

BELL TELEPHONE LABORATORIES, INCORPORATED

APR 28 1981

7-194

COMMON SYSTEMS
FOR USE WITH NO. 3 ESS
ARRANGED WITH 2-WIRE FEATURES
STORE CONTROL AND PARITY TESTS
(CDGSCP)

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ISSUE 5
02/05/81

AT&TCO
SPCS

PR-1C934-50
174 PAGES

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SECTION DICTIONARY

APR 28 1981

NUMBER	NAME	MAXIMUM	ORIGIN	TYP	ADDRESS-MODIFICATION
01	CSTCP1	0000553		C	
02	CSTCP2	0000567		C	
03	CSTCP3	0000545		C	
04	CSTCP4	0000527		C	
05	CPATCH	0000000		C	
06	CPATCH1	0000603		C	
07	CPATCH2	0000000		C	
08	CPATCH3	0000000		C	
09	CPATCH7	0000000		C	
0A	TFAPCH2	0000000		C	
0B	TPATCH	0000000		C	

STORE CONTROL AND PARITY TESTS

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23:23:17 02/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE A1

0016116
0016116
0016116

```

01 DBNAM NO33E3I3.OFF.DATABASE
02 RELNAM NO3ESS
03 GETLIB LIBRARY, MEMBER=MOPTBL
04 GETLIB LIBRARY, MEMBER=SYSMAC
05 GETLIB LIBRARY, MEMBER=SYSSYM
06 GETLIB LIBRARY, MEMBER=PATCH2
07 FIRSTOPTSS
08 VERSION 3ACC, FIELD, ESS2E
09 PATCHINIT
10 NO33E3I3.OFF.OPMS(O) DECK
11 DSQUAL NO33E3I3
12 LISTING N, CRUNCH=Y, SYSOUT=N
13 #####
14 ##
15 ## UNIX ID = NO3PAG
16 ##
17 #####
18 #####
19 ###
20 ### pid date time rel
21 ###
22 ### cdgscp 4/23/79 13:46:12 4.1.1.1
23 ###
24 #####

```

31 # THIS DATA SET EDITED FOR UNIX ON 05/24/78

38 NAME CDGSCP

42 ## The following is a list of the valid csects for program CDGSCP

0016116
0016671
0017460
0020225

```

44 CSTCP1 CSECT
45 CSTCP2 CSECT
46 CSTCP3 CSECT
47 CSTCP4 CSECT

```

23:23:17 2/05/81 ****

CDGSCP

W77D

01 ## The following csects are necessary for patching

0111432
0112562
0114107
0115073
012123603 CPATCH CSECT
04 CPATCH1 CSECT
05 CPATCH2 CSECT
06 CPATCH3 CSECT
07 CPATCH7 CSECT

0116774

09 TFAPCH2 CSECT

0600000

11 TPATCH CSECT

STORE CONTROL AND PARITY TESTS

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E01

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CDGSCP W77D

01	GETLIB	MEMBER=MEMDGM
02	GETLIB	MEMBER=TTYMAC
03	GETLIB	MEMBER=BSAIMAC
04	GETLIB	MEMBER=CTVTAB
05	GETLIB	MEMBER=DGNMAC

STORE CONTROL AND PARITY TESTS

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0600000

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01      BEGIN_DIAG DGSCP,3ACC
-001- 02 CDGNM  EXTERN  NMICRO
-001- 03 CDGNM  EXTERN  NRETRN
-001- 04 CDGNM  EXTERN  N2RETRN
-001- 05 CDGNM  EXTERN  NSTRT
-001- 06 CDGNM  EXTERN  NSTOP
-001- 07 CDGNM  EXTERN  NDISABA
-001- 08 CDGNM  EXTERN  NDISABB
-001- 09 CDGNM  EXTERN  NSTRTCLK
-001- 10 CDGNM  EXTERN  NSTPCLK
-001- 11 CDGNM  EXTERN  NTGCLK
-001- 12 CDGNM  EXTERN  NRESCLK
-001- 13 CDGNM  EXTERN  NZERO_ER
-001- 14 CDGNM  EXTERN  NPROS
-001- 15 CDGNM  EXTERN  NTESTSEG
-001- 16 CDGNM  EXTERN  NFAILTST
-001- 17 CDGNM  EXTERN  NTTY
-001- 18 CDGNM  EXTERN  NHASK
-001- 19 CDGNM  EXTERN  NPASSTST
-001- 20 CDGNM  EXTERN  NSEND
-001- 21 CDGNM  EXTERN  N2SEND
-001- 22 CDGNM  EXTERN  NADD_OFF
-001- 23 CDGNM  EXTERN  NADMIC
-001- 24 CDGNM  EXTERN  NLDMIR
-001- 25 CDGNM  EXTERN  NEXECUTE
-001- 26 CDGNM  EXTERN  NCOMPARE
-001- 27 CDGNM  EXTERN  NFRZ
-001- 28 CDGNM  EXTERN  NBEGIN
-001- 29 CDGNM  EXTERN  NLP_END
-001- 30 CDGNM  EXTERN  NSKIP
-001- 31 CDGNM  EXTERN  NABT
-001- 32 CDGNM  EXTERN  NRDMICRO
-001- 33 CDGNM  EXTERN  NCLRMS
-001- 34 CDGNM  EXTERN  NNO3CD
-001- 35 CDGNM  EXTERN  NTMTEST
-001- 36 CDGNM  EXTERN  NZERPT
-001- 37 CDGNM  EXTERN  NFLBITS
-001- 38 CDGNM  DIRECT INTRPNO3
-001- 39 CDGNM  EXTERN  NBN
-001- 40 CDGNOF EXTERN  PASSOFF
-001- 41 CDGNOF EXTERN  FAILOFF
-001- 42 CDGNM  EXTERN  SLDMCHBF
-001- 43 CDGNM  EXTERN  SLDMIRLF
-001- 44 CDGNM  EXTERN  SMCHF
-001- 45 CDGNM  EXTERN  NRTNBLM
-001- 46 CDGNM  EXTERN  NWDST

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STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

-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 CDGMM (PR-1C910-01)
-001- 05 # ENTITLED "DIAGNOSTIC TABLE INTERPRETER". FOR A GENERAL DESCRIPTION
-001- 06 # OF THE DIAGNOSTIC PHILOSOPHY AND THE DETAILED REPAIR PROCEEDURE,
-001- 07 # SEE THE TROUBLE LOCATION MANUAL (TLM-1C900) SECTION B.

STORE CONTROL AND PARITY TESTS

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0600000

01 SYMLIB

STORE CONTROL AND PARITY TESTS

PR-1C934-50

-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 CDGMM EXTERN LOOPIND
 -002- 10 CDGMM EXTERN NOSTPMES
 -002- 11 CDGMM 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 MSELMSK
 -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- 28 CSYSUB EXTERN EXCOFLPG
 -002- 29 CSYSUB EXTERN INIT_OCC
 -002- 30 CSYSUB EXTERN INITOST
 -002- 31 CSYSUB EXTERN INSYNC
 -002- 32 CSYSUB EXTERN RGCHKADR
 -002- 33 CSYSUB EXTERN UPD_OTS
 -002- 35 CTSD EXTERN MASERCNT
 -002- 36 CTSD EXTERN PAGSCR
 -002- 37 CTSD EXTERN DGREQ
 -002- 39 MASACS EXTERN MASONOFF
 -002- 41 TDATA EXTERN STRLIM
 -002- 42 TDATA EXTERN WDSTR
 -002- 43 TDATA EXTERN WPTBL

STORE CONTROL AND PARITY TESTS

PR-1C934-50

-002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS

0000010	-002- 04	CHKNDX	EQR	8	# INDEX REGISTER FOR REFRESH SELECT CHECK
0000010	-002- 05	F0BCNT	EQR	8	# SCRATCH REG FOR CURRENT FANOUT BOARD COUNT
0000011	-002- 07	RANGE	EQR	9	# NUMBER OF OFF-LINE WORDS TO BE TESTED

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

0000000	-002- 12	PATBAK	EQR	R0	# DATA READ/WRITTEN VIA OTHER-STORE
0000001	-002- 13	HIPATBAK	EQR	R1	# HIGH DATA READ/WRITTEN VIA OTHER-STORE
	-002- 14	HIPATBAKXT	SYN	R1XT	# DEFINE FOR IGNORANT MIMODE MACRO
0000002	-002- 15	BLKMSK	EQR	R2	# MASK TO BLOCK INTERRUPTS & CHECKS
0000003	-002- 16	STRSTAT	EQR	R3	# SAVE (WIDE) STORE STATUS
0000004	-002- 17	LSTPAT	EQR	R4	# PATTERN PREVIOUSLY WRITTEN
0000005	-002- 18	NXTPAT	EQR	R5	# PATTERN CURRENTLY BEING WRITTEN
0000006	-002- 19	PATNDX	EQR	R6	# NUMBER OF TEST PATTERN BEING MATCHED
0000007	-002- 20	MNRNDX	EQR	R7	# MINOR LOOP INDEX
0000010	-002- 21	ERSAVE	EQR	R8	# ERROR REGISTER AFTER OTHER-STORE READ
0000010	-002- 22	PARSLT	EQR	R8	# PARITY TEST RESULTS - FIELD ONLY
0000014	-002- 23	MEMADDR0	EQR	R12	# UPPER ADDRESS BITS OF MEMORY TEST AREA
0000015	-002- 24	MEMADDR1	EQR	R13	# LOWER ADDRESS BITS OF MEMORY TEST AREA
0000014	-002- 25	MEMADDR	EQRA	RA0	# BASE ADDRESS OF MEMORY TEST AREA
0000016	-002- 26	PATADDR	EQURA	RA1	# ADDRESS OF TEST PATTERN TABLE

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

-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 FBTD9	ITEM	1	# FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14	LOEND		
-002- 15	#		

CIOBUF

001	FBTD9	FSEL	LDFG	O10TM	STORDER								REFST	CKHLT	CKSTP	CINIT
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

4/8 MAINTENANCE STATE CODE

STORE CONTROL AND PARITY TESTS

PR-1C934-50

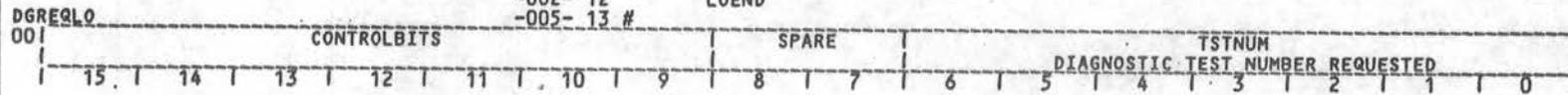
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CDGSCP W77D

-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 (CDGMM)
 -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
 -005- 13 #



STORE CONTROL AND PARITY TESTS

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-002- 01 # STORAGE FORMAT FOR MAIN STORE (MY & OTHER) SUBCHANNEL ADDRESS:

-002- 04	MSSCO	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 0
-002- 05	OSSCO	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	MSSCO	ADDRESS OF MY STORE SUBCHANNEL 0
01	OSSCO	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

STORE CONTROL AND PARITY TESTS

PR-1C934-50

-002- 01 # WORDS IN PAGING BUFFER USED BY STORE DIAGNOSTIC TESTS:
 -002- 02 LOOPSUB ITEM 16 # ADDRESS OF SUBSTITUE 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 TMSAV ITEM 16 # SAVE TIMING CONSTANT FOR TIMEOUT
 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

-002- 16 #

PAGSCR

24	LOOPSUB	
25	ADDRESS OF SUBSTITUE FOR 'LOOP' IN TTY TROUBLE MESSAGE	
26	IOADDR	
27	I/O SUBCHANNEL ADDRESS FOR CURRENT STORE CONTROLLER	
28	FOBNUM	
29	NUMBER OF MEMORY MODULES (OR FANOUT BOARDS) IN STORE CURRENTLY UNDER TEST	
30	TMSAV	
31	SAVE TIMING CONSTANT FOR TIMEOUT SUBROUTINE	UPADDR
		BASADDR

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

-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	DLPER	TBER	PWER	DHPER	FOBPARE	FOBTERA	RSELER	MODER	SHER	SCMER	CHDIF	MPXER	FOBTERB			
00	SPARE	SPARE														
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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-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 # SDO-6,SD8-14 ISOLATE TEST RESULTS
 -002- 07 RSVDO 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 ZEPCK 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	FXORG	CTRLCK	ZEPCK	SDPCK	WDISOL	RSVDO	ISOBTS	SDO-6,SD8-14 ISOLATE TEST RESULTS								
001	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

-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	00	SPARE BITS			RSEL7	SPARE	STRSLP	SA17LP	SAPHLP	RSVD1	REFRESH SELECTS FROM FANOUT BOARDS 0-6							RSEL06
		15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	

0010177 -002- 22 RSELBTS EQU M(RSEL06)IM(RSEL7) # MASK FOR REFRESH SELECT BITS
 0167600 -002- 23 RSELBTSN EQU (~RSELBTS)&B(1111111111111111)

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

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-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 SNGBTERT 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 #

```

STRSIAT

001

UNUSED											PASBT	SNGBTERT	OWDSTRO	UNUSED		PHBAK	PLBAK
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

-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
0000011 -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 PRHOLD 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 PRH1LO 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 PRWH1LO EQU B(00010) # SET PARITY WIDE=0 HIGH=1 LOW=0

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0600000

STORE CONTROL AND PARITY TESTS

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CDGSCP W77D

0000007	-002- 01 PRWH1L1 EQU	B(00111)	# SET PARITY WIDE=0 HIGH=1 LOW=1
0000010	-002- 02 PRW1HOL0 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 WPBLKSIZE 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

STORE CONTROL AND PARITY TESTS

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-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 FASRNC EQU	0(45454)
	-002- 29 FASRNC T 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 FCHKBT T TEXT	'ACTIVATE MAIN SHIFTER CHECK BIT'
0046304	-002- 41 FCHKBTR EQU	0(46304)
	-002- 42 FCHKBTR T TEXT	'ACTIVATE SHIFTER CHECK BIT W/ REFRESH ENABLED'
0040574	-002- 43 FCHKDS 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 FCKOS15 EQU	0(140574)

STORE CONTROL AND PARITY TESTS

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0141274	-002- 01	FKOS15T TEXT	'FORCE ZEROS TO CHECK CKTS W/ ERROR COLLECT'
	-002- 02	FK1S15 EQU	0(141274)
0043074	-002- 03	FK1S15T TEXT	'FORCE ONES TO CHECK CKTS W/ ERROR COLLECT'
	-002- 04	FDISIDLE EQU	0(43074)
0046156	-002- 05	FDISIDLET TEXT	'FORCE DISABLE OF IDLE FLOP'
	-002- 06	FLSHD EQU	0(46156) # FORCE LOAD THE SHIFTER WITH ZERO (W/CLOCK)
0046154	-002- 08	FLSHOT TEXT	'START ZERO INTO MAIN SHIFTER'
	-002- 09	FLSHONC EQU	0(46154) # PUT ZERO ON INPUT OF SHIFTER (W/O CLOCK)
0045434	-002- 11	FLSHONCT TEXT	'PRESENT ZERO TO INPUT OF MAIN SHIFTER'
	-002- 12	FNOWRT EQU	0(45434)
0045430	-002- 13	FNOWRTT TEXT	'FORCE WRITING OF ALL-ONES DATA'
	-002- 14	FNOWRTC EQU	0(45430)
0044474	-002- 15	FNOWRTCT TEXT	'FORCE WRITING OF ONES W/ CLOCK RUNNING'
	-002- 16	FNOTIM EQU	0(44474) # DISABLE TRANSMISSION OF TIMING SIGNALS TO FANOUT BOARDS
0044470	-002- 18	FNOTIMT TEXT	'INHIBIT TIMING SIGNALS TO FANOUT BOARDS'
	-002- 19	FNOTIMC EQU	0(44470)
0041550	-002- 20	FNOTIMCT TEXT	'BLOCK TIMING TO FANOUT BOARDS (W/CLOCK)'
	-002- 21	FOBMT EQU	0(41550)
0041474	-002- 22	FOBMTT TEXT	'FANOUT BOARD MAINTENANCE TEST'
	-002- 23	FRFSEL0 EQU	0(41474) # FORCE REFRESH SELECT SIGNAL FROM FOB0
0042334	-002- 24	FRFSEL0T TEXT	'CANCEL SELECT FROM FOB0 DURING REFRESH'
	-002- 25	FRFSEL1 EQU	0(42334) # FORCE REFRESH SELECT SIGNAL FROM FOB1
0042534	-002- 26	FRFSEL1T TEXT	'CANCEL SELECT FROM FOB1 DURING REFRESH'
	-002- 27	FRFSEL2 EQU	0(42534) # FORCE REFRESH SELECT SIGNAL FROM FOB2
0043234	-002- 28	FRFSEL2T TEXT	'CANCEL SELECT FROM FOB2 DURING REFRESH'
	-002- 29	FRFSEL3 EQU	0(43234) # FORCE REFRESH SELECT SIGNAL FROM FOB3
0043434	-002- 30	FRFSEL3T TEXT	'CANCEL SELECT FROM FOB3 DURING REFRESH'
	-002- 31	FRFSEL4 EQU	0(43434) # FORCE REFRESH SELECT SIGNAL FROM FOB4
0044354	-002- 32	FRFSEL4T TEXT	'CANCEL SELECT FROM FOB4 DURING REFRESH'
	-002- 33	FRFSEL5 EQU	0(44354) # FORCE REFRESH SELECT SIGNAL FROM FOB5
0044554	-002- 34	FRFSEL5T TEXT	'CANCEL SELECT FROM FOB5 DURING REFRESH'
	-002- 35	FRFSEL6 EQU	0(44554) # FORCE REFRESH SELECT SIGNAL FROM FOB6
0045254	-002- 36	FRFSEL6T TEXT	'CANCEL SELECT FROM FOB6 DURING REFRESH'
	-002- 37	FRFSEL7 EQU	0(45254) # FORCE REFRESH SELECT SIGNAL FROM FOB7
0044334	-002- 38	FRFSEL7T TEXT	'CANCEL SELECT FROM FOB7 DURING REFRESH'
	-002- 39	FRREQA EQU	0(44334) # SET REFRESH REQUEST FLOP (DFFREQ) ON TIMING BOARD (FA1071)
0040674	-002- 41	FRREQAT TEXT	'SET REFRESH REQUEST ON TIMING BOARD (FA1071)'
	-002- 42	FRREQB EQU	0(40674) # SET REFRESH REQUEST FLOP (RREQB) ON CHECK BOARD A (FA1062)
0040664	-002- 44	FRREQBT TEXT	'SET REFRESH REQ COPY ON CHECK BOARD A (FA1062)''
	-002- 45	FRREQBR EQU	0(40664)
0046074	-002- 46	FRREQBRT TEXT	'SET REFRESH REQUEST ON FA1062 W/ REFRESH ENABLED'
	-002- 47	FSELA EQU	0(46074)
0006074	-002- 48	FSELAT TEXT	'FORCE STORE SELECT (ISOLATE) SIGNAL ON FA1071'
	-002- 49	NSELA EQU	0(6074)

STORE CONTROL AND PARITY TESTS

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

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0046060 -002- 01 REFSTRTT TEXT 'RESUME REGULAR REFRESHING OF STORE'
-002- 02 RFWISOL EQU 0(46060)
0047214 -002- 03 RFWISOLT TEXT 'RESUME REGULAR REFRESH W/ STORE ISOLATED'
-002- 04 RTNADHI EQU 0(47214) # RETURN UPPER ADDRESS (SA16-19) BITS &
# SELECTED CONTROL SIGNALS VIA I/O CHANNE

0044714 -002- 06 RTNADHIT TEXT 'LOAD SA17 & SAPH INTO SER'
-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 SERREADY TEXT 'READ BACK STORE ERROR REGISTER(SER)'
0041634 -002- 11 STSBY EQU 0(41634)
-002- 12 STSBYTEXT 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 O1ONOR EQU 0(52354) # FORCE 0-10 (O10TIM) SIGNAL & RESET
# REFRESH REQUEST FLOP
-002- 21 O1ONORT TEXT '0-10 TIMING(O10TIM)THEN REFRESH REQUEST CLEAR'
0054334 -002- 22 O1OREF EQU 0(54334) # FORCE 0-10 (O10TIM) SIGNAL & SET
# REFRESH REQUEST FLOP
-002- 24 O1OREFT TEXT '0-10 TIMING(O10TIM)THEN REFRESH REQUEST SET'
0056074 -002- 25 O10TIM EQU 0(56074)
-002- 26 O10TIMT TEXT 'FORCE 0-10 TIMING SIGNAL ACTIVE'

```

-002- 33 # STORE MAINTENANCE ORDER OPTIONS:

```

0010000 -002- 36 FAKO10 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

```

STORE CONTROL AND PARITY TESTS

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0177771 -002- 01 CLOCKON EQU 0(177771)
0020016 -002- 02 FGLDNCFR EQU 0(20016)

MASK OUT CLOCK OFF OPTIONS
LOAD I/O ORDER CHECK RESULTS WITH CLOCK
STOPPED AND FANOUT BOARDS IN REFRESH
MODE

STORE CONTROL AND PARITY TESTS

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TEST 37

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

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-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 37, MAIN_STORE_CONTROL_AND_PARITY
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0016116

-001- 10 CSTCP1 CSECT

0016116 01 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN .

0016117

```

20 # SEGMENT 1
21 # THIS SEGMENT CHECKS THE INTEGRITY OF ALL UNTESTED STORE CONTROL LEADS
22 # EXCEPT FOR STORE ERROR B(SERB) WHICH IS CHECKED LATER DURING THE WRITE PROTECT
23 # TESTS. THE STORE ERROR A(SERA) SIGNAL IS CHECKED BY INTENTIONALLY CAUSING
24 # AN ERROR AND CHECKING THAT A MY-STORE-ERROR(MSTRER) IS SET IN THE OFF-LINE
25 # PROCESSOR ERROR REGISTER. THE ZERO STATE OF THAT LEAD (AND BIT IN ERROR REG)
26 # IS CHECKED BY INITIALIZING THE STORE CONTROLLER AND GOING THRU AN ABBREVIATED
27 # STORE CYCLE THAT DOES NOT INCLUDE AN ERROR COLLECTION (ERCOLL) SIGNAL.
28 # STORE GO (SGO), STORE BUSY (SBY) AND STORE COMPLETE (SCH) SIGNALS HAVE
29 # BEEN CHECKED PREVIOUSLY IN THE MULTIPLEXOR TESTS.
30
31 # NOTE: THE STORE REQUEST(SREQ) CONTROL LEAD IS NOT CHECKED IN THE STORE TESTS,
32 # BECAUSE IT DOES NOT PERFORM ANY FUNCTION WITHIN THE STORE CONTROLLER
33 # (IT IS JUST REPEATERED ON ITS WAY TO HIGHER STORES) AND THERE IS NO ACCESS TO
34 # THIS SIGNAL PROVIDED AT PRESENT. THUS, APPLICATIONS WHICH USE THIS SIGNAL
35 # MUST DIAGNOSE ITS TRANSMISSION THRU STORES WHICH REPEAT THIS SIGNAL (SREQ)
36 # FROM THE PROCESSOR.

39 # SEGMENT 2
40 # THIS SEGMENT CHECKS THE CIRCUIT WHICH CLEARS OUT THE MAIN SHIFTER IF
41 # THIS STORE IS NOT THE ONE BEING ADDRESSED DURING A NORMAL STORE OPERATION.
42 # FIRST, MAKE SURE CLEAR WORKS BY CHECKING FOR A TIMING BOARD ERROR WHEN THE
43 # NEXT HIGHER STORE IS ACCESSED. NEXT, SET UP CONDITIONS TO CHECK WHETHER
44 # ANY OF THE INPUTS TO THE CLEAR CIRCUIT ARE STUCK ACTIVE. FINALLY, VERIFY THAT
45 # NONE OF THE INPUTS TO THE ERROR CIRCUIT USED PREVIOUSLY ARE STUCK ACTIVE.

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STORE CONTROL AND PARITY TESTS

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TEST 37

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # SEGMENT 3
02 # THIS SEGMENT TESTS THE STORE SELECT CHECK CIRCUITS (TSTERA/TSTERB) FOR
03 # STUCK INPUT ENABLES. SINCE THE UNSELECT (TSEL0) AND SELECT-DIFFERENCE (DIF1)
04 # ENABLES WERE CHECKED PREVIOUSLY, ONLY THE SHIFTER-BIT-3 (BIT031) AND THE
05 # NORMAL-MODE (RMBB0) ENABLES NEED BE CHECKED FOR STUCK-ACTIVE FAULTS AT THIS
06 # POINT. FIRST, THE SHIFTER-BIT-3 ENABLE IS CHECKED BY FORCING IT INACTIVE (LOW)
07 # WHILE ACTIVATING THE OTHER ENABLES FOR EACH HALF OF THE STORE SELECT CHECK
08 # CIRCUIT IN TURN. THE SAME SCHEME IS THEN USED TO CHECK THE NORMAL-MODE ENABLES
09 # ON EACH HALF OF THIS CHECK CIRCUIT. IF A STORE SELECT ERROR IS REGISTERED
10 # DURING THIS PROCEDURE, THEN ONE OF THE ENABLES BEING TESTED MUST BE STUCK
11 # ACTIVE ON AN INPUT TO THE CHECK CIRCUITRY.

14 # SEGMENT 4
15 # THIS SEGMENT CHECKS THAT THE BUS-READ(BUSRD) SIGNAL WHICH ENABLES THE
16 # REPEATERING OF STORE DATA BUS BITS FROM FARTHER STORES IS NOT STUCK ACTIVE.
17 # THIS IS ACCOMPLISHED USING THE SAME TEST SEQUENCE THAT CHECKED THE STORE DATA
18 # BUS IN THE READ DIRECTION. HOWEVER, IN THIS SEQUENCE THE FORCE-BUS-READ-
19 # INACTIVE (FBUSRDN) MAINTENANCE OPTION DEACTIVATES THE BUS-READ(BUSRD1) ON
20 # THE BIT-SLICED BOARDS, SO THAT IT CAN BE CHECKED FOR A STUCK-ACTIVE FAULT.

STORE CONTROL AND PARITY TESTS

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TEST 37

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

01 CSTCP1 OW 0(1),0(16) # 12703
-001- 02 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000001 *****

0016117 01 000001 000144 ----- CDGNM
0016117 01 000001 000144 ----- CDGNM
0016120 01 000002 047707 ----- CDGNM
0016121 01 000003 000040 000001
0016123 01 000005 020005 ----- CDGNM
0016124 01 000006 106631 -----
0016125 01 000007 040043 000000 CDGNM
0016126 01 000010 000000 016130 0016130
0016130 01 000012 103501 000151 TTYTBL
0016132 01 000014 034500 043132 CTSD
0016134 01 000016 103240 -----
0016135 01 000017 004257 -----
0016136 01 000020 072652 ----- CDGNM
0016137 01 000021 037020 012757 CDGSIO
0016141 01 000023 172652 ----- CDGNM
0016142 01 000024 137020 012667 CDGSIO
0016144 01 000026 046071 -----
0016145 01 000027 171400 -----
0016146 01 000030 031000 016152 0016152
0016150 01 000032 037000 011162 CDGNM

05 CP1INIT PREPARE
-002- 06 # RTN BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-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).
-002- 13 VFD 1,0 2,2 7,B(0111111) 6,N2SEND
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBXF
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
-002- 20 VFD 8,MSXT 8,MCHBXF

-002- 22 # NO3 CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
-002- 24 VFD 1,0 2,2 7,0 6,NNO3CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MXAS
-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)

-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1 #ASSURE THAT LOOPIND IS ZERO BEFORE
#PROCEEDING WITH TEST

-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTPREP
-001- 39 HN LOOPIND,LOOPIND
-003- 40 BSA MASIOM
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

-002- 43 GA
-002- 44 LAL RO,**4,RAO
-002- 45 BL INTRPN03

