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                            -001- 13 #       MASMB 03-27  JL2     MAIN STORE PLANE - MOD 5 - BITS 3 &11
0013423                           14
0013423                           15
                                  16 # OPTION A
0013423                           17
                                  18 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  19 #       MASCM 03-27  JL16    MAIN STORE PLANE - MOD 1 BITS 3 & 11
0013423                           20
0013423                           21

                            -002- 24 #& TBL 6914
                            -002- 25 #& TEST 69
                            -002- 26 #& SEGMENT 1
                            -002- 27 #& PR CDGSD
                            -002- 28 #
                            -001- 29 #       STORE DATA BIT 12 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                            -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 32 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 33 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 34 #
                            -001- 35 #       MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                            -001- 36 #       MASMB 03-26  JL2     MAIN STORE PLANE - MOD 5 - BITS 4 &12
0013423                           37
0013423                           38
                                  39 # OPTION A
0013423                           40
                                  41 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  42 #       MASCM 03-26  JL16    MAIN STORE PLANE - MOD 1 BITS 4 & 12
0013423                           43
0013423                           44
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                          -002- 01 #& TBL 6915
                          -002- 02 #& TEST 69
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #     STORE DATA BIT 13 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                          -001- 13 #        MASMB 03-25  JL2     MAIN STORE PLANE - MOD 5 - BITS 5 &13
0013423                          14
0013423                          15
                                 16 # OPTION A
0013423                          17
                                 18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                 19 #        MASCM 03-25  JL16    MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423                          20
0013423                          21


                          -002- 24 #& TBL 6916
                          -002- 25 #& TEST 69
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #     STORE DATA BIT 14 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                          -001- 36 #        MASMB 03-24  JL2     MAIN STORE PLANE - MOD 5 - BITS 6 &14
0013423                          37
0013423                          38
                                 39 # OPTION A
0013423                          40
                                 41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                 42 #        MASCM 03-24  JL16    MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                          43
0013423                          44
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-002- 01 #& TBL 6917
-002- 02 #& TEST 69
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #        STORE DATA BIT 15 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
-001- 13 #        MASMB 03-23  JL2     MAIN STORE PLANE - MOD 5 - BITS 7 &15
      14
      15
      16 # OPTION A
      17
      18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
      19 #        MASCM 03-23  JL16    MAIN STORE PLANE - MOD 1 BITS 7 & 15
      20
      21


-002- 24 #& TBL 6918
-002- 25 #& TEST 69
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #        STORE DATA BIT 16 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #        MASMB 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
-001- 36 # NOTE--1 MASMB 03-22  JL2   MAIN STORE PLANE - MOD 5 - BITS 16&20
      37
      38
      39 # OPTION A
      40
      41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
      42 # NOTE--1 MASCM 03-22  JL16   MAIN STORE PLANE - MOD 1 BITS 16 & 20
      43
      44
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Left margin patch numbers:
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0013423
0013423

0013423


0013423
0013423
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0013423
0013423

0013423


0013423
0013423
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PATCH HISTORY                                                      23:24:58    2/05/81   ****

6919     FLTSD517                                                           CDGSD         W77D

                                 -002- 01 #& TBL 6919
                                 -002- 02 #& TEST 69
                                 -002- 03 #& SEGMENT 1
                                 -002- 04 #& PR CDGSD
                                 -002- 05 #
                                 -001- 06 #     STORE DATA BIT 17 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                 -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                 -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                 -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                 -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                 -001- 11 #
                                 -001- 12 #        MASMB 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                                 -001- 13 # NOTE--1 MASMB 03-21  JL2      MAIN STORE PLANE - MOD 5 - BITS 17&21
0013423                                14
0013423                                15
                                       16 # OPTION A
0013423                                17
                                       18 #        MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       19 # NOTE--1 MASCM 03-21  JL16     MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                                20
0013423                                21


                                 -002- 24 #& TBL 6920
                                 -002- 25 #& TEST 69
                                 -002- 26 #& SEGMENT 1
                                 -002- 27 #& PR CDGSD
                                 -002- 28 #
                                 -001- 29 #     STORE DATA BIT 18 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                 -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                 -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                 -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                 -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                 -001- 34 #
                                 -001- 35 #        MASMB 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
                                 -001- 36 # NOTE--1 MASMB 03-20  JL2      MAIN STORE PLANE - MOD 5 - BITS 18&22
0013423                                37
0013423                                38
                                       39 # OPTION A
0013423                                40
                                       41 #        MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                       42 # NOTE--1 MASCM 03-20  JL16     MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                                43
0013423                                44
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PATCH HISTORY                                                           23:24:58   2/05/81   ****

  6921     FLTSD519                                                                   CDGSD        W77D

                                      -002- 01 #& TBL 6921
                                      -002- 02 #& TEST 69
                                      -002- 03 #& SEGMENT 1
                                      -002- 04 #& PR CDGSD
                                      -002- 05 #
                                      -001- 06 #     STORE DATA BIT 19 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                      -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                      -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                      -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                      -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                      -001- 11 #
                                      -001- 12 #         MASMB 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                                      -001- 13 # NOTE--1 MASMB 03-19   JL2     MAIN STORE PLANE - MOD 5 - BITS 19&23
  0013423                                    14
  0013423                                    15
                                             16 # OPTION A
  0013423                                    17
                                             18 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                             19 # NOTE--1 MASCM 03-19   JL16    MAIN STORE PLANE - MOD 1 BITS 19 & 23
  0013423                                    20
  0013423                                    21

                                      -002- 24 #& TBL 6922
                                      -002- 25 #& TEST 69
                                      -002- 26 #& SEGMENT 1
                                      -002- 27 #& PR CDGSD
                                      -002- 28 #
                                      -001- 29 #     STORE DATA BIT 20 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                      -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                      -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                      -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                      -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                      -001- 34 #
                                      -001- 35 #         MASMB 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 5
                                      -001- 36 # NOTE--1 MASMB 03-22   JL2     MAIN STORE PLANE - MOD 5 - BITS 16&20
  0013423                                    37
  0013423                                    38
                                             39 # OPTION A
  0013423                                    40
                                             41 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                             42 # NOTE--1 MASCM 03-22   JL16    MAIN STORE PLANE - MOD 1 BITS 16 & 20
  0013423                                    43
  0013423                                    44
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

   6923    FLTSD521                                                           CDGSD         W77D

                                     -002- 01 #& TBL 6923
                                     -002- 02 #& TEST 69
                                     -002- 03 #& SEGMENT 1
                                     -002- 04 #& PR CDGSD
                                     -002- 05 #
                                     -001- 06 #     STORE DATA BIT 21 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                     -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 11 #
                                     -001- 12 #        MASMB 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 5
                                     -001- 13 # NOTE--1 MASMB 03-21  JL2    MAIN STORE PLANE - MOD 5 - BITS 17&21
   0013423                                14
   0013423                                15
                                          16 # OPTION A
   0013423                                17
                                          18 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                          19 # NOTE--1 MASCM 03-21  JL16   MAIN STORE PLANE - MOD 1 BITS 17 & 21
   0013423                                20
   0013423                                21


                                     -002- 24 #& TBL 6924
                                     -002- 25 #& TEST 69
                                     -002- 26 #& SEGMENT 1
                                     -002- 27 #& PR CDGSD
                                     -002- 28 #
                                     -001- 29 #     STORE DATA BIT 22 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
                                     -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                     -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                     -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                     -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                     -001- 34 #
                                     -001- 35 #        MASMB 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 5
                                     -001- 36 # NOTE--1 MASMB 03-20  JL2    MAIN STORE PLANE - MOD 5 - BITS 18&22
   0013423                                37
   0013423                                38
                                          39 # OPTION A
   0013423                                40
                                          41 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                          42 # NOTE--1 MASCM 03-20  JL16   MAIN STORE PLANE - MOD 1 BITS 18 & 22
   0013423                                43
   0013423                                44
```

E04

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            -002- 01  #& TBL 6925
            -002- 02  #& TEST 69
            -002- 03  #& SEGMENT 1
            -002- 04  #& PR CDGSD
            -002- 05  #
            -001- 06  #      STORE DATA BIT 23 IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
            -001- 07  # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
            -001- 08  #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
            -001- 09  #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
            -001- 10  #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
            -001- 11  #
            -001- 12  #          MASMB 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
            -001- 13  # NOTE--1 MASMB 03-19   JL2      MAIN STORE PLANE - MOD 5 - BITS 19&23
0013423           14
0013423           15
                  16  # OPTION A
0013423           17
                  18  #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                  19  # NOTE--1 MASCM 03-19   JL16     MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423           20
0013423           21


            -002- 24  #& TBL 6926
            -002- 25  #& TEST 69
            -002- 26  #& SEGMENT 1
            -002- 27  #& PR CDGSD
            -002- 28  #
            -001- 29  #      STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 5 HAS A STUCK-AT FAULT
            -001- 30  # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
            -001- 31  #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
            -001- 32  #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
            -001- 33  #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
            -001- 34  #
            -001- 35  #          MASMB 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
            -001- 36  #          MASMB 03-18   JL2      MAIN STORE PLANE - MOD 5 - BITS PL&PH
0013423           37
0013423           38
                  39  # OPTION A
0013423           40
                  41  #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                  42  # NOTE--1 MASCM 03-18   JL16     MAIN STORE PLANE - MOD 1 BITS PL & PH
0013423           43
0013423           44
```

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                                  -001- 01 #& TBL 6927
                                  -001- 02 #& TEST 69
                                  -001- 03 #& SEGMENT 1
                                  -001- 04 #& PR CDGSD
                                  -001- 05 #
                                        06 #      OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
                                        07 # MEMORY MODULE 5. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
                                        08 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
                                        09 # IS THE PROCESSOR BUS CONTROLLER.
                                        10 #      DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
C013423                                 11
                                        12 #       PROC  02-21  FA1029  MAIN STORE CONTROL 0


                                  -001- 15 #& TBL 7001
                                  -001- 16 #& TEST 70
                                  -001- 17 #& SEGMENT 0 OR 1
                                  -001- 18 #& PR CDGSD
                                  -001- 19 #
                                        20 #      TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                        21 # TO COMPLETE PROPERLY.
                                        22 #      DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                        23 #    ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
0013423                                 24
                                        25 #       MASCM 08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                        26 #       MASCM 08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                        27 #       MASCM 08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE


                                  -002- 30 #& TBL 7002
                                  -002- 31 #& TEST 70
                                  -002- 32 #& SEGMENT 1
                                  -002- 33 #& PR CDGSD
                                  -002- 34 #
                                  -001- 35 #      STORE DATA BIT 00 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                                  -001- 36 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                  -001- 37 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                  -001- 38 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                  -001- 39 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                  -001- 40 #
                                  -001- 41 #       MASMC 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 6
                                  -001- 42 #       MASMC 03-04  JL2    MAIN STORE PLANE - MOD 6 - BITS 0 & 8
                                        43 #       MASCM 08-09  FA1060 MAIN STORE CONTROLLER - BITS 7 &15
0013423                                 44
0013423                                 45
                                        46 # OPTION A
0013423                                 47
                                        48 #       MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                        49 #       MASCM 03-31  JL16   MAIN STORE PLANE - MOD 1 BITS 0 & 8
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MEMORY ELEMENT TEST   PR-1C929-50

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                                        01 #        MASCM 08-09  FA1060  MAIN STORE CONTROLLER - BITS 7 &15
0013423                                 02
0013423                                 03


                            -002- 06 #& TBL 7003
                            -002- 07 #& TEST 70
                            -002- 08 #& SEGMENT 1
                            -002- 09 #& PR CDGSD
                            -002- 10 #
                            -001- 11 #     STORE DATA BIT 01 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                            -001- 12 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 13 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 14 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 15 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 16 #
                            -001- 17 #        MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                            -001- 18 #        MASMC 03-05   JL2     MAIN STORE PLANE - MOD 6 - BITS 1 & 9
0013423                          19
0013423                          20
                                 21 # OPTION A
0013423                          22
                                 23 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                 24 #        MASCM 03-29   JL16    MAIN STORE PLANE - MOD 1 BITS 1 & 9
0013423                          25
0013423                          26


                            -002- 29 #& TBL 7004
                            -002- 30 #& TEST 70
                            -002- 31 #& SEGMENT 1
                            -002- 32 #& PR CDGSD
                            -002- 33 #
                            -001- 34 #     STORE DATA BIT 02 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                            -001- 35 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 36 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 37 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 38 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 39 #
                            -001- 40 #        MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                            -001- 41 #        MASMC 03-06   JL2     MAIN STORE PLANE - MOD 6 - BITS 2 &10
0013423                          42
0013423                          43
                                 44 # OPTION A
0013423                          45
                                 46 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                 47 #        MASCM 03-28   JL16    MAIN STORE PLANE - MOD 1 BITS 2 & 10
0013423                          48
0013423                          49
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PATCH HISTORY                                              23:24:58   2/05/81  ****

7004    FLTSD602                                              CDGSD           W77D


                          -002- 03 #& TBL 7005
                          -002- 04 #& TEST 70
                          -002- 05 #& SEGMENT 1
                          -002- 06 #& PR CDGSD
                          -002- 07 #
                          -001- 08 #      STORE DATA BIT 03 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 09 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 10 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 11 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 12 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 13 #
                          -001- 14 #         MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 15 #         MASMC 03-07   JL2     MAIN STORE PLANE - MOD 6 - BITS 3 &11
0013423                         16
0013423                         17
                                18 # OPTION A
0013423                         19
                                20 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                21 #         MASCM 03-27   JL16    MAIN STORE PLANE - MOD 1 BITS 3 & 11
0013423                         22
0013423                         23


                          -002- 26 #& TBL 7006
                          -002- 27 #& TEST 70
                          -002- 28 #& SEGMENT 1
                          -002- 29 #& PR CDGSD
                          -002- 30 #
                          -001- 31 #      STORE DATA BIT 04 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 32 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 33 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 34 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 35 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 36 #
                          -001- 37 #         MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 38 #         MASMC 03-08   JL2     MAIN STORE PLANE - MOD 6 - BITS 4 &12
0013423                         39
0013423                         40
                                41 # OPTION A
0013423                         42
                                43 #         MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                44 #         MASCM 03-26   JL16    MAIN STORE PLANE - MOD 1 BITS 4 & 12
0013423                         45
0013423                         46




MEMORY ELEMENT TEST                                              PR-1C929-50

  23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE  06     PAGE   213
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

7007     FLTSD605                                                               CDGSD        W77D

                              -002- 01 #& TBL 7007
                              -002- 02 #& TEST 70
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #       STORE DATA BIT 05 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #         MASMC 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 13 #         MASMC 03-09   JL2      MAIN STORE PLANE - MOD 6 - BITS 5 &13
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    19 #         MASCM 03-25   JL16     MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423                             20
0013423                             21


                              -002- 24 #& TBL 7008
                              -002- 25 #& TEST 70
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #       STORE DATA BIT 06 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #         MASMC 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 36 #         MASMC 03-10   JL2      MAIN STORE PLANE - MOD 6 - BITS 6 &14
0013423                             37
0013423                             38
                                    39 # OPTION A
0013423                             40
                                    41 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    42 #         MASCM 03-24   JL16     MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                             43
0013423                             44
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   7009    FLTSD607                                                     CDGSD        W77D

                              -002- 01 #& TBL 7009
                              -002- 02 #& TEST 70
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 07 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 13 #        MASMC 03-11  JL2     MAIN STORE PLANE - MOD 6 - BITS 7 &15
   0013423                          14
   0013423                          15
                                    16 # OPTION A
   0013423                          17
                                    18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    19 #        MASCM 03-23  JL16    MAIN STORE PLANE - MOD 1 BITS 7 & 15
   0013423                          20
   0013423                          21


                              -002- 24 #& TBL 7010
                              -002- 25 #& TEST 70
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #     STORE DATA BIT 08 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 36 #        MASMC 03-04  JL2     MAIN STORE PLANE - MOD 6 - BITS 0 & 8
   0013423                          37
   0013423                          38
                                    39 # OPTION A
   0013423                          40
                                    41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    42 #        MASCM 03-31  JL16    MAIN STORE PLANE - MOD 1 BITS 0 & 8
   0013423                          43
   0013423                          44
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-002- 01 #& TBL 7011
-002- 02 #& TEST 70
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #      STORE DATA BIT 09 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #         MASMC 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
-001- 13 #         MASMC 03-05   JL2      MAIN STORE PLANE - MOD 6 - BITS 1 & 9
0013423       14
0013423       15
              16 # OPTION A
0013423       17
              18 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
              19 #         MASCM 03-29   JL16     MAIN STORE PLANE - MOD 1 BITS 1 & 9
0013423       20
0013423       21


-002- 24 #& TBL 7012
-002- 25 #& TEST 70
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #      STORE DATA BIT 10 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #         MASMC 03-02   JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
-001- 36 #         MASMC 03-06   JL2      MAIN STORE PLANE - MOD 6 - BITS 2 &10
0013423       37
0013423       38
              39 # OPTION A
0013423       40
              41 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
              42 #         MASCM 03-28   JL16     MAIN STORE PLANE - MOD 1 BITS 2 & 10
0013423       43
0013423       44
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PATCH HISTORY                                                      23:24:58   2/05/81   ****

   7013     FLTSD611                                                          CDGSD       W77D

                                    -002- 01 #& TBL 7013
                                    -002- 02 #& TEST 70
                                    -002- 03 #& SEGMENT 1
                                    -002- 04 #& PR CDGSD
                                    -002- 05 #
                                    -001- 06 #      STORE DATA BIT 11 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 11 #
                                    -001- 12 #        MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                                    -001- 13 #        MASMC 03-07   JL2     MAIN STORE PLANE - MOD 6 - BITS 3 &11
   0013423                                 14
   0013423                                 15
                                           16 # OPTION A
   0013423                                 17
                                           18 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                           19 #        MASCM 03-27   JL16    MAIN STORE PLANE - MOD 1 BITS 3 & 11
   0013423                                 20
   0013423                                 21


                                    -002- 24 #& TBL 7014
                                    -002- 25 #& TEST 70
                                    -002- 26 #& SEGMENT 1
                                    -002- 27 #& PR CDGSD
                                    -002- 28 #
                                    -001- 29 #      STORE DATA BIT 12 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                                    -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 34 #
                                    -001- 35 #        MASMC 03-02   JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                                    -001- 36 #        MASMC 03-08   JL2     MAIN STORE PLANE - MOD 6 - BITS 4 &12
   0013423                                 37
   0013423                                 38
                                           39 # OPTION A
   0013423                                 40
                                           41 #        MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                           42 #        MASCM 03-26   JL16    MAIN STORE PLANE - MOD 1 BITS 4 & 12
   0013423                                 43
   0013423                                 44
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                              -002- 01 #& TBL 7015
                              -002- 02 #& TEST 70
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 13 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #        MASMC 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 13 #        MASMC 03-09  JL2    MAIN STORE PLANE - MOD 6 - BITS 5 &13
0013423                            14
0013423                            15
0013423                            16 # OPTION A
                                   17
                                   18 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   19 #        MASCM 03-25  JL16   MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423                            20
0013423                            21


                              -002- 24 #& TBL 7016
                              -002- 25 #& TEST 70
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #     STORE DATA BIT 14 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #        MASMC 03-02  JK3    MAIN STORE FANOUT BOARD FOR MODULE 6
                              -001- 36 #        MASMC 03-10  JL2    MAIN STORE PLANE - MOD 6 - BITS 6 &14
0013423                            37
0013423                            38
0013423                            39 # OPTION A
                                   40
                                   41 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   42 #        MASCM 03-24  JL16   MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                            43
0013423                            44
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PATCH HISTORY                                                    23:24:58   2/05/81   ****

7017      FLTSD615                                                          CDGSD       W77D

                            -002- 01 #& TBL 7017
                            -002- 02 #& TEST 70
                            -002- 03 #& SEGMENT 1
                            -002- 04 #& PR CDGSD
                            -002- 05 #
                            -001- 06 #       STORE DATA BIT 15 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                            -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 11 #
                            -001- 12 #       MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                            -001- 13 #       MASMC 03-11  JL2     MAIN STORE PLANE - MOD 6 - BITS 7 &15
    0013423                       14
    0013423                       15
                                  16 # OPTION A
    0013423                       17
                                  18 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  19 #       MASCM 03-23  JL16    MAIN STORE PLANE - MOD 1 BITS 7 & 15
    0013423                       20
    0013423                       21