```

STORE CONTROL AND PARITY TESTS

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TEST 37

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

0016152

01
-001- 02

EOW
NOTE

12703

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 27

TEST 37 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 37 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

```

0016152 01 000034 000100 ----- CDGMM -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THE INTEGRITY OF ALL UNTESTED STORE CONTROL LEADS
12 # EXCEPT FOR STORE ERROR B(SERB) WHICH IS CHECKED LATER DURING THE WRITE PROTECT
13 # TESTS. THE STORE ERROR A(SERA) SIGNAL IS CHECKED BY INTENTIONALLY CAUSING
14 # AN ERROR AND CHECKING THAT A MY-STORE-ERROR(MSTRER) IS SET IN THE OFF-LINE
15 # PROCESSOR ERROR REGISTER. THE ZERO STATE OF THAT LEAD (AND BIT IN ERROR REG)
16 # IS CHECKED BY INITIALIZING THE STORE CONTROLLER AND GOING THRU AN ABBREVIATED
17 # STORE CYCLE THAT DOES NOT INCLUDE AN ERROR COLLECTION (ERCOLL) SIGNAL.
18 # STORE GO (SGO), STORE BUSY (SBY) AND STORE COMPLETE (SCM) SIGNALS HAVE
19 # BEEN CHECKED PREVIOUSLY IN THE MULTIPLEXOR TESTS.
20 #
21 # NOTE: THE STORE REQUEST(SREQ) CONTROL LEAD IS NOT CHECKED IN THE STORE TESTS,
22 # BECAUSE IT DOES NOT PERFORM ANY FUNCTION WITHIN THE STORE CONTROLLER
23 # (IT IS JUST REPEATED ON ITS WAY TO HIGHER STORES) AND THERE IS NO ACCESS TO
24 # THIS SIGNAL PROVIDED AT PRESENT. THUS, APPLICATIONS WHICH USE THIS SIGNAL
25 # MUST DIAGNOSE ITS TRANSMISSION THRU STORES WHICH REPEAT THIS SIGNAL (SREQ)
26 # FROM THE PROCESSOR.

```

0016153

```

29 # NOTE: THE STORE ERROR A(SERA) ISOLATION CIRCUITRY AND TEST WERE ELIMINATED
30 # TO ALLOW ERRORS FROM UNSELECTED STORES TO PROPAGATE TO THE PROCESSOR
31 # AS QUICKLY AS POSSIBLE.

```

```

-001- 35 # ZERO_ER
-001- 36 # ZERO THE OFF-LINE ER.
0016153 01 000035 000012 ----- CDGMM -001- 37 VFD 1,0 2,0 7,0 6,NZERO_ER

```

```

-001- 39 # N03_CODE
-001- 40 # PROCESS 3ACC CODED ROUTINE AT ADDRESS ERASET.
0016154 01 000036 040043 000000 CDGMM -001- 41 VFD 1,0 2,2 7,0 6,NNO3CD
0016155 01 000037 000000 016157 0016157 -001- 42 ADDR ERASET

```

```

45 # CHECK WHETHER STORE ERROR A(SERA) IN MAIN STORE CONTROLLER &
46 # MY STORE ERROR(MSTER) IN PROCESSOR ERROR REGISTER CAN BE SET AND CLEARED

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 37 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0016157	01	000041	137020	012667	CDGSIO	-002-	04	ERASET	SIOM	MASCINT	# CLEAR STORE COMMAND REGISTER
0016164	01	000043	046071	137020		-001-	05		BSA	MASIOH	
0016161	01	000043	046071	137020		-001-	05		DATA	MASCINT	# INITIALIZE STORE CONTROLLER
0016162							06		SIOM	FBIT09	# SHOULD PICK UP ILLEGAL (0/4) STORE COMMAND CODE
0016162	01	000044	137020	012667	CDGSIO	-002-	08		BSA	MASIOH	
0016164	01	000046	146074	137020		-001-	09		DATA	FBIT09	# COLLECT ERRORS IN STORE ERROR REGISTER
0016165							10		SIOM	CLKSTR	
0016165	01	000047	137020	012667	CDGSIO	-002-	11		BSA	MASIOH	
0016167	01	000051	046070	-----		-001-	12		DATA	CLKSTR	# ENABLE STORE CONTROLLER CLOCK OUTPUT
0016170							13		NMLREAD	BASADDR	# COLLECT STORE ERRORS VIA BUS
0016170	01	000052	103561	106260		-001-	14		LI	R7,B(1000110010110000)	# MAIN MEMORY STATUS
0016172	01	000054	031040	043140	CTSD	-001-	15		LAL	R2,BASADDR,RAO	
0016174	01	000056	041061	-----		-001-	16		LA	R3,1(RAO)	
0016175	01	000057	003140	-----		-001-	17		ZR	R6	# NO SPECIAL PARITY
0016176	01	000060	037020	013027	CDGSBS	-002-	18		BSA	MEMOP	
0016200							19		SIOM	MASCINT	# PREPARE FOR NEXT TEST
0016200	01	000062	137020	012667	CDGSIO	-002-	20		BSA	MASIOH	
0016202	01	000064	046071	-----		-001-	21		DATA	MASCINT	# INITIALIZE STORE CONTROLLER
0016203							22		RTN_TBL	++4	
0016203	01	000065	171400	-----		-001-	23		GA		
0016204	01	000066	031000	016210	0016210	-001-	24		LAL	RO,++4,RAO	
0016206	01	000070	037000	011162	CDGNM	-001-	25		BL	INTRPN03	
							27	#	RETRN		
							28	#	RETURN OFF-LINE ER TO ON-LINE MCHB.		
0016210	01	000072	013710	-----	CDGNM	-001-	29		VFD	1,0 2,0 7,B(1011111) 6,NRETRN	
							31	#	COMPARE		
							32	#	COMPARE ON-LINE MCHB BIT S(MSTRER) TO 1.		
							33	#	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.		
0016211	01	000073	020714	-----	CDGNM	-001-	34		VFD	1,LPINDX 2,1 1,0 1,SUCCESS 5,S(MSTRER) 6,NCOMPARE	
0016212	01	000074	000001	-----		-001-	35		VFD	15,0 1,1	
							37	#	FAILTST		
							38	#	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS ERAFAL.		
							39	#	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.		
0016213	01	000075	020017	-----	CDGNM	-001-	40		VFD	1,0 2,1 5,0 2,0 6,NFAILTST	
0016214	01	000076	000002	-----		-001-	41		VFD	16,ERAFAL	

43 # STORE ERROR A(SERA) SIGNAL IS NOT BEING TRANSMITTED TO OFF-LINE ERROR REG(ER)

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0016215          01 ERA1XT
-001- 02 #      ZERO_ER
-001- 03 #      ZERO THE OFF-LINE ER.
0016215 01 000077 000012 ----- CDGNM -001- 04      VFD      1,0 2,0 7,0 6,NZERO_ER

-001- 06 #      NO3_CODE
-001- 07 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS ERACLR.
0016216 01 000100 040043 000000 CDGNM -001- 08      VFD      1,0 2,2 7,0 6,NN03CD
0016217 01 000101 000000 016221 0016221 -001- 09      ADDR      ERACLR

0016221          13 ERACLR
0016221          14      SIOM      CKTINIT
0016221 01 000103 137020 012667 CDGSIO -002- 15      BSA      MASIOM
0016223 01 000105 040374 137020 -001- 16      DATA     CKTINIT          # INITIALIZE ALL STORE CONTROLLER
                                # CIRCUITS
                                # COMPLETE STORE CYCLE IMMEDIATELY
0016224          18      SIOM      FCHKBT
0016224 01 000106 137020 012667 CDGSIO -002- 19      BSA      MASIOM
0016226 01 000110 046314 ----- -001- 20      DATA     FCHKBT          # ACTIVATE MAIN SHIFTER CHECK BIT
0016227          21      NMLREAD  BASADDR          # COLLECT STORE ERRORS VIA BUS
0016227 01 000111 103561 106260 -001- 22      LI      R7,B(1000110010110000) # MAIN MEMORY STATUS
0016231 01 000113 031040 043140 CTSD -001- 23      LAL     R2,BASADDR,RAO
0016233 01 000115 041061 ----- -001- 24      LA      R3,1(RAO)
0016234 01 000116 003140 ----- -001- 25      ZR      R6          # NO SPECIAL PARITY
0016235 01 000117 037020 013027 CDGSBS -002- 26      BSA     MEMOP
0016237          27      RTN_TBL  **4
0016237 01 000121 171400 ----- -001- 28      GA
0016240 01 000122 031000 016244 0016244 -001- 29      LAL     R0,**4,RAO
0016242 01 000124 037000 011162 CDGNM -001- 30      BL      INTRPNO3

-001- 32 #      RETRN
-001- 33 #      RETURN OFF-LINE ER TO ON-LINE MCHB.
0016244 01 000126 013710 ----- CDGNM -001- 34      VFD      1,0 2,0 7,B(1011111) 6,NRETRN

-001- 36 #      COMPARE
-001- 37 #      COMPARE ON-LINE MCHB BIT S(MSTRER) TO 0.
-001- 38 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016245 01 000127 020714 ----- CDGNM -001- 39      VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,S(MSTRER) 6,NCOMPARE
0016246 01 000130 000000 ----- -001- 40      VFD      15,0 1,0

-001- 42 #      FAILTST
-001- 43 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS ERAFAL.
-001- 44 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016247 01 000131 020017 ----- CDGNM -001- 45      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0016250 01 000132 000002 ----- -001- 46      VFD      16,ERAFAL

```

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # STORE INITIALIZE DID NOT CLEAR STORE ERROR REGISTER(SER) & MY STORE ERROR(ER)

04 # NOTE: STORE ERROR B(SERB) WILL BE CHECKED LATER DURING WRITE-PROTECT TESTS

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 37 SEGMENT 2
-001- 04 # *
-001- 05 # *****
    
```

0016251 01 000133 000200 ----- CDGNN -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

11 # THIS SEGMENT CHECKS THE CIRCUIT WHICH CLEARS OUT THE MAIN SHIFTER IF
12 # THIS STORE IS NOT THE ONE BEING ADDRESSED DURING A NORMAL STORE OPERATION.
13 # FIRST, MAKE SURE CLEAR WORKS BY CHECKING FOR A TIMING BOARD ERROR WHEN THE
14 # NEXT HIGHER STORE IS ACCESSED. NEXT, SET UP CONDITIONS TO CHECK WHETHER
15 # ANY OF THE INPUTS TO THE CLEAR CIRCUIT ARE STUCK ACTIVE. FINALLY, VERIFY THAT
16 # NONE OF THE INPUTS TO THE ERROR CIRCUIT USED PREVIOUSLY ARE STUCK ACTIVE.
    
```

```

-001- 19 # NO3 CODE
-001- 20 # PROCESS 3ACC CODED ROUTINE AT ADDRESS CLSHTST.
0016252 01 000134 040043 000000 CDGNN -001- 21 VFD 1,0 2,2 7,0 6,NNO3CD
0016253 01 000135 000000 016255 0016255 -001- 22 ADDR CLSHTST
    
```

24 # TEST SIGNAL WHICH CLEARS SHIFTER(CLSH) IF THIS STORE WAS NOT SELECTED

```

0016255 26 CLSHTST
0016255 27 SIOM MSCITNS
0016255 01 000137 137020 012667 CDGSIO -002- 28 BSA MASIOM
0016257 01 000141 006071 ----- -001- 29 DATA MSCITNS # INITIALIZE STORE CONTROLLER W/O FORCE
                                                                    SELECT
0016260 01 000142 131700 043140 CTSD 31 LAL R12,BASADDR,RA1
0016262 01 000144 041721 ----- 32 LA R13,1(RA1)
0016263 01 000145 004704 ----- 33 AN R12,4 # SELECT ANOTHER STORE
0016264 34 NMLREAD RAD
0016264 01 000146 003561 106260 -001- 35 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0016266 01 000150 006054 ----- -001- 36 LR R2,R12
0016267 01 000151 006075 ----- -001- 37 LR R3,R13
0016270 01 000152 003140 ----- -001- 38 ZR R6 # NO SPECIAL PARITY
0016271 01 000153 037020 013027 CDGSBS -002- 39 BSA MEMOP
0016273 40 SRIO SERREAD
0016273 01 000155 137020 012667 CDGSIO -002- 41 BSA MASIOM
0016275 01 000157 047114 ----- -001- 42 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0016276 43 TEST S(TBER),Otest,CLSHTRB
0016276 01 000160 124273 ----- -001- 44 TBN R11,S(TBER)
0016277 01 000161 055011 ----- 0016310 -001- 45 BNC P357
0016300 01 000162 007473 ----- -001- 46 LSR MCHB,R11
0016301 01 000163 071400 ----- -002- 47 GA
0016302 01 000164 031000 016306 0016306 -002- 48 LAL R0,++4,RAD
0016304 01 000166 037000 011162 CDGNN -002- 49 BL INTRPN03
    
```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

-002- 02 #   FAILTST
-002- 03 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS CLSHTRB.
-002- 04 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016306 01 000170 020017 ----- CDGNM
0016307 01 000171 000004 137020
-002- 05   VFD   1,0 2,1 5,0 2,0 6,NFAILTST
-002- 06   VFD   16,CLSHTRB

-001- 08 # TROUBLE PRINTOUT DATA = CONTENTS OF R11 IN ON-LINE PROCESSOR
-001- 09 P357
0016310
10 # SHIFTER CLEAR CIRCUIT FAILED TO CLEAR AN UNSELECTED STORE'S MAIN SHIFTER

15 # CHECK THAT INPUTS TO SET SHIFTER BITS(TSTB0B0) GATE ARE NOT STUCK ACTIVE.
16 # A PREVIOUS TEST OF THE STORE COMPLETE(SCH) SIGNAL HAS ALREADY ELIMINATED THE
17 # POSSIBILITY OF EITHER THE UNSELECT(TSELO) OR THE SHIFTER-BIT-2(SHB02000)
18 # ENABLE BEING STUCK ACTIVE. THIS SEQUENCE CHECKS THAT THE REMAINING NORMAL MODE
19 # (RMBB0) ENABLE IS NOT STUCK ACTIVE.

0016310
0016310
0016310 01 000172 137020 012667 CDGSIO
0016312 01 000174 046071 137020
0016313
0016313 01 000175 137020 012667 CDGSIO
0016315 01 000177 046074 -----
0016316 01 000200 130700 043140 CTSD
0016320 01 000202 015714 -----
0016321 01 000203 003320 -----
0016322
0016322 01 000204 003561 106260
0016324 01 000206 006054 -----
0016325 01 000207 006075 -----
0016326 01 000210 003140 -----
0016327 01 000211 037020 013027 CDGSBS
0016331
0016331 01 000213 106000 -----
0016332 01 000214 006000 -----
0016333 01 000215 006000 -----

21 HLTIN
22
-002- 23   SIOH   MASCINT
-001- 24   BSA   MASIOM
25   DATA   MASCINT
26   SIOH   CLKSTOP
-002- 26   BSA   MASIOM
-001- 27   DATA   CLKSTOP
28   LL     R12,BASADDR
29   COM    R12
30   ZR     R13
31   NMLREAD RAO
-001- 32   LI     R7,B(1000110010110000) # MAIN MEMORY STATUS
-001- 33   LR     R2,R12
-001- 34   LR     R3,R13
-001- 35   ZR     R6
-002- 36   BSA   MEMOP
37   LODSHFTR
-001- 38   NOP
-001- 39   NOP
-001- 40   NOP
41 # NOTE: SINCE ANOTHER STORE MIGHT RESPOND AND TAKE DOWN THE STORE BUS SIGNALS
42 # (E.G., STORE GO) WE MUST FORCE LOAD BIT0 OF THE MAIN SHIFTER
43 # IF BIT1 INPUT TO HALT CYCLE GATE IS STUCK ACTIVE THE SHIFTER WILL BE CLEARED
44   SIOH   FSTRM
-002- 45   BSA   MASIOM
0016334 01 000216 037020 012667 CDGSIO
0016336 01 000220 046514 137020
-001- 46   DATA   FSTRM
0016337
47   SIOH   MASCLK
0016337 01 000221 137020 012667 CDGSIO
-002- 48   BSA   MASIOM
0016341 01 000223 046076 137020
-001- 49   DATA   MASCLK
# FORCE MODE FLOP TO REFRESH STATE
# FAKE FIRST HALF OF STORE CLOCK CYCLE

```

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0016342      ,
0016342 01 000224 137020 012667 CDGSIO -002- 02      SIOM      FCHKBT
0016344 01 000226 046314 ----- -001- 03      BSA      MASOM
0016345 01 000227 130700 043140 CTSD -001- 04      DATA    FCHKBT          # ACTIVATE MAIN SHIFTER CHECK BIT
0016347      ,
0016347 01 000231 003561 106260 -001- 05      LL      R12,BASADDR
0016351 01 000233 006054 ----- -001- 06      NMLREAD  RAO
0016352 01 000234 006075 ----- -001- 07 # LOAD PROPER INFORMATION & PERFORM NORMAL READ AT SPECIFIED ADDRESS IN OFF-LINE
0016353 01 000235 003140 ----- -001- 08      LI      R7,B(1000110010110000) # MAIN MEMORY STATUS
0016354 01 000236 037020 013027 CDGSBS -001- 09 # IF ADDRESS(RAO) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0016355 01 000236 037020 013027 CDGSBS -001- 10      LR      R2,R12
0016356 01 000240 103401 114564      -001- 11      LR      R3,R13
0016360 01 000242 007400 ----- -001- 12 # IF NOT, LOAD R2 & R3 INDIRECTLY FROM MEMORY LOCATION SPECIFIED(VIA RAO)
0016361      ,
0016361 01 000243 037020 111075 CSYSUB -001- 13      ZR      R6          # NO SPECIAL PARITY
0016362 01 000245 103401 000261 -001- 14      CALL    MEMOP          # INITIATE NORMAL READ(OFF-LINE)
0016363 01 000247 073027 ----- -002- 15      BSA     MEMOP
0016364 01 000250 112403 -----      -002- 16      BSA     MEMOP
0016365 01 000251 024070 -----      17 # RETRIEVE STATE OF DATA READY FLOP IN OFF-LINE MICRO-CONTROL STATUS REG (MCS)
0016366 01 000252 055011 -----      19      LI      RO,MCHBXT+E(8)+MCSXF # GET MICRO-CONTROL STATUS
0016367 01 000253 007463 -----      20      LSR     MCHTR,RO
0016368 01 000254 071400 -----      21      LMCH    LDMIRL
0016369 01 000255 031000 016377 0016377 -001- 22 CSYSUB EXTERN SLDMIRL
0016370 01 000257 037000 011162 CDGNM -001- 23      CALL    SLDMIRL
0016371 01 000258 011162 CDGNM -002- 24      BSA     SLDMIRL
0016372 01 000259 011162 CDGNM -001- 25      LMCH    RTNMCHB
0016373 01 000260 011162 CDGNM -001- 26      LI      RO,RTNMCHB
0016374 01 000261 020017 ----- -001- 27 CSYSUB EXTERN SMCH
0016375 01 000262 020017 ----- -001- 28      CALL    SMCH
0016376 01 000263 020017 ----- -002- 29      BSAI   SXMCH          # SUBROUTINE SMCH IS IN PROGRAM CSYSUB
0016377 01 000264 020017 -----      30      UNPK   MCHB
0016378 01 000265 020017 -----      31 # IF MAIN SHIFTER WAS NOT CLEARED, THE DATA READY(DR) SHOULD NOT HAVE BEEN SET
0016379 01 000266 020017 -----      32 # BECAUSE STORE COMPLETE(SCM) WILL NOT BE ACTIVE
0016380 01 000267 020017 -----      33      TEST   S(DRO),OTEST,HLTTRB,REG=R3
0016381 01 000268 020017 ----- -001- 34 # USE NO 3 CODE FOR FIELD & MACROS SUCH AS 'COMPARE' FOR FACTORY CODE
0016382 01 000269 020017 ----- -001- 35      TBN    R3,S(DRO)
0016383 01 000270 020017 ----- -001- 36      BNC    P379
0016384 01 000271 020017 ----- -001- 37      LSR    MCHB,R3
0016385 01 000272 020017 ----- -001- 38      RTN_TBL **4
0016386 01 000273 020017 ----- -002- 39      GA
0016387 01 000274 020017 ----- -002- 40      LAL    RO,**4,RAO
0016388 01 000275 020017 ----- -002- 41      BL     INTRPN03
0016389 01 000276 020017 ----- -001- 43      FAILTST HLTTRB
0016390 01 000277 020017 ----- -002- 44 #      FAILTST
0016391 01 000278 020017 ----- -002- 45 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS HLTTRB.
0016392 01 000279 020017 ----- -002- 46 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016393 01 000280 020017 ----- -002- 47      VFD    1,0 2,1 5,0 2,0 6,NFAILTST
0016394 01 000281 020017 ----- -002- 48      DO     .DONE VAR=1,1
0016395 01 000282 020017 ----- -002- 49 .DONE VFD 16,HLTTRB

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TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0016400 01 000262 000005 137020      -002- 01      VFD      16,HLTTRB

0016401                                -001- 03 # TROUBLE PRINTOUT DATA = CONTENTS OF R3 IN ON-LINE PROCESSOR
-001- 04 P379
05 # THE NORMAL MODE(RMBBO) INPUT TO THE SHIFTER CLEAR CIRCUIT IS STUCK ACTIVE

10 # CHECK THAT INPUTS TO SHIFTER CLEAR ERROR GATE (TSTAERA0) ARE NOT STUCK
11 # ACTIVE. SINCE THE SHIFTER-BIT-3(BIT031) INPUT WAS ALREADY CHECKED IN THE
12 # INITIAL CLEAR-SHIFTER TEST (CLSHTST), THIS SEQUENCE MUST ONLY VERIFY THAT
13 # THE NORMAL MODE(RMBBO) AND THE UNSELECT(TSELO) ENABLES ARE NOT STUCK ACTIVE.

0016401                                15 STBCHK
0016401                                16      SIOM      CKTINIT
0016401 01 000263 137020 012667 CDGSI0 -002- 17      BSA      MASIOM
0016403 01 000265 040374 ----- -001- 18      DATA     CKTINIT      # INITIALIZE ALL STORE CONTROLLER
                                          # CIRCUITS

0016404 01 000266 131700 043140 CTSD      20      LAL      R12,BASADDR,RA1
0016406 01 000270 040721 -----      21      L        R13,1(RA1)
0016407 01 000271 030400 012755 CDGSI0      22      LL      RO,STRSIZE
0016411 01 000273 001700 -----      23      AR      R12,RO      # POINT TO NEXT STORE
0016412                                24      NMLREAD  RAO
0016412 01 000274 003561 106260 -001- 25      LI      R7,B(1000110010110000) # MAIN MEMORY STATUS
0016414 01 000276 006054 ----- -001- 26      LR      R2,R12
0016415 01 000277 006075 ----- -001- 27      LR      R3,R13
0016416 01 000300 003140 ----- -001- 28      ZR      R6      # NO SPECIAL PARITY
0016417 01 000301 037020 013027 CDGSBS -002- 29      BSA      MEMOP
0016417 01 000301 037020 013027 CDGSBS -001- 30 CSTCP1 0W      0(303)      # 780315
-001- 31      NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000303 *****

0016421                                34      SIOM      STSBY
0016421 01 000303 137020 012667 CDGSI0 -002- 35      BSA      MASIOM
0016423 01 000305 041634 103401 -001- 36      DATA     STSBY      # SET STORE BUSY(SBY) SIGNAL
0016424 01 000306 103401 015471      37      LI      RO,SDR%
0016426 01 000310 007400 -----      38      LSR     MCHTR,RO
0016427                                39      LMCH     LDMIRL
0016427 -001- 40      CALL     SLDMIRL
0016427 01 000311 037020 111075 CSYSUB -002- 41      BSA      SLDMIRL
0016431                                42      TAKEOUT  5
0016431 01 000313 106000 ----- -001- 43      LR      0,0
0016432 01 000314 006000 ----- -001- 44      LR      0,0
0016433 01 000315 006000 ----- -001- 45      LR      0,0
0016434 01 000316 006000 ----- -001- 46      LR      0,0
0016435 01 000317 006000 ----- -001- 47      LR      0,0
0016436                                48      EOW
-001- 49      NOTE      # 780315 ***** THE LAST ADDRESS OVERWRITTEN IS 000317 *****

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 35

TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

04 # THIS WILL CHECK FOR THE UNSELECT ENABLE (TSELO) STUCK ACTIVE