                            -002- 24 #& TBL 7018
                            -002- 25 #& TEST 70
                            -002- 26 #& SEGMENT 1
                            -002- 27 #& PR CDGSD
                            -002- 28 #
                            -001- 29 #       STORE DATA BIT 16 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                            -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                            -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                            -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                            -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                            -001- 34 #
                            -001- 35 #       MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                            -001- 36 # NOTE--1 MASMC 03-12  JL2     MAIN STORE PLANE - MOD 6 - BITS 16&20
    0013423                       37
    0013423                       38
                                  39 # OPTION A
    0013423                       40
                                  41 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                  42 # NOTE--1 MASCM 03-22  JL16    MAIN STORE PLANE - MOD 1 BITS 16 & 20
    0013423                       43
    0013423                       44




    MEMORY ELEMENT TEST                                              PR-1C929-50

       23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE 219
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

7019      FLTSD617                                                             CDGSD        W77D

                        -002- 01 #& TBL 7019
                        -002- 02 #& TEST 70
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #     STORE DATA BIT 17 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #     OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #          MASMC 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                        -001- 13 # NOTE--1 MASMC 03-13  JL2      MAIN STORE PLANE - MOD 6 - BITS 17&21
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 # NOTE--1 MASCM 03-21  JL16     MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                       20
0013423                       21


                        -002- 24 #& TBL 7020
                        -002- 25 #& TEST 70
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #     STORE DATA BIT 18 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #     OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #          MASMC 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                        -001- 36 # NOTE--1 MASMC 03-14  JL2      MAIN STORE PLANE - MOD 6 - BITS 18&22
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #          MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 # NOTE--1 MASCM 03-20  JL16     MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                       43
0013423                       44
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

7021    FLTSD619                                                          CDGSD        W77D

                    -002- 01 #& TBL 7021
                    -002- 02 #& TEST 70
                    -002- 03 #& SEGMENT 1
                    -002- 04 #& PR CDGSD
                    -002- 05 #
                    -001- 06 #      STORE DATA BIT 19 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                    -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                    -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 11 #
                    -001- 12 #           MASMC 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                    -001- 13 # NOTE--1 MASMC 03-16  JL2      MAIN STORE PLANE - MOD 6 - BITS 19&23
0013423                  14
0013423                  15
                         16 # OPTION A
0013423                  17
                         18 #           MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                         19 # NOTE--1 MASCM 03-19  JL16     MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423                  20
0013423                  21


                    -002- 24 #& TBL 7022
                    -002- 25 #& TEST 70
                    -002- 26 #& SEGMENT 1
                    -002- 27 #& PR CDGSD
                    -002- 28 #
                    -001- 29 #      STORE DATA BIT 20 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                    -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                    -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                    -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                    -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                    -001- 34 #
                    -001- 35 #           MASMC 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
                    -001- 36 # NOTE--1 MASMC 03-12  JL2      MAIN STORE PLANE - MOD 6 - BITS 16&20
0013423                  37
0013423                  38
                         39 # OPTION A
0013423                  40
                         41 #           MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                         42 # NOTE--1 MASCM 03-22  JL16     MAIN STORE PLANE - MOD 1 BITS 16 & 20
0013423                  43
0013423                  44



MEMORY ELEMENT TEST                                                      PR-1C929-50

  23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE  06     PAGE  221
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                          -002- 01 #& TBL 7023
                          -002- 02 #& TEST 70
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #       STORE DATA BIT 21 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 13 # NOTE--1 MASMC 03-13  JL2     MAIN STORE PLANE - MOD 6 - BITS 17&21
0013423                         14
0013423                         15
                                16 # OPTION A
0013423                         17
                                18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                19 # NOTE--1 MASCM 03-21  JL16    MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                         20
0013423                         21


                          -002- 24 #& TBL 7024
                          -002- 25 #& TEST 70
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #       STORE DATA BIT 22 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 36 # NOTE--1 MASMC 03-14  JL2     MAIN STORE PLANE - MOD 6 - BITS 18&22
0013423                         37
0013423                         38
                                39 # OPTION A
0013423                         40
                                41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                42 # NOTE--1 MASCM 03-20  JL16    MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                         43
0013423                         44
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PATCH HISTORY                                                    23:24:58   2/05/81   ****

7025    FLTSD623                                                           CDGSD        W77D

                          -002- 01 #& TBL 7025
                          -002- 02 #& TEST 70
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 23 IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 13 # NOTE--1 MASMC 03-16  JL2     MAIN STORE PLANE - MOD 6 - BITS 19&23
 0013423                        14
 0013423                        15
                                16 # OPTION A
 0013423                        17
                                18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                19 # NOTE--1 MASCM 03-19  JL16    MAIN STORE PLANE - MOD 1 BITS 19 & 23
 0013423                        20
 0013423                        21


                          -002- 24 #& TBL 7026
                          -002- 25 #& TEST 70
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #      STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 6 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #        MASMC 03-02  JK3     MAIN STORE FANOUT BOARD FOR MODULE 6
                          -001- 36 #        MASMC 03-17  JL2     MAIN STORE PLANE - MOD 6 - BITS PL&PH
 0013423                        37
 0013423                        38
                                39 # OPTION A
 0013423                        40
                                41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                42 # NOTE--1 MASCM 03-18  JL16    MAIN STORE PLANE - MOD 1 BITS PL & PH
 0013423                        43
 0013423                        44
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                                      -001- 01 #& TBL 7027
                                      -001- 02 #& TEST 70
                                      -001- 03 #& SEGMENT 1
                                      -001- 04 #& PR CDGSD
                                      -001- 05 #
                                            06 #      OFF-LINE MEMORY TEST ROUTINE TOOK A WILD TRANSFER WHILE CHECKING OUT
                                            07 # MEMORY MODULE 6. SINCE THE STORE CONTROLLER HAS JUST BEEN SUCCESSFULLY USED
                                            08 # TO CHECK OUT THE FIRST MEMORY MODULE(MOD 0), THE MOST PROBABLE SOURCE OF ERROR
                                            09 # IS THE PROCESSOR BUS CONTROLLER.
                                            10 #      DATA WORD = CONTENTS OF OFF-LINE PROGRAM ADDRESS REGISTER
                                            11
                                            12 #        PROC   02-21  FA1029  MAIN STORE CONTROL 0
                                            13 #        PROC   02-27  FA1037  MAINTENANCE CHANNEL CONTROL


                                      -001- 16 #& TBL 7101
                                      -001- 17 #& TEST 71
                                      -001- 18 #& SEGMENT 0 OR 1
                                      -001- 19 #& PR CDGSD
                                      -001- 20 #
                                            21 #      TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
                                            22 # TO COMPLETE PROPERLY.
                                            23 #      DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
                                            24 #   ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
                                            25
                                            26 #        MASCM  08-20  FA1064  MAIN STORE CONTROLLER - I/O ORDER DECODER
                                            27 #        MASCM  08-22  FA1063  MAIN STORE CONTROLLER - I/O ORDER RECEIVER
                                            28 #        MASCM  08-23  FC203   MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

                                      -002- 31 #& TBL 7102
                                      -002- 32 #& TEST 71
                                      -002- 33.#& SEGMENT 1
                                      -002- 34 #& PR CDGSD
                                      -002- 35 #
                                      -001- 36 #      STORE DATA BIT 00 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                                      -001- 37 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                      -001- 38 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                      -001- 39 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                      -001- 40 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                      -001- 41 #
                                      -001- 42 #        MASMC  03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 7
                                      -001- 43 #        MASMC  03-31  JL2    MAIN STORE PLANE - MOD 7 - BITS 0 & 8
                                            44
                                            45
                                            46 # OPTION A
                                            47
                                            48 #        MASCM  03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                            49 #        MASCM  03-31  JL16   MAIN STORE PLANE - MOD 1 BITS 0 & 8
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0013423

0013423

0013423
0013423

0013423

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

   7102    FLTSD700                                                         CDGSD      W77D

0013423                                        01
0013423                                        02

                                    -002- 05 #& TBL 7103
                                    -002- 06 #& TEST 71
                                    -002- 07 #& SEGMENT 1
                                    -002- 08 #& PR CDGSD
                                    -002- 09 #
                                    -001- 10 #       STORE DATA BIT 01 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                                    -001- 11 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 12 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 13 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 14 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 15 #
                                    -001- 16 #       MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                                    -001- 17 #       MASMC 03-29  JL2     MAIN STORE PLANE - MOD 7 - BITS 1 & 9
0013423                                     18 # NOTE--3 CTI   02-14  FA1211  CTI BOARD 5
0013423                                        19
                                               20
0013423                                        21 # OPTION A
                                               22
                                               23 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                               24 #       MASCM 03-29  JL16    MAIN STORE PLANE - MOD 1 BITS 1 & 9
0013423                                        25 # NOTE--3 CTI   02-14  FA1211  CTI BOARD 5
0013423                                        26
                                               27

                                    -002- 30 #& TBL 7104
                                    -002- 31 #& TEST 71
                                    -002- 32 #& SEGMENT 1
                                    -002- 33 #& PR CDGSD
                                    -002- 34 #
                                    -001- 35 #       STORE DATA BIT 02 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                                    -001- 36 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                    -001- 37 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                    -001- 38 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                    -001- 39 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                    -001- 40 #
                                    -001- 41 #       MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                                    -001- 42 #       MASMC 03-28  JL2     MAIN STORE PLANE - MOD 7 - BITS 2 &10
0013423                                        43
0013423                                        44
                                               45 # OPTION A
0013423                                        46
                                               47 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                               48 #       MASCM 03-28  JL16    MAIN STORE PLANE - MOD 1 BITS 2 & 10
0013423                                        49

   MEMORY ELEMENT TEST                                                        PR-1C929-50

     23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE 225
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PATCH HISTORY                                                        23:24:58   2/05/81  ****

  7104    FLTSD702                                                      CDGSD              W77D

0013423                                        01


                              -002- 04 #& TBL 7105
                              -002- 05 #& TEST 71
                              -002- 06 #& SEGMENT 1
                              -002- 07 #& PR CDGSD
                              -002- 08 #
                              -001- 09 #    STORE DATA BIT 03 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                              -001- 10 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 11 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 12 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 13 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 14 #
                              -001- 15 #        MASMC 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 7
                              -001- 16 #        MASMC 03-27  JL2    MAIN STORE PLANE - MOD 7 - BITS 3 &11
0013423                            17
0013423                            18
                                   19 # OPTION A
0013423                            20
                                   21 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   22 #        MASCM 03-27  JL16   MAIN STORE PLANE - MOD 1 BITS 3 & 11
0013423                            23
0013423                            24


                              -002- 27 #& TBL 7106
                              -002- 28 #& TEST 71
                              -002- 29 #& SEGMENT 1
                              -002- 30 #& PR CDGSD
                              -002- 31 #
                              -001- 32 #    STORE DATA BIT 04 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                              -001- 33 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 34 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 35 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 36 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 37 #
                              -001- 38 #        MASMC 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 7
                              -001- 39 #        MASMC 03-26  JL2    MAIN STORE PLANE - MOD 7 - BITS 4 &12
0013423                            40
0013423                            41
                                   42 # OPTION A
0013423                            43
                                   44 #        MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   45 #        MASCM 03-26  JL16   MAIN STORE PLANE - MOD 1 BITS 4 & 12
0013423                            46
0013423                            47
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            -002- 01 #& TBL 7107
            -002- 02 #& TEST 71
            -002- 03 #& SEGMENT 1
            -002- 04 #& PR CDGSD
            -002- 05 #
            -001- 06 #     STORE DATA BIT 05 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
            -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
            -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
            -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
            -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
            -001- 11 #
            -001- 12 #        MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
            -001- 13 #        MASMC 03-25  JL2     MAIN STORE PLANE - MOD 7 - BITS 5 &13
0013423           14
0013423           15
                  16 # OPTION A
0013423           17
                  18 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                  19 #        MASCM 03-25  JL16    MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423           20
0013423           21


            -002- 24 #& TBL 7108
            -002- 25 #& TEST 71
            -002- 26 #& SEGMENT 1
            -002- 27 #& PR CDGSD
            -002- 28 #
            -001- 29 #     STORE DATA BIT 06 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
            -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
            -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
            -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
            -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
            -001- 34 #
            -001- 35 #        MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
            -001- 36 #        MASMC 03-24  JL2     MAIN STORE PLANE - MOD 7 - BITS 6 &14
0013423           37
0013423           38
                  39 # OPTION A
0013423           40
                  41 #        MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                  42 #        MASCM 03-24  JL16    MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423           43
0013423           44
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             -002- 01 #& TBL 7109
             -002- 02 #& TEST 71
             -002- 03 #& SEGMENT 1
             -002- 04 #& PR CDGSD
             -002- 05 #
             -001- 06 #      STORE DATA BIT 07 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
             -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
             -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
             -001- 09 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
             -001- 10 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
             -001- 11 #
             -001- 12 #         MASMC 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 7
             -001- 13 #         MASMC 03-23  JL2    MAIN STORE PLANE - MOD 7 - BITS 7 &15
0013423            14
0013423            15
0013423            16 # OPTION A
                   17
                   18 #         MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                   19 #         MASCM 03-23  JL16   MAIN STORE PLANE - MOD 1 BITS 7 & 15
0013423            20
0013423            21


             -002- 24 #& TBL 7110
             -002- 25 #& TEST 71
             -002- 26 #& SEGMENT 1
             -002- 27 #& PR CDGSD
             -002- 28 #
             -001- 29 #      STORE DATA BIT 08 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
             -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
             -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
             -001- 32 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
             -001- 33 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
             -001- 34 #
             -001- 35 #         MASMC 03-33  JK3    MAIN STORE FANOUT BOARD FOR MODULE 7
             -001- 36 #         MASMC 03-31  JL2    MAIN STORE PLANE - MOD 7 - BITS 0 & 8
0013423            37
0013423            38
                   39 # OPTION A
0013423            40
                   41 #         MASCM 03-33  JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 1
                   42 #         MASCM 03-31  JL16   MAIN STORE PLANE - MOD 1 BITS 0 & 8
0013423            43
0013423            44
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PATCH HISTORY                                                    23:24:58    2/05/81   ****

7111     FLTSD709                                                       CDGSD       W77D

                          -002- 01 #& TBL 7111
                          -002- 02 #& TEST 71
                          -002- 03 #& SEGMENT 1
                          -002- 04 #& PR CDGSD
                          -002- 05 #
                          -001- 06 #      STORE DATA BIT 09 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                          -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 11 #
                          -001- 12 #         MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                          -001- 13 #         MASMC 03-29   JL2      MAIN STORE PLANE - MOD 7 - BITS 1 & 9
0013423                         14
0013423                         15
                                16 # OPTION A
0013423                         17
                                18 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                19 #         MASCM 03-29   JL16     MAIN STORE PLANE - MOD 1 BITS 1 & 9
0013423                         20
0013423                         21


                          -002- 24 #& TBL 7112
                          -002- 25 #& TEST 71
                          -002- 26 #& SEGMENT 1
                          -002- 27 #& PR CDGSD
                          -002- 28 #
                          -001- 29 #      STORE DATA BIT 10 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                          -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                          -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                          -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                          -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                          -001- 34 #
                          -001- 35 #         MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                          -001- 36 #         MASMC 03-28   JL2      MAIN STORE PLANE - MOD 7 - BITS 2 &10
0013423                         37
0013423                         38
                                39 # OPTION A
0013423                         40
                                41 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                42 #         MASCM 03-28   JL16     MAIN STORE PLANE - MOD 1 BITS 2 & 10
0013423                         43
0013423                         44


MEMORY ELEMENT TEST                                                        PR-1C929-50

   23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06     PAGE  229
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PATCH HISTORY

7113   FLTSD711

CDGSD   W77D

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-002- 01 #& TBL 7113
-002- 02 #& TEST 71
-002- 03 #& SEGMENT 1
-002- 04 #& PR CDGSD
-002- 05 #
-001- 06 #      STORE DATA BIT 11 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
-001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 11 #
-001- 12 #      MASMC 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
-001- 13 #      MASMC 03-27  JL2      MAIN STORE PLANE - MOD 7 - BITS 3 &11
        14
        15
        16 # OPTION A
        17
        18 #      MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
        19 #      MASCM 03-27  JL16     MAIN STORE PLANE - MOD 1 BITS 3 & 11
        20
        21


-002- 24 #& TBL 7114
-002- 25 #& TEST 71
-002- 26 #& SEGMENT 1
-002- 27 #& PR CDGSD
-002- 28 #
-001- 29 #      STORE DATA BIT 12 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
-001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
-001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
-001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
-001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
-001- 34 #
-001- 35 #      MASMC 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
-001- 36 #      MASMC 03-26  JL2      MAIN STORE PLANE - MOD 7 - BITS 4 &12
        37
        38
        39 # OPTION A
        40
        41 #      MASCM 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
        42 #      MASCM 03-26  JL16     MAIN STORE PLANE - MOD 1 BITS 4 & 12
        43
        44
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0013423
0013423

0013423

0013423
0013423

0013423
0013423

0013423

0013423
0013423

MEMORY ELEMENT TEST

PR-1C929-50

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PATCH HISTORY                                                        23:24:58   2/05/81  ****

  7115    FLTSD713                                                        CDGSD          W77D

                        -002- 01 #& TBL 7115
                        -002- 02 #& TEST 71
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 13 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #         MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 13 #         MASMC 03-25  JL2     MAIN STORE PLANE - MOD 7 - BITS 5 &13
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #         MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 #         MASCM 03-25  JL16    MAIN STORE PLANE - MOD 1 BITS 5 & 13
0013423                       20
0013423                       21


                        -002- 24 #& TBL 7116
                        -002- 25 #& TEST 71
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #      STORE DATA BIT 14 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #         MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 36 #         MASMC 03-24  JL2     MAIN STORE PLANE - MOD 7 - BITS 6 &14
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #         MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 #         MASCM 03-24  JL16    MAIN STORE PLANE - MOD 1 BITS 6 & 14
0013423                       43
0013423                       44
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PATCH HISTORY                                                           23:24:58   2/05/81   ****

7117    FLTSD715                                                              CDGSD          W77D

                        -002- 01 #& TBL 7117
                        -002- 02 #& TEST 71
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 15 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #         MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 13 #         MASMC 03-23   JL2      MAIN STORE PLANE - MOD 7 - BITS 7 &15
0013423                       14
0013423                       15
                              16 # OPYTION A
0013423                       17
                              18 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 #         MASCM 03-23   JL16     MAIN STORE PLANE - MOD 1 BITS 7 & 15
0013423                       20
0013423                       21


                        -002- 24 #& TBL 7118
                        -002- 25 #& TEST 71
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #      STORE DATA BIT 16 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #         MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 36 # NOTE--1 MASMC 03-22   JL2      MAIN STORE PLANE - MOD 7 - BITS 16&20
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #         MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 # NOTE--1 MASCM 03-22   JL16     MAIN STORE PLANE - MOD 1 BITS 16 & 20
0013423                       43
0013423                       44
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

 7119    FLTSD717                                                             CDGSD          W77D

                        -002- 01 #& TBL 7119
                        -002- 02 #& TEST 71
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #       STORE DATA BIT 17 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #          MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 13 # NOTE--1 MASMC 03-21   JL2      MAIN STORE PLANE - MOD 7 - BITS 17&21
0013423                       14
0013423                       15
                              16 # OPTION A
0013423                       17
                              18 #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              19 # NOTE--1 MASCM 03-21   JL16     MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                       20
0013423                       21


                        -002- 24 #& TBL 7120
                        -002- 25 #& TEST 71
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #       STORE DATA BIT 18 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #          MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 36 # NOTE--1 MASMC 03-20   JL2      MAIN STORE PLANE - MOD 7 - BITS 18&22
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #          MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 # NOTE--1 MASCM 03-20   JL16     MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                       43
0013423                       44
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PATCH HISTORY                                                      23:24:58   2/05/81  ****

  7121    FLTSD719                         .                                   CDGSD        W77D

                                -002- 01 #& TBL 7121
                                -002- 02 #& TEST 71
                                -002- 03 #& SEGMENT 1
                                -002- 04 #& PR CDGSD
                                -002- 05 #
                                -001- 06 #      STORE DATA BIT 19 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                                -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                -001- 09 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                -001- 10 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                -001- 11 #
                                -001- 12 #      MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
      0013423                   -001- 13 # NOTE--1 MASMC 03-19   JL2      MAIN STORE PLANE - MOD 7 - BITS 19&23
      0013423                         14
                                      15
                                      16 # OPTION A
      0013423                         17
                                      18 #      MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                      19 # NOTE--1 MASCM 03-19   JL16     MAIN STORE PLANE - MOD 1 BITS 19 & 23
      0013423                         20
      0013423                         21