```

0016436
0016436 01 000320 037020 012667 CDGSI0 -002- 06 SIOM FSTRM
0016440 01 000322 046514 137020 -001- 07 BSA MASIOM
09 CSTCP1 OW 0(323),0(325) # FORCE MODE FLOP TO REFRESH STATE
-001- 08 DATA FSTRM # 780315
-001- 10 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000323 *****

```

```

0016441
0016441 01 000323 137020 012667 CDGSI0 -002- 13 SIOM CLKSTRT
0016443 01 000325 046070 137000 -001- 14 BSA MASIOM
0016444 -001- 15 DATA CLKSTRT # ENABLE STORE CONTROLLER CLOCK OUTPUT
-001- 16 EOW # 780315
-001- 17 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000325 *****

```

21 # IF THE NORMAL MODE(RMBB0) ENABLE IS STUCK ACTIVE, IT WILL SET THE ERROR HERE

```

-001- 23 CSTCP1 OW 0(326) # 12991
-001- 24 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000326 *****

```

```

0016444 01 000326 137000 113346 0000564 -001- 27 CPATCH1 BGNP 0(564) # 12991
-001- 28 BL XXX405
-001- 29 NOTE CPATCH1 'CSECT'
-001- 30 NOTE ***** PATCH AREA BEGINS AT 000564 *****

```

```

0113346 -001- 33 XXX405 PATCHAREA
0113346 34 SRI0 SERREAD
0113346 06 000564 137020 012667 CDGSI0 -002- 35 BSA MASIOM
0113350 06 000566 047114 137000 -001- 36 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0113351 37 ENDP # 12991
0113351 06 000567 137000 016446 0000330 -001- 38 BL XXX409
-001- 39 NOTE ***** LAST PATCH ADDRESS USED IS 000570 *****
-001- 40 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

```

```

0016446 -001- 43 XXX409 OWCONTINUE
0016446 44 CALL WAIT # TAKE A REAL TIME BREAK.
0016446 01 000330 173025 ----- -001- 45 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
0016447 46 EOW # 12991
-001- 47 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000330 *****

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 36

TEST 37 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0016447          01          01          TEST      S(TBER),O TEST,STBTRB
0016447 01 000331 124273 -----          -001- 02          TBN      R11,S(TBER)
0016450 01 000332 055011 ----- 0016461 -001- 03          BNC      P414
0016451 01 000333 007473 -----          -001- 04          LSR      MCHB,R11
0016452 01 000334 071400 -----          -002- 05          GA
0016453 01 000335 031000 016457 0016457 -002- 06          LAL      RD,++4,RAO
0016455 01 000337 037000 011162 CDGNM -002- 07          BL      INTRPN03

          -002- 09 #          FAILTST
          -002- 10 #          FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS STBTRB.
          -002- 11 #          DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016457 01 000341 020017 -----  CDGNM -002- 12          VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0016460 01 000342 000006 -----          -002- 13          VFD      16,STBTRB

          -001- 15 #          TROUBLE PRINTOUT DATA = CONTENTS OF R11 IN ON-LINE PROCESSOR
0016461          -001- 16 P414
          17 #          AN INPUT TO THE SHIFTER CLEAR CHECK(TSTERB) IS STUCK ACTIVE

0016461          20          RTN_TBL  ++4
0016461 01 000343 171400 -----          -001- 21          GA
0016462 01 000344 031000 016466 0016466 -001- 22          LAL      RD,++4,RAO
0016464 01 000346 037000 011162 CDGNM -001- 23          BL      INTRPN03

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP .ISSUE 05 PAGE 37

TEST 37 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 37 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

```

0016466 01 000350 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,d(3) 6,NTESTSEG

```

```

11 # THIS SEGMENT TESTS THE STORE SELECT CHECK CIRCUITS (TSTERA/TSTERB) FOR
12 # STUCK INPUT ENABLES. SINCE THE UNSELECT (TSEL0) AND SELECT-DIFFERENCE (DIF1)
13 # ENABLES WERE CHECKED PREVIOUSLY, ONLY THE SHIFTER-BIT-3 (BIT031) AND THE
14 # NORMAL-MODE (RMBB0) ENABLES NEED BE CHECKED FOR STUCK-ACTIVE FAULTS AT THIS
15 # POINT. FIRST, THE SHIFTER-BIT-3 ENABLE IS CHECKED BY FORCING IT INACTIVE (LOW)
16 # WHILE ACTIVATING THE OTHER ENABLES FOR EACH HALF OF THE STORE SELECT CHECK
17 # CIRCUIT IN TURN. THE SAME SCHEME IS THEN USED TO CHECK THE NORMAL-MODE ENABLES
18 # ON EACH HALF OF THIS CHECK CIRCUIT. IF A STORE SELECT ERROR IS REGISTERED
19 # DURING THIS PROCEDURE, THEN ONE OF THE ENABLES BEING TESTED MUST BE STUCK
20 # ACTIVE ON AN INPUT TO THE CHECK CIRCUITRY.

```

```

-001- 23 # NO3_CODE
-001- 24 # PROCESS 3ACC CODED ROUTINE AT ADDRESS BT3STK.
0016467 01 000351 040043 000000 CDGNM -001- 25 VFD 1,0 2,2 7,0 6,NN03CD
0016470 01 000352 000000 016472 0016472 -001- 26 ADDR BT3STK

```

```

0016472 28 BT3STK
0016472 29 SIOM MASCINT8-ISOLATE
0016472 01 000354 137020 012667 CDGSIO -002- 30 BSA MASIO
0016474 01 000356 006071 ----- -001- 31 DATA MASCINT8-ISOLATE # INITIALIZE STORE CONTROLLER
0016475 01 000357 131700 043140 CTSD 32 LAL R12,BASADDR,RA1
0016477 01 000361 041721 ----- 33 LA R13,1(RA1)
0016500 01 000362 015714 ----- 34 COM R12 # UNSELECT STORE UNDER TEST
0016501 35 NMLREAD RAO
0016501 01 000363 003561 106260 -001- 36 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0016503 01 000365 006054 ----- -001- 37 LR R2,R12
0016504 01 000366 006075 ----- -001- 38 LR R3,R13
0016505 01 000367 003140 ----- -001- 39 ZR R6 # NO SPECIAL PARITY
0016506 01 000370 037020 013027 CDGSBS -002- 40 BSA MEMOP

```

```

42 # THIS OPERATION WILL LOAD THE ADDRESS TO UNSELECT THIS STORE WHICH, IN TURN,
43 # ACTIVATES THE SELECT INPUT (TSEL) TO THE ONE HALF OF THE SELECT CHECK
44 # CIRCUIT (TTSERA). SINCE THE STORE INITIALIZE HAS FORCED THE CONTROLLER INTO
45 # THE NORMAL MODE, THAT INPUT (RMD) TO THE CHECK CIRCUIT IS ALSO ACTIVE.
46 # FINALLY, ALL SHIFTER BITS WERE CLEARED BY THE INITIALIZE, SO THE SELECT ERROR
47 # (SELER) WILL BE SET ONLY IF THE BIT-3 INPUT (BIT031) IS STUCK ACTIVE.

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 38

TEST 37 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0016510          01          SIOM  CLKSTOP
0016510 01 000372 137020 012667 CDGSIO -002- 02      BSA    MASIOM
0016512 01 000374 046074 137020      -001- 03      DATA  CLKSTOP          # DISABLE STORE CONTROLLER CLOCK OUTPUT

05 # THIS ORDER LEAVES THE STORE CONTROLLER FORCED SELECTED ON THE TIMING BOARD,
06 # BUT UNSELECTED ON THE CHECK BOARD.  THUS, THE DIFFERENCE BETWEEN THESE TWO
07 # WILL ACTIVATE THE APPROPRIATE MATCH CIRCUIT (DIF1), AND IF THE BIT 3 INPUT
08 # TO THIS HALF OF THE CHECK CIRCUIT (TSTSERB) IS STUCK ACTIVE, AN ERROR WILL
09 # APPEAR IN THE SELECT-ERROR FLOP.

0016513          11          SIOM  FSTRM
0016513 01 000375 137020 012667 CDGSIO -002- 12      BSA    MASIOM
0016515 01 000377 046514 137020      -001- 13      DATA  FSTRM          # FORCE MODE FLOP TO REFRESH STATE
                                14 CSTCP1 OW    O(400)          # 780315
                                -001- 15      NOTE  ***** THE FIRST ADDRESS OVERWRITTEN IS 000400 *****

0016516          18          SIOM  STSBY
0016516 01 000400 137020 012667 CDGSIO -002- 19      BSA    MASIOM
0016520 01 000402 041634 103401      -001- 20      DATA  STSBY          # SET STORE BUSY(SBY) SIGNAL
0016521 01 000403 103401 015471          21          LI    RO,SDRX
0016523 01 000405 007400 -----          22          LSR   MCHTR,RO
0016524          23          LMCH  LDMIRL
0016524          -001- 24      CALL  SLDMIRL
0016524 01 000406 037020 111075 CSYSUB -002- 25      BSA    SLDMIRL
0016526          26          TAKEOUT 5
0016526 01 000410 106000 -----          -001- 27      LR    0,0
0016527 01 000411 006000 -----          -001- 28      LR    0,0
0016530 01 000412 006000 -----          -001- 29      LR    0,0
0016531 01 000413 006000 -----          -001- 30      LR    0,0
0016532 01 000414 006000 -----          -001- 31      LR    0,0
0016533          32          EOW
                                -001- 33      NOTE  # 780315
                                ***** THE LAST ADDRESS OVERWRITTEN IS 000414 *****

                                37 CSTCP1 OW    O(415),O(417)          # 780315
                                -001- 38      NOTE  ***** THE FIRST ADDRESS OVERWRITTEN IS 000415 *****

0016533          41          SIOM  REFSTOP
0016533 01 000415 037020 012667 CDGSIO -002- 42      BSA    MASIOM
0016535 01 000417 006070 137020      -001- 43      DATA  REFSTOP          # INHIBIT REFRESHING OF STORE
0016536          44          EOW          # 780315
                                -001- 45      NOTE  ***** THE LAST ADDRESS OVERWRITTEN IS 000417 *****

```

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

02 # THIS ORDER ACTIVATES THE SELECT INPUT (TSEL) TO THE OTHER HALF (TSTSER) OF
03 # THE CHECK CIRCUIT, SO THAT THIS HALF IS CHECKED FOR ITS REFRESH MODE (RMO)
04 # INPUT STUCK ACTIVE.
05 SIOM FBIT09
0016536 01 000420 137020 012667 CDGSI0 -002- 06 BSA MASIOM
0016540 01 000422 146074 137020 -001- 07 DATA FBIT09 # COLLECT ERRORS IN STORE ERROR REGISTER
0016541 01 000423 137020 012667 CDGSI0 -002- 08 SRIO SERREAD
0016541 01 000423 137020 012667 CDGSI0 -002- 09 BSA MASIOM
0016543 01 000425 047114 ----- -001- 10 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0016544 01 000426 124273 ----- -001- 11 TEST S(TBER),O TEST,STATRB
0016544 01 000426 124273 ----- -001- 12 TBN R11,S(TBER)
0016545 01 000427 055011 ----- 0016556 -001- 13 BNC P448
0016546 01 000430 007473 ----- -001- 14 LSR MCHB,R11
0016547 01 000431 071400 ----- -002- 15 GA
0016550 01 000432 031000 016554 0016554 -002- 16 LAL RD,++4,RAO
0016552 01 000434 037000 011162 CDGNM -002- 17 BL INTRPN03

-002- 19 # FAILTST
-002- 20 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS STATRB.
0016554 01 000436 020017 ----- CDGNM -002- 21 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016555 01 000437 000007 ----- -002- 22 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-002- 23 VFD 16,STATRB

-001- 25 # TROUBLE PRINTOUT DATA = CONTENTS OF R11 IN ON-LINE PROCESSOR
0016556 -001- 26 P448
-001- 27 # AN ENABLE TO THE STORE SELECT ERROR CKT (TSTSER) IS STUCK ACTIVE
0016556 01 000440 171400 ----- -001- 28 RTN_TBL **4
0016556 01 000440 171400 ----- -001- 29 GA
0016557 01 000441 031000 016563 0016563 -001- 30 LAL RD,++4,RAO
0016561 01 000443 037000 011162 CDGNM -001- 31 BL INTRPN03

```

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 37 SEGMENT 4
-001- 04 # *
-001- 05 # *****

0016563 01 000445 000400 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(4) 6,NTESTSEG

11 # THIS SEGMENT CHECKS THAT THE BUS-READ(BUSRD) SIGNAL WHICH ENABLES THE
12 # REPEATERING OF STORE DATA BUS BITS FROM FARTHER STORES IS NOT STUCK ACTIVE.
13 # THIS IS ACCOMPLISHED USING THE SAME TEST SEQUENCE THAT CHECKED THE STORE DATA
14 # BUS IN THE READ DIRECTION. HOWEVER, IN THIS SEQUENCE THE FORCE-BUS-READ-
15 # INACTIVE (FBUSRDN) MAINTENANCE OPTION DEACTIVATES THE BUS-READ(BUSRD1) ON
16 # THE BIT-SLICED BOARDS, SO THAT IT CAN BE CHECKED FOR A STUCK-ACTIVE FAULT.

-001- 18 # NO3 CODE
-001- 19 # PROCESS 3ACC CODED ROUTINE AT ADDRESS BUSRDCK.
0016564 01 000446 040043 000000 CDGNM -001- 20 VFD 1,0 2,2 7,0 6,NNO3CD
0016565 01 000447 000000 016567 0016567 -001- 21 ADDR BUSRDCK

0016567 23 BUSRDCK
0016567 24 SIOM CKTINIT
0016567 01 000451 137020 012667 CDGSIO -002- 25 BSA MASIOM
0016571 01 000453 040374 137020 -001- 26 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER
# CIRCUITS
# FORCE BUS READ INACTIVE, TOO

0016572 28 SIOM ISOCHKUIFBUSRDN
0016572 01 000454 137020 012667 CDGSIO -002- 29 BSA MASIOM
0016574 01 000456 027214 ----- -001- 30 DATA ISOCHKUIFBUSRDN # APPLY ONES TO STORE DATA BUS(W/O
# ISOLATE)

0016575 01 000457 103320 ----- 32 ZR R13
0016576 01 000460 030700 043140 CTSD 33 LL R12,BASADDR # BASE ADDRESS OF STORE UNDER TEST
0016600 01 000462 030420 012755 CDGSIO 34 LL R1,STRSIZE
0016602 01 000464 001701 ----- 35 AR R12,R1 # POINT TO NEXT STORE
36 # THIS TEST IS UNNECESSARY FOR THE HIGHEST STORE

0016603 01 000465 030400 012756 CDGSIO 37 LL R0,STSELMASK
0016605 01 000467 014014 ----- 38 NR R0,R12 # DOES ADDRESS POINT TO STORE 0?
0016606 01 000470 054054 ----- 0016662 39 BC BUSRDEND # IF SO, SKIP THIS TEST
0016607 40 NMLREAD RAD # GENERATE NORMAL LOAD(NLD) SIGNAL
0016607 01 000471 003561 106260 -001- 41 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0016611 01 000473 006054 ----- -001- 42 LR R2,R12
0016612 01 000474 006075 ----- -001- 43 LR R3,R13
0016613 01 000475 003140 ----- -001- 44 ZR R6 # NO SPECIAL PARITY
0016614 01 000476 037020 013027 CDGSBS -002- 45 BSA MEMOP
0016616 46 RTN_TBL **4
0016616 01 000500 171400 ----- -001- 47 GA
0016617 01 000501 031000 016623 0016623 -001- 48 LAL R0,**4,RAD
0016621 01 000503 037000 011162 CDGNM -001- 49 BL INTRPNO3

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 37 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 02 # COMPARE
-001- 03 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 04 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016623 01 000505 050014 ----- CDGNM
0016624 01 000506 000000 000000 -001- 05 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 06 ADDR 0(0000000)

-001- 08 # FAILBIT
-001- 09 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS BSRDBTXX
-001- 10 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0016626 01 000510 020020 ----- CDGNM
0016627 01 000511 000010 ----- -001- 11 VFD 1,0 2,1 5,0 2, 6,NFLBITS
-001- 12 VFD 16,BSRDBT

14 # BUS READ ENABLE(BUSRD) IS STUCK ACTIVE ON A STORE DATA BIT-SLICED BOARD

-001- 17 # COMPARE
-001- 18 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 19 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016630 01 000512 022414 ----- CDGNM
0016631 01 000513 000000 ----- -001- 20 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 21 VFD 15,0 1,0

-001- 23 # FAILTST
-001- 24 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS BSRDBTPL.
-001- 25 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016632 01 000514 020017 ----- CDGNM
0016633 01 000515 000030 ----- -001- 26 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 27 VFD 16,BSRDBTPL

29 # BUS-READ (BUSRD1) IS STUCK ACTIVE ON THE STORE DATA PARITY LOW REPEATER

-001- 32 # COMPARE
-001- 33 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 34 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016634 01 000516 022514 ----- CDGNM
0016635 01 000517 000000 ----- -001- 35 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 36 VFD 15,0 1,0

-001- 38 # FAILTST
-001- 39 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS BSRDBTPH.
-001- 40 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016636 01 000520 020017 ----- CDGNM
0016637 01 000521 000031 ----- -001- 41 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 42 VFD 16,BSRDBTPH

44 # BUS-READ (BUSRD1) IS STUCK ACTIVE ON THE STORE DATA PARITY HIGH REPEATER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 37 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

0016640 01 000522 040046 000000 CDGNM -001- 01 # WIDE_TST
 -001- 02 # IF WIDE STORE IS NOT PRESENT, GO TO TABLE ENTRY AT ADDRESS BUSRDXT.
 0016641 01 000523 000000 016657 0016657 -001- 03 VFD 1,0 2,2 7,0 6,NWDSTST
 -001- 04 ADDR BUSRDXT

0016643 01 000525 020005 ----- CDGNM -001- 06 # MICRO
 -001- 07 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
 0016644 01 000526 114455 ----- -001- 08 # TO FIELD = MCHBXT FROM FIELD = SDR1XF
 -001- 09 VFD 1,0 2,1 7,0 6,NMICRO
 -001- 10 VFD 8,MCHBXT 8,SDR1XF

0016645 01 000527 007710 ----- CDGNM -001- 12 # RETRN
 -001- 13 # RETURN OFF-LINE MCHB TO ON-LINE MCHB.
 -001- 14 VFD 1,0 2,0 7,B(0111111) 6,NRETRN

0016646 01 000530 050014 ----- CDGNM -001- 16 # COMPARE
 -001- 17 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
 0016647 01 000531 000000 000000 -001- 18 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
 -001- 19 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
 -001- 20 ADDR 0(0000000)

0016651 01 000533 020020 ----- CDGNM -001- 22 # FAILBIT
 -001- 23 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS BSRDBT+16XX
 0016652 01 000534 000030 ----- -001- 24 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
 -001- 25 VFD 1,0 2,1 5,0 2, 6,NFLBITS
 -001- 26 VFD 16,BSRDBT+16

28 # BUS-READ (BUSRD1) IS STUCK ACTIVE ON A WIDE STORE DATA BIT-SLICED BOARD

0016653 01 000535 022514 ----- CDGNM -001- 31 # COMPARE
 -001- 32 # COMPARE ON-LINE MCHB BIT PH TO 0.
 0016654 01 000536 000000 ----- -001- 33 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
 -001- 34 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
 -001- 35 VFD 15,0 1,0

0016655 01 000537 020017 ----- CDGNM -001- 37 # FAILTST
 -001- 38 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS BSRDBTPW.
 0016656 01 000540 000042 ----- -001- 39 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
 -001- 40 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
 -001- 41 VFD 16,BSRDBTPW

43 # BUS-READ (BUSRD1) IS STUCK ACTIVE ON THE STORE DATA WIDE PARITY HIGH REPEATER

STORE CONTROL AND PARITY TESTS

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TEST 37 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

0016657

01 BUSRDXT

-001- 02 #

NO3_CODE

-001- 03 #

PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.

0016657 01 000541 040043 000000 CDGNM

-001- 04

VFD

1,0 2,2 7,0 6,NN03CD

0016660 01 000542 000000 016662 0016662

-001- 05

ADDR

**2

0016662

07 BUSRDEND

STORE CONTROL AND PARITY TESTS

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PAGE 44

TEST 37 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

		01	CSTCP1	OW	0(544),0(546)	# 12703	
		-001-	02	NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000544 *****		
0016662			05	FINALE	CP1INIT		
0016662	01	000544	137020	012771	CDGSI0	-002-	06
0016664	01	000546	137000	016141	0016141	-001-	07
0016666	01	000550	171400	-----		-001-	08
0016667	01	000551	037000	011725	CDGNM	-001-	09
0016667							10
			-001-	11	NOTE	# TEST COMPLETED # 12703 ***** THE LAST ADDRESS OVERWRITTEN IS 000552 *****	

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 38

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # ** **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 38, MAIN_STORE_CONTROL_AND_PARITY **
-001- 05 # ** **
-001- 06 # *****
-001- 07 # *****

```

0016671

-001- 10 CSTCP2 CSECT

0016671 02 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT CHECKS THE REGISTRATION OF THE TWO TYPES OF DATA PARITY
20 # ERRORS (OVER HIGH HALF OR LOW HALF) INTO THE STORE ERROR REGISTER DURING
21 # WRITE OPERATIONS. THE TYPICAL OPERATION OF THE CIRCUIT IS TESTED BY ATTEMPTING
22 # A WRITE WITH A BAD DATA PARITY AND VERIFYING THAT BOTH OF THE WRITE DATA
23 # PARITY ERROR BITS ARE SET IN THE STORE ERROR REGISTER. IT IS NOT NECESSARY TO
24 # REPEAT THIS FOR A BLIND WRITE BECAUSE THESE INPUTS (WR1/BLDWR1) TO THE STROBE-
25 # PARITY-ERROR GATES (TSPERA0/TSPERB0) HAVE PREVIOUSLY BEEN CHECKED FOR STUCK-
26 # INACTIVE (LOW) FAULTS DURING THE TESTING OF THE STORE COMMAND DECODER/CHECKER.

```

```

29 # SEGMENT 2
30 # (BLDWR1) IS STUCK ACTIVE ON INPUT TO THE STROBE-PARITY-ERROR GATES (TSPERA0/
31 # TSPERB0). AT THE SAME TIME THE ASSOCIATED INPUTS (TWRTPK1) TO WRITE-PARITY-
32 # ERROR GATES (WTRPLER0/WTRPHER0) ARE TESTED FOR STUCK-ACTIVE (HIGH) FAULTS.
33 # THIS IS ACCOMPLISHED BY PERFORMING A WRITE PROTECT REGISTER WRITE (MTCWRIT)
34 # VIA THE OFF-LINE PROCESSOR. IF EITHER DATA PARITY ERROR (DLPER/DHPER) IS SET
35 # AS A RESULT OF THIS OPERATION, THEN ONE OF THE ABOVE FAULTS MUST BE PRESENT.

```

```

38 # SEGMENT 3
39 # THIS SEGMENT FINISHES THE TESTING OF THE NORMAL MODE INPUTS (RMBO) TO BOTH
40 # OF THE STROBE-PARITY-ERROR GATES (TSPERA0/TSPERB0) THAT WAS BEGUN PREVIOUSLY.
41 # THEY ARE CHECKED FOR STUCK-ACTIVE (HIGH) FAULTS BY SIMULATING A REFRESH
42 # OPERATION TAKING PLACE WHILE AN EXTERNAL REQUEST, EITHER A NORMAL WRITE OR
43 # A BLIND WRITE, IS PENDING. THIS IS DONE BY INITIATING ONE OF THESE EXTERNAL
44 # REQUESTS FROM THE OFF-LINE PROCESSOR WITH THE STORE CLOCK DISABLED (HALTED).
45 # AT THIS POINT THE STORE IS FORCED INTO THE REFRESH MODE WHICH SHOULD MAKE THE
46 # NORMAL MODE INPUT (RMBO) TO THE STROBE-PARITY-ERROR GATES INACTIVE (LOW).
47 # IF NOT, THE ALL-ZEROS DATA SENT WITH BAD PARITY WILL CAUSE THE WRITE PARITY
48 # ERROR BITS (DLPER/DHPER) TO BOTH BE SET IN THE STORE ERROR REGISTER.
49 # IT IS KNOWN FROM PREVIOUS TESTS THAT THE STORE-COMPLEMENT-WRITE INPUT (LSCW00)

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 46

TEST 38

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # TO THE WRITE-PARITY-ERROR GATES (WTRPLERD/WTRPHERO) ISN'T STUCK INACTIVE(LOW).

04 # SEGMENT 4

05 # THIS SEGMENT VERIFIES THAT NEITHER OF THE STORE-COMPLEMENT-WRITE INPUTS
 06 # (LSCWO) IS STUCK ACTIVE (HIGH) ON INPUT TO THE WRITE-PARITY-ERROR GATES
 07 # (WTRPLERD/WTRPHERO). THIS IS DONE BY PERFORMING A NORMAL WRITE OF DATA WITH
 08 # INTENTIONALLY BAD PARITY IN THE OFF-LINE SYSTEM WITH THE COMPLEMENT WRITE
 09 # OPTION ACTIVE. THE LATTER CONDITION SHOULD INHIBIT THE SETTING OF EITHER OF
 10 # THE WRITE PARITY ERROR BITS (DLPER/DHPER) IN THE STORE ERROR REGISTER. IF
 11 # EITHER BIT IS SET, THEN THE STORE-COMPLEMENT-WRITE INPUT TO THE CORRESPONDING
 12 # WRITE-PARITY-ERROR GATE (WTRPLERD/WTRPHERO) MUST BE STUCK ACTIVE (HIGH).