                                -002- 24 #& TBL 7122
                                -002- 25 #& TEST 71
                                -002- 26 #& SEGMENT 1
                                -002- 27 #& PR CDGSD
                                -002- 28 #
                                -001- 29 #      STORE DATA BIT 20 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                                -C01- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                                -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                                -001- 32 #    DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                                -001- 33 #    DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                                -001- 34 #
                                -001- 35 #      MASMC 03-33   JK3      MAIN STORE FANOUT BOARD FOR MODULE 7
                                -001- 36 # NOTE--1 MASMC 03-22   JL2      MAIN STORE PLANE - MOD 7 - BITS 16&20
      0013423                         37
      0013423                         38
                                      39 # OPTION A
      0013423                         40
                                      41 #      MASCM 03-33   JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                      42 # NOTE--1 MASCM 03-22   JL16     MAIN STORE PLANE - MOD 1 BITS 16 & 20
      0013423                         43
      0013423                         44
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                        -002- 01 #& TBL 7123
                        -002- 02 #& TEST 71
                        -002- 03 #& SEGMENT 1
                        -002- 04 #& PR CDGSD
                        -002- 05 #
                        -001- 06 #      STORE DATA BIT 21 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 08 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 09 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 10 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 11 #
                        -001- 12 #          MASMC 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 13 # NOTE--1 MASMC 03-21   JL2     MAIN STORE PLANE - MOD 7 - BITS 17&21
0013423                       14
0013423                       15
0013423                       16 # OPTION A
                              17
                              18 #          MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
0013423                       19 # NOTE--1 MASCM 03-21   JL16    MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                       20
                              21


                        -002- 24 #& TBL 7124
                        -002- 25 #& TEST 71
                        -002- 26 #& SEGMENT 1
                        -002- 27 #& PR CDGSD
                        -002- 28 #
                        -001- 29 #      STORE DATA BIT 22 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                        -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                        -001- 31 #    OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                        -001- 32 #      DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                        -001- 33 #      DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                        -001- 34 #
                        -001- 35 #          MASMC 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                        -001- 36 # NOTE--1 MASMC 03-20   JL2     MAIN STORE PLANE - MOD 7 - BITS 18&22
0013423                       37
0013423                       38
                              39 # OPTION A
0013423                       40
                              41 #          MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                              42 # NOTE--1 MASCM 03-20   JL16    MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                       43
0013423                       44
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PATCH HISTORY                                                  23:24:58   2/05/81  ****

7125     FLTSD723                                                      CDGSD        W77D

                         -002- 01 #& TBL 7125
                         -002- 02 #& TEST 71
                         -002- 03 #& SEGMENT 1
                         -002- 04 #& PR CDGSD
                         -002- 05 #
                         -001- 06 #       STORE DATA BIT 23 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                         -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                         -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                         -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                         -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                         -001- 11 #
                         -001- 12 #          MASMC 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                         -001- 13 # NOTE--1 MASMC 03-19   JL2     MAIN STORE PLANE - MOD 7 - BITS 19&23
0013423                        14
0013423                        15
                               16 # OPTION A
0013423                        17
                               18 #          MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                               19 # NOTE--1 MASCM 03-19   JL16    MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423                        20
0013423                        21


                         -002- 24 #& TBL 7126
                         -002- 25 #& TEST 71
                         -002- 26 #& SEGMENT 1
                         -002- 27 #& PR CDGSD
                         -002- 28 #
                         -001- 29 #       STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                         -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                         -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                         -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                         -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                         -001- 34 #
                         -001- 35 #          MASMC 03-33   JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                         -001- 36 #          MASMC 03-18   JL2     MAIN STORE PLANE - MOD 7 - BITS PL&PH
0013423                        37
0013423                        38
                               39 # OPTION A
0013423                        40
                               41 #          MASCM 03-33   JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                               42 # NOTE--1 MASCM 03-18   JL16    MAIN STORE PLANE - MOD 1 BITS PL & PH
0013423                        43
0013423                        44
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                              -002- 01 #& TBL 7123
                              -002- 02 #& TEST 71
                              -002- 03 #& SEGMENT 1
                              -002- 04 #& PR CDGSD
                              -002- 05 #
                              -001- 06 #     STORE DATA BIT 21 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                              -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 09 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 10 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 11 #
                              -001- 12 #          MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                              -001- 13 # NOTE--1 MASMC 03-21  JL2     MAIN STORE PLANE - MOD 7 - BITS 17&21
0013423                             14
0013423                             15
                                    16 # OPTION A
0013423                             17
                                    18 #          MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    19 # NOTE--1 MASCM 03-21  JL16    MAIN STORE PLANE - MOD 1 BITS 17 & 21
0013423                             20
0013423                             21


                              -002- 24 #& TBL 7124
                              -002- 25 #& TEST 71
                              -002- 26 #& SEGMENT 1
                              -002- 27 #& PR CDGSD
                              -002- 28 #
                              -001- 29 #     STORE DATA BIT 22 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                              -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                              -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                              -001- 32 #     DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                              -001- 33 #     DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                              -001- 34 #
                              -001- 35 #          MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                              -001- 36 # NOTE--1 MASMC 03-20  JL2     MAIN STORE PLANE - MOD 7 - BITS 18&22
0013423                             37
0013423                             38
                                    39 # OPTION A
0013423                             40
                                    41 #          MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                    42 # NOTE--1 MASCM 03-20  JL16    MAIN STORE PLANE - MOD 1 BITS 18 & 22
0013423                             43
0013423                             44
```

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

7125     FLTSD723                                                                 CDGSD        W77D

                             -002- 01 #& TBL 7125
                             -002- 02 #& TEST 71
                             -002- 03 #& SEGMENT 1
                             -002- 04 #& PR CDGSD
                             -002- 05 #
                             -001- 06 #       STORE DATA BIT 23 IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                             -001- 07 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                             -001- 08 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                             -001- 09 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                             -001- 10 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                             -001- 11 #
                             -001- 12 #       MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                             -001- 13 # NOTE--1 MASMC 03-19  JL2     MAIN STORE PLANE - MOD 7 - BITS 19&23
0013423                            14
0013423                            15
                                   16 # OPTION A
0013423                            17
                                   18 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   19 # NOTE--1 MASCM 03-19  JL16    MAIN STORE PLANE - MOD 1 BITS 19 & 23
0013423                            20
0013423                            21


                             -002- 24 #& TBL 7126
                             -002- 25 #& TEST 71
                             -002- 26 #& SEGMENT 1
                             -002- 27 #& PR CDGSD
                             -002- 28 #
                             -001- 29 #       STORE DATA PARITY LOW OR HIGH IN MEMORY MODULE 7 HAS A STUCK-AT FAULT
                             -001- 30 # THIS INDICATES A FAILURE ON THE BIT-SLICED MEMORY PLANE LISTED BELOW
                             -001- 31 #   OR A STORE ADDRESS FAULT ON A FANOUT BOARD THAT WAS NOT TESTED PREVIOUSLY
                             -001- 32 #   DATA WORD 1 = LOW ADDRESS BITS OF FAILING LOCATION
                             -001- 33 #   DATA WORD 2 = RESULT OF EXCLUSIVE-OR BETWEEN DATA WRITTEN AND DATA READ
                             -001- 34 #
                             -001- 35 #       MASMC 03-33  JK3     MAIN STORE FANOUT BOARD FOR MODULE 7
                             -001- 36 #       MASMC 03-18  JL2     MAIN STORE PLANE - MOD 7 - BITS PL&PH
0013423                            37
0013423                            38
                                   39 # OPTION A
0013423                            40
                                   41 #       MASCM 03-33  JK25    MAIN MEMORY FANOUT BOARD FOR MODULE 1
                                   42 # NOTE--1 MASCM 03-18  JL16    MAIN STORE PLANE - MOD 1 BITS PL & PH
0013423                            43
0013423                            44
```

```
PATCH HISTORY                                                      23:24:58   2/05/81  ****

     VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                      CDGSD        W77D

   54056760 S  .STOP
    0112744 L  %%%311     27-05  26-49
    0112654 L  %%%407     40-13  40-08
    0112754 L  %%%824    111-40 111-35
06 0033414 L  %%%839    114-08 114-03
    0000201 A  %BITCNT           1-08
        0 U  %BOP              1-08
    0000001 A  %CLAS            LIBNUM=14        1-08
    0000001 A  %MAXWRD          LIBNUM=14        1-08
'CDGSD'     T  %NAME%
        0 J  %OW%       1-10
        0 J  %PFT%
'()'        T  %SAVREGS
    0001130 A  %T
    0000010 A  %TA1%      26-02  26-35, 28-35, 29-34, 30-36, 31-04, 35-23, 37-02, 38-02, 43-02, 45-21, 50-02, 52-02, 54-21,
                                 59-02, 61-02, 63-21, 68-02, 70-02, 72-22, 77-02, 79-02, 81-21, 86-02, 88-02, 90-23, 95-02,
                                 97-02, 99-21,104-02,107-17,110-41,111-31,116-01,116-31,117-10,117-44
        0 J  %TCHEA %   1-10
'PRLINE 1,1,
'  ----------
   -----------
   -----------
   -----------
   -----------
   -----------
   -----------
   -----------
   -----------
   -----------
   -----------'T %US%
TT ----------  T %USING12
''          T %USING14
    0000001 A  %WRDCNT          LIBNUM=14        1-08
    CTVTAB  V  rgchkAdr         LIBNUM=7       115-47
       14 P  rgchkAdr%_%C
             SYSUB            LIBNUM=7
    0000107 A  AA%              LIBNUM=14        1-08
06 0033133 L  ADDRLP    105-42 105-47
06 0033136 L  ADDSKP    105-46 105-44
    0020016 A  ALLZERO    20-04
'APPLY ERRON
EOUS ORDER(0
/8) TO CHECK
ER'         T  ALLZEROT
    0063476 A  BADCODE    20-06
'APPLY ERRON
EOUS ORDER(5
/8) TO CHECK
ER'         T  BADCODET

   MEMORY ELEMENT TEST                                                        PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD    ISSUE 06     PAGE  239
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PATCH HISTORY                                                    23:24:58    2/05/81  ****

       VALUE  T NAME        DEF/REF    ATTRIBUTES AND REFERENCES                              CDGSD        W77D

'PAGSCR+30'  T BASADDR                 W=4  S=0  N=36  CL=2        29-06, 35-30, 47-46, 48-13, 56-46, 57-13, 65-46, 66-13, 74-46,
             '                                                     75-13, 83-46, 84-13, 92-46, 93-13,101-46,102-13,105-37,107-03,109-34,117-32
          0  U BBX                     1-08
         17  R BHC                     W=1  S=1  N=0  CL=1  LIBNUM=14        29-02
         17  R BIN                     W=1  S=2  N=0  CL=1  LIBNUM=14        29-02, 39-49, 40-47,115-36
    0000000  A BIT0        18-05
    0000001  A BIT1        18-06
    0000012  A BIT10       18-15
    0000013  A BIT11       18-16
    0000014  A BIT12       18-17
    0000015  A BIT13       18-18
    0000016  A BIT14       18-19
    0000017  A BIT15       18-20
    0000020  A BIT16       18-21
    0000021  A BIT17       18-22
    0000022  A BIT18       18-23
    0000023  A BIT19       18-24
    0000002  A BIT2        18-07
    0000003  A BIT3        18-08
    0000004  A BIT4        18-09
    0000005  A BIT5        18-10
    0000006  A BIT6        18-11
    0000007  A BIT7        18-12
    0000010  A BIT8        18-13
    0000011  A BIT9        18-14
 06 0032406  L BKCSTDT1    26-47    37-07
 06 0033767  L BKCSTDT2    43-39    50-07
 06 0034203  L BKCSTDT3    52-39    59-07
 06 0034417  L BKCSTDT4    61-39    68-07
 06 0034633  L BKCSTDT5    70-39    77-07
 06 0035047  L BKCSTDT6    79-39    86-07
 06 0035263  L BKCSTDT7    88-39    95-07
 06 0035477  L BKCSTDT8    97-39   104-07
          2  R BLKMSK       9-15    29-02, 29-18, 31-30, 32-08, 32-34, 33-47, 34-44
'#         P
ROC  06-12
FA1010  GENE
RAL REGISTER
S BITS 3 AND
 11'        T BS00311                 LIBNUM=12
'#         P
ROC  06-14
FA1010  GENE
RAL REGISTER
S BITS 5 AND
 13'        T BS00513                 LIBNUM=12
'#         P
ROC  06-17
FA1010  GENE


   MEMORY ELEMENT TEST                                                              PR-1C929-50

    23:24:58    2/05/81    TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  240
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PATCH HISTORY   23:24:58   2/05/81 ****

          VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

RAL REGISTER
S BITS 7 AND
 15'   T BS00715   LIBNUM=12
'#   P
ROC 02-18
FA1024 SPEC
IAL REGISTER
S BITS PL AN
D PH'   T BS1PLPH   LIBNUM=12
'#   P
ROC 02-08
FA1024 SPEC
IAL REGISTER
S BITS 0 AND
 8'   T BS10008   LIBNUM=12
'#   P
ROC 02-09
FA1024 SPEC
IAL REGISTER
S BITS 1 AND
 9'   T BS10109   LIBNUM=12
'#   P
ROC 02-10
FA1024 SPEC
IAL REGISTER
S BITS 2 AND
 10'   T BS10210   LIBNUM=12
'#   P
ROC 02-11
FA1024 SPEC
IAL REGISTER
S BITS 3 AND
 11'   T BS10311   LIBNUM=12
'#   P
ROC 02-12
FA1024 SPEC
IAL REGISTER
S BITS 4 AND
 12'   T BS10412   LIBNUM=12
'#   P
ROC 02-13
FA1024 SPEC
IAL REGISTER
S BITS 5 AND
 13'   T BS10513   LIBNUM=12
'#   P
ROC 02-16
FA1024 SPEC
IAL REGISTER

     MEMORY ELEMENT TEST   PR-1C929-50

          23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE 241

PATCH HISTORY   23:24:58   2/05/81 ****

　　VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

S BITS 6 AND
　14'   'T BS10614   LIBNUM=12
'#   P
ROC 02-17
FA1024 SPEC
IAL REGISTER
S BITS 7 AND
　15'   T BS10715   LIBNUM=12
'#   P
ROC 02-20
FA1030 MISC
. DEC. - REG
ISTERS BITS
17 AND 19'   T BS1719   LIBNUM=12
　0047214 A BUSCHK   20-08
'CHECK BUS I
SOLATION USI
NG SER'   T BUSCHKT
　06 0033300 L CALLPROC 109-09 109-29
　　CDGS3A V CALOFL6   7-34 108-11
'SER+0'   T CHDIF   W=1   S=2   N=0   CL=2
　　　10 R CHKNDX   9-04
'CIOBUF+0'   T CINIT   W=1   S=0   N=0   CL=2
'CIOBUF+0'   T CKHLT   W=1   S=2   N=0   CL=2
'CIOBUF+0'   T CKSTP   W=1   S=1   N=0   CL=2
　0040374 A CKTINIT   20-10
'INITIALIZE
ALL STORE CO
NTROLLER CIR
CUITS'   T CKTINITT
'#   P
ROC 06-31
FA1025 SYST
EM CLOCK'   T CLCK   LIBNUM=12
　0046074 A CLKSTOP   20-15
'DISABLE STO
RE CONTROLLE
R CLOCK OUTP
UT'   T CLKSTOPT
　0046070 A CLKSTRT   20-17
'ENABLE STOR
E CONTROLLER
 CLOCK OUTPU
T'   T CLKSTRTT
　0177771 A CLOCKON   24-01
　0043310 A CLRSER   20-13
'CLEAR STORE
 ERROR REGIS
TER'   T CLRSERT

MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                          23:24:58   2/05/81  ****

     VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                      CDGSD        W77D

   0112661 L CLRSS      40-21  40-16
'REFSTRT'  T COMENT
'
```

```
 ¢.<(+!&
     !$*);
--/              !
,%_>?
    :#@'="  ab
cdefghi n≤(+
† jklmnopqr^
∞)±≡~·stuvw
xyz+ᴸ⌐[≥≢012
3456789↑↲⌐┘]≠
-⟨abcdefghi
   ⟩jklmno
pqr     \ s
tuvwxyz
 0123456789
'          T CONLC              LIBNUM=7
'n
```

```
     Z
 ¢e<hp!x
     v$fgs     !
¬al
i%_>k
  Jo#b'd"  ab
cdefghi n≤(+
† jklmnopqr^
∞)±≡~·stuvw
xyz+ᴸ⌐[≥≢012
3456789↑↲⌐┘]≠
-⟨ABCDEFGHI
   ⟩JKLMNO
PQR     \ S
TUVWXYZ
 0123456789
'          T CONSC              LIBNUM=7
   CDGSIO  V CONTPREP    7-25   26-46, 43-38, 52-38, 61-38, 70-38, 79-38, 88-38, 97-38
'DGREQLO+O' T CONTROLBITS        W=7  S=11  N=0  CL=2
   0000033 A COUNT      25-11 LIBNUM=15      42-11, 51-11, 60-11, 69-11, 78-11, 87-11, 96-11,121-27,122-17,123-01,124-01,

   MEMORY ELEMENT TEST                                                             PR-1C929-50

     23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  243
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      VALUE  T  NAME        DEF/REF   ATTRIBUTES AND REFERENCES                                    CDGSD        W77D

                                      125-01,126-01,127-01,128-01,129-01,130-01,131-01,132-01,133-01,134-01,135-01,136-01,137-01,
                                      138-01,139-01,139-27,140-09,141-01,142-01,142-31,143-13,143-46,144-01,144-20,145-01,145-23,
                                      146-01,146-21,147-01,147-23,148-01,148-21,149-01,149-20,150-01,150-21,151-01,151-21,152-01,
                                      152-21,153-01,153-27,154-01,154-21,155-01,155-21,156-01,156-20,157-01,157-29,157-31,158-01,
                                      158-24,159-01,159-24,160-01,160-24,161-01,161-24,162-01,162-24,163-01,163-24,164-01,164-24,
                                      165-01,165-24,166-01,166-24,167-01,167-24,168-01,168-24,169-01,169-24,170-01,170-24,170-36,
                                      171-01,171-16,172-01,172-24,173-01,173-24,174-01,174-24,175-01,175-24,176-01,176-24,177-01,
                                      177-24,178-01,178-24,179-01,179-24,180-01,180-24,181-01,181-24,182-01,182-24,183-01,183-24,
                                      184-01,184-13,184-15,184-30,185-06,185-31,186-07,187-01,187-26,188-01,188-28,189-04,189-27,
                                      190-01,190-24,191-01,191-24,192-01,192-24,193-01,193-26,194-01,194-24,195-01,195-26,196-01,
                                      196-24,197-01,197-27,197-45,198-01,198-16,199-01,199-26,200-01,200-24,201-01,201-24,202-01,
                                      202-24,203-01,203-24,204-01,204-24,205-01,205-24,206-01,206-24,207-01,207-24,208-01,208-24,
                                      209-01,209-24,210-01,210-24,211-01,211-13,211-15,211-30,212-06,212-29,213-03,213-26,214-01,
                                      214-24,215-01,215-24,216-01,216-24,217-01,217-24,218-01,218-24,219-01,219-24,220-01,220-24,
                                      221-01,221-24,222-01,222-24,223-01,223-24,224-01,224-14,224-16,224-31,225-05,225-30,226-04,
                                      226-27,227-01,227-24,228-01,228-24,229-01,229-24,230-01,230-24,231-01,231-24,232-01,232-24,
                                      233-01,233-24,234-01,234-24,235-01,235-24,236-01,236-24,237-01
     0111432  L  CPATCH        2-22
     0112562  L  CPATCH1       2-23    26-49, 40-08,111-35
     0114107  L  CPATCH2       2-24
     0115073  L  CPATCH3       2-25
     0121236  L  CPATCH7       2-26
'#            P
ROC  06-06
FA1034  CONS
OLE AND STAT
US PANEL INT
ERFACE'         T  CSSPITRF            LIBNUM=12
  06 0032355  L  CSTDT1        2-08   25-11
  06 0033744  L  CSTDT2        2-09   42-11
  06 0034160  L  CSTDT3        2-10   51-11
  06 0034374  L  CSTDT4        2-11   60-11
  06 0034610  L  CSTDT5        2-12   69-11
  06 0035024  L  CSTDT6        2-13   78-11
  06 0035240  L  CSTDT7        2-14   87-11
  06 0035454  L  CSTDT8        2-15   96-11
'# NOTE--3 C
TI   02-14
FA1211  CTI
BOARD 5'        T  CTI5                LIBNUM=12
'CHKWRD+0'      T  CTRLCK              W=1  S=16  N=0  CL=2
     0000000  A  DATAWD       25-11   42-11, 51-11, 60-11, 69-11, 78-11, 87-11, 96-11
  06 0032635  L  DATPATBL     33-20   29-07, 33-33
  06 0032567  L  DELAY        32-17   32-18
```

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PATCH HISTORY                                                    23:24:58  2/05/81  ****

       VALUE T NAME      DEF/REF   ATTRIBUTES AND REFERENCES               CDGSD      W77D

  ¢.<(+18
       !$*);
 ¬/
,%_>?
    :#@'="
        n≤(+
+
  ¤)±¤-~
    +L[≥●012
3456789↑↓]≠
-(ABCDEFGHI
    )JKLMNO
PQR      \ S
TUVWXYZ
 0123456789
     '         T DELLC              LIBNUM=7
   CTSD        V DGNLIM     7-12    26-30, 40-02,106-18,112-43,116-28
   MASACS      V DGNMSG     6-01    40-44,114-14
   CTSD        V DGREQ      7-45    40-39,114-10
 06 0032700 L DHFLXT      34-33    30-23
'SER+0'        T DHPER              W=1  S=11  N=0  CL=2
 06 0032650 L DLFLXT      33-36    30-02, 30-32, 30-47
'SER+0'        T DLPER              W=1  S=15  N=0  CL=2
'# NOTE--3 D
MA   02-17
FC392  DMA
MY STORE CON
TROL'          T DMAC               LIBNUM=12
'# NOTE--3 D
MA   02-23
FC388  DMA
CC INTERFACE
 BOARD'        T DMAINTF            LIBNUM=12
'# NOTE--3 D
MA   02-09
FC383  DMA
REGISTER BIT
S 16, 17, 18
, 19'          T DMA2               LIBNUM=12
'# NOTE--3 D
MA   02-08
FC384  DMA
REGISTER BIT
S PL, PH'      T DMA3               LIBNUM=12
'#         P
ROC  06-26
FA1015  DMLO
 ROTATE AND

   MEMORY ELEMENT TEST                                          PR-1C929-50
```

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PATCH HISTORY                                                        23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES              CDGSD          W77D

PARITY GENER
ATOR'          T  DML0RPL            LIBNUM=12
'#          P
ROC  06-23
FA1015  DML1
 ROTATE AND
PARITY GENER
ATOR'          T  DML1RPH            LIBNUM=12
'#          P
ROC  02-23
FA1046  DOUB
LE STORE REA
D'             T  DSR               LIBNUM=12
   06 0033745 L  DT2INIT    43-05
   06 0034161 L  DT3INIT    52-05
   06 0034375 L  DT4INIT    61-05
   06 0034611 L  DT5INIT    70-05
   06 0035025 L  DT6INIT    79-05
   06 0035241 L  DT7INIT    88-05
   06 0035455 L  DT8INIT    97-05
      0146074 A  ERCOLL     20-19
'COLLECT ERR
ORS IN STORE
 ERROR REG'    T  ERCOLLT
           15 R  ERRI               W=1  S=5  N=0  CL=1  LIBNUM=14      31-23, 32-27, 33-38, 34-35, 40-24
           10 R  ERSAVE     9-21
'#          P
ROC  10-23
FA1027  ERRO
R REG/DISPLA
Y BUFFER LOW
 BITS'         T  ER0900            LIBNUM=12
            0 J  ESS2       1-10
            1 J  ESS2E      1-09
       CSYSUB  V  EXCOFLPG   7-36 108-29
      0145454 A  EXERLD     20-21
'ENABLE EXTE
RNAL LOAD OF
 STORE ERROR
REG'           T  EXERLDT
      0145454 A  EXLDB15    20-24
'ENABLE EXTE
RNAL LOAD OF
 STORE ERROR
 REG W/ ERRO
R COLLECT OP
TION'          T  EXLDB15T
    CDGNOF     V  FAILOFF    3-45
    0010000    A  FAK010     23-36


  MEMORY ELEMENT TEST                                                    PR-1C929-50

    23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE  246
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PATCH HISTORY                                                          23:24:58   2/05/81  ****

      VALUE T NAME        DEF/REF   ATTRIBUTES AND REFERENCES                       CDGSD         W77D

      0005440 A FASTREF     20-26
'PERFORM FAS
T REFRESH ON
 STORE'        T FASTREFT
      0045454 A FASTRNC     20-28
'FORCE FAST
REFRESH W/O
CLOCK'         T FASTRNCT
      0146074 A FBIT09      20-32
      0146064 A FBIT09R     20-35
'COLLECT ERR
ORS IN SER W
/ REFRESH ON'T FBIT09RT
'COLLECT ERR
ORS IN STORE
 ERROR REGIS
TER'           T FBIT09T
      0146076 A FBRMB15     20-37
'FANOUT BOAR
D REFRESH W/
 ERROR COLLE
CT'            T FBRMB15T
'CIOBUF+0'     T FBT09              W=1  S=17  N=0  CL=2
      0020000 A FBUSRDN     23-38
      0046314 A FCHKBT      20-39
      0046304 A FCHKBTR     20-41
'ACTIVATE SH
IFTER CHECK
BIT W/ REFRE
SH ENABLED'    T FCHKBTRT
'ACTIVATE MA
IN SHIFTER C
HECK BIT'      T FCHKBTT
      0040574 A FCHKOS      20-43
'FORCE ZEROS
 TO MODULE S
ELECT XOR CH
ECK & WRITE
PROTECT SELE
CT XOR CHECK
 CIRCUITS'     T FCHKOST
      0041274 A FCHK1S      20-46
'FORCE ONES
 TO MODULE S
ELECT XOR CH
ECK & WRITE
PROTECT SELE
CT XOR CHECK
 CIRCUITS'     T FCHK1ST
```

```
PATCH HISTORY                                                    23:24:58   2/05/81  ****

      VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES              CDGSD         W77D

     0140574 A FCKOS15      20-49
'FORCE ZEROS
 TO CHECK CK
TS W/ ERROR
COLLECT'      T FCKOS15T
     0141274 A FCK1S15      21-02
'FORCE ONES
 TO CHECK CK
TS W/ ERROR
COLLECT'      T FCK1S15T
     0043074 A FDISIDLE     21-04
'FORCE DISAB
LE OF IDLE F
LOP'          T FDISIDLET
     0000002 A FFOBRM       23-44
     0145454 A FFRMB15      20-30
'FORCE FAST
REFRESH & BI
T 15'         T FFRMB15T
           0 U FFOO
     0020016 A FGLDNCFR     24-02
           1 J FIELD         1-09
      CDGSIO V FINAL         7-24   37-06, 50-06, 59-06, 68-06, 77-06, 86-06, 95-06,104-06
     0046156 A FLSHO        21-06
     0046154 A FLSHONC      21-09
'PRESENT ZER
O TO INPUT O
F MAIN SHIFT
ER'           T FLSHONCT
'START ZERO
INTO MAIN SH
IFTER'        T FLSHOT
     0000002 A FLTSDO      121-27   34-18, 35-16
     0000032 A FLTSDOPR    143-13   34-27,143-13
     0000002 A FLTSD000    121-27
     0000003 A FLTSD001    122-17
     0000004 A FLTSD002    123-01
     0000005 A FLTSD003    124-01
     000C006 A FLTSD004    125-01
     0000007 A FLTSD005    126-01
     0000010 A FLTSD006    127-01
     0000011 A FLTSD007    128-01
     0000012 A FLTSD008    129-01
     0000013 A FLTSD009    130-01
     0000014 A FLTSD010    131-01
     0000015 A FLTSD011    132-01
     0000016 A FLTSD012    133-01
     0000017 A FLTSD013    134-01
     0000020 A FLTSD014    135-01


   MEMORY ELEMENT TEST                                          PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE  248
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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES		CDGSD	W77D
0000021	A	FLTSD015	136-01				
0000022	A	FLTSD016	137-01				
0000023	A	FLTSD017	138-01				
0000024	A	FLTSD018	139-01				
0000025	A	FLTSD019	139-27				
0000026	A	FLTSD020	140-09				
0000027	A	FLTSD021	141-01				
0000030	A	FLTSD022	142-01				
0000031	A	FLTSD023	142-31				
0000002	A	FLTSD1	144-20	46-34, 47-19			
0000032	A	FLTSD1PR	156-20	47-35,156-20			
0000033	A	FLTSD1WT	157-01	46-05,157-01			
0000002	A	FLTSD100	144-20				
0000003	A	FLTSD101	145-01				
0000004	A	FLTSD102	145-23				
0000005	A	FLTSD103	146-01				
0000006	A	FLTSD104	146-21				
0000007	A	FLTSD105	147-01				
0000010	A	FLTSD106	147-23				
0000011	A	FLTSD107	148-01				
0000012	A	FLTSD108	148-21				
0000013	A	FLTSD109	149-01				
0000014	A	FLTSD110	149-20				
0000015	A	FLTSD111	150-01				
0000016	A	FLTSD112	150-21				
0000017	A	FLTSD113	151-01				
0000020	A	FLTSD114	151-21				
0000021	A	FLTSD115	152-01				
0000022	A	FLTSD116	152-21				
0000023	A	FLTSD117	153-01				
0000024	A	FLTSD118	153-27				
0000025	A	FLTSD119	154-01				
0000026	A	FLTSD120	154-21				
0000027	A	FLTSD121	155-01				
0000030	A	FLTSD122	155-21				
0000031	A	FLTSD123	156-01				
0000002	A	FLTSD2	158-01	55-34, 56-19			
0000032	A	FLTSD2PR	170-01	56-35,170-01			
0000033	A	FLTSD2WT	170-24	55-05,170-24			
0000002	A	FLTSD200	158-01				
0000003	A	FLTSD201	158-24				
0000004	A	FLTSD202	159-01				
0000005	A	FLTSD203	159-24				
0000006	A	FLTSD204	160-01				
0000007	A	FLTSD205	160-24				
0000010	A	FLTSD206	161-01				
0000011	A	FLTSD207	161-24				
0000012	A	FLTSD208	162-01				
0000013	A	FLTSD209	162-24				

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PATCH HISTORY   23:24:58   2/05/81 ****

    VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

    0000014 A FLTSD210   163-01
    0000015 A FLTSD211   163-24
    0000016 A FLTSD212   164-01
    0000017 A FLTSD213   164-24
    0000020 A FLTSD214   165-01
    0000021 A FLTSD215   165-24
    0000022 A FLTSD216   166-01
    0000023 A FLTSD217   166-23
    0000024 A FLTSD218   167-01
    0000025 A FLTSD219   167-24
    0000026 A FLTSD220   168-01
    0000027 A FLTSD221   168-24
    0000030 A FLTSD222   169-01
    0000031 A FLTSD223   169-24
    0000002 A FLTSD3   171-16   64-34, 65-19
    0000032 A FLTSD3PR   183-24   65-35,183-24
    0000033 A FLTSD3WT   184-01   64-05,184-01
    0000002 A FLTSD300   171-16
    0000003 A FLTSD301   172-01
    0000004 A FLTSD302   172-24
    0000005 A FLTSD303   173-01
    0000006 A FLTSD304   173-24
    0000007 A FLTSD305   174-01
    0000010 A FLTSD306   174-24
    0000011 A FLTSD307   175-01
    0000012 A FLTSD308   175-24
    0000013 A FLTSD309   176-01
    0000014 A FLTSD310   176-24
    0000015 A FLTSD311   177-01
    0000016 A FLTSD312   177-24
    0000017 A FLTSD313   178-01
    0000020 A FLTSD314   178-24
    0000021 A FLTSD315   179-01
    0000022 A FLTSD316   179-24
    0000023 A FLTSD317   180-01
    0000024 A FLTSD318   180-24
    0000025 A FLTSD319   181-01
    0000026 A FLTSD320   181-24
    0000027 A FLTSD321   182-01
    0000030 A FLTSD322   182-24
    0000031 A FLTSD323   183-01
    0000002 A FLTSD4   184-30   73-34, 74-19
    0000032 A FLTSD4PR   197-01   74-35,197-01
    0000033 A FLTSD4WT   197-27   73-05,197-27
    0000002 A FLTSD400   184-30
    0000003 A FLTSD401   185-06
    0000004 A FLTSD402   185-31
    0000005 A FLTSD403   186-07
    0000006 A FLTSD404   187-01

MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                         23:24:58    2/05/81   ****

   VALUE  T  NAME        DEF/REF    ATTRIBUTES AND REFERENCES              CDGSD         W77D

   0000007 A FLTSD405    187-26
   0000010 A FLTSD406    188-01
   0000011 A FLTSD407    188-28
   0000012 A FLTSD408    189-04
   0000013 A FLTSD409    189-27
   0000014 A FLTSD410    190-01
   0000015 A FLTSD411    190-24
   0000016 A FLTSD412    191-01
   0000017 A FLTSD413    191-24
   0000020 A FLTSD414    192-01
   0000021 A FLTSD415    192-24
   0000022 A FLTSD416    193-01
   0000023 A FLTSD417    193-26
   0000024 A FLTSD418    194-01
   0000025 A FLTSD419    194-24
   0000026 A FLTSD420    195-01
   0000027 A FLTSD421    195-26
   0000030 A FLTSD422    196-01
   0000031 A FLTSD423    196-24
   0000002 A FLTSD5      198-16     82-34, 83-19
   0000032 A FLTSD5PR    210-24     83-35,210-24
   0000033 A FLTSD5WT    211-01     82-05,211-01
   0000002 A FLTSD500    198-16
   0000003 A FLTSD501    199-01
   0000004 A FLTSD502    199-26
   0000005 A FLTSD503    200-01
   0000006 A FLTSD504    200-24
   0000007 A FLTSD505    201-01
   0000010 A FLTSD506    201-24
   0000011 A FLTSD507    202-01
   0000012 A FLTSD508    202-24
   0000013 A FLTSD509    203-01
   0000014 A FLTSD510    203-24
   0000015 A FLTSD511    204-01
   0000016 A FLTSD512    204-24
   0000017 A FLTSD513    205-01
   0000020 A FLTSD514    205-24
   0000021 A FLTSD515    206-01
   0000022 A FLTSD516    206-24
   0000023 A FLTSD517    207-01
   0000024 A FLTSD518    207-24
   0000025 A FLTSD519    208-01
   0000026 A FLTSD520    208-24
   0000027 A FLTSD521    209-01
   0000030 A FLTSD522    209-24
   0000031 A FLTSD523    210-01
   0000002 A FLTSD6      211-30     91-34, 92-19
   0000032 A FLTSD6PR    223-24     92-35,223-24
   0000033 A FLTSD6WT    224-01     91-05,224-01


 MEMORY ELEMENT TEST                                                      PR-1C929-50

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PATCH HISTORY   23:24:58   2/05/81 ****

   VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

   0000002 A FLTSD600   211-30
   0000003 A FLTSD601   212-06
   0000004 A FLTSD602   212-29
   0000005 A FLTSD603   213-03
   000C006 A FLTSD604   213-26
   0000007 A FLTSD605   214-01
   0000010 A FLTSD606   214-24
   0000011 A FLTSD607   215-01
   0000012 A FLTSD608   215-24
   0000013 A FLTSD609   216-01
   0000014 A FLTSD610   216-24
   0000015 A FLTSD611   217-01
   0000016 A FLTSD612   217-24
   0000017 A FLTSD613   218-01
   0000020 A FLTSD614   218-24
   0000021 A FLTSD615   219-01
   0000022 A FLTSD616   219-24
   0000023 A FLTSD617   220-01
   0000024 A FLTSD618   220-24
   0000025 A FLTSD619   221-01
   0000026 A FLTSD620   221-24
   0000027 A FLTSD621   222-01
   0000030 A FLTSD622   222-24
   0000031 A FLTSD623   223-01
   0000002 A FLTSD7   224-31   100-34,101-19
   G000032 A FLTSD7PR   236-24   101-35,236-24
   0000033 A FLTSD7WT   237-01   100-05,237-01
   0000002 A FLTSD700   224-31
   0000003 A FLTSD701   225-05
   0000004 A FLTSD702   225-30
   0000005 A FLTSD703   226-04
   0000006 A FLTSD704   226-27
   0000007 A FLTSD705   227-01
   0000010 A FLTSD706   227-24
   0000011 A FLTSD707   228-01
   0000012 A FLTSD708   228-24
   0000013 A FLTSD709   229-01
   0000014 A FLTSD710   229-24
   0000015 A FLTSD711   230-01
   0000016 A FLTSD712   230-24
   C000017 A FLTSD713   231-01
   0000020 A FLTSD714   231-24
   0000021 A FLTSD715   232-01
   0000022 A FLTSD716   232-24
   0000023 A FLTSD717   233-01
   0000024 A FLTSD718   233-24
   0000025 A FLTSD719   234-01
   0000026 A FLTSD720   234-24
   0000027 A FLTSD721   235-01

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSD	W77D

```
    0000030 A FLTSD722      235-24
    0000031 A FLTSD723      236-01
    CDGS3A  V FLXT            7-27 111-29
06  0033034 L FNDBGN        38-33  38-29
06  0033030 L FNDBTS        38-25  30-01
    0113070 L FNDCU        113-48 113-31,113-39,113-44
06  0033033 L FNDHIBTS     38-30  30-22
    0044474 A FNOTIM        21-16
    0044470 A FNOTIMC       21-19
'BLOCK TIMIN
G TO FANOUT
BOARDS(W/CLO
CK)'        T FNOTIMCT
'INHIBIT TIM
ING SIGNALS
TO FANOUT BO
ARDS'       T FNOTIMT
    0045434 A FNOWRT        21-12
    0045430 A FNOWRTC       21-14
'FORCE WRITI
NG OF ONES W
/ CLOCK RUNN
ING'        T FNOWRTCT
'FORCE WRITI
NG OF ALL-ON
ES DATA'    T FNOWRTT
         10 R FOBCNT         9-05 105-31,105-32
    0041550 A FOBMT         21-21
'FANOUT BOAR
D MAINTENANC
E TEST'     T FOBMTT
    CDGSFA  V FOBNDX         7-17 105-30
'PAGSCR+26' T FOBNUM              W=20  S=0   N=32  CL=2
'SER+0'     T FOBPARER            W=1   S=10  N=0   CL=2
'SER+0'     T FOBTERA             W=1   S=7   N=0   CL=2
'SER+0'     T FOBTERB             W=1   S=0   N=0   CL=2
06  0033100 L FORMADDR      39-44
06  0033075 L FORMDATA      39-30  38-44, 39-14, 39-22
    0112771 L FORMINPCN    112-07 111-43,111-49
    0000004 A FOUR          18-25
    0041474 A FRFSEL0       21-23
'CANCEL SELE
CT FROM FOB0
 DURING REFR
ESH'        T FRFSEL0T
    0042334 A FRFSEL1       21-25
'CANCEL SELE
CT FROM FOB1
 DURING REFR
```

MEMORY ELEMENT TEST   PR-1C9? 7-50

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PATCH HISTORY                                                      23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES              CDGSD        W77D

ESH'           T  FRFSEL1T
     0042534  A  FRFSEL2     21-27
'CANCEL SELE
CT FROM FOB2
 DURING REFR
ESH'           T  FRFSEL2T
     0043234  A  FRFSEL3     21-29
'CANCEL SELE
CT FROM FOB3
 DURING REFR
ESH'           T  FRFSEL3T
     0043434  A  FRFSEL4     21-31
'CANCEL SELE
CT FROM FOB4
 DURING REFR
ESH'           T  FRFSEL4T
     0044354  A  FRFSEL5     21-33
'CANCEL SELE
CT FROM FOB5
 DURING REFR
ESH'           T  FRFSEL5T
     0044554  A  FRFSEL6     21-35
'CANCEL SELE
CT FROM FOB6
 DURING REFR
ESH'           T  FRFSEL6T
     0045254  A  FRFSEL7     21-37
'CANCEL SELE
CT FROM FOB7
 DURING REFR
ESH'           T  FRFSEL7T
'#         P
ROC  06-33
FA1011  ''FRO
M'' FIELD DEC
ODER'          T  FRMDEC              LIBNUM=12
     0044334  A  FRREQA      21-39
'SET REFRESH
REQUEST ON
TIMING BOARD
 (FA1071)'     T  FRREQAT
     0040674  A  FRREQB      21-42
     0040664  A  FRREQBR     21-45
'SET REFRESH
REQUEST ON
FA1062 W/ RE
FRESH ENABLE
D'             T  FRREQBRT
'SET REFRESH
```

    MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                                        23:24:58  2/05/81  ****

     VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES               CDGSD      W77D
REQ COPY ON
CHECK BOARD
A (FA1062)''T FRREQBT
   0100000 A FSBIT09       23-41
'CIOBUF+0'  T FSEL                   W=1  S=16  N=0  CL=2
   0046074 A FSELA         21-47
'FORCE STORE
SELECT(ISOL
ATE) SIGNAL
ON FA1071'  T FSELAT
   0004714 A FSELB         22-02
   0004710 A FSELBC        22-05
'FORCE DUPLI
CATED STORE
SELECT(SELB)
W/ CLOCK'   T FSELBCT
'FORCE DUPLI
CATED STORE
SELECT(SELB)
ACTIVE'     T FSELBT
   0046516 A FSTFBRM       22-07
'FORCE CONTR
OLLER & FANO
UT BOARDS TO
REFRESH'    T FSTFBRMT
   0042354 A FSTNM         22-09
   0052354 A FSTNMFR       22-11
'FORCE NORMA
L MODE IN CO
NTROLLER & R
EFRESH TO FA
NOUT BOARDS' T FSTNMFRT
   0042344 A FSTNMR        22-13
'FORCE MODE
TO NORMAL W/
REFRESH ENA
BLED'       T FSTNMRT
'FORCE MODE
FLOP TO NORM
AL STATE'   T FSTNMT
   0046514 A FSTRM         22-15
'FORCE MODE
FLOP TO REFR
ESH STATE'  T FSTRMT
   0046234 A FTINWP        22-17
'FORCE IN-WR
ITE-PROTECT
INHIBIT'    T FTINWPT
'#          P
```

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PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T NAME      DEF/REF    ATTRIBUTES AND REFERENCES              CDGSD        W77D
ROC  06-05
FB6    FUSE
S FOR OTHER
STORE ADDRES
S 16-PH AND
CONTROL'      T FUSADH               LIBNUM=12
'#        P
ROC  02-04
FB6    FUSE
S FOR OTHER
STORE DATA 1
6-23 AND CON
TROL'         T FUSDTH               LIBNUM=12
'#        P
ROC  06-07
FB6    FUSE
S FOR OTHER
STORE DATA 0
-15'          T FUSDTL               LIBNUM=12
'CHKWRD+0'    T FXORG                W=1   S=17   N=0   CL=2
'#        P
ROC  06-20
FA1026  GATI
NG BUS PARIT
Y CHECK AND
DML MATCH'    T GBP                  LIBNUM=12
   0000004 A HALTCLK      23-46
06 0034042 L HDF444       46-39  45-35
06 0034256 L HDF493       55-39  54-35
06 0034472 L HDF542       64-39  63-35
06 0034706 L HDF591       73-39  72-36
06 0035122 L HDF640       82-39  81-35
06 0035336 L HDF689       91-39  90-37
06 0035552 L HDF738       100-39 99-35
   0113064 L HIBITF       113-40 113-15
         1 R HIPATBAK      9-13  34-01, 34-02, 34-47, 34-49, 41-01
             HIPATBAK%T    9-14  IS A SYNONYM OF R1%T
06 0032453 L HIPATSKP     29-28
   0112757 L HITST        111-44 111-41
'ILLEGAL CON
DITIONAL IN
THE IF MACRO'T IFERROR1
'DATA > 0 OR
DATA < 0 IS
MEANINGLESS
, USE DATA ¬
= 0'          T IFERROR2
'TWO CONSTAN
TS ARE BEING


   MEMORY ELEMENT TEST                                                      PR-1C929-50
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                     CDGSD      W77D

 COMPARED IN
 IF MACRO'   T IFERROR3
'AN ITEM WAS
 COMPARED TO
 SOMETHING O
 THER THAN A
 CONSTANT'   T IFERROR4
'DESTINATION
 OF AN = STA
 TEMENT IS A
 CONSTANT'   T IFERROR5
'ATTEMPTING
 TO SET ITEM
 = TO SOMETHI
 NG OTHER THA
 N A CONSTANT'T IFERROR6
'ITEM MAY ON
 LY USE THE =
 AND ¬= COND
 ITIONALS'   T IFERROR7
 06 0032546 L INCNDX      31-41   31-36
    CSYSUB   V INIT_OCC     7-37   28-42,106-42
    0000001  A INITBIT     23-42
    CSYSUB   V INITOST      7-38   27-08, 43-40, 52-40, 61-40, 70-40, 79-40, 88-40, 97-40,118-08
    CSYSUB   V INSYNC       7-39
    CDGNM    X INTRPNO3     3-42   27-12, 34-06, 35-04, 43-44, 45-45, 46-14, 46-43, 47-29, 52-44, 54-45, 55-14, 55-43, 56-29,
                                   61-44, 63-45, 64-14, 64-43, 65-29, 70-44, 72-46, 73-14, 73-43, 74-29, 79-44, 81-45, 82-14,
                                   82-43, 83-29, 88-44, 90-47, 91-14, 91-43, 92-29, 97-44, 99-45,100-14,100-43,101-29
'PAGSCR+25'  T IOADDR              W=20  S=0  N=31  CL=2
'I&'         T IOBRK
    0006220  A IOGO        22-19
'ENABLE ON-L
 INE I/O ACCE
 SS TO OFF-LI
 NE STORE'   T IOGOT
    0000001  A IOPRTYER   144-01  157-31,171-01,184-15,198-01,211-15,224-16
    0125252  A IOTSTA      22-21
'I/O TEST PA
 TTERN #1'   T IOTSTAT
    0052525  A IOTST5      22-23
'I/O TEST PA
 TTERN #2'   T IOTST5T
    0000066  A IS_RXT              LIBNUM=14      31-27, 32-31, 33-44, 34-41, 40-30
'CHKWRD+0'   T ISOBTS             W=7  S=0  N=0  CL=2
    0067214  A ISOCHK      22-25
'ISOLATE FRO
 M FAR STORES
 & VERIFY VI
 A SER'      T ISOCHKT


 MEMORY ELEMENT TEST                                                           PR-1C929-50

   23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE 257
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PATCH HISTORY                                                       23:24:58   2/05/81  ****

       VALUE  T  NAME         DEF/REF   ATTRIBUTES AND REFERENCES                   CDGSD        W77D

       0027214 A ISOCHKU        22-29
'APPLY ONES
TO STORE DAT
A BUS(W/O IS
OLATE)'        T ISOCHKUT
       0040000 A ISOLATE        23-40
       0043454 A KILL12         22-31
'CLEAR SHIFT
ER BIT IN PO
SITION 12'     T KILL12T
'CIOBUF+0'     T LDFG                     W=1  S=15  N=0  CL=2
   06 0034026 L LDF444          46-10  45-34
   06 0034242 L LDF493          55-10  54-34
   06 0034456 L LDF542          64-10  63-34
   06 0034672 L LDF591          73-10  72-35
   06 0035106 L LDF640          82-10  81-34
   06 0035322 L LDF689          91-10  90-36
   06 0035536 L LDF738         100-10  99-34
       0020000 A LOADCHK        23-39
   06 0033211 L LODLP          107-10 107-15
'PAGSCR'       T LONAM_BASADD
                 R
'SER'          T LONAM_CHDIF
'CIOBUF'       T LONAM_CINIT
'CIOBUF'       T LONAM_CKHLT
'CIOBUF'       T LONAM_CKSTP
'DGREQLO'      T LONAM_CONTRO
                 LBITS
'CHKWRD'       T LONAM_CTRLCK
'SER'          T LONAM_DHPER
'SER'          T LONAM_DLPER
'CIOBUF'       T LONAM_FBT09
'PAGSCR'       T LONAM_FOBNUM
'SER'          T LONAM_FOBPAR
                 ER
'SER'          T LONAM_FOBTER
                 A
'SER'          T LONAM_FOBTER
                 B
'CIOBUF'       T LONAM_FSEL
'CHKWRD'       T LONAM_FXORG
'PAGSCR'       T LONAM_IOADDR
'CHKWRD'       T LONAM_ISOBTS
'CIOBUF'       T LONAM_LDFG
'PAGSCR'       T LONAM_LOOPSU
                 B
'SER'          T LONAM_MODER
'SER'          T LONAM_MPXER
'MASCIOSC'     T LONAM_MSSCO
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                        23:24:58   2/05/81  ****

      VALUE   T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                      CDGSD        W77D

'MASCIOSC'    T LONAM_MSSC1
'MASCIOSC'    T LONAM_MSSC2
'MASCIOSC'    T LONAM_MSSC3
'STRSTAT'     T LONAM_PASBT
'STRSTAT'     T LONAM_PHBAK
'STRSTAT'     T LONAM_PLBAK
'SER'         T LONAM_PWER
'CIOBUF'      T LONAM_REFST
'SER'         T LONAM_RSELER
'RSLCHK'      T LONAM_RSEL06
'RSLCHK'      T LONAM_RSEL7
'CHKWRD'      T LONAM_RSVD0
'RSLCHK'      T LONAM_RSVD1
'RSLCHK'      T LONAM_SAPHLP
'RSLCHK'      T LONAM_SA17LP
'SER'         T LONAM_SCMER
'CHKWRD'      T LONAM_SDPCK
'SER'         T LONAM_SHER
'STRSTAT'     T LONAM_SNGBTE
                R
'DGREQLO'     T LONAM_SPARE
'CIOBUF'      T LONAM_STORDE
                R
'RSLCHK'      T LONAM_STRSLP
'SER'         T LONAM_TBER
'PAGSCR'      T LONAM_TIMSAV
'DGREQLO'     T LONAM_TSTNUM
'PAGSCR'      T LONAM_UPADDR
'CHKWRD'      T LONAM_WDISOL
'MASCIOSC'    T LONAM_OSSC0
'MASCIOSC'    T LONAM_OSSC1
'MASCIOSC'    T LONAM_OSSC2
'MASCIOSC'    T LONAM_OSSC3
'STRSTAT'     T LONAM_OWDSTR
                0
'CIOBUF'      T LONAM_010TM
'CHKWRD'      T LONAM_2EPCK
    CDGNM     V LOOPIND    7-09    26-43, 26-44, 27-06, 27-06, 43-34, 43-35, 43-37, 43-37, 43-39, 43-39, 52-34, 52-35, 52-37,
                                   52-37, 52-39, 52-39, 61-34, 61-35, 61-37, 61-37, 61-39, 61-39, 70-34, 70-35, 70-37, 70-37,
                                   70-39, 70-39, 79-34, 79-37, 79-37, 79-37, 79-39, 79-39, 88-34, 88-35, 88-37, 88-37, 88-39,
                                   88-39, 97-34, 97-35, 97-37, 97-37, 97-39, 97-39
'PAGSCR+24'   T LOOPSUB            W=20  S=0  N=30  CL=2
06 0033410    L LOTST     111-28
   0113067    L LOWBITF   113-45  113-14
   0000000    A LPINDX     34-08   34-11, 35-06, 35-09, 46-24, 46-27, 47-09, 47-12, 55-24, 55-27, 56-09, 56-12, 64-24, 64-27,
                                   65-09, 65-12, 73-24, 73-27, 74-09, 74-12, 82-24, 82-27, 83-09, 83-12, 91-24, 91-27, 92-09,
                                   92-12,100-24,100-27,101-09,101-12
        4     R LSTPAT     9-17   29-04, 29-19, 29-42, 29-44, 29-47, 30-17, 32-06, 39-40
  TTYTBL      X M%AS      43-28   26-23, 43-28, 52-28, 61-28, 70-28, 79-28, 88-28, 97-28


   MEMORY ELEMENT TEST                                                             PR-1C929-50
```

```
PATCH HISTORY                                          23:24:58   2/05/81  ****

     VALUE  T  NAME    DEF/REF   ATTRIBUTES AND REFERENCES        CDGSD         W77D
'#        M
ASCM 08-02
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 0 & 8'    T MASCBS0            LIBNUM=12
'#        M
ASCM 08-03
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 1 & 9'    T MASCBS1            LIBNUM=12
'#        M
ASCM 08-04
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 2 &10'    T MASCBS2            LIBNUM=12
'#        M
ASCM 08-05
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 3 &11'    T MASCBS3            LIBNUM=12
'#        M
ASCM 08-06
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 4 &12'    T MASCBS4            LIBNUM=12
'#        M
ASCM 08-07
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 5 &13'    T MASCBS5            LIBNUM=12
'#        M
ASCM 08-08
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 6 &14'    T MASCBS6            LIBNUM=12
'#        M
ASCM 08-09
FA1060  MAIN
 STORE CONTR
OLLER - BITS
 7 &15'    T MASCBS7            LIBNUM=12
'#        M


    MEMORY ELEMENT TEST
```

```
PATCH HISTORY                                                          23:24:58   2/05/81  ****

     VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                      CDGSD          W77D

ASCM 08-16
FA1060  MAIN
  STORE CONTR
OLLER - BITS
  PL&PH'      T MASCBS8           LIBNUM=12
'# NOTE--1 M
ASCM 08-10
FA1060  MAIN
  STORE CONTR
OLLER - BITS
  16&20'      T MASCBS9           LIBNUM=12
'#        M
ASCM 08-17
FA1062  MAIN
  STORE CONTR
OLLER - CHEC
K CIRCUIT A' T MASCCHKA          LIBNUM=12
'#        M
ASCM 08-19
FA1066  MAIN
  STORE CONTR
OLLER - CHEC
K CIRCUIT B' T MASCCHKB          LIBNUM=12
'#        M
ASCM 08-23
FC203   MAIN
  STORE CONTR
OLLER CLOCK
& I/O INTERF
ACE'         T MASCCLK           LIBNUM=12
      0046071 A MASCINT   22-33
'INITIALIZE
STORE CONTRO
LLER'        T MASCINTT
     MASACS  V MASCIOSC   7-04
      0046076 A MASCLK    22-37
      0046074 A MASCLKN   22-40
'FAKE SECOND
 HALF OF STO
RE CLOCK CYC
LE'          T MASCLKNT
'FAKE FIRST
HALF OF STOR
E CLOCK CYCL
E'           T MASCLKT
'#        M
ASCM 08-22
FA1063  MAIN
  STORE CONTR
```

MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                              23:24:58   2/05/81  ****

      VALUE  T NAME       DEF/REF   ATTRIBUTES AND REFERENCES         CDGSD        W77D

OLLER - I/O
ORDER RECEIV
ER'          T MASCMTCA             LIBNUM=12
'#       M
ASCM 08-20
FA1064  MAIN
 STORE CONTR
OLLER - I/O
ORDER DECODE
R'           T MASCMTCB             LIBNUM=12
'#       M
ASCM 08-18
FA1071  MAIN
 STORE CONTR
OLLER  - TIM
ING GENERATO
R'           T MASCTIM             LIBNUM=12
   CTSD      V MASERCNT   7-43
   CDGS3A    V MASERS     7-28
'#       M
ASCM 03-02
JK25    MAIN
 MEMORY FANO
UT BOARD FOR
 MODULE 0'   T MASFOBA0            LIBNUM=12
'#       M
ASCM 03-33
JK25    MAIN
 MEMORY FANO
UT BOARD FOR
 MODULE 1'   T MASFOBA1            LIBNUM=12
'#       M
ASCM 03-02
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 0'    T MASFOB0             LIBNUM=12
'#       M
ASCM 03-33
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 1'    T MASFOB1             LIBNUM=12
'#       M
ASMA 03-02
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 2'    T MASFOB2             LIBNUM=12

   MEMORY ELEMENT TEST                                        PR-1C929-50

   23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE  06   PAGE  262
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PATCH HISTORY                                                          23:24:58  2/05/81  ****

        VALUE  T NAME      DEF/REF   ATTRIBUTES AND REFERENCES                   CDGSD        W77D

'#          M
ASMA 03-33
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 3'    T MASFOB3             LIBNUM=12
'#          M
ASMB 03-02
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 4'    T MASFOB4             LIBNUM=12
'#          M
ASMB 03-33
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 5'    T MASFOB5             LIBNUM=12
'#          M
ASMC 03-02
JK3     MAIN
 STORE FANDU
T BOARD FOR
MODULE 6'    T MASFOB6             LIBNUM=12
'#          M
ASMC 03-33
JK3     MAIN
 STORE FANOU
T BOARD FOR
MODULE 7'    T MASFOB7             LIBNUM=12
   CDGSIO    X MASIOM    7-19  32-11, 32-20
   MASACS    V MASONOFF  6-02   8-01
'#          M
ASCM 03-04
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 0 & 8'     T MASPLA000           LIBNUM=12
'#          M
ASCM 03-05
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 1 & 9'     T MASPLA001           LIBNUM=12
'#          M
ASCM 03-06
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT


   MEMORY ELEMENT TEST                                                         PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE 263
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PATCH HISTORY

```
     VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                          CDGSD        W77D

S 2 & 10'   T MASPLA002            LIBNUM=12
'#        M
ASCM 03-07
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 3 & 11'   T MASPLA003            LIBNUM=12
'#        M
ASCM 03-08
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 4 & 12'   T MASPLA004            LIBNUM=12
'#        M
ASCM 03-09
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 5 & 13'   T MASPLA005            LIBNUM=12
'#        M
ASCM 03-10
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 6 & 14'   T MASPLA006            LIBNUM=12
'#        M
ASCM 03-11
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 7 & 15'   T MASPLA007            LIBNUM=12
'# NOTE--1 M
ASCM 03-12
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 16 & 20'  T MASPLA008            LIBNUM=12
'# NOTE--1 M
ASCM 03-12
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 17 & 21'  T MASPLA009            LIBNUM=12
'# NOTE--1 M
ASCM 03-14
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 18 & 22'  T MASPLA010            LIBNUM=12
```

MEMORY ELEMENT TEST

PR-1C929-50

```
PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                 CDGSD          W77D

'# NOTE--1 M
ASCM 03-16
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S 19 & 23'   T MASPLA011            LIBNUM=12
'#          M
ASCM 03-17
JL16    MAIN
 STORE PLANE
 - MOD 0 BIT
S PL & PH'   T MASPLA012            LIBNUM=12
'#          M
ASCM 03-31
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 0 & 8'     T MASPLA100            LIBNUM=12
'#          M
ASCM 03-29
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 1 & 9'     T MASPLA101            LIBNUM=12
'#          M
ASCM 03-28
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 2 & 10'    T MASPLA102            LIBNUM=12
'#          M
ASCM 03-27
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 3 & 11'    T MASPLA103            LIBNUM=12
'#          M
ASCM 03-26
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 4 & 12'    T MASPLA104            LIBNUM=12
'#          M
ASCM 03-25
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 5 & 13'    T MASPLA105            LIBNUM=12
'#          M
```

```
PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                        CDGSD        W77D

ASCM 03-24,
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 6 & 14'   T MASPLA106           LIBNUM=12
'#        M
ASCM 03-23
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 7 & 15'   T MASPLA107           LIBNUM=12
'# NOTE--1 M
ASCM 03-22
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 16 & 20'  T MASPLA108           LIBNUM=12
'# NOTE--1 M
ASCM 03-21
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 17 & 21'  T MASPLA109           LIBNUM=12
'# NOTE--1 M
ASCM 03-20
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 18 & 22'  T MASPLA110           LIBNUM=12
'# NOTE--1 M
ASCM 03-19
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S 19 & 23'  T MASPLA111           LIBNUM=12
'# NOTE--1 M
ASCM 03-18
JL16    MAIN
 STORE PLANE
 - MOD 1 BIT
S PL & PH'  T MASPLA112           LIBNUM=12
'#        M
ASCM 03-04
JL2     MAIN
 STORE PLANE
 - MOD 0 - B
ITS 0 & 8'  T MASPL000           LIBNUM=12
'#        M
ASCM 03-05


    MEMORY ELEMENT TEST                                            PR-1C929-50
```

```
PATCH HISTORY                                                     23:24:58   2/05/81  ****

       VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                CDGSD        W77D

JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 1 & 9'   T MASPL001         LIBNUM=12
'#         M
ASCM 03-06
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 2 &10'   T MASPL002         LIBNUM=12
'#         M
ASCM 03-07
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 3 &11'   T MASPL003         LIBNUM=12
'#         M
ASCM 03-08
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 4 &12'   T MASPL004         LIBNUM=12
'#         M
ASCM 03-09
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 5 &13'   T MASPL005         LIBNUM=12
'#         M
ASCM 03-10
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 6 &14'   T MASPL006         LIBNUM=12
'#         M
ASCM 03-11
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS 7 &15'   T MASPL007         LIBNUM=12
'#         M
ASCM 03-17
JL2    MAIN
 STORE PLANE
 - MOD 0 - B
ITS PL&PH'   T MASPL008         LIBNUM=12
'# NOTE--1 M
ASCM 03-12
JL2    MAIN


    MEMORY ELEMENT TEST                                              PR-1C929-50

      23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET  CDGSD   ISSUE 06   PAGE 267
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PATCH HISTORY   23:24:58   2/05/81 ****

      VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

STORE PLANE
 - MOD 0 - B
ITS 16&20'   T MASPL009   LIBNUM=12
'# NOTE--1 M
ASCM 03-13
JL2   MAIN
 STORE PLANE
 - MOD 0 - B
ITS 17&21'   T MASPL010   LIBNUM=12
'# NOTE--1 M
ASCM 03-14
JL2   MAIN
 STORE PLANE
 - MOD 0 - B
ITS 18&22'   T MASPL011   LIBNUM=12
'# NOTE--1 M
ASCM 03-16
JL2   MAIN
 STORE PLANE
 - MOD 0 - B
ITS 19&23'   T MASPL012   LIBNUM=12
'#   M
ASCM 03-31
JL2   MAIN
 STORE PLANE
 - MOD 1 - B
ITS 0 & 8'   T MASPL100   LIBNUM=12
'#   M
ASCM 03-29
JL2   MAIN
 STORE PLANE
 - MOD 1 - B
ITS 1 & 9'   T MASPL101   LIBNUM=12
'#   M
ASCM 03-28
JL2   MAIN
 STORE PLANE
 - MOD 1 - B
ITS 2 &10'   T MASPL102   LIBNUM=12
'#   M
ASCM 03-27
JL2   MAIN
 STORE PLANE
 - MOD 1 - B
ITS 3 &11'   T MASPL103   LIBNUM=12
'#   M
ASCM 03-26
JL2   MAIN
 STORE PLANE

MEMORY ELEMENT TEST   PR-1C929-50

PATCH HISTORY   23:24:58   2/05/81 ****

    VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