15 # SEGMENT 5

16 # THIS SEGMENT TESTS THE PARITY ERROR INPUTS (PLER1C/PHER1C) TO THE WRITE-
 17 # PARITY-ERROR GATES (WTRPLERD/WTRPHERO) FOR STUCK-ACTIVE (HIGH) FAULTS.
 18 # THIS IS DONE BY PERFORMING A NORMAL WRITE OPERATION WITH A DATA PATTERN
 19 # THAT CONTAINS GOOD PARITY. IF EITHER INPUT IS STUCK ACTIVE, THE CORRESPONDING
 20 # WRITE-DATA-PARITY ERROR BIT (DLPER/DHPER) WILL BE SET IN STORE ERROR REGISTER.

23 # SEGMENT 6

24 # THIS SEGMENT VERIFIES THAT THE STORE CONTROLLER WILL RETURN A STORE
 25 # COMPLETE SIGNAL (SCM) AND NOT A STORE ERROR 'C' (SERC) IF THE PARITY OVER
 26 # THE DATA BEING READ IS GOOD. TO DO THIS A DATA PATTERN WITH GOOD PARITY IS
 27 # WRITTEN INTO THE DATA FLOPS (FFSD) IN THE STORE CONTROLLER AND THE SAME DATA
 28 # IS READ BACK OUT USING THE COMPLEMENT WRITE OPTION TO PRESERVE THE PATTERN
 29 # (DISABLING THE NORMAL LOAD SIGNAL (NLD) TO THE DATA FLOPS). THE DATA READY BIT
 30 # (DR) IN THE OFF-LINE PROCESSOR SHOULD BE SET IF THE STORE COMPLETE SIGNAL IS
 31 # GENERATED PROPERLY. LIKEWISE, THE STORE ERROR 'C' BIT (SRP) SHOULD NOT BE SET
 32 # IN THE OFF-LINE ERROR REGISTER UNLESS ITS ASSOCIATED CIRCUITRY IS FAULTY

35 # SEGMENT 7

36 # THIS SEGMENT VERIFIES THAT A STORE ERROR 'C' (SERC) WILL BE RETURNED
 37 # INSTEAD OF A STORE COMPLETE (SCM) IF THE PARITY OVER THE DATA BEING READ IS
 38 # INCORRECT. AT THE SAME TIME THE ACTUAL DATA BEING RETURNED IS CHECKED TO
 39 # MAKE SURE IT IS NOT BEING COMPLEMENTED IMPROPERLY. THESE TESTS ARE PERFORMED
 40 # BY WRITING A DATA PATTERN WITH BAD PARITY OVER ITS LOWER HALF INTO THE STORE
 41 # DATA FLOPS (FFSD) IN THE STORE CONTROLLER. WHEN THIS DATA IS READ BACK (USING
 42 # COMPLEMENT WRITE TO PRESERVE THE DATA BY PREVENTING NORMAL LOAD) THE BAD
 43 # PARITY SHOULD CAUSE STORE COMPLETE TO BE DISABLED VIA THE PARITY ERROR SIGNAL
 44 # (PARERD). CONVERSELY, STORE ERROR 'C' (SERC) SHOULD BE ENABLED BY THE
 45 # COMBINATION OF THE SINGLE-PARITY-ERROR SIGNAL (PER1), THE COMPLEMENT OF
 46 # THE TWO-PARITY-ERROR SIGNAL (P2ERD) AND UNGATED STORE COMPLETE (USCM1).
 47 # IF EITHER OF THESE SIGNALS IS NOT IN THE PRESPECIFIED STATE, IT IS AN
 48 # INDICATION THAT ITS ASSOCIATED CIRCUITRY IS FAULTY. IN ADDITION, ONE OF THE
 49 # DATA BITS FROM THE OFF-LINE STORE DATA REGISTER (SDR) IS CHECKED TO MAKE

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 47

TEST 38

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # SURE THAT A SINGLE PARITY (LOW) ERROR DOES NOT CAUSE A COMPLEMENT OF THE
 02 # DATA READ BACK WITH THE STORE AUTOMATIC CORRECTION OPTION ACTIVE. IF A DATA
 03 # BIT IS COMPLEMENTED, THIS INDICATES THAT THE CORRESPONDING PARITY-HIGH-ERROR
 04 # INPUT (PHER1B) MUST BE STUCK ACTIVE (HIGH) TO THE TWO-PARITY WIRED-OR
 05 # (TPER1B) WHICH SIGNALS THE BIT-SLICED BOARDS TO COMPLEMENT THE DATA.

```

08 CSTCP2 OW      0(1),0(16)          # 12703
-001- 09          NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0016672
12 CP2INIT PREPARE
-002- 13 #      RTN BLM
0016672 02 000001 000144 ----- CDGNM -002- 14 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 15          VFD      1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 17 #      SEND
-002- 18 # SEND 0(0000001) TO OFF-LINE MCHB.
-002- 19 # PARITY IS 0(2).
0016673 02 000002 047707 ----- CDGNM -002- 20          VFD      1,0 2,2 7,B(0111111) 6,N2SEND
0016674 02 000003 000040 000001 -002- 21          ADDR      0(0000001),0(2)

-002- 23 #      MICRO
-002- 24 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 25 # TO FIELD = MSXT FROM FIELD = MCHBXF
0016676 02 000005 020005 ----- CDGNM -002- 26          VFD      1,0 2,1 7,0 6,NMICRO
0016677 02 000006 106631 ----- -002- 27          VFD      8,MSXT 8,MCHBXF

-002- 29 #      NO3 CODE
-002- 30 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0016700 02 000007 040043 000000 CDGNM -002- 31          VFD      1,0 2,2 7,0 6,NN03CD
0016701 02 000010 000000 016703 0016703 -002- 32          ADDR      **2

-001- 34 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 35          LI      R4,MXAS
0016703 02 000012 103501 000151 TTYTBL -001- 36          STL      R4,PAGSCR+24
0016705 02 000014 034500 043132 CTSD -001- 37 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 38 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 39 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0016707 02 000016 103240 ----- -001- 41          ZR      LOOPIND
0016710 02 000017 004257 ----- -001- 42          SN      LOOPIND,1          #ASSURE THAT LOOPIND IS ZERO BEFORE
                                          PROCEEDING WITH TEST

0016711 02 000020 072652 ----- CDGNM -001- 44          HN      LOOPIND,LOOPIND
0016712 02 000021 037020 012757 CDGSIO -002- 45          BSA      CONTPREP
0016714 02 000023 172652 ----- CDGNM -001- 46          HN      LOOPIND,LOOPIND
0016715 02 000024 137020 012667 CDGSIO -003- 47          BSA      MASIOM
0016717 02 000026 046071 ----- -002- 48          DATA     MASCINT          # INITIALIZE STORE CONTROLLER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 38

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0016720 02 000027 171400 ----- -002- 01
 0016721 02 000030 031000 016725 0016725 -002- 02
 0016723 02 000032 037000 011162 CDGNM -002- 03
 0016725 05
 -001- 06

GA
 LAL RD, **4, RAD
 BL INTRPN03

EOW # 12703
 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE CONTROL AND PARITY TESTS

PR-1C934-50

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 1
-001- 04 # *
-001- 05 # *****
    
```

0016725 02 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTESTSEG

```

11 # THIS SEGMENT CHECKS THE REGISTRATION OF THE TWO TYPES OF DATA PARITY
12 # ERRORS (OVER HIGH HALF OR LOW HALF) INTO THE STORE ERROR REGISTER DURING
13 # WRITE OPERATIONS. THE TYPICAL OPERATION OF THE CIRCUIT IS TESTED BY ATTEMPTING
14 # A WRITE WITH A BAD DATA PARIY AND VERIFYING THAT BOTH OF THE WRITE DATA
15 # PARIY ERROR BITS ARE SET IN THE STORE ERROR REGISTER. IT IS NOT NECESSARY TO
16 # REPEAT THIS FOR A BLIND WRITE BECAUSE THESE INPUTS (WR1/BLDWR1) TO THE STROBE-
17 # PARITY-ERROR GATES (TSPERA0/TSPERB0) HAVE PREVIOUSLY BEEN CHECKED FOR STUCK-
18 # INACTIVE (LOW) FAULTS DURING THE TESTING OF THE STORE COMMAND DECODER/CHECKER.
    
```

```

0016726 02 000035 040043 000000 CDGNM -001- 21 # N03_CODE
0016727 02 000036 000000 016731 0016731 -001- 22 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCKD.
-001- 23 VFD 1,0 2,2 7,0 6,NNO3CD
-001- 24 ADDR WRPRCKD
    
```

```

0016731 26 WRPRCKD
0016731 27 SIOM MASCINT
0016731 02 000040 137020 012667 CDGSIO -002- 28 BSA MASIAM
0016733 02 000042 046071 ----- -001- 29 DATA MASCINT # INITIALIZE STORE CONTROLLER
0016734 30 NMLWRIT BASADDR,ZEROS,PRHOLD
0016734 02 000043 103561 106200 -001- 31 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0016736 02 000045 003741 000000 -001- 32 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0016740 02 000047 003761 000000 -001- 33 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 34 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0016742 02 000051 031040 043140 CTSD -001- 35 LAL R2,BASADDR,RAD
0016744 02 000053 041061 ----- -001- 36 LA R3,1(RAD)
0016745 02 000054 003541 000020 -001- 37 LI R6,PRHOLD # SETUP SPECIAL PARITY
0016747 02 000056 037020 013027 CDGSBS -001- 38 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0016751 40 BSA MEMOP
0016751 02 000060 137020 012667 CDGSIO -002- 41 SRI0 SERREAD
0016753 02 000062 047114 ----- -001- 42 BSA MASIAM
0016754 02 000063 107473 ----- -001- 43 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0016755 44 LSR MCHB,R11 # PREPARE FOR COMPARE(S)
0016755 02 000064 071400 ----- -001- 44 RTN_TBL **4
0016756 02 000065 031000 016762 0016762 -001- 45 GA
0016760 02 000067 037000 011162 CDGNM -001- 46 LAL RO,**4,RAD
-001- 47 BL INTRPN03
    
```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 38 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MCHB BIT S(DLPER) TO 1.
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016762 02 000071 021514 ----- CDGNM -001- 04 VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(DLPER) 6,NCOMPARE
0016763 02 000072 000001 ----- -001- 05 VFD 15,0 1,1

```

```

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WRDLPFLT.
0016764 02 000073 020017 ----- CDGNM -001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016765 02 000074 000002 ----- -001- 10 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 11 VFD 16,WRDLPFLT

```

13 # DATA LOW PARITY ERROR IS NOT BEING DETECTED DURING A WRITE OPERATION

```

-001- 16 # COMPARE
-001- 17 # COMPARE ON-LINE MCHB BIT S(DHPER) TO 1.
-001- 18 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0016766 02 000075 021114 ----- CDGNM -001- 19 VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(DHPER) 6,NCOMPARE
0016767 02 000076 000001 ----- -001- 20 VFD 15,0 1,1

```

```

-001- 22 # FAILTST
-001- 23 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WRDHPFLT.
0016770 02 000077 020017 ----- CDGNM -001- 24 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0016771 02 000100 000003 ----- -001- 25 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 26 VFD 16,WRDHPFLT

```

28 # DATA HIGH PARITY ERROR IS NOT BEING DETECTED DURING A WRITE OPERATION

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 51

TEST 38 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

```

0016772 02 000101 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(2) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THAT NEITHER THE DECODED WRITE (WR1) NOR BLIND WRITE
12 # (BLDWR1) IS STUCK ACTIVE ON INPUT TO THE STROBE-PARITY-ERROR GATES (TSPERA0/
13 # TSPERB0). AT THE SAME TIME THE ASSOCIATED INPUTS (TWRTPK1) TO WRITE-PARITY-
14 # ERROR GATES (WTRPLER0/WTRPHER0) ARE TESTED FOR STUCK-ACTIVE (HIGH) FAULTS.
15 # THIS IS ACCOMPLISHED BY PERFORMING A WRITE PROTECT REGISTER WRITE (MTCWRIT)
16 # VIA THE OFF-LINE PROCESSOR. IF EITHER DATA PARITY ERROR (DLPER/DHPER) IS SET
17 # AS A RESULT OF THIS OPERATION, THEN ONE OF THE ABOVE FAULTS MUST BE PRESENT.

```

```

-001- 20 # NO3_CODE
-001- 21 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCK1.
0016773 02 000102 040043 000000 CDGNM -001- 22 VFD 1,0 2,2 7,0 6,NN03CD
0016774 02 000103 000000 016776 0016776 -001- 23 ADDR WRPRCK1

0016776 25 WRPRCK1
0016776 26 SIOM CKTINIT
0016776 02 000105 137020 012667 CDGSIO -002- 27 BSA MASIOM
0017000 02 000107 040374 ----- -001- 28 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER
# CIRCUITS

0017001 30 MTCWRIT BASADDR,ZEROS,PRHOLO
0017001 02 000110 103561 106203 -001- 31 LI R7,MTCHR
0017003 02 000112 003741 000000 -001- 32 LI R14,ZEROS # SET UP ZEROS TO BE WRITTEN (SD0-15)
0017005 02 000114 003360 ----- -001- 33 ZR R15 # CLEAR HIGH BITS (SD16-23)
0017006 02 000115 031040 043140 CTSD -001- 34 LAL R2,BASADDR,RAD
0017010 02 000117 040061 ----- -001- 35 L R3,1(RAD)
0017011 02 000120 003541 000020 -001- 36 LI R6,PRHOLO # LOAD SPECIAL PARITY
0017013 02 000122 037020 013027 CDGSBS -002- 37 BSA MEMOP
0017015 38 SIOM ERCOLL
0017015 02 000124 137020 012667 CDGSIO -002- 39 BSA MASIOM
0017017 02 000126 146074 137020 -001- 40 DATA ERCOLL # COLLECT ERRORS IN STORE ERROR REG
0017020 41 SRIO SERREAD
0017020 02 000127 137020 012667 CDGSIO -002- 42 BSA MASIOM
0017022 02 000131 047114 ----- -001- 43 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0017023 02 000132 107473 ----- 44 LSR MCHB,R11 # PREPARE FOR COMPARE(S)
0017024 45 RTN_TBL **4
0017024 02 000133 071400 ----- -001- 46 GA
0017025 02 000134 031000 017031 0017031 -001- 47 LAL R0,**4,RAD
0017027 02 000136 037000 011162 CDGNM -001- 48 BL INTRPNO3

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

```

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 52

```

TEST 38 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MCHB BIT S(DLPER) TO 0.
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017031 02 000140 021514 ----- CDGNM -001- 04 # VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(DLPER) 6,NCOMPARE
0017032 02 000141 000000 ----- -001- 05 # VFD 15,0 1,0

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS TSPLEREN.
0017033 02 000142 020017 ----- CDGNM -001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017034 02 000143 000004 ----- -001- 10 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 11 # VFD 16,TSPLEREN

13 # EITHER WRITE (WR1) OR BLIND WRITE (BLDWR1) INPUT TO STROBE-PARITY-ERROR GATES
14 # (TSPERA0/TSPERB0) IS STUCK ACTIVE OR THIS STROBE SIGNAL IS STUCK ACTIVE
15 # ON INPUT TO WRITE-PARITY-LOW-ERROR GATE (WTRPLER0)

-001- 18 # COMPARE
-001- 19 # COMPARE ON-LINE MCHB BIT S(DHPER) TO 0.
-001- 20 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017035 02 000144 021114 ----- CDGNM -001- 21 # VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(DHPER) 6,NCOMPARE
0017036 02 000145 000000 ----- -001- 22 # VFD 15,0 1,0

-001- 24 # FAILTST
-001- 25 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS TSPHEREN.
0017037 02 000146 020017 ----- CDGNM -001- 26 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017040 02 000147 000005 ----- -001- 27 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 28 # VFD 16,TSPHEREN

30 # WRITE-PARITY-CHECK STROBE (WTRPCK1) ON WRITE-PARITY-HIGH-ERROR GATE
31 # (WTRPHER0) IS STUCK ACTIVE

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 53

TEST 38 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

```

0017041 02 000150 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(3) 6,NTESTSEG

```

```

11 # THIS SEGMENT FINISHES THE TESTING OF THE NORMAL MODE INPUTS (RMBO) TO BOTH
12 # OF THE STROBE-PARITY-ERROR GATES (TSPERA0/TSPERB0) THAT WAS BEGUN PREVIOUSLY.
13 # THEY ARE CHECKED FOR STUCK-ACTIVE (HIGH) FAULTS BY SIMULATING A REFRESH
14 # OPERATION TAKING PLACE WHILE AN EXTERNAL REQUEST, EITHER A NORMAL WRITE OR
15 # A BLIND WRITE, IS PENDING. THIS IS DONE BY INITIATING ONE OF THESE EXTERNAL
16 # REQUESTS FROM THE OFF-LINE PROCESSOR WITH THE STORE CLOCK DISABLED (HALTED).
17 # AT THIS POINT THE STORE IS FORCED INTO THE REFRESH MODE WHICH SHOULD MAKE THE
18 # NORMAL MODE INPUT (RMBO) TO THE STROBE-PARITY-ERROR GATES INACTIVE (LOW).
19 # IF NOT, THE ALL-ZEROS DATA SENT WITH BAD PARITY WILL CAUSE THE WRITE PARITY
20 # ERROR BITS (DLPER/DHPER) TO BOTH BE SET IN THE STORE ERROR REGISTER.
21 # IT IS KNOWN FROM PREVIOUS TESTS THAT THE STORE-COMPLEMENT-WRITE INPUT (LSCW00)
22 # TO THE WRITE-PARITY-ERROR GATES (WTRPLER0/WTRPHER0) ISN'T STUCK INACTIVE(LOW).

```

```

-001- 25 # NO3_CODE
-001- 26 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCK2A.
0017042 02 000151 040043 000000 CDGNM -001- 27 VFD 1,0 2,2 7,0 6,NN03CD
0017043 02 000152 000000 017045 0017045 -001- 28 ADDR WRPRCK2A

0017045 30 WRPRCK2A
0017045 31 SIOM CKTINIT
0017045 02 000154 137020 012667 CDGSIO -002- 32 BSA MASIOM
0017047 02 000156 040374 ----- -001- 33 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER
# CIRCUITS

0017050 35 SPRWRIT BASADDR,ZEROS,PRH0L0
0017050 02 000157 103561 106214 -001- 36 LI R7,SPRWR
0017052 02 000161 003741 000000 -001- 37 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017054 02 000163 003761 000000 -001- 38 LI R15,ZEROS # TO BE WRITTEN - SD16-23
0017056 02 000165 003541 000020 -001- 39 LI R6,PRH0L0 # LOAD SPECIAL PARITY
0017060 02 000167 031040 043140 CTSD -001- 40 LAL R2,BASADDR,RA0
0017062 02 000171 040061 ----- -001- 41 L R3,1(RA0)
0017063 02 000172 003000 ----- -001- 42 ZR R0 # NO SPECIAL PARITY
0017064 02 000173 037020 013027 CDGSBS -002- 43 BSA MEMOP
0017066 44 SIOM FSTRM # FORCE RMBO INPUT INACTIVE
0017066 02 000175 137020 012667 CDGSIO -002- 45 BSA MASIOM
0017070 02 000177 046514 137020 -001- 46 DATA FSTRM # FORCE MODE FLOP TO REFRESH STATE
0017071 47 SIOM ERCOLL
0017071 02 000200 137020 012667 CDGSIO -002- 48 BSA MASIOM
0017073 02 000202 146074 137000 -001- 49 DATA ERCOLL # COLLECT ERRORS IN STORE ERROR REG

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 54

TEST 38 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

01 CSTCP2 OW 0(203) # 12991
-001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000203 *****

001704 02 000203 137000 113353 0000571 -001- 05 CPATCH1 BGNP 0(571) # 12991
-001- 06 BL XXX542
-001- 07 NOTE CPATCH1 'CSECT'
-001- 08 NOTE ***** PATCH AREA BEGINS AT 000571 *****

0113353 -001- 11 XXX542 PATCHAREA
0113353 12 SRIO SERREAD
0113353 06 020571 137020 012667 CDGSI0 -002- 13 BSA MASIOM
0113355 06 000573 047114 137000 -001- 14 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0113356 15 ENDP # 12991
0113356 06 000574 137000 017076 0000205 -001- 16 BL XXX546
-001- 17 NOTE ***** LAST PATCH ADDRESS USED IS 000575 *****
-001- 18 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0017076 -001- 21 XXX546 OWCONTINUE
0017076 22 CALL WAIT # TAKE A REAL TIME BREAK.
0017076 02 000205 173025 ----- -001- 23 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
0017077 24 EOW # 12991
-001- 25 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000205 *****

0017077 02 000206 107473 ----- 28 LSR MCHB,R11 # PREPARE FOR COMPARE
0017100 29 RTN_TBL **4
0017100 02 000207 071400 ----- -001- 30 GA
0017101 02 000210 031000 017105 0017105 -001- 31 LAL RO,**4,RAO
0017103 02 000212 037000 011162 CDGNM -001- 32 BL INTRPN03
-001- 34 # COMPARE
-001- 35 # COMPARE ON-LINE MCHB BIT S(DLPCR) TO 0.
-001- 36 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017105 02 000214 021514 ----- CDGNM -001- 37 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DLPCR) 6,NCOMPARE
0017106 02 000215 000000 ----- -001- 38 VFD 15,0 1,0
-001- 40 # FAILTST
-001- 41 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS RMBOSPER.
-001- 42 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017107 02 000216 020017 ----- CDGNM -001- 43 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017110 02 000217 000006 ----- -001- 44 VFD 16,RMBOSPER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 55

TEST 38 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # NORMAL MODE INPUT (RMBD) TO STROBE-PARITY-ERROR GATE (TSPERA0) IS STUCK ACTIVE

```

-001- 04 # NO3_CODE
-001- 05 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCK2B.
0017111 02 000220 040043 000000 CDGNM -001- 06 VFD 1,0 2,2 7,0 6,NNO3CD
0017112 02 000221 000000 017114 0017114 -001- 07 ADDR WRPRCK2B

0017114 09 WRPRCK2B
0017114 10 SIOM CKTINIT
0017114 02 000223 137020 012667 CDGSI0 -002- 11 BSA MASIOM
0017116 02 000225 040374 ----- -001- 12 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER
# CIRCUITS

0017117 14 NMLWRIT BASADDR,ZEROS,PRHOLO
0017117 02 000226 103561 106200 -001- 15 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017121 02 000230 003741 000000 -001- 16 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017123 02 000232 003761 000000 -001- 17 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 18 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0017125 02 000234 031040 043140 CTSD -001- 19 LAL R2,BASADDR,RAD
0017127 02 000236 041061 ----- -001- 20 LA R3,1(RAD)
0017130 02 000237 003541 000020 -001- 21 LI R6,PRHOLO # SETUP SPECIAL PARITY
0017132 -001- 22 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0017132 02 000241 037020 013027 CDGSBS -002- 23 BSA MEMOP
0017134 24 SIOM FSTRM # FORCE RMBD INPUT INACTIVE
0017134 02 000243 137020 012667 CDGSI0 -002- 25 BSA MASIOM
0017136 02 000245 046514 137020 -001- 26 DATA FSTRM # FORCE MODE FLOP TO REFRESH STATE
0017137 27 SIOM ERCOLL
0017137 02 000246 137020 012667 CDGSI0 -002- 28 BSA MASIOM
0017141 02 000250 146074 137020 -001- 29 DATA ERCOLL # COLLECT ERRORS IN STORE ERROR REG
0017142 30 SRI0 SERREAD
0017142 02 000251 137020 012667 CDGSI0 -002- 31 BSA MASIOM
0017144 02 000253 047114 ----- -001- 32 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0017145 02 000254 107473 ----- 33 LSR MCHB,R11 # PREPARE FOR COMPARE
0017146 34 RTN_TBL **4
0017146 02 000255 071400 ----- -001- 35 GA
0017147 02 000256 031000 017153 0017153 -001- 36 LAL R0,**4,RAD
0017151 02 000260 037000 011162 CDGNM -001- 37 BL INTRPNO3

-001- 39 # COMPARE
-001- 40 # COMPARE ON-LINE MCHB BIT S(DHPER) TO 0.
-001- 41 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017153 02 000262 021114 ----- CDGNM -001- 42 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DHPER) 6,NCOMPARE
0017154 02 000263 000000 ----- -001- 43 VFD 15,0 1,0

-001- 45 # FAILTST
-001- 46 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS RMBOSPER.
-001- 47 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017155 02 000264 020017 ----- CDGNM -001- 48 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017156 02 000265 000006 ----- -001- 49 VFD 16,RMBOSPER

```

STORE CONTROL AND PARITY TESTS

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TEST 38 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

02 # NORMAL MODE INPUT (RMBD) TO STROBE-PARITY-ERROR GATE (TSPERBD) IS STUCK ACTIVE

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 57

TEST 38 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 4
-001- 04 # *
-001- 05 # *****

```

```

0017157 02 000266 000400 ----- CDGNN -001- 08 VFD 1,0 2,0 2,0 5,D(4) 6,NTESTSEG

```

```

11 # THIS SEGMENT VERIFIES THAT NEITHER OF THE STORE-COMPLEMENT-WRITE INPUTS
12 # (LSCW00) IS STUCK ACTIVE (HIGH) ON INPUT TO THE WRITE-PARITY-ERROR GATES
13 # (WTRPLER0/WTRPHER0). THIS IS DONE BY PERFORMING A NORMAL WRITE OF DATA WITH
14 # INTENTIONALLY BAD PARITY IN THE OFF-LINE SYSTEM WITH THE COMPLEMENT WRITE
15 # OPTION ACTIVE. THE LATTER CONDITION SHOULD INHIBIT THE SETTING OF EITHER OF
16 # THE WRITE PARITY ERROR BITS (DLPER/DHPER) IN THE STORE ERROR REGISTER. IF
17 # EITHER BIT IS SET, THEN THE STORE-COMPLEMENT-WRITE INPUT TO THE CORRESPONDING
18 # WRITE-PARITY-ERROR GATE (WTRPLER0/WTRPHER0) MUST BE STUCK ACTIVE (HIGH).

```

```

-001- 21 # NO3_CODE
-001- 22 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCKCW.
0017160 02 000267 040043 000000 CDGNN -001- 23 VFD 1,0 2,2 7,D 6,NNO3CD
0017161 02 000270 000000 017163 0017163 -001- 24 ADDR WRPRCKCW

0017163 26 WRPRCKCW
0017163 27 SIOM MASCINT # CLEAR ALL DATA FLOPS (FFSD)
0017163 02 000272 137020 012667 CDGSI0 -002- 28 BSA MASIOM
0017165 02 000274 046071 ----- -001- 29 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017166 30 NMLWRIT BASADDR,ZEROS,PRHOLO,CW=1
0017166 02 000275 103561 146200 -001- 31 LI R7,B(1100110010000000) # MAIN MEMORY STATUS
0017170 02 000277 003741 000000 -001- 32 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017172 02 000301 003761 000000 -001- 33 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 34 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0017174 02 000303 031040 043140 CTSD -001- 35 LAL R2,BASADDR,RAO
0017176 02 000305 041061 ----- -001- 36 LA R3,1(RAO)
0017177 02 000306 003541 000020 -001- 37 LI R6,PRHOLO # SETUP SPECIAL PARITY
0017201 -001- 38 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0017201 02 000310 037020 013027 CDGSBS -002- 39 BSA MEMOP
0017203 40 SRIO SERREAD
0017203 02 000312 137020 012667 CDGSI0 -002- 41 BSA MASIOM
0017205 02 000314 047114 ----- -001- 42 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0017206 02 000315 107473 ----- 43 LSR MCHB,R11 # PREPARE FOR COMPARE(S)
0017207 44 RTN_TBL **4
0017207 02 000316 071400 ----- -001- 45 GA
0017210 02 000317 031000 017214 0017214 -001- 46 LAL R0,**4,RAO
0017212 02 000321 037000 011162 CDGNN -001- 47 BL INTRPN03

```

STORE CONTROL AND PARITY TESTS

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TEST 38 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MCHB BIT S(DLPER) TO 0.
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017214 02 000323 021514 ----- CDGNM -001- 04 VFD 1,LPINDX 2,1 1,0 1,SUCCES 5,S(DLPER) 6,NCOMPARE
0017215 02 000324 000000 ----- -001- 05 VFD 15,0 1,0

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS LSCWSTK1.
-001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017216 02 000325 020017 ----- CDGNM -001- 10 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017217 02 000326 000007 ----- -001- 11 VFD 16,LSCWSTK1

13 # STORE-COMPLEMENT-WRITE INPUT (LSCW00) IS STUCK ACTIVE ON INPUT TO WRITE-
14 # PARITY-LOW-ERROR GATE (WTRPLERO)

-001- 17 # COMPARE
-001- 18 # COMPARE ON-LINE MCHB BIT S(DHPER) TO 0.
-001- 19 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017220 02 000327 021114 ----- CDGNM -001- 20 VFD 1,LPINDX 2,1 1,0 1,SUCCES 5,S(DHPER) 6,NCOMPARE
0017221 02 000330 000000 ----- -001- 21 VFD 15,0 1,0

-001- 23 # FAILTST
-001- 24 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS LSCWSTK1.
-001- 25 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017222 02 000331 020017 ----- CDGNM -001- 26 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017223 02 000332 000007 ----- -001- 27 VFD 16,LSCWSTK1

29 # STORE-COMPLEMENT-WRITE INPUT (LSCW00) IS STUCK ACTIVE ON INPUT TO WRITE-
30 # PARITY-HIGH-ERROR GATE (WTRPHERD)

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 38 SEGMENT 5

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

M77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 5
-001- 04 # *
-001- 05 # *****

```

```

0017224 02 000333 000500 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(5) 6,NTESTSEG

```

```

11 # THIS SEGMENT TESTS THE PARITY ERROR INPUTS (PLER1C/PHER1C) TO THE WRITE-
12 # PARITY-ERROR GATES (WTRPLERO/WTRPHERO) FOR STUCK-ACTIVE (HIGH) FAULTS.
13 # THIS IS DONE BY PERFORMING A NORMAL WRITE OPERATION WITH A DATA PATTERN
14 # THAT CONTAINS GOOD PARITY. IF EITHER INPUT IS STUCK ACTIVE, THE CORRESPONDING
15 # WRITE-DATA-PARITY ERROR BIT (DLPER/DHPER) WILL BE SET IN STORE ERROR REGISTER.

```

```

-001- 18 # NO3 CODE
-001- 19 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WRPRCK2.
0017225 02 000334 040043 000000 CDGNM -001- 20 VFD 1,0 2,2 7,0 6,NN03CD
0017226 02 000335 000000 017230 0017230 -001- 21 ADDR WRPRCK2

```

```

0017230 23 WRPRCK2
0017230 24 SIOM MASCINT
0017230 02 000337 137020 012667 CDGSIO -002- 25 BSA MASIOM
0017232 02 000341 046071 ----- -001- 26 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017233 27 NMLWRIT BASADDR,ZEROS
0017233 02 000342 103561 106200 -001- 28 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017235 02 000344 003741 000000 -001- 29 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017237 02 000346 003761 000000 -001- 30 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 31 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0017241 02 000350 031040 043140 CTSD -001- 32 LAL R2,BASADDR,RAO
0017243 02 000352 041061 ----- -001- 33 LA R3,1(RAO)
0017244 02 000353 003140 ----- -001- 34 ZR R6 # NO SPECIAL PARITY
0017245 -001- 35 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0017245 02 000354 037020 013027 CDGSBS -002- 36 BSA MEMOP
0017247 37 SRIO SERREAD
0017247 02 000356 137020 012667 CDGSIO -002- 38 BSA MASIOM
0017251 02 000360 047114 ----- -001- 39 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0017252 02 000361 107473 ----- 40 LSR MCHB,R11
0017253 41 RTN_TBL **4
0017253 02 000362 071400 ----- -001- 42 GA
0017254 02 000363 031000 017260 0017260 -001- 43 LAL R0,**4,RAO
0017256 02 000365 037000 011162 CDGNM -001- 44 BL INTRPN03

```

STORE CONTROL AND PARITY TESTS

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TEST 38 SEGMENT 5

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W770

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MCHB BIT S(DLPER) TO 0.
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017260 02 000367 021514 ----- CDGNM -001- 04 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DLPER) 6,NCOMPARE
0017261 02 000370 000000 ----- -001- 05 VFD 15,0 1,0

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PLERSTK1.
0017262 02 000371 020017 ----- CDGNM -001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017263 02 000372 000010 ----- -001- 10 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 11 VFD 16,PLERSTK1

```

13 # PARITY LOW ERROR (PLER1C) IS STUCK ACTIVE TO WRITE-PARITY-LOW-ERROR (WTRPLER0)

```

-001- 16 # COMPARE
-001- 17 # COMPARE ON-LINE MCHB BIT S(DHPER) TO 0.
-001- 18 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017264 02 000373 021114 ----- CDGNM -001- 19 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DHPER) 6,NCOMPARE
0017265 02 000374 000000 ----- -001- 20 VFD 15,0 1,0

-001- 22 # FAILTST
-001- 23 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PHERSTK1.
0017266 02 000375 020017 ----- CDGNM -001- 24 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017267 02 000376 000011 ----- -001- 25 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 26 VFD 16,PPERSTK1

```

28 # PARITY HIGH ERROR(PHER1C) IS STUCK ACTIVE TO WRITE-PARITY-HIGH-ERROR(WTRPHER0)

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 61

TEST 38 SEGMENT 6

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 6
-001- 04 # *
-001- 05 # *****

```

```

0017270 02 000377 000600 ----- CDGMM -001- 08 VFD 1,0 2,0 2,0 5,D(6) 6,NTESTSEG

```

```

11 # THIS SEGMENT VERIFIES THAT THE STORE CONTROLLER WILL RETURN A STORE
12 # COMPLETE SIGNAL (SCH) AND NOT A STORE ERROR 'C' (SERC) IF THE PARITY OVER
13 # THE DATA BEING READ IS GOOD. TO DO THIS A DATA PATTERN WITH GOOD PARITY IS
14 # WRITTEN INTO THE DATA FLOPS (FFSD) IN THE STORE CONTROLLER AND THE SAME DATA
15 # IS READ BACK OUT USING THE COMPLEMENT WRITE OPTION TO PRESERVE THE PATTERN
16 # (DISABLING THE NORMAL LOAD SIGNAL (NLD) TO THE DATA FLOPS). THE DATA READY BIT
17 # (DR) IN THE OFF-LINE PROCESSOR SHOULD BE SET IF THE STORE COMPLETE SIGNAL IS
18 # GENERATED PROPERLY. LIKEWISE, THE STORE ERROR 'C' BIT (SRP) SHOULD NOT BE SET
19 # IN THE OFF-LINE ERROR REGISTER UNLESS ITS ASSOCIATED CIRCUITRY IS FAULTY

```

```

-001- 22 # MICRO
-001- 23 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-001- 24 # MISCELLANEOUS CROSSPOINT ZERX
0017271 02 000400 020005 ----- CDGMM -001- 25 VFD 1,0 2,1 7,0 6,NMICRO
0017272 02 000401 025750 ----- -001- 26 VFD 16,ZERX

```

```

-001- 28 # NO3 CODE
-001- 29 # PROCESS 3ACC CODED ROUTINE AT ADDRESS RDPRCKD.
0017273 02 000402 040043 000000 CDGMM -001- 30 VFD 1,0 2,2 7,0 6,NN03CD
0017274 02 000403 000000 017276 0017276 -001- 31 ADDR RDPRCKD

```

```

0017276 33 RDPRCKD
0017276 34 SIOM MASCINT
0017276 02 000405 137020 012667 CDGSIO -002- 35 BSA MASIO
0017300 02 000407 046071 137020 -001- 36 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017301 37 SIOM FNOTIMC # PREVENT INTERFERENCE FROM FAULTY MEMORY
# ELEMENTS
0017301 02 000410 137020 012667 CDGSIO -002- 39 BSA MASIO
0017303 02 000412 044470 ----- -001- 40 DATA FNOTIMC # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0017304 41 NMLWRIT BASADDR,ZEROS # GOOD PARITY
0017304 02 000413 103561 106200 -001- 42 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017306 02 000415 003741 000000 -001- 43 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017310 02 000417 003761 000000 -001-44 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 45 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0017312 02 000421 031040 043140 CTSD -001- 46 LAL R2,BASADDR,RAD
0017314 02 000423 041061 ----- -001-47 LA R3,1(RAD)
0017315 02 000424 003140 ----- -001- 48 ZR R6 # NO SPECIAL PARITY
0017316 -001- 49 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)

```

STORE CONTROL AND PARITY TESTS

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```

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TEST 38 SEGMENT 6

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

0017316 02 000425 037020 013027 CDGSBS -002- 01      BSA  MEMOP
0017320                                -002- 02      NMLREAD BASADDR,CW=1,BEC=0
0017320 02 000427 103561 046260          -001- 03      LI   R7,B(0100110010110000) # MAIN MEMORY STATUS
0017322 02 000431 031040 043140 CTSD     -001- 04      LAL  R2,BASADDR,RAO
0017324 02 000433 041061 -----        -001- 05      LA   R3,1(RAO)
0017325 02 000434 003140 -----        -001- 06      ZR   R6 # NO SPECIAL PARITY
0017326 02 000435 037020 013027 CDGSBS -002- 07      BSA  MEMOP
0017330                                -002- 08      RTN_TBL **4
0017330 02 000437 171400 -----        -001- 09      GA
0017331 02 000440 031000 017335 0017335 -001- 10      LAL  R0,**4,RAO
0017333 02 000442 037000 011162 CDGNM    -001- 11      BL   INTRPNO3

                                -001- 13 #      MICRO
                                -001- 14 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                -001- 15 #      TO FIELD = MCHBXT FROM FIELD = MCSXF
0017335 02 000444 020005 -----        -001- 16      VFD  1,0 2,1 7,0 6,NMICRO
0017336 02 000445 114564 -----        -001- 17      VFD  8,MCHBXT 8,MCSXF

                                -001- 19 #      RETRN
                                -001- 20 #      RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017337 02 000446 007710 -----        -001- 21      VFD  1,0 2,0 7,B(0111111) 6,NRETRN

                                -001- 23 #      COMPARE
                                -001- 24 #      COMPARE ON-LINE MCHB BIT S(DRD) TO 1.
                                -001- 25 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017340 02 000447 021014 -----        -001- 26      VFD  1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DRD) 6,NCOMPARE
0017341 02 000450 000001 -----        -001- 27      VFD  15,0 1,1

                                -001- 29 #      FAILTST
                                -001- 30 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS SCHSTK.
                                -001- 31 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017342 02 000451 020017 -----        -001- 32      VFD  1,0 2,1 5,0 2,0 6,NFAILTST
0017343 02 000452 000012 -----        -001- 33      VFD  16,SCHSTK

                                35 # EITHER STORE COMPLETE (SCM) OR ITS ASSOCIATED ENABLING CIRCUITRY IS FAULTY

                                -001- 38 #      MICRO
                                -001- 39 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                -001- 40 #      TO FIELD = MCHBXT FROM FIELD = ERXF
0017344 02 000453 020005 -----        -001- 41      VFD  1,0 2,1 7,0 6,NMICRO
0017345 02 000454 114652 -----        -001- 42      VFD  8,MCHBXT 8,ERXF

                                -001- 44 #      RETRN
                                -001- 45 #      RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017346 02 000455 007710 -----        -001- 46      VFD  1,0 2,0 7,B(0111111) 6,NRETRN

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 38 SEGMENT 6

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MCHB BIT S(SRPER) TO 0.
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017347 02 000456 021214 ----- CDGNM -001- 04 VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(SRPER) 6,NCOMPARE
0017350 02 000457 000000 ----- -001- 05 VFD 15,0 1,0

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS SERCSTK.
0017351 02 000460 020017 ----- CDGNM -001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017352 02 000461 000013 ----- -001- 10 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 11 VFD 16,SERCSTK

13 # STORE ERROR C (SERC) OR ITS ASSOCIATED ENABLING CIRCUITRY IS FAULTY

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STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 64

TEST 38 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

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-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 38 SEGMENT 7
-001- 04 # *
-001- 05 # *****

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0017353 02 000462 000700 ----- CDGMM -001- 08 VFD 1,0 2,0 2,0 5,D(7) 6,NTESTSEG

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11 # THIS SEGMENT VERIFIES THAT A STORE ERROR 'C' (SERC) WILL BE RETURNED
12 # INSTEAD OF A STORE COMPLETE (SCM) IF THE PARITY OVER THE DATA BEING READ IS
13 # INCORRECT. AT THE SAME TIME THE ACTUAL DATA BEING RETURNED IS CHECKED TO
14 # MAKE SURE IT IS NOT BEING COMPLEMENTED IMPROPERLY. THESE TESTS ARE PERFORMED
15 # BY WRITING A DATA PATTERN WITH BAD PARITY OVER ITS LOWER HALF INTO THE STORE
16 # DATA FLOPS (FFSD) IN THE STORE CONTROLLER. WHEN THIS DATA IS READ BACK (USING
17 # COMPLEMENT WRITE TO PRESERVE THE DATA BY PREVENTING NORMAL LOAD) THE BAD
18 # PARITY SHOULD CAUSE STORE COMPLETE TO BE DISABLED VIA THE PARITY ERROR SIGNAL
19 # (PARERD). CONVERSELY, STORE ERROR 'C' (SERC) SHOULD BE ENABLED BY THE
20 # COMBINATION OF THE SINGLE-PARITY-ERROR SIGNAL (PER1), THE COMPLEMENT OF
21 # THE TWO-PARITY-ERROR SIGNAL (P2ERD) AND UNGATED STORE COMPLETE (USCH1).
22 # IF EITHER OF THESE SIGNALS IS NOT IN THE PRESPECIFIED STATE, IT IS AN
23 # INDICATION THAT ITS ASSOCIATED CIRCUITRY IS FAULTY. IN ADDITION, ONE OF THE
24 # DATA BITS FROM THE OFF-LINE STORE DATA REGISTER (SDR) IS CHECKED TO MAKE
25 # SURE THAT A SINGLE PARITY (LOW) ERROR DOES NOT CAUSE A COMPLEMENT OF THE
26 # DATA READ BACK WITH THE STORE AUTOMATIC CORRECTION OPTION ACTIVE. IF A DATA
27 # BIT IS COMPLEMENTED, THIS INDICATES THAT THE CORRESPONDING PARITY-HIGH-ERROR
28 # INPUT (PHER1B) MUST BE STUCK ACTIVE (HIGH) TO THE TWO-PARITY WIRED-OR
29 # (TPER1B) WHICH SIGNALS THE BIT-SLICED BOARDS TO COMPLEMENT THE DATA.

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-001- 32 # MICRO
-001- 33 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-001- 34 # MISCELLANEOUS CROSSPOINT ZERX
0017354 02 000463 020005 ----- CDGMM -001- 35 VFD 1,0 2,1 7,0 6,NMICRO
0017355 02 000464 025750 ----- -001- 36 VFD 16,ZERX

-001- 38 # NO3 CODE
-001- 39 # PROCESS JACC CODED ROUTINE AT ADDRESS RDPRCK1.
0017356 02 000465 040043 000000 CDGMM -001- 40 VFD 1,0 2,2 7,0 6,NN03CD
0017357 02 000466 000000 017361 0017361 -001- 41 ADDR RDPRCK1

0017361 43 RDPRCK1
0017361 44 SIOM MASCINT
0017361 02 000470 137020 012667 CDGSIO -002- 45 BSA MASION
0017363 02 000472 046071 ----- -001- 46 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017364 47 NMLWRIT BASADDR,ZER0S,PRH10 # DATA LOW PARITY IS INCORRECT
0017364 02 000473 103561 106200 -001- 48 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017366 02 000475 003741 000000 -001- 49 LI R14,ZER0S # TO BE WRITTEN - SDO-15

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STORE CONTROL AND PARITY TESTS

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TEST 38 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

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0017370 02 000477 003761 000000          -001-;01      LI      R15,ZEROS          # TO BE WRITTEN - SD16-23
-001- 02 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0017372 02 000501 031040 043140 CTSD      -001- 03      LAL     R2,BASADDR,RAO
0017374 02 000503 041061 -----          -001-;04      LA      R3,1(RAO)
0017375 02 000504 003541 000012          -001- 05      'I     R6,PRH1LO          # SETUP SPECIAL PARITY
0017377          -001- 06      CALL   MEMOP            # INITIATE NORMAL WRITE(OFF-LINE)
0017377 02 000506 037020 013027 CDGSBS     -002- 07      BSA    MEMOP
0017401          -001- 08      SIOM   FNOTIMC
0017401 02 000510 137020 012667 CDGSIO     -002- 09      BSA    MASION
0017403 02 000512 044470 103561          -001- 10      DATA  FNOTIMC          # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0017404          -001- 11      NMLREAD BASADDR,BEC=0,CW=1,SAC=1
0017404 U2 000513 103561 076260          -001- 12      LI     R7,B(0111110010110000) # MAIN MEMORY STATUS
0017406 02 000515 031040 043140 CTSD      -001- 13      LAL     R2,BASADDR,RAO
0017410 02 000517 041061 -----          -001-;14      LA      R3,1(RAO)
0017411 02 000520 003140 -----          -001- 15      ZR     R6                # NO SPECIAL PARITY
0017412 02 000521 037020 013027 CDGSBS     -002- 16      BSA    MEMOP
0017414          -001- 17      RTN_TBL **4
0017414 02 000523 171400 -----          -001- 18      GA
0017415 02 000524 031000 017421 0017421 -001- 19      LAL     R0,**4,RAO
0017417 02 000526 037000 011162 CDGNM      -001- 20      BL     INTRPN03

-001- 22 #      MICRO
-001- 23 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
0017421 02 000530 020005 -----          -001- 24 #      TO FIELD = MCHBXT FROM FIELD = MCSXF
0017422 02 000531 114564 -----          -001- 25      VFD    1,0 2,1 7,0 6,NMICRO
-001- 26      VFD    8,MCHBXT 8,MCSXF

-001- 28 #      RETRN
-001- 29 #      RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017423 02 000532 007710 -----          -001- 30      VFD    1,0 2,0 7,B(0111111) 6,NRETRN

-001- 32 #      COMPARE
-001- 33 #      COMPARE ON-LINE MCHB BIT S(DRO) TO 0.
-001- 34 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017424 02 000533 021014 -----          -001- 35      VFD    1,LPINDX 2,1 1,0 1,SUCCES 5,S(DRO) 6,NCOMPARE
0017425 02 000534 000000 -----          -001- 36      VFD    15,0 1,0

-001- 38 #      FAILTST
-001- 39 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS SCMSTK.
-001- 40 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017426 02 000535 020017 -----          -001- 41      VFD    1,0 2,1 5,0 2,0 6,NFAILTST
0017427 02 000536 000012 -----          -001- 42      VFD    16,SCMSTK

44 # EITHER STORE COMPLETE (SCM) OR ITS ASSOCIATED ENABLING CIRCUITRY IS FAULTY

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STORE CONTROL AND PARITY TESTS

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TESTY 38 . SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

			-001- 01 #	MICRO
			-001- 02 #	PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
			-001- 03 #	TO FIELD = MCHBXT FROM FIELD = ERXF
0017430 02	000537 020005	-----	-001- 04	VFD 1,0 2,1 7,0 6,NMICRO
0017431 02	000540 114652	-----	-001- 05	VFD 8,MCHBXT 8,ERXF
			-001- 07 #	RETRN
			-001- 08 #	RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017432 02	000541 007710	-----	-001- 09	VFD 1,0 2,0 7,B(0111111) 6,NRETRN
			-001- 11 #	COMPARE
			-001- 12 #	COMPARE ON-LINE MCHB BIT S(SRPER) TO 1.
			-001- 13 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017433 02	000542 021214	-----	-001- 14	VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(SRPER) 6,NCOMPARE
0017434 02	000543 000001	-----	-001- 15	VFD 15,0 1,1
			-001- 17 #	FAILTST
			-001- 18 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS SERCSTK.
			-001- 19 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017435 02	000544 020017	-----	-001- 20	VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017436 02	000545 000013	-----	-001- 21	VFD 16,SERCSTK
			23 # EITHER STORE ERROR 'C' (SERC) OR ITS ASSOCIATED ENABLING CIRCUITRY IS FAULTY	
			-001- 26 #	MICRO
			-001- 27 #	PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
			-001- 28 #	TO FIELD = MCHBXT FROM FIELD = SDRXF
0017437 02	000546 020005	-----	-001- 29	VFD 1,0 2,1 7,0 6,NMICRO
0017440 02	000547 114456	-----	-001- 30	VFD 8,MCHBXT 8,SDRXF
			-001- 32 #	RETRN
			-001- 33 #	RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017441 02	000550 007710	-----	-001- 34	VFD 1,0 2,0 7,B(0111111) 6,NRETRN
			-001- 36 #	COMPARE
			-001- 37 #	COMPARE ON-LINE MCHB BIT BITO TO 0.
			-001- 38 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017442 02	000551 020014	-----	-001- 39	VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,BITO 6,NCOMPARE
0017443 02	000552 000C30	-----	-001- 40	VFD 15,0 1,0
			-001- 42 #	FAILTST
			-001- 43 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PHERSTK.
			-001- 44 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017444 02	000553 020017	-----	-001- 45	VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0017445 02	000554 000014	-----	-001- 46	VFD 16,PHERSTK

STORE CONTROL AND PARITY TESTS

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TEST 38 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # PARITY-HIGH INHIBIT (PHER1A) TO TWO-PARITY-ERROR 'OR' (TP2ER1A) IS STUCK HIGH

	-001-	04	#	NO3_CODE	
	-001-	05	#	PROCESS_3ACC	CODED ROUTINE AT ADDRESS **2.
0017446	02	000555	040043	000000	CDGMM
	-001-	06		VFD	1,0 2,2 7,0 6,NN03CD
0017447	02	000556	000000	017451	0017451
	-001-	07		ADDR	**2

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 38 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

		01	CSTCP2	OW	0(560),0(562)	# 12703	
	-001-	02		NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000560 *****		
0017451				05	FINALE	CP2INIT	
0017451	02	000560	137020	012771	CDGSI0	-002-	06
0017453	02	000562	137000	016714	0016714	-001-	07
0017455	02	000564	171400	-----		-001-	08
0017456	02	000565	037000	011725	CDGNM	-001-	09
0017456							10
							11
					BSA	FINAL	
					BL	BKCSTCP2	
					GA		
					BL	PASSTST	# TEST COMPLETED
					EOW		# 12703
					NOTE	***** THE LAST ADDRESS OVERWRITTEN IS 000566 *****	

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 39

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

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-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 39, MAIN_STORE_CONTROL_AND_PARITY
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

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0017460

-001- 10 CSTCP3 CSECT

0017460 03 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

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18 # SEGMENT 1
19 # THIS SEGMENT CHECKS THAT DATA READ WILL NOT BE AUTOMATICALLY COMPLEMENTED.
20 # IF ONLY A DATA PARITY HIGH ERROR IS DETECTED. (NOTE: PREVIOUS SEGMENT HAS
21 # TESTED THIS SITUATION FOR DATA PARITY LOW ERROR.) THIS IS DONE BY WRITING
22 # A DATA PATTERN WITH BAD PARITY OVER ITS UPPER HALF INTO THE STORE DATA FLOPS
23 # (FFSD) IN THE STORE CONTROLLER. WHEN THIS PATTERN IS READ BACK (USING THE
24 # COMPLEMENT WRITE SIGNAL TO PRESERVE THE DATA BY PREVENTING NORMAL LOAD)
25 # THE SINGLE BAD PARITY BIT SHOULD NOT CAUSE THE DATA TO BE COMPLEMENTED. IF
26 # A DATA BIT IS COMPLEMENTED, THIS INDICATES THAT THE CORRESPONDING PARITY-LOW-
27 # ERROR INPUT (PLER1B) MUST BE STUCK ACTIVE (HIGH) TO THE TWO-
28 # PARITY WIRED-OR NET (TP2ER1B) WHICH SIGNALS THE BIT-SLICED BOARDS
29 # TO COMPLEMENT THE DATA.

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32 # SEGMENT 2
33 # THIS SEGMENT VERIFIES THAT READING A DATA WORD THAT HAS BOTH PARITY BITS
34 # BAD WITH THE STORE AUTOMATIC CORRECTION SIGNAL ACTIVE WILL RESULT IN A STORE
35 # COMPLETE (SCM) BEING SENT BACK TO THE OFF-LINE PROCESSOR INSTEAD OF A STORE
36 # ERROR 'C' (SERC). THIS IS TESTED BY WRITING A DATA PATTERN WITH BAD PARITY
37 # OVER BOTH HALVES INTO THE STORE DATA FLOPS (FFSD) IN THE STORE CONTROLLER.
38 # WHEN THIS PATTERN IS READ BACK, DETECTION OF THE TWO BAD PARITY BITS
39 # ACTIVATE THE TWO-PARITY-ERROR WIRED-OR (TP2ER1B) WHICH IS CONNECTED TO THE
40 # ENABLE-STORE-COMplete LEAD (ENSCM1) ON THE TIMING BOARD. IF DATA READY (DR)
41 # IS NOT SET AFTER THE READ, THIS CIRCUITRY WHICH SHOULD GENERATE STORE COMPLETE
42 # MUST BE FAULTY. ADDITIONALLY, STORE ERROR 'C' (SERC) SHOULD BE INHIBITED
43 # BY THE TWO-PARITY-ERROR INPUT (P2ER0) INTO THE STORE-ERROR-C GATE (TSERCA0)
44 # UNLESS THAT SIGNAL IS STUCK ACTIVE (HIGH). FINALLY, BOTH PARITY BITS ARE
45 # CHECKED TO MAKE SURE THEY HAVE BEEN COMPLEMENTED FROM THE 'ONE' STATE TO THE
46 # 'ZERO' STATE SINCE THIS PARTICULAR TRANSITION WAS NOT CHECKED IN THE PREVIOUS
47 # DATA BUS TEST(S).
48 # WITH THE STORE AUTOMATIC CORRECTION FLOP SET (SACD IS LOW) SHOULD

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STORE CONTROL AND PARITY TESTS

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TEST 39

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # SEGMENT 3
 02 # THIS SEGMENT VERIFIES THAT NEITHER OF THE NORMAL READ (RD1) INPUTS TO
 03 # THE READ-PARITY-ERROR GATES (RDPLER0(RDPHER0) IS STUCK ACTIVE (HIGH).
 04 # A NORMAL WRITE OF DATA WITH BOTH PARITY BITS INCORRECT IS DONE FROM OFF-LINE
 05 # PROCESSOR TO OFF-LINE STORE. IF NEITHER OF THE NORMAL READ INPUTS IS STUCK
 06 # ACTIVE, THEN THIS OPERATION SHOULD END WITH A STORE COMPLETE FROM THE OFF-LINE
 07 # STORE SETTING THE DATA READY BIT (DR) IN THE OFF-LINE PROCESSOR. IF DATA
 08 # READY DOES NOT GET SET, THEN A STUCK NORMAL READ INPUT MUST BE ERRONEOUSLY
 09 # ACTIVATING THE PARITY-ERROR INHIBIT (PARER0) WHICH DISABLES THE OUTPUT OF
 10 # THE STORE COMPLETE FLOP (SCM) ON THE TIMING BOARD.

13 # SEGMENT 4
 14 # THIS SEGMENT CHECKS THE CLEAR SIDE OF THE NORMAL LOAD SIGNAL TO THE STORE
 15 # AUTOMATIC CORRECTION FLOP (SAC). A NORMAL WRITE OF A DATA PATTERN WITH BOTH
 16 # PARITY BITS INCORRECT AND THE STORE AUTOMATIC CORRECTION LEAD ACTIVE (LOW ON
 17 # BUS) IS DONE IN THE OFF-LINE SYSTEM. A READ OF THE SAME DATA IS PERFORMED
 18 # USING THE COMPLEMENT WRITE OPTION (CW=1) TO PRESERVE THE INFORMATION BY
 19 # INHIBITTING NORMAL LOAD (TO ADDRESS AND DATA FLOPS ONLY). SINCE THE READ
 20 # OPERATION IS PERFORMED WITH THE STORE AUTOMATIC CORRECTION LEAD INACTIVE (HIGH
 21 # ON BUS), THE PARITY ERRORS SHOULD CAUSE STORE COMPLETE TO BE DISABLED, SO
 22 # THAT DATA READY (DR) WILL NOT GET SET IN THE OFF-LINE PROCESSOR. IF THE NORMAL
 23 # LOAD CLEAR SIGNAL (NLDO) TO THE STORE AUTOMATIC CORRECTION FLOP IS STUCK HIGH,
 24 # IT WILL NOT BE CLEARED (FROM WRITE OPERATION) AND AN ENABLED STORE COMPLETE
 25 # WILL CAUSE THE DATA READY BIT(S) TO BE SET.

28 # SEGMENT 5
 29 # THIS SEGMENT CHECKS THE CLEAR FUNCTION ON THE STORE COMPLEMENT WRITE FLOP
 30 # (SCW). A NORMAL WRITE OF A DATA PATTERN WITH BOTH PARITY BITS BAD IS PERFORMED
 31 # TWICE IN THE OFF-LINE SYSTEM. THE FIRST WRITE SETS THE SCW FLOP, AND THE
 32 # SECOND WRITE SHOULD CLEAR THE FLOP. IF THE CLEAR IS SUCCESSFUL, THE SECOND
 33 # WRITE WILL GENERATE PARITY ERRORS (DLPER/DHPER) IN THE STORE ERROR REGISTER.
 34 # IF A PARITY ERROR DOES NOT OCCUR, THE NORMAL LOAD SIGNAL (NLDO) WHICH IS
 35 # SUPPOSED TO CLEAR THE SCW FLOP MUST BE STUCK ACTIVE (HIGH).

38 # SEGMENT 6
 39 # THIS SEGMENT VERIFIES THAT NEITHER THE STORE COMPLEMENT WRITE FLOP (SCW)
 40 # NOR THE STORE AUTOMATIC CORRECTION FLOP (SAC) MAY BE CHANGED DURING A STORE
 41 # CYCLE AFTER THE NORMAL LOAD SIGNAL HAS TERMINATED. THIS IS ACCOMPLISHED BY
 42 # INITIALIZING THE STORE CONTROLLER AND INITIATING A NORMAL READ IN THE OFF-LINE
 43 # SYSTEM. THE STORE CYCLE CAN BE CLOSELY CONTROLLED BY STEPPING THE CONTROLLER
 44 # CLOCK TO THE POINT AT WHICH STORE BUSY (SBY) IS ACTIVATED (LOW ON BUS) AND
 45 # THE NORMAL LOAD IS DEACTIVATED. THE CONTENTS OF THE OFF-LINE MAIN MEMORY
 46 # STATUS REGISTER ARE MODIFIED, SO THAT THE COMPLEMENT WRITE (CWO) AND STORE
 47 # AUTOMATIC CORRECTION (BDSRD/BDSR1) BITS WHICH WERE INITIALLY SET ARE RESET.
 48 # THE STORE CLOCK IS RE-ENABLED AND THE CYCLE IS ALLOWED TO COMPLETE.
 49 # IF THE FAST SET ON THE SCW FLOP IS STUCK ACTIVE (HIGH), THEN CHANGING THE

STORE CONTROL AND PARITY TESTS .

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TEST 39

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # MMSR WILL CAUSE THE SCW TO BE CLEARED AND WRITE PARITY ERRORS WILL IMPROPERLY
02 # BE SET IN THE STORE ERROR REGISTER. IF THE FAST SET ON THE SAC FLOP IS STUCK
03 # ACTIVE (HIGH), THEN THE MMSR CHANGE WILL CLEAR SAC AND ERRONEOUSLY INHIBIT
04 # THE STORE COMPLETE SIGNAL. THUS, IF OFF-LINE DATA READY (DR) IS NOT SET BY
05 # A STORE COMPLETE AT THE END OF THIS CYCLE, THIS NORMAL LOAD (NLDB1) TO THE
06 # SAC FLOP MUST BE STUCK HIGH.

09 # SEGMENT 7
10 # THIS SEGMENT ENSURES THAT THE STORE ERROR 'C' BUS SIGNAL (SERC) WHICH IS
11 # SENT IN PLACE OF STORE COMPLETE (SCM) WHEN A READ PARITY ERROR OCCURS CAN BE
12 # DIVERTED TO THE STORE COMPLETE LEAD IF THE BLOCK ERROR CORRECT BIT (BEC0) IS
13 # SET IN THE MAIN MEMORY STATUS REGISTER (MMSR). A NORMAL READ IS PERFORMED IN
14 # THE OFF-LINE SYSTEM WITH THE BLOCK ERROR CORRECT BIT SET IN THE MMSR (AND THE
15 # COMPLEMENT WRITE OPTION ACTIVE TO PRESERVE THE STORE DATA FLOP CONTENTS). IF
16 # THE DATA READY BIT (DR) IS SET BY STORE COMPLETE DURING THIS OPERATION, THEN
17 # SERC IS PROPERLY BEING DIVERTED TO STORE COMPLETE. CONVERSELY, IF DATA READY
18 # IS NOT SET, THEN THE CIRCUITRY WHICH IS SUPPOSED TO DIVERT SERC TO THE SCM
19 # LEAD (IF BEC=1) MUST BE FAULTY.

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 39

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP M77D

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01 CSTCP3 OW      0(1),0(16)          # 12703
-001- 02          NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0017461 .
0017461 03 000001 000144 ----- CDGNM
0017462 03 000002 047707 ----- CDGNM
0017463 03 000003 000040 000001
0017465 03 000005 020005 ----- CDGNM
0017466 03 000006 106631 -----
0017467 03 000007 040043 000000 CDGNM
0017470 03 000010 000000 017472 0017472
0017472 03 000012 103501 000151 TTYTBL
0017474 03 000014 034500 043132 CTSD
0017476 03 000016 103240 -----
0017477 03 000017 004257 -----
0017500 03 000020 072652 ----- CDGNM
0017501 03 000021 037020 012757 CDGSIO
0017503 03 000023 172652 ----- CDGNM
0017504 03 000024 137020 012667 CDGSIO
0017506 03 000026 046071 -----
0017507 03 000027 171400 -----
0017510 03 000030 031000 017514 0017514
0017512 03 000032 037000 011162 CDGNM

05 CP3INIT PREPARE
-002- 06 # RTN_BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-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).
-002- 13 VFD 1,0 2,2 7,8(0111111) 6,N2SEND
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBXF
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
-002- 20 VFD 8,MSXT 8,MCHBXF

-002- 22 # NO3_CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
-002- 24 VFD 1,0 2,2 7,0 6,NN03CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MXAS
-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)

-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1 MASSURE THAT LOOPIND IS ZERO BEFORE
PROCEEDING WITH TEST

-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTPREP
-001- 39 HN LOOPIND,LOOPIND
-003- 40 BSA MASIOM
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

-002- 43 GA
-002- 44 LAL RO,**4,RAO
-002- 45 BL INTRPNO3

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 73

TEST 39

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0017514

01
-001- 02EOW
NOTE

12703

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 74

TEST 39 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