```
- MOD 1 - B
ITS 4 &12'   T MASPL104         LIBNUM=12
'#          M
ASCM 03-25
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 5 &13'   T MASPL105         LIBNUM=12
'#          M
ASCM 03-24
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 6 &14'   T MASPL106         LIBNUM=12
'#          M
ASCM 03-23
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 7 &15'   T MASPL107         LIBNUM=12
'#          M
ASCM 03-18
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS PL&PH'   T MASPL108         LIBNUM=12
'# NOTE--1 M
ASCM 03-22
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 16&20'   T MASPL109         LIBNUM=12
'# NOTE--1 M
ASCM 03-21
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 17&21'   T MASPL110         LIBNUM=12
'# NOTE--1 M
ASCM 03-20
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
ITS 18&22'   T MASPL111         LIBNUM=12
'# NOTE--1 M
ASCM 03-19
JL2     MAIN
 STORE PLANE
 - MOD 1 - B
```

   MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                               23:24:58   2/05/81  ****
      VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES
                                                              CDGSD          W77D
ITS 19&23'  T MASPL112             LIBNUM=12
'#       M
ASMA 03-04
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS.0 & 8'  T MASPL200             LIBNUM=12
'#       M
ASMA 03-05
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 1 & 9'  T MASPL201             LIBNUM=12
'#       M
ASMA 03-06
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 2 &10'  T MASPL202             LIBNUM=12
'#       M
ASMA 03-07
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 3 &11'  T MASPL203             LIBNUM=12
'#       M
ASMA 03-08
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 4 &12'  T MASPL204             LIBNUM=12
'#       M
ASMA 03-09
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 5 &13'  T MASPL205             LIBNUM=12
'#       M
ASMA 03-10
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 6 &14'  T MASPL206             LIBNUM=12
'#       M
ASMA 03-11
JL2     MAIN
 STORE PLANE
 - MOD 2 - B
ITS 7 &15'  T MASPL207             LIBNUM=12
```

MEMORY ELEMENT TEST

PATCH HISTORY   23:24:58   2/05/81 ****

         VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

'#   M
ASMA 03-17
JL2   MAIN
 STORE PLANE
 - MOD 2 - B
ITS PL&PH'   T MASPL208   LIBNUM=12
'# NOTE--1 M
ASMA 03-12
JL2   MAIN
 STORE PLANE
 - MOD 2 - B
ITS 16&20'   T MASPL209   LIBNUM=12
'# NOTE--1 M
ASMA 03-13
JL2   MAIN
 STORE PLANE
 - MOD 2 - B
ITS 17&21'   T MASPL210   LIBNUM=12
'# NOTE--1 M
ASMA 03-14
JL2   MAIN
 STORE PLANE
 - MOD 2 - B
ITS 18&22'   T MASPL211   LIBNUM=12
'# NOTE--1 M
ASMA 03-16
JL2   MAIN
 STORE PLANE
 - MOD 2 - B
ITS 19&23'   T MASPL212   LIBNUM=12
'#   M
ASMA 03-31
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 0 & 8'   T MASPL300   LIBNUM=12
'#   M
ASMA 03-29
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 1 & 9'   T MASPL301   LIBNUM=12
'#   M
ASMA 03-28
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 2 &10'   T MASPL302   LIBNUM=12
'#   M

    MEMORY ELEMENT TEST   PR-1C929-50

      23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD   ISSUE 06   PAGE 271

PATCH HISTORY   23:24:58   2/05/81 ****

    VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

ASMA 03-27
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 3 &11' T MASPL303   LIBNUM=12
'#   M
ASMA 03-26
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 4 &12' T MASPL304   LIBNUM=12
'#   M
ASMA 03-25
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 5 &13' T MASPL305   LIBNUM=12
'#   M
ASMA 03-24
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 6 &14' T MASPL306   LIBNUM=12
'#   M
ASMA 03-23
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 7 &15' T MASPL307   LIBNUM=12
'#   M
ASMA 03-18
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS PL&PH' T MASPL308   LIBNUM=12
'# NOTE--1 M
ASMA 03-22
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 16&20' T MASPL309   LIBNUM=12
'# NOTE--1 M
ASMA 03-21
JL2   MAIN
 STORE PLANE
 - MOD 3 - B
ITS 17&21' T MASPL310   LIBNUM=12
'# NOTE--1 M
ASMA 03-20

    MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T  NAME     DEF/REF   ATTRIBUTES AND REFERENCES              CDGSD        W77D

JL2     MAIN
 STORE PLANE
 - MOD 3 - B
ITS 18&22'   T MASPL311           LIBNUM=12
'# NOTE--1 M
ASMA 03-19
JL2     MAIN
 STORE PLANE
 - MOD 3 - B
ITS 19&23'   T MASPL312           LIBNUM=12
'#         M
ASMB 03-04
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 0 & 8'   T MASPL400           LIBNUM=12
'#         M
ASMB 03-05
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 1 & 9'   T MASPL401           LIBNUM=12
'#         M
ASMB 03-06
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 2 &10'   T MASPL402           LIBNUM=12
'#         M
ASMB 03-07
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 3 &11'   T MASPL403           LIBNUM=12
'#         M
ASMB 03-08
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 4 &12'   T MASPL404           LIBNUM=12
'#         M
ASMB 03-09
JL2     MAIN
 STORE PLANE
 - MOD 4 - B
ITS 5 &13'   T MASPL405           LIBNUM=12
'#         M
ASMB 03-10
JL2     MAIN
```

MEMORY ELEMENT TEST   PR-1C929-50

```
      VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES          CDGSD        W77D

STORE PLANE
- MOD 4 - B
ITS 6 &14'   T MASPL406             LIBNUM=12
'#        M
ASMB 03-11
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS 7 &15'   T MASPL407             LIBNUM=12
'#        M
ASMB 03-17
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS PL&PH'   T MASPL408             LIBNUM=12
'# NOTE--1 M
ASMB 03-12
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS 16&20'   T MASPL409             LIBNUM=12
'# NOTE--1 M
ASMB 03-13
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS 17&21'   T MASPL410             LIBNUM=12
'# NOTE--1 M
ASMB 03-14
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS 18&22'   T MASPL411             LIBNUM=12
'# NOTE--1 M
ASMB 03-16
JL2     MAIN
 STORE PLANE
- MOD 4 - B
ITS 19&23'   T MASPL412             LIBNUM=12
'#        M
ASMB 03-31
JL2     MAIN
 STORE PLANE
- MOD 5 - B
ITS 0 & 8'   T MASPL500             LIBNUM=12
'#        M
ASMB 03-29
JL2     MAIN
 STORE PLANE
```

MEMORY ELEMENT TEST   PR-1C929-50

```
        VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                          CDGSD      W77D

 - MOD 5 - B
ITS 1 & 9'   T MASPL501          LIBNUM=12
'#         M
ASMB 03-28
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 2 &10'   T MASPL502          LIBNUM=12
'#         M
ASMB 03-27
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 3 &11'   T MASPL503          LIBNUM=12
'#         M
ASMB 03-26
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 4 &12'   T MASPL504          LIBNUM=12
'#         M
ASMB 03-25
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 5 &13'   T MASPL505          LIBNUM=12
'#         M
ASMB 03-24
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 6 &14'   T MASPL506          LIBNUM=12
'#         M
ASMB 03-23
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS 7 &15'   T MASPL507          LIBNUM=12
'#         M
ASMB 03-18
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
ITS PL&PH'   T MASPL508          LIBNUM=12
'# NOTE--1 M
ASMB 03-22
JL2     MAIN
 STORE PLANE
 - MOD 5 - B
```

MEMORY ELEMENT TEST   PR-1C929-50

PATCH HISTORY

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES

CDGSD   W77D

```
ITS 16&20'   T MASPL509           LIBNUM=12
'# NOTE--1'M
ASMB 03-21
JL2    MAIN
 STORE PLANE
 - MOD 5 - B
ITS 17&21'   T MASPL510           LIBNUM=12
'# NOTE--1 M
ASMB 03-20
JL2    MAIN
 STORE PLANE
 - MOD 5 - B
ITS 18&22'   T MASPL511           LIBNUM=12
'# NOTE--1 M
ASMB 03-19
JL2    MAIN
 STORE PLANE
 - MOD 5 - B
ITS 19&23'   T MASPL512           LIBNUM=12
'#         M
ASMC 03-04
JL2    MAIN
 STORE PLANE
 - MOD 6 - B
ITS 0 & 8'   T MASPL600           LIBNUM=12
'#         M
ASMC 03-05
JL2    MAIN
 STORE PLANE
 - MOD 6 - B
ITS 1 & 9'   T MASPL601           LIBNUM=12
'#         M
ASMC 03-06
JL2    MAIN
 STORE PLANE
 - MOD 6 - B
ITS 2 &10'   T MASPL602           LIBNUM=12
'#         M
ASMC 03-07
JL2    MAIN
 STORE PLANE
 - MOD 6 - B
ITS 3 &11'   T MASPL603           LIBNUM=12
'#         M
ASMC 03-08
JL2    MAIN
 STORE PLANE
 - MOD 6 - B
ITS 4 &12'   T MASPL604           LIBNUM=12
```

MEMORY ELEMENT TEST

PR-1C929-50

```
PATCH HISTORY                                                          23:24:58   2/05/81  ****

       VALUE T NAME      DEF/REF    ATTRIBUTES AND REFERENCES                       CDGSD        W77D

'#         M
ASMC 03-09
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 5 &13'   T MASPL605             LIBNUM=12
'#         M
ASMC 03-10
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 6 &14'   T MASPL606             LIBNUM=12
'#         M
ASMC 03-11
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 7 &15'   T MASPL607             LIBNUM=12
'#         M
ASMC 03-17
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS PL&PH'   T MASPL608             LIBNUM=12
'# NOTE--1 M
ASMC 03-12
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 16&20'   T MASPL609             LIBNUM=12
'# NOTE--1 M
ASMC 03-13
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 17&21'   T MASPL610             LIBNUM=12
'# NOTE--1 M
ASMC 03-14
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 18&22'   T MASPL611             LIBNUM=12
'# NOTE--1 M
ASMC 03-16
JL2     MAIN
 STORE PLANE
 - MOD 6 - B
ITS 19&23'   T MASPL612             LIBNUM=12
'#         M
```

MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                                          23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF     ATTRIBUTES AND REFERENCES                   CDGSD          W77D

ASMC 03-31
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 0 & 8'   T MASPL700              LIBNUM=12
'#        M
ASMC 03-29
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 1 & 9'   T MASPL701              LIBNUM=12
'#        M
ASMC 03-28
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 2 &10'   T MASPL702              LIBNUM=12
'#        M
ASMC 03-27
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 3 &11'   T MASPL703              LIBNUM=12
'#        M
ASMC 03-26
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 4 &12'   T MASPL704              LIBNUM=12
'#        M
ASMC 03-25
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 5 &13'   T MASPL705              LIBNUM=12
'#        M
ASMC 03-24
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 6 &14'   T MASPL706              LIBNUM=12
'#        M
ASMC 03-23
JL2     MAIN
 STORE PLANE
 - MOD 7 - B
ITS 7 &15'   T MASPL707              LIBNUM=12
'#        M
ASMC 03-18
```

 MEMORY ELEMENT TEST   PR-1C929-50

```
PATCH HISTORY                                                         23:24:58   2/05/81  ****

        VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                         CDGSD       W77D

JL2      MAIN
 STORE PLANE
 - MOD 7 - B
ITS PL&PH'   T MASPL708       LIBNUM=12
'# NOTE--1 M
ASMC 03-22
JL2      MAIN
 STORE PLANE
 - MOD 7 - B
ITS 16&20'   T MASPL709       LIBNUM=12
'# NOTE--1 M
ASMC 03-21
JL2      MAIN
 STORE PLANE
 - MOD 7 - B
ITS 17&21'   T MASPL710       LIBNUM=12
'# NOTE--1 M
ASMC 03-20
JL2      MAIN
 STORE PLANE
 - MOD 7 - B
ITS 18&22'   T MASPL711       LIBNUM=12
'# NOTE--1 M
ASMC 03-19
JL2      MAIN
 STORE PLANE
 - MOD 7 - B
ITS 19&23'   T MASPL712       LIBNUM=12
       3 R MCHB              LIBNUM=14      34-02, 34-49,109-17,110-22,110-33,111-12,111-27,112-34,113-27
  0000231 A MCHB%F           LIBNUM=14      26-15, 43-20, 52-20, 61-20, 70-20, 79-20, 88-20, 97-20,106-25,106-34
  0000231 A MCHB%T           LIBNUM=14      46-22, 47-02, 55-22, 56-02, 64-22, 65-02, 73-22, 74-02, 82-22, 83-02, 91-22,
                                            92-02,100-22,101-02,110-12,110-24,110-38,111-18,112-25,113-18
'#       P
ROC  02-27
FA1037  MAIN
TENANCE CHAN
NEL CONTROL' T MCHC          LIBNUM=12
       0 R MCHTR             LIBNUM=14      106-21,106-26,106-30,106-35,110-13,110-25,111-04,111-19,112-26,113-19
'#       P
ROC  02-35
FA1016  MICR
O CONTROL 1' T MC1           LIBNUM=12
'#       P
ROC  02-33
FA1018  MICR
O CONTROL 3' T MC3           LIBNUM=12
'#       P
ROC  06-19
FA1020  MICR

   MEMORY ELEMENT TEST                                                             PR-1C929-50
```

```
PATCH HISTORY                                                    23:24:58    2/05/81  ****

        VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                     CDGSD         W77D

O CONTROL 5' T MC5                    LIBNUM=12
'#        P
ROC  06-35
FA1021  MICR
O CONTROL 6' T MC6                    LIBNUM=12
'#        P
ROC  02-32
FA1022  MICR
O CONTROL 7' T MC7                    LIBNUM=12
    CDGSIO    V MDSELMSK    7-20  48-05, 57-05, 66-05, 75-05, 84-05, 93-05,102-05
         14   P MEMADDR     9-25  29-23, 30-07, 31-16
         14   R MEMADDR0    9-23  29-06, 39-45
         15   R MEMADDR1    9-24  29-08, 33-48, 33-49, 34-45, 34-46, 39-47
    CDGSBS    V MEMOP       7-14
    CDGSBS    V MEMOPI      7-15
    CDGS3A    V MEMTST      7-29 107-07
```

```
   <.-(|&
      !$*);
¬'/
,⌐__?
   :#@'=" ab
cdefghi n≤<+
+ jklmnopqr^
 ⫫)±≡--stuvw
xyz+└┌[≥●012
3456789↑⌐]≠
-<ABCDEFGHI
    )JKLMNO
PQR       \ S
TUVWXYZ
 0123456789
     '       T MICODETR            LIBNUM=14
'#        P
ROC  02-25
FA1032  MISC
ELLANEOUS CI
RCUIT BOARD' T MISC                   LIBNUM=12
         7   R MNRNDX      9-20  29-09, 29-23, 30-07, 31-16, 31-37, 31-39, 31-42, 31-44, 32-40, 33-48, 34-45, 39-46
'SER+0'        T MODER              W=1  S=5  N=0  CL=2
    CDGSIO    V MODSIZE     7-21  35-34, 47-47, 56-47, 65-47, 74-47, 83-47, 92-47,101-47,105-41,109-36
    0000000   A MOD0       18-27
06 0032414    L MOD0TST    28-33  28-29
06 0032726    L MOD0XT     35-29  26-38, 32-05
```

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   MEMORY ELEMENT TEST                                                          PR-1C929-50

     23:24:58   2/05/81  TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE 280
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PATCH HISTORY                                                    23:24:58   2/05/81   ****

    VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES               CDGSD      W77D

    0000001 A MOD1       18-28   45-31
 06 0034003 L MOD1TST    45-18   45-16
 06 0034151 L MOD1XT     49-01   45-38
    0000002 A MOD2       18-29   54-31
 06 0034217 L MOD2TST    54-18   54-16
 06 0034365 L MOD2XT     58-01   54-38
    0000003 A MOD3       18-30   63-31
 06 0034433 L MOD3TST    63-18   63-16
 06 0034601 L MOD3XT     67-01   63-38
    0000004 A MOD4       18-31   72-32
 06 0034647 L MOD4TST    72-19   72-16
 06 0035015 L MOD4XT     76-01   72-39
    0000005 A MOD5       18-32   81-31
 06 0035063 L MOD5TST    81-18   81-16
 06 0035231 L MOD5XT     85-01   81-38
    0000006 A MOD6       18-33   90-33
 06 0035277 L MOD6TST    90-20   90-16
 06 0035445 L MOD6XT     94-01   90-40
    0000007 A MOD7       18-34   99-31
 06 0035513 L MOD7TST    99-18   99-16
 06 0035661 L MOD7XT    103-01   99-38
'SER+0'     T MPXER             W=1  S=1  N=0  CL=2
    0000215 A MSXT              LIBNUM=14       26-15, 43-20, 52-20, 61-20, 70-20, 79-20, 88-20, 97-20
    0006071 A MSCITNS   22-35
'INITIALIZE
STORE CONTRO
LLER W/O FOR
CE SELECT'  T MSCITNST
'MASCIOSC+0' T MSSC0             W=20  S=0  N=0  CL=2
'MASCIOSC+2' T MSSC1             W=20  S=0  N=2  CL=2
'MASCIOSC+4' T MSSC2             W=20  S=0  N=4  CL=2
'MASCIOSC+6' T MSSC3             W=20  S=0  N=6  CL=2
'#       P
ROC  02-21
FA1029  MAIN
 STORE CONTR
OL 0'       T MSTCONT0           LIBNUM=12
'#       P
ROC  02-22
FA1029  MAIN
 STORE CONTR
OL 1'       T MSTCONT1           LIBNUM=12
    0000321 A MSTOP             LIBNUM=14       106-13,110-04,110-09
    0106263 A MTCRD     19-24
    0106203 A MTCWR     19-26
    0112703 L MULTXT    40-49   38-40, 39-03, 39-09, 39-27
    CDGNM   V NABT       3-35
    CDGNM   V NADD_OFF   3-26
    CDGNM   V NADMIC     3-27


    MEMORY ELEMENT TEST                                              PR-1C929-50
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PATCH HISTORY      -                                                    23:24:58   2/05/81  ****