```

0017514 03 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THAT DATA READ WILL NOT BE AUTOMATICALLY COMPLEMENTED
12 # IF ONLY A DATA PARITY HIGH ERROR IS DETECTED. (NOTE: PREVIOUS SEGMENT HAS
13 # TESTED THIS SITUATION FOR DATA PARITY LOW ERROR.) THIS IS DONE BY WRITING
14 # A DATA PATTERN WITH BAD PARITY OVER ITS UPPER HALF INTO THE STORE DATA FLOPS
15 # (FFSD) IN THE STORE CONTROLLER. WHEN THIS PATTERN IS READ BACK (USING THE
16 # COMPLEMENT WRITE SIGNAL TO PRESERVE THE DATA BY PREVENTING NORMAL LOAD)
17 # THE SINGLE BAD PARITY BIT SHOULD NOT CAUSE THE DATA TO BE COMPLEMENTED. IF
18 # A DATA BIT IS COMPLEMENTED, THIS INDICATES THAT THE CORRESPONDING PARITY-LOW-
19 # ERROR INPUT (PLER1B) MUST BE STUCK ACTIVE (HIGH) TO THE TWO-
20 # PARITY WIRED-OR NET (TP2ER1B) WHICH SIGNALS THE BIT-SLICED BOARDS
21 # TO COMPLEMENT THE DATA.

```

```

-001- 24 # NO3_CODE
-001- 25 # PROCESS 3ACC CODED ROUTINE AT ADDRESS RDPRCK2.
0017515 03 000035 040043 000000 CDGNM -001- 26 VFD 1,0 2,2 7,0 6,NNO3CD
0017516 03 000036 000000 017523 0017523 -001- 27 ADDR RDPRCK2
0017520 29 SIOM MASCINT
0017520 03 000040 037020 012667 CDGSI0 -002- 30 BSA MASIOM
0017522 03 000042 046071 ----- -001- 31 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017523 32 RDPRCK2
0017523 33 NMLWRIT BASADDR,ZEROS PRHOL1 # DATA HIGH PARITY IS INCORRECT
0017523 03 000043 103561 106200 -001- 34 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017525 03 000045 003741 000000 -001- 35 LI R14,ZEROS # TO BE WRITTEN - SDD-15
0017527 03 000047 003761 000000 -001-;36 LI R15,ZEROS # TO BE WRITTEN - SDD16-23
-001- 37 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0017531 03 000051 031040 043140 CTSD -001- 38 LAL R2,BASADDR,RAD
0017533 03 000053 041061 ----- -001-;39 LA R3,1(RAD)
0017534 03 000054 003541 000005 -001- 40 LI R6,PRHOL1 # SETUP SPECIAL PARITY
0017536 -001- 41 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0017536 03 000056 037020 013027 CDGSBS -002- 42 BSA MEMOP
0017540 43 SIOM FNOTIMC
0017540 03 000060 137020 012667 CDGSI0 -002- 44 BSA MASIOM
0017542 03 000062 044470 103561 -001- 45 DATA FNOTIMC # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0017543 46 NMLREAD BASADDR,CW=1,SAC=1
0017543 03 000063 103561 176260 -001- 47 LI R7,B(1111110010110000) # MAIN MEMORY STATUS
0017545 03 000065 031040 043140 CTSD -001- 48 LAL R2,BASADDR,RAD
0017547 03 000067 041061 ----- -001-;49 LA R3,1(RAD)

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

```

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 75

```

TEST 39 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0017550 03 000070 003140 ----- -001- 01      ZR      R6      # NO SPECIAL PARITY
0017551 03 000071 037020 013027 CDGSBS -002- 02      BSA     MEMOP
0017553          -001- 03      RTN_TBL **4
0017553 03 000073 171400 ----- -001- 04      GA
0017554 03 000074 031000 017560 0017560 -001- 05      LAL     RO,++4,RAD
0017556 03 000076 037000 011162 CDGNM  -001- 06      BL     INTRPN03

-001- 08 #      COMPARE
-001- 09 #      COMPARE ON-LINE MCHB BIT BIT0 TO 0.
-001- 10 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017560 03 000100 020014 ----- CDGNM  -001- 11      VFD     1,LPINDX 2,1 1,0 1,SUCCES 5,BITO 6,NCOMPARE
0017561 03 000101 000000 ----- -001- 12      VFD     15,0 1,0

-001- 14 #      FAILTST
-001- 15 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PLERSTK.
-001- 16 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017562 03 000102 020017 ----- CDGNM  -001- 17      VFD     1,0 2,1 5,0 2,0 6,NFAILTST
0017563 03 000103 000002 ----- -001- 18      VFD     16,PLERSTK

```

20 # PARITY-LOW INHIBIT (PLER1A) TO TWO-PARITY-ERROR 'OR' (TP2ER1A) IS STUCK HIGH

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 76

TEST 39 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

```

0017564 03 000104 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

```

11 # THIS SEGMENT VERIFIES THAT READING A DATA WORD THAT HAS BOTH PARITY BITS
12 # BAD WITH THE STORE AUTOMATIC CORRECTION SIGNAL ACTIVE WILL RESULT IN A STORE
13 # COMPLETE (SCM) BEING SENT BACK TO THE OFF-LINE PROCESSOR INSTEAD OF A STORE
14 # ERROR 'C' (SERC). THIS IS TESTED BY WRITING A DATA PATTERN WITH BAD PARITY
15 # OVER BOTH HALVES INTO THE STORE DATA FLOPS (FFSD) IN THE STORE CONTROLLER.
16 # WHEN THIS PATTERN IS READ BACK, DETECTION OF THE TWO BAD PARITY BITS
17 # ACTIVATE THE TWO-PARITY-ERROR WIRED-OR (TP2ER1B) WHICH IS CONNECTED TO THE
18 # ENABLE-STORE-COMplete LEAD (ENSCM1) ON THE TIMING BOARD. IF DATA READY (DR)
19 # IS NOT SET AFTER THE READ, THIS CIRCUITRY WHICH SHOULD GENERATE STORE COMPLETE
20 # MUST BE FAULTY. ADDITIONALLY, STORE ERROR 'C' (SERC) SHOULD BE INHIBITED
21 # BY THE TWO-PARITY-ERROR INPUT (P2ERO) INTO THE STORE-ERROR-C GATE (TSERCAO)
22 # UNLESS THAT SIGNAL IS STUCK ACTIVE (HIGH). FINALLY, BOTH PARITY BITS ARE
23 # CHECKED TO MAKE SURE THEY HAVE BEEN COMPLEMENTED FROM THE 'ONE' STATE TO THE
24 # 'ZERO' STATE SINCE THIS PARTICULAR TRANSITION WAS NOT CHECKED IN THE PREVIOUS
25 # DATA BUS TEST(S).
26 # WITH THE STORE AUTOMATIC CORRECTION FLOP SET (SACO IS LOW) SHOULD

```

```

-001- 29 # MICRO
-001- 30 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-001- 31 # MISCELLANEOUS CROSSPOINT ZERX
0017565 03 000105 020005 ----- CDGNM -001- 32 VFD 1,0 2,1 7,0 6,NMICRO
0017566 03 000106 025750 ----- -001- 33 VFD 16,ZERX

```

```

-001- 35 # NO3 CODE
-001- 36 # PROCESS 3ACC CODED ROUTINE AT ADDRESS RDPRCK3.
0017567 03 000107 040043 000000 CDGNM -001- 37 VFD 1,0 2,2 7,0 6,NN03CD
0017570 03 000110 000000 017572 0017572 -001- 38 ADDR RDPRCK3

```

```

0017572 40 RDPRCK3
0017572 41 SION MASCINT
0017572 03 000112 137020 012667 CDGSIO -002- 42 BSA MASIOM
0017574 03 000114 046071 ----- -001- 43 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017575 44 NMLWRIT BASADDR,B(100000001),PRH1L1
0017575 03 000115 103561 106200 -001- 45 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0017577 03 000117 003741 000401 -001- 46 LI R14,B(100000001) # TO BE WRITTEN - SD0-15
0017601 03 000121 003761 000401 -001- 47 LI R15,B(100000001) # TO BE WRITTEN - SD16-23
0017603 03 000123 031040 043140 CTSD -001- 48 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
-001- 49 LAL R2,BASADDR,RAO

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 39 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

0017605	03	000125	041061	-----		-001- 01	LA	R3,1(RAD)	
0017606	03	000126	003541	000017		-001- 02	LI	R6,PRH1L1	# SETUP SPECIAL PARITY
0017610						-001- 03	CALL	MEMOP	# INITIATE NORMAL WRITE(OFF-LINE)
0017610	03	000130	037020	013027	CDGSBS	-002- 04	BSA	MEMOP	
0017612						05	SIOM	FNOTIMC	
0017612	03	000132	137020	012667	CDGSIO	-002- 06	BSA	MASIOB	
0017614	03	000134	044470	103561		-001- 07	DATA	FNOTIMC	# BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0017615						08	NMLREAD	BASADDR,BEC=0,CW=1,SAC=1	
0017615	03	000135	103561	076260		-001- 09	LI	R7,B(0111110010110000)	# MAIN MEMORY STATUS
0017617	03	000137	031040	043140	CTSD	-001- 10	LAL	R2,BASADDR,RAO	
0017621	03	000141	041061	-----		-001- 11	LA	R3,1(RAD)	
0017622	03	000142	003140	-----		-001- 12	ZR	R6	# NO SPECIAL PARITY
0017623	03	000143	037020	013027	CDGSBS	-002- 13	BSA	MEMOP	
0017625						14	RTN_TBL	**4	
0017625	03	000145	171400	-----		-001- 15	GA		
0017626	03	000146	031000	017632	0017632	-001- 16	LAL	RO,**4,RAO	
0017630	03	000150	037000	011162	CDGNM	-001- 17	BL	INTRPN03	
						-001- 19 #	MICRO		
						-001- 20 #	PERFORM MICRO INSTRUCTION IN OFF-LINE CU.		
0017632	03	000152	020005	-----	CDGNM	-001- 21 #	TO FIELD = MCHBXT FROM FIELD = MCSXF		
0017633	03	000153	114564	-----		-001- 22	VFD	1,0 2,1 7,0 6,NMICRO	
						-001- 23	VFD	8,MCHBXT 8,MCSXF	
						-001- 25 #	RETRN		
						-001- 26 #	RETURN OFF-LINE MCHB TO ON-LINE MCHB.		
0017634	03	000154	007710	-----	CDGNM	-001- 27	VFD	1,0 2,0 7,B(0111111) 6,NRETRN	
						-001- 29 #	COMPARE		
						-001- 30 #	COMPARE ON-LINE MCHB BIT S(DR0) TO 1.		
						-001- 31 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.		
0017635	03	000155	021014	-----	CDGNM	-001- 32	VFD	1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DR0) 6,NCOMPARE	
0017636	03	000156	000001	-----		-001- 33	VFD	15,0 1,1	
						-001- 35 #	FAILTST		
						-001- 36 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS SCMFLT.		
						-001- 37 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.		
0017637	03	000157	020017	-----	CDGNM	-001- 38	VFD	1,0 2,1 5,0 2,0 6,NFAILTST	
0017640	03	000160	000003	-----		-001- 39	VFD	16,SCMFLT	
						41 #	STORE COMPLETE (SCM) IS NOT ACTIVE (LOW ON BUS) AFTER DOUBLE DATA PARITY ERROR		
						42 #	DURING A READ WITH STORE AUTOMATIC CORRECTION ACTIVE		
						-001- 45 #	MICRO		
						-001- 46 #	PERFORM MICRO INSTRUCTION IN OFF-LINE CU.		
						-001- 47 #	TO FIELD = MCHBXT FROM FIELD = ERXF		
0017641	03	000161	020005	-----	CDGNM	-001- 48	VFD	1,0 2,1 7,0 6,NMICRO	
0017642	03	000162	114652	-----		-001- 49	VFD	8,MCHBXT 8,ERXF	

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 78

TEST 39 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 02 #   RETRN
-001- 03 #   RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017643 03 000163 007710 ----- CDGNM -001- 04   VFD   1,0 2,0 7,B(0111111) 6,NRETRN

-001- 06 #   COMPARE
-001- 07 #   COMPARE ON-LINE MCHB BIT S(SRPER) TO 0.
0017644 03 000164 021214 ----- CDGNM -001- 08 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017645 03 000165 000000 ----- -001- 09   VFD   1,LPINDX 2,1 1,0 1,SUCCES 5,S(SRPER) 6,NCOMPARE
-001- 10   VFD   15,0 1,0

-001- 12 #   FAILTST
-001- 13 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS ERCSTK.
0017646 03 000166 020017 ----- CDGNM -001- 14 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017647 03 000167 000004 ----- -001- 15   VFD   1,0 2,1 5,0 2,0 6,NFAILTST
-001- 16   VFD   16,ERCSTK

18 # STORE ERROR 'C' (SERC) IS NOT INACTIVE (HIGH ON BUS) AFTER DOUBLE DATA PARITY
19 # ERROR IS DETECTED ON A READ WITH STORE AUTOMATIC CORRECTION ACTIVE

21 # NOTE: THIS EXERCISE CHECKS SINGLE PARITY ERROR (PER1) AND DOUBLE PARITY
22 # ERROR (P2EROD) SIGNALS FOR STUCK-ACTIVE (HIGH) FAULTS (AMONG OTHERS).

-001- 25 #   MICRO
-001- 26 #   PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
0017650 03 000170 020005 ----- CDGNM -001- 27 #   TO FIELD = MCHBXT FROM FIELD = SDRXF
0017651 03 000171 114456 ----- -001- 28   VFD   1,0 2,1 7,0 6,NMICRO
-001- 29   VFD   8,MCHBXT 8,SDRXF

-001- 31 #   RETRN
-001- 32 #   RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017652 03 000172 007710 ----- CDGNM -001- 33   VFD   1,0 2,0 7,B(0111111) 6,NRETRN

-001- 35 #   COMPARE
-001- 36 #   COMPARE ON-LINE MCHB BIT PL TO 0.
0017653 03 000173 022414 ----- CDGNM -001- 37 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017654 03 000174 000000 ----- -001- 38   VFD   1,LPINDX 2,1 1,0 1,SUCCES 5,PL 6,NCOMPARE
-001- 39   VFD   15,0 1,0

-001- 41 #   FAILTST
-001- 42 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PLCMER.
0017655 03 000175 020017 ----- CDGNM -001- 43 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017656 03 000176 000005 ----- -001- 44   VFD   1,0 2,1 5,0 2,0 6,NFAILTST
-001- 45   VFD   16,PLCMER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 79

TEST 39 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # DATA PARITY LOW BIT IN STORE CONTROLLER IS NOT BEING COMPLEMENTED PROPERLY

0017657 03 000177 022514	-----	CDGNM	-001- 04 #	COMPARE
0017660 03 000200 000000	-----		-001- 05 #	COMPARE ON-LINE MCHB BIT PH TO 0.
			-001- 06 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
			-001- 07	VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
			-001- 08	VFD 15,0 1,0
			-001- 10 #	FAILTST
			-001- 11 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PHCMR.
0017661 03 000201 020017	-----	CDGNM	-001- 12 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017662 03 000202 000006	-----		-001- 13	VFD 1,0 2,1 5,0 2,0 6,NFAILTST
			-001- 14	VFD 16,PHCMR

16 # DATA PARITY HIGH BIT IN STORE CONTROLLER IS NOT BEING COMPLEMENTED PROPERLY

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 80

TEST 39 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