    VALUE  T  NAME        DEF/REF   ATTRIBUTES AND REFERENCES                        CDGSD        W77D

06 0013354 L NAROSTR      116-42 116-34
   0113032 L NARSTR       113-07 113-02
   CDGNM   V NBEGIN         3-32
   CDGNM   V NBGN           3-43   25-14, 42-14, 51-14, 60-14, 69-14, 78-14, 87-14, 96-14
   CDGNM   V NCLRMS         3-37
   CDGNM   V NCOMPARE       3-30   34-11, 35-09, 46-27, 47-12, 55-27, 56-12, 64-27, 65-12, 73-27, 74-12, 82-27, 83-12, 91-27,
                                   92-12,100-27,101-12
   CDGNM   V NDISABA        3-11
   CDGNM   V NDISABB        3-12
06 0032553 L NEWPAT        32-02   31-38, 31-43
   CDGNM   V NEXECUTE       3-29
   CDGNM   V NFAILTST       3-20   34-26, 46-04, 47-34, 55-04, 56-34, 64-04, 65-34, 73-04, 74-34, 82-04, 83-34, 91-04, 92-34,
                                   100-04,101-34
   CDGNM   V NFLBITS        3-41   34-17, 35-15, 46-33, 47-18, 55-33, 56-18, 64-33, 65-18, 73-33, 74-18, 82-33, 83-18, 91-33,
                                   92-18,100-33,101-18
   CDGNM   V NFRZ           3-31
   CDGNM   V NLDMIR         3-28
   CDGNM   V NLP_END        3-33
   CDGNM   V NMASK          3-22   47-06, 56-06, 65-06, 74-06, 83-06, 92-06,101-06
   CDGNM   V NMICRO         3-06   26-14, 43-19, 52-19, 61-19, 70-19, 79-19, 88-19, 97-19
   0106260 A NMLRD         19-28
   0106200 A NMLWR         19-30
   CDGNM   V NNO3CD         3-38   26-19, 28-28, 43-24, 45-15, 52-24, 54-15, 61-24, 63-15, 70-24, 72-15, 79-24, 81-15, 88-24,
                                   90-15, 97-24, 99-15
06 0013410 L NOINIT       118-09 118-04
   0112701 L NOPRINT       40-45  40-42
06 0033422 L NOPRNT       114-15 112-22,113-35,114-12
   CDGNM   V NOSTPMES       7-10   45-41, 54-41, 63-41, 72-42, 81-41, 90-43, 99-41
06 0033430 L NOTST        114-30 105-33
06 0013416 L NOUPDAT      118-22
06 0033021 L NOUPDTE       36-42
   CDGNM   V NPASSTST       3-23
   CDGNM   V NPROS          3-18
   CDGNM   V NRDMICRO       3-36
   CDGNM   V NRESCLK        3-16
   CDGNM   V NRETRN         3-07
   CDGNM   V NRTNBLM        3-49   43-08, 52-08, 61-08, 70-08, 79-08, 88-08, 97-08
   0006074 A NSELA         21-49
'RESET STORE
SELECT(ISOL
ATE) SIGNAL
ON FA1071'  T NSELAT
   CDGNM   V NSEND          3-24
   CDGNM   V NSKIP          3-34
   CDGNM   V NSTOP          3-10
   CDGNM   V NSTPCLK        3-14
   CDGNM   V NSTRT          3-09
   CDGNM   V NSTRTCLK       3-13
   CDGNM   V NTESTSEG       3-19   28-08, 45-08, 54-08, 63-08, 72-08, 81-08, 90-08, 99-08


   MEMORY ELEMENT TEST                                                           PR-1C929-50
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PATCH HISTORY                                                        23:24:58   2/05/81  ****

     VALUE  T  NAME        DEF/REF    ATTRIBUTES AND REFERENCES                      CDGSD        W77D

    CDGNM   V  NTGCLK        3-15
    CDGNM   V  NTMTEST       3-39
    CDGNM   V  NTTY          3-21
   0000000  A  NUM          24-17    41-14, 50-14, 59-14, 68-14, 77-14, 86-14, 95-14
    CDGNM   V  NWDTST        4-01
        5   R  NXTPAT        9-18    29-07, 31-11, 32-06, 32-07
   .CDGNM   V  NZERO_ER      3-17
    CDGNM   V  NZERPT        3-40
    CDGNM   V  N2RETRN       3-08    46-21, 47-01, 55-21, 56-01, 64-21, 65-01, 73-21, 74-01, 82-21, 83-01, 91-21, 92-01,100-21,
                                     101-01
    CDGNM   V  N2SEND        3-25    26-08, 43-13, 52-13, 61-13, 70-13, 79-13, 88-13, 97-13
   0000200  A  OFLNCHNK     18-37
   0007760  A  OFLNDONE     18-38   109-18
   0010000  A  OFLTST       24-13    48-17, 57-17, 66-17, 75-17, 84-17, 93-17,102-17,107-06,111-29,111-45,112-02,114-26
 06 0013364  L  OK_DATA     117-04   116-22
   0000001  A  ONE          18-35
   0177777  A  ONES         18-36
'#      ####
## ON-LINE P
ACKS ######'  T  ONLINE              LIBNUM=12
A




     ¢.<(AON
       X$*);
-S/
,%_>?
    :#@'L" ab
cdefghi n≤(+
+ jklmnopqr
 ж)±=-~stuvw
xyz+└r[≥∘012
3456789+┘┐]≠
-(IBCLEFGHI
     }JKLMNO
PQR      \ S
LLLWLYZ
 0123456789
 '          T  OPTR
   0001316  A  ORG_000001   26-02    43-02, 52-02, 61-02, 70-02, 79-02, 88-02, 97-02
   0001525  A  ORG_000011  116-01
   0000461  A  ORG_000023   26-35
   0001530  A  ORG_000024  116-31
   0001340  A  ORG_000037   28-35    45-21, 54-21, 63-21, 72-22, 81-21, 90-23, 99-21
   0001541  A  ORG_000042  117-10
   0001550  A  ORG_000060  117-44

     MEMORY ELEMENT TEST                                                        PR-1C929-50

      23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  283
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PATCH HISTORY

```
    VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES                                          CDGSD        W77D

    0000627 A ORG_000072   40-14
    0000514 A ORG_000076   29-34
    0001416 A ORG_000102  107-17
    0000526 A ORG_000144   30-36
    0000535 A ORG_000151   31-04
    0000467 A ORG_000162   27-06
    0001470 A ORG_000172  111-41
    0001370 A ORG_000205   50-02   59-02, 68-02, 77-02, 86-02, 95-02,104-02
    0001450 A ORG_000251  110-41
    0001466 A ORG_000276  111-31
    0000603 A ORG_000351   35-23
    0000611 A ORG_000444   37-02
    0000617 A ORG_000453   38-02
         16 R OVLOF                W=1  S=0  N=0  CL=1  LIBNUM=14
    0000226 A PAXF                 LIBNUM=14    111-18
    CTSD      V PAGSCR       7-44   26-24, 29-06, 33-49, 34-01, 34-46, 34-47, 35-30, 35-37, 43-29, 47-46, 48-03, 48-13, 48-19,
                                    52-29, 56-46, 57-03, 57-13, 57-19, 61-29, 65-46, 66-03, 66-13, 66-19, 70-29, 74-46, 75-03,
                                    75-13, 75-19, 79-29, 83-46, 84-03, 84-13, 84-19, 88-29, 92-46, 93-03, 93-13, 93-19, 97-29,
                                   101-46,102-03,102-13,102-19,105-37,106-01,107-03,109-08,109-26,109-34,110-36,112-40,112-41,
                                   115-43,117-32
    0113040 L PARBITF     113-16
    0000002 A PARITY       26-05   43-10, 52-10, 61-10, 70-10, 79-10, 88-10, 97-10
         10 R PARSLT        9-22   29-43, 29-45, 29-46
          3 R PASBT        17-08  W=1  S=6  N=0  CL=1
 06 0032744 L PASCK        35-40
    CDGNOF    V PASSOFF      3-44
    CDGNM     V PASSTST      7-11   37-09, 50-09, 59-09, 68-09, 77-09, 86-09, 95-09,104-09
    CDGS3A    V PASSXT       7-30  114-26
 06 0033424 L PAST$T      114-20  112-04,114-25
 06 0032447 L PASTWO       29-21
         16 P PATADDR       9-26   29-07, 32-07
          0 R PATBAK        9-12   29-38, 29-40, 29-47, 30-17, 30-18, 30-19
 06 0032640 L PATBLND      33-27   33-33
          6 R PATNDX        9-19   29-05, 31-35, 32-03, 32-04, 32-07
    0000004 A PATOTAL      33-33   32-04
 06 0013400 L PATSKP      117-31  117-27
          3 R PHBAK        17-04  W=1  S=1  N=0  CL=1    29-45, 30-34, 39-07, 39-24,113-33
 06 0033070 L PLBAD        39-23   39-20
    0113056 L PLBAD1      113-32  113-29
          3 R PLBAK        17-03  W=1  S=0  N=0  CL=1    29-43, 30-25, 39-01, 39-19,113-28
   'CDGSD'    T PNAME
    CDGS3A    V PRFLXT       7-31  112-02
 06 0034061 L PRF444       47-25   45-36
 06 0034275 L PRF493       56-25   54-36
 06 0034511 L PRF542       65-25   63-36
 06 0034725 L PRF591       74-25   72-37
 06 0035141 L PRF640       83-25   81-36
 06 0035355 L PRF689       92-25   90-38
 06 0035571 L PRF738      101-25   99-36
```

MEMORY ELEMENT TEST

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PATCH HISTORY                                                        23:24:58   2/05/81  ****

      VALUE T NAME      DEF/REF   ATTRIBUTES AND REFERENCES                          CDGSD      W77D

   0000020 A PRHOL0     18-45
   0000005 A PRHOL1     18-46
   0000012 A PRH1L0     18-47
   0000017 A PRH1L1     18-48
   CBLM    V PRTMASER    7-06
06 0013371 L PRTN_UPD  117-16 118-12
   0112764 L PRTST     112-01 111-46
06 0032511 L PRTYTEST   30-24  30-05, 30-20
   0000002 A PRWOH1L0   18-49
   0000007 A PRWOH1L1   19-01
   0000010 A PRW1HOL0   19-02
   0000015 A PRW1HOL1   19-03
06 0013405 L PTCH_UPD  118-03 117-15
'SER+0'    T PWER                 W=1  S=12  N=0  CL=2
        11 R RANGE       9-07 107-08,107-11,107-13,107-15
        14 P RA0              LIBNUM=3     9-25, 26-30, 26-31, 27-11, 34-05, 35-03, 35-30, 35-33, 35-36, 43-43, 45-44,
                              46-13, 46-42, 47-28, 47-46, 47-49, 48-02, 48-13, 48-16, 48-18, 52-43, 54-44, 55-13, 55-42,
                              56-28, 56-46, 56-49, 57-02, 57-13, 57-16, 57-18, 61-43, 63-44, 64-13, 64-42, 65-28, 65-46,
                              65-49, 66-02, 66-13, 66-16, 66-18, 70-43, 72-45, 73-13, 73-42, 74-28, 74-46, 74-49, 75-02,
                              75-13, 75-16, 75-18, 79-43, 81-44, 82-13, 82-42, 83-28, 83-46, 83-49, 84-02, 84-13, 84-16,
                              84-18, 88-43, 90-46, 91-13, 91-42, 92-28, 92-46, 92-49, 93-02, 93-13, 93-16, 93-18, 97-43,
                              99-44,100-13,100-42,101-28,101-46,101-49,102-02,102-13,102-16,102-18,107-13,108-16,115-43,
                             115-44,117-26,117-29
        16 P RA1              LIBNUM=3     9-26, 35-37, 35-39, 39-45, 39-46, 39-47, 40-04, 48-03, 48-07, 48-19, 48-21,
                              57-03, 57-07, 57-19, 57-21, 66-03, 66-07, 66-19, 66-21, 75-03, 75-07, 75-19, 75-21, 84-03,
                              84-07, 84-19, 84-21, 93-03, 93-07, 93-19, 93-21,102-03,102-07,102-19,102-21,105-37,105-48,
                             105-49,106-01,106-02,107-07,107-11,109-34,109-35,109-42,109-43,110-36,111-13,112-17,112-40,
                             112-41,112-48,116-20,116-48,117-03,117-06,118-24,118-25,118-26,118-29,118-30
   0047410 A RDAD       22-42
   0047414 A RDADNC     22-45
'GATE STORE
ADDRESS BITS
 TO STORE DA
TA BUS'    T RDADNCT
'GATE STORE
ADDRESS BUS(
SAO-16,PL) T
O STORE DATA
BUS(SDO-15,
PL,PH) W/ CL
OCK'       T RDADT
06 0032442 L REDCOMP    29-14  32-41, 32-45
'CIOBUF+0'  T REFST                W=1  S=3  N=0  CL=2
   000607D A REFSTOP    22-47  32-12
'INHIBIT REF
RESHING OF S
TORE'      T REFSTOPT
   000606D A REFSTRT    22-49  32-21
'RESUME REGU


   MEMORY ELEMENT TEST                                                          PR-1C929-50
```

```
        VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES                              CDGSD        W77D

LAR REFRESHI
NG OF STORE' T REFSTRTT
    0046060  A RFWISOL      23-02
'RESUME REGU
LAR REFRESH
W/ STORE ISO
LATED'       T RFWISOLT
    CSYSUB   V RGCHKADR      7-40
' BASE ADDRE
SS OF STORE/
MOD UNDER TE
ST'          T RMK_BASADDR
' ERROR INDI
CATED BY STO
RE COMMAND C
HECKER'      T RMK_CHDIF
' MAIN STORE
 CONTROLLER
INITIALIZATI
ON'          T RMK_CINIT
' CONTROLLER
 CLOCK HALT' T RMK_CKHLT
' CONTROLLER
 CLOCK STEP' T RMK_CKSTP
''           T RMK_CONTROLB
               ITS
' RESULT OF
STORE CONTRO
L LEADS ISOL
ATION'       T RMK_CTRLCK
' ERROR IN P
ARITY OVER H
IGH DATA BIT
S'           T RMK_DHPER
' ERROR IN P
ARITY OVER L
OW DATA BITS'T RMK_DLPER
' FORCE BIT
15 ACTIVE IN
 MAIN SHIFTE
R'           T RMK_FBT09
' NUMBER OF
MEMORY MODUL
ES (OR FANOU
T BOARDS) IN
 STORE CURRE
NTLY UNDER T
EST'         T RMK_FOBNUM
' PARITY ERR
```

```
      VALUE  T  NAME      DEF/REF   ATTRIBUTES AND REFERENCES                          CDGSD          W77D

OR DETECTED,
IN ADDRESS R
EACHING FANO
UT BOARD(S)'  T RMK_FOBPARER
' STORE TIMI
NG ERROR FRO
M SELECTED F
OB'           T RMK_FOBTERA
' STORE TIMI
NG ERROR FRO
M UNSELECTED
 FOB'         T RMK_FOBTERB
' STORE SELE
CT FORCE ON
TIMING BOARD
 A'           T RMK_FSEL
' I/O ORDER
CHECKER EXCL
USIVE-OR RES
ULT'          T RMK_FXORG
' I/O SUBCHA
NNEL ADDRESS
 FOR CURRENT
 STORE CONTR
OLLER'        T RMK_IOADDR
' SD0-6,SD8-
14 ISOLATE T
EST RESULTS'  T RMK_ISOBTS
' ORDER CHEC
KER EXCLUSIV
E-OR LOAD'    T RMK_LDFG
' ADDRESS OF
 SUBSTITUTE
FOR 'LOOP' I
N TTY TROUBL
E MESSAGE'    T RMK_LOOPSUB
' ALL-SEEMS-
WELL SIGNAL
NOT RECEIVED
 FROM MODULE
(FOB) ACCESS
ED DURING NO
RMAL CYCLE'   T RMK_MODER
' MULTIPLEXO
R ERROR DETE
CTED BY CHEC
K BOARD'      T RMK_MPXER
'  ADDRESS O
F MY STORE S
```

MEMORY ELEMENT TEST   PR-1C929-50

PATCH HISTORY   23:24:58   2/05/81   ****

    VALUE   T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

UBCHANNEL 0' T RMK_MSSC0
' ADDRESS OF
MY STORE SU
BCHANNEL 1'   T RMK_MSSC1
' ADDRESS OF
MY STORE SU
BCHANNEL 2'   T RMK_MSSC2
' ADDRESS OF
MY STORE SU
BCHANNEL 3'   T RMK_MSSC3
' REPEAT PAS
S THRU TEST
INDICATOR'   T RMK_PASBT
' PARITY HIG
H VALUE READ
 BACK'   T RMK_PHBAK
' PARITY LOW
 VALUE READ
BACK'   T RMK_PLBAK
' ERROR IN P
ARITY FOR WI
DE STORE'   T RMK_PWER
' STORE REFR
ESH STOP'   T RMK_REFST
' ALL MEMORY
 MODULES(FOB
S) NOT SELEC
TED DURING R
EFRESH'   T RMK_RSELER
' REFRESH SE
LECTS FROM F
ANOUT BOARDS
0-6'   T RMK_RSEL06
' REFRESH SE
LECT FROM FA
NOUT BOARD 7'T RMK_RSEL7
' SD7,SD15 I
SOLATE TEST
RESULT - ONL
Y GATED INTO
 BY LOAD I/O
 DECODER CHE
CK (LOADCHK)
 OPTION'   T RMK_RSVD0
' RESERVED -
 FOBTERA IS
SET AFTER IN
IT'   T RMK_RSVD1
' STORE ADDR

   MEMORY ELEMENT TEST   PR-1C929-50

PATCH HISTORY   23:24:58   2/05/81 ****

    VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

```
ESS PARITY H
IGH LOOP RES
ULT'        T RMK_SAPHLP
' STORE ADDR
ESS BIT 17 L
OOP RESULT'  T RMK_SA17LP
' PREMATURE
STORE COMPLE
TE(SCM)'     T RMK_SCMER
' RESULT OF
STORE DATA P
ARITY ISOLAT
ION'         T RMK_SDPCK
' ERROR IN M
AIN SHIFTER
OPERATION'   T RMK_SHER
' SINGLE BIT
 ERROR FLAG' T RMK_SNGBTER
''           T RMK_SPARE
' 4/8 MAINTE
NANCE STATE
CODE'        T RMK_STORDER
' STORE SELE
CT ADDRESS B
ITS LOOP RES
ULT'         T RMK_STRSLP
' ERROR DETE
CTED ON TIMI
NG BOARD'    T RMK_TBER
' SAVE TIMIN
G CONSTANT F
OR TIMOUT SU
BROUTINE'    T RMK_TIMSAV
' DIAGNOSTIC
 TEST NUMBER
 REQUESTED'  T RMK_TSTNUM
' ADDRESS OF
 NEXT BLOCK
OF MEMORY TO
 BE UPDATED
AFTER MEMORY
 PATTERN TES
T'           T RMK_UPADDR
' RESULTS OF
 WIDE DATA(S
D16-23) ISOL
ATE'         T RMK_WDISOL
' ADDRESS OF
 OTHER STORE
```

MEMORY ELEMENT TEST   PR-1C929-50

PATCH HISTORY   23:24:58   2/05/81 ****

    VALUE T NAME   DEF/REF   ATTRIBUTES AND REFERENCES   CDGSD   W77D

```
SUBCHANNEL
0'          T RMK_OSSC0
' ADDRESS OF
OTHER STORE
SUBCHANNEL
1'          T RMK_OSSC1
' ADDRESS OF
OTHER STORE
SUBCHANNEL
2'          T RMK_OSSC2
' ADDRESS OF
OTHER STORE
SUBCHANNEL
3'          T RMK_OSSC3
' WIDE STORE
INDICATOR B
IT'         T RMK_OWDSTRO
' 0-10 BIT T
IMING SHIFTE
R FAKE'     T RMK_O10TM
' RESULT OF
EXTENDED(3 B
IT) PARITY I
SOLATE'     T RMK_2EPCK
     0000000 A RPTMD      24-11 S=12     24-12, 40-40,114-11
     0010177 A RSELBTS    16-22  16-23
     0167600 A RSELBTSN   16-23
'SER+O'      T RSELER             W=1  S=6   N=0   CL=2
'RSLCHK+O'   T RSELO6             W=7  S=0   N=0   CL=2    16-22
'RSLCHK+O'   T RSEL7              W=1  S=14  N=0   CL=2             16-22
  06 0033332 L RSLTCK     110-07
'CHKWRD+O'   T RSVD0              W=1  S=7   N=0   CL=2
'RSLCHK+O'   T RSVD1              W=1  S=7   N=0   CL=2
  06 0032605 L RTBREAK    32-42  32-35
  06 0032410 L RTN_57     27-19  27-11
     0047214 A RTNADHI    23-04
'LOAD SA17 &
SAPH INTO S
ER'         T RTNADHIT
'DGSD'      T RTNAME
     0000261 A RTNMCHB           LIBNUM=14    109-14,110-19,110-30,111-09,111-24,112-31,113-24
  06 0033114 L RUNTST     2-16   45-32, 54-32, 63-32, 72-33, 81-32, 90-34, 99-32
           0 R RO               LIBNUM=3     9-12, 26-30, 26-32, 26-33, 27-11, 30-26, 31-11, 32-16, 32-18, 34-05, 35-03,
                                             35-30, 35-32, 35-33, 35-37, 35-38, 35-39, 38-34, 38-35, 38-36, 38-37, 38-38, 40-34, 40-36,
                                             40-38, 43-43, 45-33, 45-44, 46-13, 46-42, 47-28, 47-46, 48-03, 48-13, 48-15, 48-16, 48-19,
                                             52-43, 54-33, 54-44, 55-13, 55-42, 56-28, 56-46, 57-03, 57-13, 57-15, 57-16, 57-19, 61-43,
                                             63-33, 63-44, 64-13, 64-42, 65-28, 65-46, 66-03, 66-13, 66-15, 66-16, 66-19, 70-43, 72-34,
                                             72-45, 73-13, 73-42, 74-28, 74-46, 75-03, 75-13, 75-15, 75-16, 75-19, 79-43, 81-33, 81-44,
                                             82-13, 82-42, 83-28, 83-46, 84-03, 84-13, 84-15, 84-16, 84-19, 88-43, 90-35, 90-46, 91-13,
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                      23:24:58   2/05/81  ****

   VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                        CDGSD        W77D

                                  91-42, 92-28, 92-46, 93-03, 93-13, 93-15, 93-16, 93-19, 97-43, 99-33, 99-44,100-13,100-42,
                                 101-28,101-46,102-03,102-13,102-15,102-16,102-19,105-38,105-39,106-13,106-18,106-19,106-25,
                                 106-26,106-34,106-35,107-04,107-05,107-07,107-11,108-12,108-13,109-08,109-14,109-26,109-36,
                                 109-37,109-38,110-04,110-09,110-12,110-13,110-19,110-24,110-25,110-30,110-38,111-04,111-09,
                                 111-18,111-19,111-24,112-17,112-18,112-19,112-20,112-25,112-26,112-31,113-11,113-18,113-19,
                                 113-24,113-30,113-38,113-42,113-43,113-47,114-01,114-17,116-05,116-27,116-47,118-26
   0000123 A  RO%F      LIBNUM=14    31-14, 46-22, 55-22, 64-22, 73-22, 82-22, 91-22,100-22
   0000123 A  RO%T      LIBNUM=14    30-12
         1 R  R1        LIBNUM=3      9-13, 26-31, 26-33, 30-26, 35-31, 35-32, 35-34, 35-35, 35-36, 40-02, 40-06,
                                     45-31, 47-47, 47-48, 48-01, 48-02, 48-05, 48-06, 48-14, 48-15, 48-17, 48-18, 48-20, 48-21,
                                     54-31, 56-47, 56-48, 57-01, 57-02, 57-05, 57-06, 57-14, 57-15, 57-17, 57-18, 57-20, 57-21,
                                     63-31, 65-47, 65-48, 66-01, 66-02, 66-05, 66-06, 66-14, 66-15, 66-17, 66-18, 66-20, 66-21,
                                     72-32, 74-47, 74-48, 75-01, 75-02, 75-05, 75-06, 75-14, 75-15, 75-17, 75-18, 75-20, 75-21,
                                     81-31, 83-47, 83-48, 84-01, 84-02, 84-05, 84-06, 84-14, 84-15, C4-17, 84-18, 84-20, 84-21,
                                     90-33, 92-47, 92-48, 93-01, 93-02, 93-05, 93-06, 93-14, 93-15, 93-17, 93-18, 93-20, 93-21,
                                     99-31,101-47,101-48,102-01,102-02,102-05,102-06,102-14,102-15,102-17,102-18,102-20,102-21,
                                    105-32,105-40,105-47,108-11,108-12,108-16,114-10,114-11
   0000125 A  R1%F      LIBNUM=14    47-02, 56-02, 65-02, 74-02, 83-02, 92-02,101-02,110-38
   0000125 A  R1%T      LIBNUM=14     9-14
        12 R  R10       LIBNUM=3     38-16, 38-46, 39-13, 39-21, 39-29, 40-36,112-19,113-42,113-47
        13 R  R11       LIBNUM=3    117-32,117-33
        14 R  R12       LIBNUM=3      9-23,105-37,105-39,105-45,105-48,106-01,106-20,106-21,107-03,107-05,108-13,
                                    108-26,109-34,109-40,109-42
   0000107 A  R12%T     LIBNUM=14   106-25
        15 R  R13       LIBNUM=3      9-24,105-36,105-43,105-49,106-02,106-30,107-06,108-27,109-35,109-38,109-43
   0000113 A  R13%F     LIBNUM=14    29-27, 30-14, 33-40, 34-37, 40-26,110-12
   0000113 A  R13%T     LIBNUM=14   106-34
        16 R  R14       LIBNUM=3    108-26,115-43,117-28,117-29
        17 R  R15       LIBNUM=3    108-27,115-44,117-25,117-26,117-33
         2 R  R2        LIBNUM=3      9-15, 39-49, 40-01, 40-33, 40-39, 40-40, 47-49, 48-01, 48-06, 48-07, 56-49,
                                     57-01, 57-06, 57-07, 65-49, 66-01, 66-06, 66-07, 74-49, 75-01, 75-06, 75-07, 83-49, 84-01,
                                     84-06, 84-07, 92-49, 93-01, 93-06, 93-07,101-49,102-06,102-07,105-41,105-43
         3 R  R3        LIBNUM=3      9-16, 38-28, 38-42, 39-01, 39-07, 39-19, 39-24,109-18,110-23,110-34,110-36,
                                    111-13,111-29,111-45,112-02,112-35,112-36,112-43,113-01,113-28,113-33,114-26,115-36,116-18,
                                    117-08
         4 R  R4        LIBNUM=3      9-17, 26-23, 26-24, 38-34, 39-18, 41-01, 43-28, 43-29, 52-28, 52-29, 61-28,
                                     61-29, 70-28, 70-29, 79-28, 79-29, 88-28, 88-29, 97-28, 97-29,110-23,110-34,115-42,116-20,
                                    116-48,117-03,117-06,118-10
   0000132 A  R4%F      LIBNUM=14   112-25
         5 R  R5        LIBNUM=3      9-18,111-42,111-47,112-06,113-13,114-17
   0000134 A  R5%F      LIBNUM=14   113-18
         6 R  R6        LIBNUM=3      9-19, 40-20,113-06,116-28,116-29
   0000143 A  R6%T      LIBNUM=14    40-19,113-05,116-41
         7 R  R7        LIBNUM=3      9-20, 40-34,113-11,116-27
   0000145 A  R7%F      LIBNUM=14   110-24
        10 R  R8        LIBNUM=3      9-21,  9-22, 30-28, 30-44, 39-41, 39-42, 40-47, 40-48,112-36,112-37
        11 R  R9        LIBNUM=3     39-40, 39-41,112-35
   CTVTAB  V  S%MCH     LIBNUM=7    106-15,109-16,110-06,110-11,110-21,110-32,111-11,111-26,112-33,113-26
        14 P  S%MCH%_%CSYS


MEMORY ELEMENT TEST                                                              PR-1C929-50

   23:24:58   2/05/81   TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET   CDGSD    ISSUE 06    PAGE  291
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PATCH HISTORY                                                    23:24:58   2/05/81   ****

     VALUE  T  NAME        DEF/REF    ATTRIBUTES AND REFERENCES                  CDGSD           W77D

              UB                      LIBNUM=7
'RSLCHK+0'  'T SAPHLP                 W=1   S=10  N=0   CL=2
'RSLCHK+0'   T SA17LP                 W=1   S=11  N=0   CL=2
'SER+0'      T SCMER                  W=.   S=3   N=0   CL=2
'CHKWRD+0'   T SDPCK                  W=1   S=14  N=0   CL=2
   0000055 A SDR1%F                   LIBNUM=14      30-12, 40-19,113-05,116-41
   0000344 A SDR1%T                   LIBNUM=14      29-27, 30-14, 31-14, 33-40, 34-37, 40-26
   0001577 A SERNO_047347 119-14
   0001617 A SERNO_049069 120-25
   0001623 A SERNO_050624 121-02
   0002474 A SERNO_053656 237-14
   0001613 A SERNO_059563 120-13
   0001607 A SERNO_059574 120-02
   0001603 A SERNO_060253 119-28
   0001573 A SERNO_064244 119-02
   0002500 A SERNO_067594 237-30
   0047114 A SERREAD      23-09
'READ BACK S
TORE ERROR R
EGISTER(SER)'T SERREADT
'SER+0'      T SHER                   W=1   S=4   N=0   CL=2
   CSYSUB    V SLDMCHB     106-23 106-24,106-32,106-33
   CDGNM     V SLDMCHBF    3-46
   CSYSUB    V SLDMIRL     .106-28 106-29,106-37,106-38,110-15,110-16,110-27,110-28,111-06,111-07,111-21,111-22,112-28,112-29,
                                  113-21,113-22
   CDGNM     V SLDMIRLF    3-47
   CSYSUB    V SMCH        106-14 109-15,110-05,110-10,110-20,110-31,111-10,111-25,112-32,113-25
   CDGNM     V SMCHF       3-48
         3 R SNGBTER      17-07 W=1   S=5   N=0   CL=1
'DGREQLO+0'  T SPARE                  W=2   S=7   N=0   CL=2
   0044714 A SPAREA       23-07
'SPARE I/O O
RDER'        T SPAREAT
   0106274 A SPRRD        19-32
   0106214 A SPRWR        19-34
'M%AS'       T SPWORD
        17 R SS                       LIBNUM=14      40-37,113-49
        17 R SS_R                     LIBNUM=14      31-30, 32-34, 33-47, 34-44, 40-33,117-08
        15 R SS_S                     LIBNUM=14      29-18, 32-08, 40-01, 40-48,116-18
   0000071 A STDT1                    LIBNUM=15      24-17
   0000072 A STDT2                    LIBNUM=15      41-14
   0000073 A STDT3                    LIBNUM=15      50-14
   0000074 A STDT4                    LIBNUM=15      59-14
   0000075 A STDT5                    LIBNUM=15      68-14
   0000076 A STDT6                    LIBNUM=15      77-14
   0000077 A STDT7                    LIBNUM=15      86-14
   0000100 A STDT8                    LIBNUM=15      95-14
   0000002 A STEPCLK      23-45
   0000010 A STOPREF      23-47


     MEMORY ELEMENT TEST                                                    PR-1C929-50
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PATCH HISTORY                                                    23:24:58   2/05/81  ****

        VALUE  T NAME      DEF/REF    ATTRIBUTES AND REFERENCES                          CDGSD        W77D

'CIOBUF+0'    T STORDER              W=10  S=4  N=0  CL=2
  06 0033325  L STRBAS     109-41 109-39
       TDATA  V STRLIM     8-03  29-03
      CDGSIO  V STRSIZE    7-22
'RSLCHK+0'    T STRSLP               W=1  S=12  N=0  CL=2
          3   R STRSTAT    9-16  17-03, 17-04, 17-06, 17-07, 17-08, 29-03, 29-39, 29-41, 29-46, 30-04, 30-25, 30-34
    0041634   A STSBY      23-11
    0041630   A STSBYCL    23-13
'SET STORE B
USY(SBY) W/
CLOCK'        T STSBYCLT
'SET STORE B
USY(SBY) SIG
NAL'          T STSBYT
      CDGSIO  V STSELMSK   7-23  35-31, 48-14, 57-14, 66-14, 75-14, 84-14, 93-14,102-14,105-38,107-04
    0000000   A SUCCES     34-08  34-11, 35-06, 35-09, 46-24, 46-27, 47-09, 47-12, 55-24, 55-27, 56-09, 56-12, 64-24, 64-27,
                                  65-09, 65-12, 73-24, 73-27, 74-09, 74-12, 82-24, 82-27, 83-09, 83-12, 91-24, 91-27, 92-09,
                                  92-12,100-24,100-27,101-09,101-12
    0000000   A SV_REG
      CTVTAB  V TXIMCHK             LIBNUM=7       109-28
         14   P TXIMCHKX_XCS
              YSUB                  LIBNUM=7
      CTVTAB  V TXIMOUT             LIBNUM=7       109-06
         14   P TXIMOUTX_XCS
              YSUB                  LIBNUM=7
'SER+0'       T TBER                 W=1  S=13  N=0  CL=2
    0000107   A TESTNO     24-17  41-14, 50-14, 59-14, 68-14, 77-14, 86-14, 95-14,143-46,157-29,170-36,184-13,197-45,211-13,
                                  224-14
      CDGS3A  V TESTSIZE   7-32  48-20, 57-20, 66-20, 75-20, 84-20, 93-20,102-20,107-08
    0116774   L TFAPCH2    2-28
    0000003   A THREE      19-05
  06 0032602  L TIMCHCK    32-39  31-40, 31-45
      CSYSUB  V TIMCHK     109-27
      CSYSUB  V TIMOUT     109-05
'PAGSCR+27'   T TIMSAV               W=20  S=0  N=33  CL=2        109-08,109-26
  06 0033310  L TIMTST     109-24
    0000071   A TLMFRST    6-01  24-17
'#         P
ROC  06-34
FA1045  "TO"
 FIELD DECOD
ER'           T TODEC                LIBNUM=12
    0600000   L TPATCH     2-30
    0001573   A TR_012254  119-02
    0001607   A TR_012434  120-02
    0001603   A TR_012444  119-28
    0001577   A TR_012708  119-14
    0001613   A TR_013328  120-13
    0001617   A TR_013329  120-25


    MEMORY ELEMENT TEST                                                          PR-1C929-50

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PATCH HISTORY                                                      23:24:58   2/05/81  ****

    VALUE  T  NAME       DEF/REF   ATTRIBUTES AND REFERENCES                          CDGSD        W77D

   0001623 A TR_013775   121-02
   0001450 A TR_12254    110-41
   0000611 A TR_12434     26-02   27-06, 37-02
   0001370 A TR_12708     43-02   50-02, 52-02, 59-02, 61-02, 68-02, 70-02, 77-02, 79-02, 86-02, 88-02, 95-02, 97-02,104-02
   0000627 A TR_13328     29-34   38-02, 40-14
   0001470 A TR_13329    107-17   111-31,111-41
   0001525 A TR_13775     26-35   28-35, 30-36, 31-04, 35-23, 45-21, 54-21, 63-21, 72-22, 81-21, 90-23, 99-21,116-01
   0002474 A TR_790123   117-10   117-44,237-14
   0002500 A TR_790477   116-31   237-30
   MASACS  V TRBLMSG       6-03   117-02
06 0013405 L TRORG        26-02   26-35, 28-35, 29-34, 30-36, 31-04, 35-23, 37-02, 38-02, 43-02, 45-21, 50-02, 52-02, 54-21,
                                  59-02, 61-02, 63-21, 68-02, 70-02, 72-22, 77-02, 79-02, 81-21, 86-02, 88-02, 90-23, 95-02,
                                  97-02, 99-21,104-02,107-17,110-41,111-31,116-01,116-31,117-10,117-44
06 0033061 L TSTNRCRD     39-15   30-31, 30-46
'DGREQLO+O' T TSTNUM              W=7  S=0  N=0  CL=2
06 0032520 L TSTPH        30-33   30-27
        0 U TTYTBL
   0000002 A TWO          19-06
'1'        T TXTSEG
'PAGSCR+28' T UPADDR              W=4  S=0  N=34  CL=2         35-37, 48-03, 48-19, 57-03, 57-19, 66-03, 66-19, 75-03, 75-19,
                                  84-03, 84-19, 93-03, 93-19,102-03,102-19,106-01,112-41,115-43
06 0013371 L UPADINC     117-24   116-06
06 0033314 L UPBASAD     109-33   109-19
   CSYSUB  V UPD_OTS       7-41
   0000400 A UPDATBLK     24-15   115-42,117-25
06 0013325 L UPDATE        2-17   35-42, 48-09, 48-23, 57-09, 57-23, 66-09, 66-23, 75-09, 75-23, 84-09, 84-23, 93-09, 93-23,
                                  102-09,102-23
06 0013404 L UPDOUT      117-36   116-04,117-30
06 0034070 L UPD444       47-45   45-37
06 0034304 L UPD493       56-45   54-37
06 0034520 L UPD542       65-45   63-37
06 0034734 L UPD591       74-45   72-38
06 0035150 L UPD640       83-45   81-37
06 0035364 L UPD689       92-45   90-39
06 0035600 L UPD738      101-45   99-37
06 0013341 L UPLOOP      116-17   118-10
06 0013327 L UPSTRT      115-38   117-34
   0007114 A USERRED      23-15
'READ STORE
ERROR REG (W
/O ISOLATE)' T USERREDT
   CTVTAB  V WXAIT                LIBNUM=7          32-44,109-11,115-40
        14 P WXAIT%_XCBLM         LIBNUM=7
   CBLM    V WAIT          7-07
06 0033046 L WDBTCK       38-45   38-43
'# NOTE--1 P
ROC  02-06
FA1040  WIDE
STORE BUS I
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MEMORY ELEMENT TEST   PR-1C929-50

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PATCH HISTORY                                                      23:24:58   2/05/81  ****

        VALUE  T  NAME        DEF/REF   ATTRIBUTES AND REFERENCES                       CDGSD       W77D

NTERFACE BIT
S 22-27'      T WDBUS2227            LIBNUM=12
'# NOTE--1 P
ROC  02-07
FA1040  WIDE
 STORE BUS I
NTERFACE BIT
S 28-PH'      T WDBUS28PH           LIBNUM=12
   06 0032471 L WDCOMP      30-03  29-48
      CDGS3A  V WDFLXT       7-33 111-45
   06 0033057 L WDINDX      39-11  39-05
'CHKWRD+0'    T WDISOL             W=4  S=10  N=0  CL=2
   06 0033054 L WDPHCK      39-06  38-47
   06 0033050 L WDPLCK      38-49
      TDATA   V WDSTR        8-04  30-04, 38-28, 38-42, 40-06,106-19,106-20,113-01,116-29
   06 0033431 L WLDRET     114-33 114-27
      0010000 A WPBLKSZE    19-07
      0046061 A WPCLR       23-17
'STORE INITI
ALIZE, INCL.
 WRITE PROTE
CT'           T WPCLRT
      TDATA   V WPTBL        8-05
   06 0032526 L WRITPAT     31-10  29-20, 30-39
      0000322 A YT%F               LIBNUM=14       31-27, 32-31, 33-44, 34-41, 40-30
      0025750 A ZER%               LIBNUM=14       31-25, 32-29, 33-42, 34-39, 40-28
      0000000 A ZERO        19-08
      0000000 A ZEROS       19-09
      0026750 A ZMINT%             LIBNUM=14       30-16, 31-29, 32-33, 33-46, 34-43, 40-32
'MASCIOSC+1' T OSSC0              W=20  S=0  N=1  CL=2
'MASCIOSC+3' T OSSC1              W=20  S=0  N=3  CL=2
'MASCIOSC+5' T OSSC2              W=20  S=0  N=5  CL=2
'MASCIOSC+7' T OSSC3              W=20  S=0  N=7  CL=2
      0000000 A OTEST       19-10
            3 R OWDSTRO     17-06 W=1  S=4  N=0  CL=1
      0052354 A O10NOR      23-19
'0-10 TIMING
(O10TIM)THEN
 REFRESH REQ
UEST CLEAR'   T O10NORT
      0054334 A O10REF      23-22
'0-10 TIMING
(O10TIM)THEN
 REFRESH REQ
UEST SET'     T O10REFT
      0056074 A O10TIM      23-25
'FORCE 0-10
TIMING SIGNA
L ACTIVE'     T O10TIMT


    MEMORY ELEMENT TEST                                              PR-1C929-50

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PATCH HISTORY                                                    23:24:58   2/05/81  ****
    VALUE  T  NAME      DEF/REF    ATTRIBUTES AND REFERENCES                 CDGSD        W77D

'CIOBUF+0'  T  010TM               W=1  S=14  N=0  CL=2
    0000001 A  1TEST     19-11
'CHKWRD+0'  T  2EPCK               W=1  S=15  N=0  CL=2
    0000000 L  3         196-40
          1 J  3ACC      1-09
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PATCH HISTORY   23:24:58   2/05/81 ****

    COUNT   FLAG   PAGE-LINE OF FLAG   CDGSD   W77D
        1   F   105-33
        6'   E   29-23, 30-07, 31-16,107-13,108-16,117-06

7 FLAG(S) FOUND IN THIS ASSEMBLY

MEMORY ELEMENT TEST   PR-1C929-50
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