```

0017663 03 000203 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(3) 6,NTESTSEG

```

```

11 # THIS SEGMENT VERIFIES THAT NEITHER OF THE NORMAL READ (RD1) INPUTS TO
12 # THE READ-PARITY-ERROR GATES (RDPLERD(RDPHERD) IS STUCK ACTIVE (HIGH).
13 # A NORMAL WRITE OF DATA WITH BOTH PARITY BITS INCORRECT IS DONE FROM OFF-LINE
14 # PROCESSOR TO OFF-LINE STORE. IF NEITHER OF THE NORMAL READ INPUTS IS STUCK
15 # ACTIVE, THEN THIS OPERATION SHOULD END WITH A STORE COMPLETE FROM THE OFF-LINE
16 # STORE SETTING THE DATA READY BIT (DR) IN THE OFF-LINE PROCESSOR. IF DATA
17 # READY DOES NOT GET SET, THEN A STUCK NORMAL READ INPUT MUST BE ERRONEOUSLY
18 # ACTIVATING THE PARITY-ERROR INHIBIT (PARERO) WHICH DISABLES THE OUTPUT OF
19 # THE STORE COMPLETE FLOP (SCM) ON THE TIMING BOARD.

```

```

-001- 22 # NO3_CODE
-001- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS RDPRCK4.
0017664 03 000204 040043 000000 CDGNM -001- 24 VFD 1,0 2,2 7,0 6,NNO3CD
0017665 03 000205 000000 017667 0017667 -001- 25 ADDR RDPRCK4
0017667 27 RDPRCK4
0017667 28 SIOM MASCINT
0017667 03 000207 137020 012667 CDGSIO -002- 29 BSA MASIOM
0017671 03 000211 046071 ----- -001- 30 DATA MASCINT # INITIALIZE STORE CONTROLLER
0017672 31 NMLWRIT BASADDR,ZEROS,PRHOLD,BEC=0 # BOTH PARITY BITS INCORRECT
0017672 03 000212 103561 006200 -001- 32 LI R7,B(0000110010000000) # MAIN MEMORY STATUS
0017674 03 000214 003741 000000 -001- 33 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0017676 03 000216 003761 000000 -001- 34 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 35 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0017700 03 000220 031040 043140 CTSD -001- 36 LAL R2,BASADDR,RAD
0017702 03 000222 041061 ----- -001- 37 LA R3,1(RAD)
0017703 03 000223 003541 000020 -001- 38 LI R6,PRHOLD # SETUP SPECIAL PARITY
0017705 -001- 39 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0017705 03 000225 037020 013027 CDGSBS -002- 40 BSA MEMOP
0017707 41 RTN_TBL **4
0017707 03 000227 171400 ----- -001- 42 GA
0017710 03 000230 031000 017714 0017714 -001- 43 LAL R0,**4,RAD
0017712 03 000232 037000 011162 CDGNM -001- 44 BL INTRPNO3

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 81

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TEST 39 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

		-001- 01 #	MICRO
		-001- 02 #	PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
		-001- 03 #	TO FIELD = MCHBXT FROM FIELD = MCSXF
0017714	03 000234 020005	-----	CDGNM
0017715	03 000235 114564	-----	
		-001- 04	VFD 1,0 2,1 7,0 6,NMICRO
		-001- 05	VFD 8,MCHBXT 8,MCSXF
		-001- 07 #	RETRN
		-001- 08 #	RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017716	03 000236 007710	-----	CDGNM
		-001- 09	VFD 1,0 2,0 7,B(0111111) 6,NRETRN
		-001- 11 #	COMPARE
		-001- 12 #	COMPARE ON-LINE MCHB BIT S(DRO) TO 1.
		-001- 13 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017717	03 000237 021014	-----	CDGNM
0017720	03 000240 000001	-----	
		-001- 14	VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DRO) 6,NCOMPARE
		-001- 15	VFD 15,0 1,1
		-001- 17 #	FAILTST
		-001- 18 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS RD1STK.
		-001- 19 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0017721	03 000241 020017	-----	CDGNM
0017722	03 000242 000007	-----	
		-001- 20	VFD 1,0 2,1 5,0 2,0 6,NFAILTST
		-001- 21	VFD 16,RD1STK

23 # NORMAL READ ENABLE (RD1) TO READ-PARITY-ERROR GATE (RDPLERO/RDPHERO) IS FAULTY

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 82

TEST 39 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 4
-001- 04 # *
-001- 05 # *****

```

```

0017723 03 000243 000400 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(4) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THE CLEAR SIDE OF THE NORMAL LOAD SIGNAL TO THE STORE
12 # AUTOMATIC CORRECTION FLOP (SAC). A NORMAL WRITE OF A DATA PATTERN WITH BOTH
13 # PARITY BITS INCORRECT AND THE STORE AUTOMATIC CORRECTION LEAD ACTIVE (LOW ON
14 # BUS) IS DONE IN THE OFF-LINE SYSTEM. A READ OF THE SAME DATA IS PERFORMED
15 # USING THE COMPLEMENT WRITE OPTION (CW=1) TO PRESERVE THE INFORMATION BY
16 # INHIBITTING NORMAL LOAD (TO ADDRESS AND DATA FLOPS ONLY). SINCE THE READ
17 # OPERATION IS PERFORMED WITH THE STORE AUTOMATIC CORRECTION LEAD INACTIVE (HIGH
18 # ON BUS), THE PARITY ERRORS SHOULD CAUSE STORE COMPLETE TO BE DISABLED, SO
19 # THAT DATA READY (DR) WILL NOT GET SET IN THE OFF-LINE PROCESSOR. IF THE NORMAL
20 # LOAD CLEAR SIGNAL (NLDD) TO THE STORE AUTOMATIC CORRECTION FLOP IS STUCK HIGH,
21 # IT WILL NOT BE CLEARED (FROM WRITE OPERATION) AND AN ENABLED STORE COMPLETE
22 # WILL CAUSE THE DATA READY BIT(S) TO BE SET.

```

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-001- 25 # NO3_CODE
-001- 26 # PROCESS 3ACC CODED ROUTINE AT ADDRESS NLDCKO.
0017724 03 000244 040043 000000 CDGNM -001- 27 VFD 1,0 2,2 7,0 6,NNO3CD
0017725 03 000245 000000 017727 0017727 -001- 28 ADDR NLDCKO

```

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30 CSTCP3 OW 0(247) # 12991
-001- 31 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000247 *****

```

```

0017727 34 NLDCKO
0017727 03 000247 137000 113360 0000576 -001- 35 CPATCH1 BGNP 0(576) # 12991
-001- 36 BL XXX725
-001- 37 NOTE CPATCH1 'CSECT'
-001- 38 NOTE ***** PATCH AREA BEGINS AT 000576 *****

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0113360 -001- 41 XXX725 PATCHAREA
0113360 42 SIOM MASCINT
0113360 06 000576 137020 012667 CDGSI0 -002- 43 BSA MASIOM
0113362 06 000600 046071 137000 -001- 44 DATA MASCINT # INITIALIZE STORE CONTROLLER
0113363 45 ENDP # 12991
0113363 06 000601 137000 017731 0000251 -001- 46 BL XXX729
-001- 47 NOTE ***** LAST PATCH ADDRESS USED IS 000602 *****
-001- 48 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

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STORE CONTROL AND PARITY TESTS

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

0017731          -001- 01 XXX729 OWCONTINUE
0017731          02          CALL WAIT          # TAKE A REAL TIME BREAK.
0017731 03 000251 173025 ----- -001- 03          BSAI WXAII        # SUBROUTINE WAIT IS IN PROGRAM CBLM
0017732          04          EOW          # 12991
                                -001- 05          NOTE ***** THE LAST ADDRESS OVERRITTEN IS 000251 *****

0017732          08          SIOM FNOTIMC          # PREVENT INTERFERENCE FROM FAULTY MEMORY
                                # ELEMENTS
0017732 03 000252 137020 012667 CDGSIO -002- 10          BSA MASIOM
0017734 03 000254 044470 103561 -001- 11          DATA FNOTIMC          # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0017735          12          NMLWRIT BASADDR,ZEROS,PRHOLO,SAC=1
0017735 03 000255 103561 136200 -001- 13          LI R7,B(1011110010000000) # MAIN MEMORY STATUS
0017737 03 000257 003741 000000 -001- 14          LI R14,ZEROS          # TO BE WRITTEN - SDD-15
0017741 03 000261 003761 000000 -001- 15          LI R15,ZEROS          # TO BE WRITTEN - SD16-23
                                -001- 16 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0017743 03 000263 031040 043140 CTSD -001- 17          LAL R2,BASADDR,RAD
0017745 03 000265 041061 ----- -001- 18          LA R3,1(RAD)
0017746 03 000266 003541 000020 -001- 19          LI R6,PRHOLO          # SETUP SPECIAL PARITY
0017750          -001- 20          CALL MEMOP          # INITIATE NORMAL WRITE(OFF-LINE)
0017750 03 000270 037020 013027 CDGSBS -002- 21          BSA MEMOP
0017752          22          NMLREAD BASADDR,BEC=0,CW=1
0017752 03 000272 103561 046260 -001- 23          LI R7,B(0100110010110000) # MAIN MEMORY STATUS
0017754 03 000274 031040 043140 CTSD -001- 24          LAL R2,BASADDR,RAD
0017756 03 000276 041061 ----- -001- 25          LA R3,1(RAD)
0017757 03 000277 003140 ----- -001- 26          ZR R6
0017760 03 000300 037020 013027 CDGSBS -002- 27          BSA MEMOP          # NO SPECIAL PARITY
0017762          28          RTN_TBL **4
0017762 03 000302 171400 ----- -001- 29          GA
0017763 03 000303 031000 017767 0017767 -001- 30          LAL RD,**4,RAD
0017765 03 000305 037000 011162 CDGNM -001- 31          BL INTRPNO3

                                -001- 33 # MICRO
                                -001- 34 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
0017767 03 000307 020005 ----- CDGNM -001- 35 # MISCELLANEOUS CROSSPOINT 0(114564)
0017770 03 000310 114564 ----- -001- 36          VFD 1,0 2,1 7,0 6,NMICRO
                                -001- 37          VFD 16,0(114564)

                                -001- 39 # RETRN
                                -001- 40 # RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0017771 03 000311 007710 ----- CDGNM -001- 41          VFD 1,0 2,0 7,B(0111111) 6,NRETRN

                                -001- 43 # COMPARE
                                -001- 44 # COMPARE ON-LINE MCHB BIT S(DRO) TO 0.
                                -001- 45 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0017772 03 000312 021014 ----- CDGNM -001- 46          VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DRO) 6,NCOMPARE
0017773 03 000313 000000 ----- -001- 47          VFD 15,0 1,0
    
```

STORE CONTROL AND PARITY TESTS

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TEST 39 SEGMENT 5

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 5
-001- 04 # *
-001- 05 # *****

0017776 03 000316 000500 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(5) 6,NTESTSEG

11 # THIS SEGMENT CHECKS THE CLEAR FUNCTION ON THE STORE COMPLEMENT WRITE FLOP
12 # (SCW). A NORMAL WRITE OF A DATA PATTERN WITH BOTH PARITY BITS BAD IS PERFORMED
13 # TWICE IN THE OFF-LINE SYSTEM. THE FIRST WRITE SETS THE SCW FLOP, AND THE
14 # SECOND WRITE SHOULD CLEAR THE FLOP. IF THE CLEAR IS SUCCESSFUL, THE SECOND
15 # WRITE WILL GENERATE PARITY ERRORS (DLPER/DHPER) IN THE STORE ERROR REGISTER.
16 # IF A PARITY ERROR DOES NOT OCCUR, THE NORMAL LOAD SIGNAL (NLDO) WHICH IS
17 # SUPPOSED TO CLEAR THE SCW FLOP MUST BE STUCK ACTIVE (HIGH).

-001- 20 # NO3_CODE
-001- 21 # PROCESS 3ACC CODED ROUTINE AT ADDRESS NLDCK1.
0017777 03 000317 040043 000000 CDGNM -001- 22 VFD 1,0 2,2 7,0 6,NN03CD
0020000 03 000320 000000 020002 0020002 -001- 23 ADDR NLDCK1

0020002 25 NLDCK1
0020C32 26 SIOM MASCINT
0020002 03 000322 137020 012667 CDGSIO -002- 27 BSA MASIOM
0020004 03 000324 046071 ----- -001- 28 DATA MASCINT # INITIALIZE STORE CONTROLLER
0020005 29 NMLWRIT BASADDR,ZEROS,PRHOLO,CW=1 # SET STORE COMPLEMENT WRITE FLOP (SCW)
0020005 03 000325 103561 146200 -001- 30 LI R7,B(1100110010000000) # MAIN MEMORY STATUS
0020007 03 000327 003741 000000 -001- 31 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0020011 03 000331 003761 000000 -001-;32 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 33 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0020013 03 000333 031040 043140 CTSD -001- 34 LAL R2,BASADDR,RAO
0020015 03 000335 041061 ----- -001-;35 LA R3,1(RAO)
0020016 03 000336 003541 000020 -001- 36 LI R6,PRHOLO # SETUP SPECIAL PARITY
0020020 -001- 37 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0020020 03 000340 037020 013027 CDGSBS -002- 38 BSA MEMOP
0020022 39 NMLWRIT BASADDR,ZEROS,PRHOLO,CW=0 # TRY TO CLEAR SCW
0020022 03 000342 103561 106200 -001- 40 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0020024 03 000344 003741 000000 -001- 41 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0020026 03 000346 003761 000000 -001-;42 LI R15,ZEROS # TO BE WRITTEN - SD16-23
-001- 43 # IF ADDRESS(BASADDR) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAO
0020030 03 000350 031040 043140 CTSD -001- 44 LAL R2,BASADDR,RAO
0020032 03 000352 041061 ----- -001-;45 LA R3,1(RAO)
0020033 03 000353 003541 000020 -001- 46 LI R6,PRHOLO # SETUP SPECIAL PARITY
0020035 -001- 47 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0020035 03 000355 037020 013027 CDGSBS -002- 48 BSA MEMOP
0020037 49 SRIO SERREAD

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STORE CONTROL AND PARITY TESTS

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0020037	03	000357	137020	012667	CDGSI0	-002-	01	BSA	MASIOM	
0020041	03	000361	047114	-----		-001-	02	DATA	SERREAD	# READ BACK STORE ERROR REGISTER(SER)
0020042	03	000362	107473	-----			03	LSR	MCHB,R11	# PREPARE FOR COMPARE
0020043							04	RTN_TBL	**4	
0020043	03	000363	071400	-----		-001-	05	GA		
0020044	03	000364	031000	020050	0020050	-001-	06	LAL	RD,**4,RAD	
0020046	03	000366	037000	011162	CDGNM	-001-	07	BL	INTRPN03	
						-001-	09 #	COMPARE		
						-001-	10 #	COMPARE ON-LINE MCHB BIT S(DLPER) TO 1.		
						-001-	11 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.		
0020050	03	000370	021514	-----	CDGNM	-001-	12	VFD	1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DLPER) 6,NCOMPARE	
0020051	03	000371	000001	-----		-001-	13	VFD	15,0 1,1	
						-001-	15 #	FAILTST		
						-001-	16 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS NLDSTK1.		
						-001-	17 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.		
0020052	03	000372	020017	-----	CDGNM	-001-	18	VFD	1,0 2,1 5,0 2,0 6,NFAILTST	
0020053	03	000373	000010	-----		-001-	19	VFD	16,NLDSTK1	

21 # CLEAR SIGNAL (NLDD) TO STORE COMPLEMENT WRITE FF (SCH) IS STUCK ACTIVE (HIGH)

STORE CONTROL AND PARITY TESTS

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TEST 39 SEGMENT 6

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 6
-001- 04 # *
-001- 05 # *****

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0020054 03 000374 000600 ----- CDGMM -001- 08 VFD 1,0 2,0 2,0 5,D(6) 6,NTESTSEG

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11 # THIS SEGMENT VERIFIES THAT NEITHER THE STORE COMPLEMENT WRITE FLOP (SCW)
12 # NOR THE STORE AUTOMATIC CORRECTION FLOP (SAC) MAY BE CHANGED DURING A STORE
13 # CYCLE AFTER THE NORMAL LOAD SIGNAL HAS TERMINATED. THIS IS ACCOMPLISHED BY
14 # INITIALIZING THE STORE CONTROLLER AND INITIATING A NORMAL READ IN THE OFF-LINE
15 # SYSTEM. THE STORE CYCLE CAN BE CLOSELY CONTROLLED BY STEPPING THE CONTROLLER
16 # CLOCK TO THE POINT AT WHICH STORE BUSY (SBY) IS ACTIVATED (LOW ON BUS) AND
17 # THE NORMAL LOAD IS DEACTIVATED. THE CONTENTS OF THE OFF-LINE MAIN MEMORY
18 # STATUS REGISTER ARE MODIFIED, SO THAT THE COMPLEMENT WRITE (CWO) AND STORE
19 # AUTOMATIC CORRECTION (BDSRD/BDSR1) BITS WHICH WERE INITIALLY SET ARE RESET.
20 # THE STORE CLOCK IS RE-ENABLED AND THE CYCLE IS ALLOWED TO COMPLETE.
21 # IF THE FAST SET ON THE SCW FLOP IS STUCK ACTIVE (HIGH), THEN CHANGING THE
22 # MMSR WILL CAUSE THE SCW TO BE CLEARED AND WRITE PARITY ERRORS WILL IMPROPERLY
23 # BE SET IN THE STORE ERROR REGISTER. IF THE FAST SET ON THE SAC FLOP IS STUCK
24 # ACTIVE (HIGH), THEN THE MMSR CHANGE WILL CLEAR SAC AND ERRONEOUSLY INHIBIT
25 # THE STORE COMPLETE SIGNAL. THUS, IF OFF-LINE DATA READY (DR) IS NOT SET BY
26 # A STORE COMPLETE AT THE END OF THIS CYCLE, THIS NORMAL LOAD (NLDB1) TO THE
27 # SAC FLOP MUST BE STUCK HIGH.

```

```

-001- 30 # NO3_CODE
-001- 31 # PROCESS 3ACC CODED ROUTINE AT ADDRESS NLDCK2.
0020055 03 000375 040043 000000 CDGMM -001- 32 VFD 1,0 2,2 7,0 6,NN03CD
0020056 03 000376 000000 020060 0020060 -001- 33 ADDR NLDCK2

0020060 35 NLDCK2
0020060 36 SIOM MASCINT # ZERO STORE DATA FLOPS (FFSD)
0020060 03 000400 137020 012667 CDGSI0 -002- 37 BSA MASIOM
0020062 03 000402 046071 137020 -001- 38 DATA MASCINT # INITIALIZE STORE CONTROLLER
0020063 39 SIOM CLKSTO~ # INHIBIT STORE CLOCK
0020063 03 000403 137020 012667 CDGSI0 -002- 40 BSA MASIOM
0020065 03 000405 046074 103561 -001- 41 DATA CLKSTOP # DISABLE STORE CONTROLLER CLOCK OUTPUT
0020066 42 NMLREAD BASADDR,BEC=0,CW=1,SAC=1
0020066 03 000406 103561 076260 -001- 43 LI R7,B(0111110010110000) # MAIN MEMORY STATUS
0020070 03 000410 031040 043140 CTSD -001- 44 LAL R2,BASADDR,RAO
0020072 03 000412 041061 ----- -001- 45 LA R3,1(RAO)
0020073 03 000413 003140 ----- -001- 46 ZF R6 # NO SPECIAL PARITY
0020074 03 000414 037020 013027 CDGSBS -002- 47 BSA MEMOP
0020076 48 CLOCK 3 # DEACTIVATE NORMAL LOAD (NLD1)
-001- 49 # FORCE EXACTLY 3 CLOCK CYCLES IN MAIN STORE CONTROLLER

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STORE CONTROL AND PARITY TESTS

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TEST 39 SEGMENT 6

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MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

0020076	03	000416	103701	000002	-001-	01	LI	R12,2	
0020100					-001-	02	CLP768		
0020100	03	000420	137020	012667	-003-	03	BSA	MASIOM	
0020102	03	000422	056076	137020	-002-	04	DATA	MASCLKIFAK010	# FAKE FIRST HALF OF STORE CLOCK CYCLE
0020103	03	000423	137020	012667	-003-	05	BSA	MASIOM	
0020105	03	000425	056074	136300	-002-	06	DATA	MASCLKNIFAK010	# FAKE SECOND HALF OF STORE CLOCK CYCLE
0020106	03	000426	136300	020100	-001-	07	BX	R12,CLP768	
0020110	03	000430	003401	006260		08	LI	RO,B(110010110000)	# MMSR = NORMAL READ (CW=SAC=0)
0020112	03	000432	007400	-----		09	LSR	MCHTR,RO	
0020113						10	LMCH	LDMIRL	
0020113					-001-	11	CALL	SMDMIRL	
0020113	03	000433	037020	111075	-002-	12	BSA	SMDMIRL	
0020115	03	000435	103401	070631		13	LI	RO,BRXT+E(8)+MCHBXF	
0020117	03	000437	007400	-----		14	LSR	MCHTR,RO	
0020120						15	LMCH	LDMIRL	
0020120					-001-	16	CALL	SMDMIRL	
0020120	03	000440	037020	111075	-002-	17	BSA	SMDMIRL	
0020122	03	000442	103401	145312		18	LI	RO,BRXHMSX	
0020124	03	000444	007400	-----		19	LSR	MCHTR,RO	
0020125						20	LMCH	LDMIRL	
0020125					-001-	21	CALL	SMDMIRL	
0020125	03	000445	037020	111075	-002-	22	BSA	SMDMIRL	
						24	# AT THIS POINT THE COMPLEMENT WRITE (CW) & STORE AUTOMATIC CORRECTION (SAC)		
						25	# BITS SHOULD BE CLEARED IN THE OFF-LINE MAIN MEMORY STATUS REGISTER (MMSR)		
0020127						27	SIOM	FNOTIMC	# ENABLE STORE CONTROLLER CLOCK
0020127	03	000447	137020	012667	-002-	28	BSA	MASIOM	
0020131	03	000451	044470	137020	-001-	29	DATA	FNOTIMC	# BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0020132						30	SRIO	SERREAD	
0020132	03	000452	137020	012667	-002-	31	BSA	MASIOM	
0020134	03	000454	047114	-----	-001-	32	DATA	SERREAD	# READ BACK STORE ERROR REGISTER(SER)
0020135						33	RTN_TBL	**A	
0020135	03	000455	171400	-----	-001-	34	GA		
0020136	03	000456	031000	020142	-001-	35	LAL	RO,**A,RAO	
0020140	03	000460	037000	011162	-001-	36	BL	INTRPNO3	
					-001-	38	# COMPARE		
					-001-	39	# COMPARE ON-LINE MCHB BIT S(DLPER) TO 0.		
					-001-	40	# IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.		
0020142	03	000462	021514	-----	-001-	41	VFD	1,LPINDX 2,1 1,0 1,SUCCESS,S(DLPER) 6,NCMPARE	
0020143	03	000463	000000	-----	-001-	42	VFD	15,0 1,0	
						44	CSTCP3	OW	0(464) # 11938
					-001-	45	NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000464 *****	

STORE CONTROL AND PARITY TESTS

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TEST 39 SEGMENT 6

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0020144 03 000464 006000 ----- 01      NOP
0020145 03 000465 006000 ----- 02      NOP
0020146                                     03      EOW
-001- 04      NOTE      # 11938
                        ***** THE LAST ADDRESS OVERWRITTEN IS 000465 *****

                                07 # FAST SET LEAD (NLDB1) ON STORE COMPLEMENT WRITE FLOP (SCW) IS STUCK HIGH

-001- 10 #      MICRO
-001- 11 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-001- 12 #      MISCELLANEOUS CROSSPOINT 0(114564)
0020146 03 000466 020005 ----- CDGNM -001- 13      VFD      1,0 2,1 7,0 6,NMICRO
0020147 03 000467 114564 ----- -001- 14      VFD      16,0(114564)

-001- 16 #      RETRN
-001- 17 #      RETURN OFF-LINE MCHB TO ON-LINE MCHB.
0020150 03 000470 007710 ----- CDGNM -001- 18      VFD      1,0 2,0 7,B(0111111) 6,NRETRN

-001- 20 #      COMPARE
-001- 21 #      COMPARE ON-LINE MCHB BIT S(DRO) TO 1.
-001- 22 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020151 03 000471 021014 ----- CDGNM -001- 23      VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,S(DRO) 6,NCOMPARE
0020152 03 000472 000001 ----- -001- 24      VFD      15,0 1,1

-001- 26 CSTCP3 OW      0(473) # 11938
-001- 27      NOTE      ***** THE FIRST ADDRESS OVERWRITTEN IS 000473 *****

0020153 03 000473 006000 ----- 30      NOP
0020154 03 000474 006000 ----- 31      NOP
0020155                                     32      EOW
-001- 33      NOTE      # 11938
                        ***** THE LAST ADDRESS OVERWRITTEN IS 000474 *****

```

36 # FAST SET LEAD (NLDB1) ON STORE AUTOMATIC CORRECTION FF (SAC) IS STUCK HIGH

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TEST 39 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 39 SEGMENT 7
-001- 04 # *
-001- 05 # *****
    
```

0020155 03 000475 000700 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(7) 6,NTESTSEG

```

11 # THIS SEGMENT ENSURES THAT THE STORE ERROR 'C' BUS SIGNAL (SERC) WHICH IS
12 # SENT IN PLACE OF STORE COMPLETE (SCM) WHEN A READ PARITY ERROR OCCURS CAN BE
13 # DIVERTED TO THE STORE COMPLETE LEAD IF THE BLOCK ERROR CORRECT BIT (BECO) IS
14 # SET IN THE MAIN MEMORY STATUS REGISTER (MMSR). A NORMAL READ IS PERFORMED IN
15 # THE OFF-LINE SYSTEM WITH THE BLOCK ERROR CORRECT BIT SET IN THE MMSR (AND THE
16 # COMPLEMENT WRITE OPTION ACTIVE TO PRESERVE THE STORE DATA FLOP CONTENTS). IF
17 # THE DATA READY BIT (DR) IS SET BY STORE COMPLETE DURING THIS OPERATION, THE
18 # SERC IS PROPERLY BEING DIVERTED TO STORE COMPLETE. CONVERSELY, IF DATA READY
19 # IS NOT SET, THEN THE CIRCUITRY WHICH IS SUPPOSED TO DIVERT SERC TO THE SCM
20 # LEAD (IF BEC=1) MUST BE FAULTY.
    
```

```

-001- 23 # NO3 CODE
-001- 24 # PROCESS 3ACC CODED ROUTINE AT ADDRESS ERECTOSCH.
0020156 03 000476 040043 000000 CDGNM -001- 25 VFD 1,0 2,2 7,0 6,NNO3CD
0020157 03 000477 000000 020161 0020161 -001- 26 ADDR ERECTOSCH
    
```

```

0020161 28 ERECTOSCH
0020161 29 SIOM MASCINT
0020161 03 000501 137020 012667 CDGSIO -002- 30 BSA MASIOM
0020163 03 000503 046071 137020 -001- 31 DATA MASCINT # INITIALIZE STORE CONTROLLER
0020164 32 SIOM FNOTIMC # PREVENT INTERFERENCE FROM FAULTY MEMORY
# ELEMENTS
0020164 03 000504 137020 012667 CDGSIO -002- 34 BSA MASIOM
0020166 03 000506 044470 ----- -001- 35 DATA FNOTIMC # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0020167 36 NMLREAD BASADDR,CW=1,BEC=1
0020167 03 000507 103561 146260 -001- 37 LI R7,B(1100110010110000) # MAIN MEMORY STATUS
0020171 03 000511 031040 043140 CTSD -001- 38 LAL R2,BASADDR,RAO
0020173 03 000513 041061 ----- -001- 39 LA R3,1(RAO)
0020174 03 000514 003140 ----- -001- 40 ZR R6 # NO SPECIAL PARITY
0020175 03 000515 037020 013027 CDGSBS -002- 41 BSA MEMOP
0020177 42 RTN_TBL **4
0020177 03 000517 171400 ----- -001- 43 GA
0020200 03 000520 031000 020204 0020204 -001- 44 LAL R0,**4,RAO
0020202 03 000522 037000 011162 CDGNM -001- 45 BL INTRPN03
    
```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 39 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # MICRO
-001- 02 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-001- 03 # MISCELLANEOUS CROSSPOINT 0(114564)
0020204 03 000524 020005 ----- CDGNM -001- 04 VFD 1,0 2,1 7,0 6,NMICRO
0020205 03 000525 114564 ----- -001- 05 VFD 16,0(114564)

-001- 07 # RETRN
0020206 03 000526 007710 ----- CDGNM -001- 08 # RETURN OFF-LINE MCHB TO ON-LINE MCHB.
-001- 09 VFD 1,0 2,0 7,B(0111111) 6,NRETRN

-001- 11 # COMPARE
-001- 12 # COMPARE ON-LINE MCHB BIT S(DRO) TO 1.
0020207 03 000527 021014 ----- CDGNM -001- 13 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020210 03 000530 000001 ----- -001- 14 VFD 1,LPINDX 2,1 1,0 1,SUCCE 5,S(DRO) 6,NCOMPARE
-001- 15 VFD 15,0 1,1

-001- 17 # FAILTST
-001- 18 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS ERCDIVNG.
0020211 03 000531 020017 ----- CDGNM -001- 19 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0020212 03 000532 000011 ----- -001- 20 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 21 VFD 16,ERCDIVNG

23 # STORE ERROR 'C' WAS NOT DIVERTED TO STORE COMPLETE WITH BLOCK ERROR CORRECT UP

-001- 26 # NO3_CODE
0020213 03 000533 040043 000000 CDGNM -001- 27 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0020214 03 000534 000000 020216 0020216 -001- 28 VFD 1,0 2,2 7,0 6,NN03CD
-001- 29 ADDR **2

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 92

TEST 39 SEGMENT 7

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

		01	CSTCP3	OW	0(536),0(540)	# 12703	
	-001-	02		NOTE	*****	THE FIRST ADDRESS	OVERWRITTEN IS 000536 *****
0020216				05	FINALE	CP3INIT	
0020216	03	000536	137020	012771	CDGSIO	-002-	06
0020220	03	000540	137000	017503	0017503	-001-	07
0020222	03	000542	171400	-----		-001-	08
0020223	03	000543	037000	011725	CDGNM	-001-	09
0020223							10
							11
					BSA	FINAL	
					BL	BKCSTCP3	
					GA		
					BL	PASSTST	# TEST COMPLETED
					EOW		# 12703
					NOTE	*****	THE LAST ADDRESS OVERWRITTEN IS 000544 *****

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 93

TEST 40

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 40, MAIN_STORE_CONTROL_AND_PARITY
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0020225

-001- 10 CSTCP4 CSECT

0020225 04 000000 000145 ----- CDGMM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

18 # SEGMENT 1

19 # THIS SEGMENT EXERCISES THE DATA PARITY CHECK CIRCUIT. EIGHT DATA/PARITY
20 # PATTERNS ARE APPLIED ONE AT TIME TO BOTH THE DATA PARITY LOW (SD0-7 ;SD16-19)
21 # AND THE DATA PARITY HIGH (SD8-15;SD20-23) CHECK CIRCUITS. THE RESULT OF EACH
22 # CHECK CIRCUIT OPERATION IS RECORDED AND THE ACCUMULATED RESULT IS COMPARED
23 # WITH THE EXPECTED PATTERN.

26 # SEGMENT 2

27 # THIS SEGMENT CHECKS THAT PART OF THE WIDE STORE PARITY CONVERSION CIRCUIT
28 # THAT GENERATES THE TWO MEMORY PARITY BITS (SDPL,SDPH) USING THE UPPER DATA
29 # BITS (SD16-23) AND THE THREE STORE BUS PARITY BITS (SDPYZ,SDPX,SDPW).
30 # A SUFFICIENT SET OF DATA AND PARITY PATTERNS ARE APPLIED TO THE STORE
31 # CONTROLLER OVER THE BUS, WHILE THE CONTROLLER IS IN THE APPROPRIATE
32 # MAINTENANCE STATE.

35 # SEGMENT 3

36 # THIS SEGMENT CHECKS THAT PART OF THE WIDE STORE PARITY CONVERSION CIRCUIT
37 # THAT GENERATES THE THREE STORE BUS PARITY BITS (SDPYZ,SDPX,SDPW) USING THE
38 # UPPER DATA BITS (SD16-23) AND THE TWO STORE DATA PARITY BITS (SDPL,SDPH) FROM
39 # MEMORY PLANE DATA. THIS SECTION OF CIRCUITRY IS TESTED BY APPLYING A
40 # SUFFICIENT SET OF DATA AND PARITY PATTERNS UNDER THE APPROPRIATE STORE
41 # CONTROLLER CONDITIONS.

44 # SEGMENT 4

45 # THIS SEGMENT CHECKS THE WIDE PARITY ERROR DETECTION CIRCUIT. EIGHT DATA
46 # AND PARITY PATTERNS ARE SENT OVER THE DATA BUS AND REGISTERED IN THE STORE
47 # DATA FLOPS(FFSD). SINCE THE STORE IS FORCE-SELECTED BY THE ISOLATE MAINTENANCE
48 # OPTION AND THE STORE BUS IS IN THE IDLE (BUS-READ) STATE, THIS DATA IS GATED
49 # ONTO THE STORE BUS, AND, THUS, IS PRESENT ON THE INPUTS TO THE WIDE PARITY

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 94

TEST 40

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

01 # ERROR DETECTION CIRCUIT. THE TEST CONCLUDES BY CLEARING THE ISOLATE OPTION AND
02 # APPLYING TWO ADDITIONAL DATA/PARITY PATTERNS TO VERIFY THAT THE SELECT ENABLES
03 # (SELIB) ARE NOT STUCK ACTIVE ON THE OUTPUT OF THIS CIRCUIT.

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 40

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

01 CSTCP4 ON 0(1),0(16) # 12703
-001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0020226 05 CP4INIT PREPARE
-002- 06 # RTN_BLM
0020226 04 000001 000144 ----- CDGNM -002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-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.
0020227 04 000002 047707 ----- CDGNM -002- 12 # PARITY IS 0(2).
0020230 04 000003 000040 000001 -002- 13 VFD 1,0 2,2 7,B(0111111) 6,N2SEND
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
0020232 04 000005 020005 ----- CDGNM -002- 18 # TO FIELD = MSXT FROM FIELD = MCHBXF
0020233 04 000006 106631 ----- -002- 19 VFD 1,0 2,1 7,0 6,NMICRO
-002- 20 VFD 8,MSXT 8,MCHBXF

-002- 22 # NO3_CODE
0020234 04 000007 040043 000000 CDGNM -002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0020235 04 000010 000000 020237 0020237 -002- 24 VFD 1,0 2,2 7,0 6,NNO3CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0020237 04 000012 103501 000151 TTYTBL -002- 28 LI R4,MXAS
0020241 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)

0020243 04 000016 103240 ----- -001- 34 ZR LOOPIND
0020244 04 000017 004257 ----- -001- 35 SN LOOPIND,1 #ASSURE THAT LOOPIND IS ZERO BEFORE
#PROCEEDING WITH TEST

0020245 04 000020 072652 ----- CDGNM -001- 37 HN LOOPIND,LOOPIND
0020246 04 000021 037020 012757 CDGSI0 -002- 38 BSA CONTPREP
0020250 04 000023 172652 ----- CDGNM -001- 39 HN LOOPIND,LOOPIND
0020251 04 000024 137020 012667 CDGSI0 -003- 40 BSA MASIOM
0020253 04 000026 046071 ----- -002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

0020254 04 000027 171400 ----- -002- 43 GA
0020255 04 000030 031000 020261 0020261 -002- 44 LAL RD,**4,RA0
0020257 04 000032 037000 011162 CDGNM -002- 45 BL INTRPN03

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 40

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0020261

01
-001- 02

EOM
NOTE

12703

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 97

TEST 40 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 40 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

```

0020261 04 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTESTSEG

```

```

11 # THIS SEGMENT EXERCISES THE DATA PARITY CHECK CIRCUIT. EIGHT DATA/PARITY
12 # PATTERNS ARE APPLIED ONE AT TIME TO BOTH THE DATA PARITY LOW (SD0-7 ;SD16-19)
13 # AND THE DATA PARITY HIGH (SD8-15;SD20-23) CHECK CIRCUITS. THE RESULT OF EACH
14 # CHECK CIRCUIT OPERATION IS RECORDED AND THE ACCUMULATED RESULT IS COMPARED
15 # WITH THE EXPECTED PATTERN.

```

```

-001- 18 # NO3 CODE
-001- 19 # PROCESS 3ACC CODED ROUTINE AT ADDRESS SDPARCK.
0020262 04 000035 040043 000000 CDGNM -001- 20 VFD 1,0 2,2 7,0 6,NN03CD
0020263 04 000036 000000 020275 0020275 -001- 21 ADDR SDPARCK

```

25 # TABLE OF DATA PARITY CHECK PATTERNS

```

0020265 27 DATPATBL
0020265 04 000040 177777 ----- 28 DATA B(1111111111111111) # 8
0020266 04 000041 141331 ----- 29 DATA B(1100001011011001) # 7
0020267 04 000042 035513 ----- 30 DATA B(0011101101001011) # 6
0020270 04 000043 003155 ----- 31 DATA B(0000011001101101) # 5
0020271 04 000044 172622 ----- 32 DATA B(1111010110010010) # 4
0020272 04 000045 144264 ----- 33 DATA B(1100100010110100) # 3
0020273 04 000046 036446 ----- 34 DATA B(0011110100100110) # 2
0020274 04 000047 000000 ----- 35 DATA B(0000000000000000) # 1

```

```

0020275 40 SDPARCK
0020275 04 000050 103107 ----- 41 LN R4,7 # EIGHT PASSES - ONE PER TEST PATTERN
0020276 04 000051 003137 ----- 42 LN R5,15 # SIXTEEN ERROR RESULT BITS
0020277 04 000052 003561 106200 43 LI R7,NMLWR # MAIN MEMORY STATUS - NORMAL WRITE
0020301 04 000054 003200 ----- 44 ZR R8 # CLEAR RESULT STORAGE REGISTER
0020302 04 000055 031020 020265 0020265 45 LAL R1,DATPATBL,RAO # ADDRESS OF DATA PARITY PATTERNS
0020304 46 SDPARLP
0020304 47 SIOM MASCINT
0020304 04 000057 137020 012667 CDGSI0 -002- 48 BSA MASIOM
0020306 04 000061 046071 ----- -001- 49 DATA MASCINT # INITIALIZE STORE CONTROLLER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 40 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0020307 04 000062 131440 043140 CTSD          01      LAL      R2,BASADDR,RA1
0020311 04 000064 040461 -----          02      L        R3,1(RA1)          # ADDRESS FOR MEMORY OPERATION(MEMOP)
0020312 04 000065 042024 -----          03      LX       R1,R4(RAO)          # GET DATA PATTERN
0020313 04 000066 006341 -----          04      LR       R14,R1          # LOAD DATA BITS SDO-7
0020314 04 000067 006361 -----          05      LR       R15,R1          # LOAD DATA BITS SD16-19
0020315 04 000070 010434 -----          06      RLM      R1,4
0020316 04 000071 016361 170000          07      IRM      R15,R1,B(1111000000000000) # LOAD DATA BITS SD20-23
0020320 04 000073 006141 -----          08 # THIS WILL MAKE SD20-23 IDENTICAL TO SD16-19
0020320 04 000073 006141 -----          09      LR       R6,R1          # LOAD SPECIAL PARITY HIGH & LOW BITS
                                # (SDPL,PH) FOR 18-BIT STORES

0020321 04 000074 030402 021637 TDATA        12      LL       RO,STRLIM
0020323 04 000076 024004 ----- TDATA        13      TBN      RO,S(WDSTR)          # IS THIS A WIDE STORE?
0020324 04 000077 055004 ----- 0020330        14      BNC      SDPAR16          # IF NOT, SKIP ADDITIONAL CODE
0020325 04 000100 010422 -----          15      RRN      R1,2
0020326 04 000101 006141 -----          16      LR       R6,R1          # LOAD SPECIAL PARITY HIGH & LOW BITS
                                # (SDPL,PH) FOR 26-BIT STORES

19 # NOTE: STORE DATA EXTENDED PARITY HIGH (SDEPH) IS NOT USED IN THE CALCULATION
20 # OF EITHER OF THE TWO PARITY BITS THAT ARE STORED IN THE MEMORY (AND
21 # INPUTTED TO THE DATA PARITY CHECK CIRCUITS).

0020327 04 000102 010436 -----          23      RLN      R1,2          # RESTORE PATTERN REGISTER
0020330          24 SDPAR16
0020330 04 000103 126144 -----          25      SBN      R6,4          # SET SPECIAL PARITY INDICATOR
0020331 04 000104 010434 -----          26      RLN      R1,4
0020332 04 000105 016341 177400          27      IRM      R14,R1,B(1111111100000000) # LOAD DATA BITS SDB-15
0020334          28 # SIMILARLY, THIS MAKES DATA BITS SDB-15 THE SAME AS SDO-7
0020334 04 000107 037020 013027 CDGSBS -001- 29      CALL     MEMOP
0020336          30      BSA     MEMOP
0020336 04 000111 137020 012667 CDGSIO -002- 31      SIOM     FBIT09
0020340 04 000113 146074 137020 -001- 32      BSA     MASIOM
0020341          33      DATA  FBIT09          # COLLECT ERRORS IN STORE ERROR REGISTER
0020341 04 000114 137020 012667 CDGSIO -002- 34      SRIO     SERREAD
0020343 04 000116 047114 ----- -001- 35      BSA     MASIOM
0020344 04 000117 124271 -----          36      DATA  SERREAD          # READ BACK STORE ERROR REGISTER(SER)
0020345 04 000120 055002 ----- 0020347        37      TBN      R11,S(DHPER)          # DATA HIGH PARITY ERROR?
0020346 04 000121 026605 -----          38      BNC      SBRSKP0
0020347          39      SBR     R8,R5          # IF SO, RECORD IN RESULT REGISTER
0020347 04 000122 104137 -----          40 SBRSKP0
0020350 04 000123 024275 -----          41      SN       R5,1          # DECREMENT ERROR BIT POINTER
0020351 04 000124 055002 ----- 0020353        42      TBN      R11,S(DLPER)          # DATA LOW PARITY ERROR?
0020352 04 000125 026605 -----          43      BNC      SBRSKP1
0020353          44      SBR     R8,R5          # IF SO, RECORD RESULT
0020353 04 000126 104137 -----          45 SBRSKP1
0020353          46      SN       R5,1          # DECREMENT AGAIN
0020353          47 CSTCPA  OW 0(127)          # 12921
-001- 48      NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000127 *****

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TEST 40 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0020354 04 000127 037000 113256 0000474 -001- 01 CPATCH1 BGNP 0(474) # 12991
-001- 02 BL XXX846
-001- 03 NOTE CPATCH1 'CSECT'
-001- 04 NOTE ***** PATCH AREA BEGINS AT 000474 *****

0113256 -001- 07 XXX846 PATCHAREA
0113256 06 000474 117500 001400 08 CIRM R4,0,0,0(3) # ON EVERY 4TH TIME THRU THE LOOP TAKE A
REAL TIME BREAK

0113260 06 000476 055002 ----- 0113262 10 BNC NOBRK
0113261 11 CALL WAIT # TAKE A REAL TIME BREAK.
0113261 06 000477 073025 ----- -001- 12 BSAI WXAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113262 13 NOBRK
0113262 06 000500 136100 020304 0000057 14 BX R4,SDPARLP
0113264 15 ENDP # 12991
0113264 06 000502 037000 020356 0000131 -001- 16 BL XXX849
-001- 17 NOTE ***** LAST PATCH ADDRESS USED IS 000503 *****
-001- 18 NOTE ***** NUMBER OF PATCH WORDS USED IS 8 (DECIMAL) *****

0020356 -001- 21 XXX849 OWCONTINUE
0020356 04 000131 107470 ----- 22 LSR MCHB,R8 # FOR COMPARE
0020357 23 EOW # 12991
-001- 24 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000131 *****

0020357 27 RTN_TBL **4
0020357 04 000132 071400 ----- -001- 28 GA
0020360 04 000133 031000 020364 0020364 -001- 29 LAL R0,**4,RA0
0020362 04 000135 037000 011162 CDGNM -001- 30 BL INTRPN03

-001- 32 # WIDE_TST
-001- 33 # IF WIDE_STORE IS NOT PRESENT, GO TO TABLE ENTRY AT ADDRESS NARPAT.
0020364 04 000137 040046 000000 CDGNM -001- 34 VFD 1,0 2,2 7,0 6,NWDTST
0020365 04 000140 000000 020377 0020377 -001- 35 ADDR NARPAT

-001- 37 # COMPARE
-001- 38 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0141474).
-001- 39 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020367 04 000142 050014 ----- CDGNM -001- 40 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0020370 04 000143 000000 141474 -001- 41 ADDR 0(0141474)

-001- 43 # FAILBIT
-001- 44 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS SDPRFLXX
-001- 45 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0020372 04 000145 020020 ----- CDGNM -001- 46 VFD 1,0 2,1 5,0 2, 6,NFLBITS
0020373 04 000146 000002 ----- -001- 47 VFD 16,SDPRFL

```

STORE CONTROL AND PARITY TESTS

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TEST 40 SEGMENT 1

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # EITHER THE STORE DATA PARITY HIGH OR LOW CHECK CIRCUIT HAS A FAULT

						-001- 04 #	N03_CODE
						-001- 05 #	PROCESS 3ACC CODED ROUTINE AT ADDRESS DPCKXT.
0020374	04	000147	040043	000000	CDGNM	-001- 06	VFD 1,0 2,2 7,0 6,NN03CD
0020375	04	000150	000000	020407	0020407	-001- 07	ADDR DPCKXT

0020377

							11 NARPAT
						-001- 12 #	COMPARE
						-001- 13 #	COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177400).
						-001- 14 #	IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020377	04	000152	050014	-----	CDGNM	-001- 15	VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCMPARE
0020400	04	000153	000000	177400		-001- 16	ADDR 0(0177400)

0020402	04	000155	020020	-----	CDGNM
0020403	04	000156	000002	-----	

						-001- 18 #	FAILBIT
						-001- 19 #	FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS SDRPFLXX
						-001- 20 #	WHERE XX IS THE LOWEST FAILING BIT NUMBER.
						-001- 21	VFD 1,0 2,1 5,0 2, 6,NFLBITS
						-001- 22	VFD 16,SDPRFL

24 # EITHER THE STORE DATA PARITY HIGH OR LOW CHECK CIRCUIT HAS A FAULT

						-001- 27 #	N03_CODE
						-001- 28 #	PROCESS 3ACC CODED ROUTINE AT ADDRESS DPCKXT.
0020404	04	000157	040043	000000	CDGNM	-001- 29	VFD 1,0 2,2 7,0 6,NN03CD
0020405	04	000160	000000	020407	0020407	-001- 30	ADDR DPCKXT

0020407							32 DPCKXT
0020407							33
0020407	04	000162	171400	-----		-001- 34	RTN_TBL **4
0020410	04	000163	031000	020414	0020414	-001- 35	GA
0020412	04	000165	037000	011162	CDGNM	-001- 36	LAL RD,**4,RAO
							BL INTRPN03

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 101

TEST 40 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 40 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

```

0020414 04 000167 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THAT PART OF THE WIDE STORE PARITY CONVERSION CIRCUIT
12 # THAT GENERATES THE TWO MEMORY PARITY BITS (SDPL,SDPH) USING THE UPPER DATA
13 # BITS (SD16-23) AND THE THREE STORE BUS PARITY BITS (SDPYZ,SDPX,SDPW).
14 # A SUFFICIENT SET OF DATA AND PARITY PATTERNS ARE APPLIED TO THE STORE
15 # CONTROLLER OVER THE BUS, WHILE THE CONTROLLER IS IN THE APPROPRIATE
16 # MAINTENANCE STATE.

```

```

-001- 19 # WIDE_TST
-001- 20 # IF WIDE STORE IS NOT PRESENT, GO TO TABLE ENTRY AT ADDRESS PRCVCKXT.
0020415 04 000170 040046 000000 CDGNM -001- 21 VFD 1,0 2,2 7,0 6,NWDTST
0020416 04 000171 000000 020513 0020513 -001- 22 ADDR PRCVCKXT

-001- 24 # NO3_CODE
-001- 25 # PROCESS 3ACC CODED ROUTINE AT ADDRESS PRCVCKO.
0020420 04 000173 040043 000000 CDGNM -001- 26 VFD 1,0 2,2 7,0 6,NN03CD
0020421 04 000174 000000 020423 0020423 -001- 27 ADDR PRCVCKO

```

```

31 # CHECK THAT DATA PARITY LOW AND HIGH ARE GENERATED CORRECTLY ON DATA FROM CC

```

```

0020423 33 PRCVCKO
0020423 34 S10M MASCINT
0020423 04 000176 137020 012667 CDGSIO -002- 35 BSA MASIOM
0020425 04 000200 046071 137020 -001- 36 DATA MASCINT # INITIALIZE STORE CONTROLLER
0020426 37 S10M FN0TIM
0020426 04 000201 137020 012667 CDGSIO -002- 38 BSA MASIOM
0020430 04 000203 044474 ----- -001- 39 DATA FN0TIM # INHIBIT TIMING SIGNALS TO FANOUT BOARDS

```

```

41 # SET UP PARAMETERS FOR MEMORY OPERATION(MEMOP) SUBROUTINE

```

```

0020431 04 000204 131440 043140 CTSD 43 LAL R2,BASADDR,RA1
0020433 04 000206 040461 ----- 44 L R3,1(RA1) # ADDRESS OF STORE UNDER TEST
0020434 04 000207 003541 002412 45 LI R6,B(0000010100001010) # SPECIAL PARITY FOR FOUR PASSES
46 # PASS 1 - PRHOLD ; PASS 2 - PRHOL1 ; PASS 3 - PRHOLD ; PASS 4 - PRH1LO
0020436 04 000211 003561 106200 47 LI R7,NMLWR # MAIN MEMORY STATUS FOR NORMAL WRITE
0020440 04 000213 003721 113151 48 LI R13,B(1001011001101001) # EXPECTED PARITY CHECK (SECOND TIME)
0020442 04 000215 003340 ----- 49 ZR R14 # CLEAR LOW DATA BITS

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 102

TEST 40 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0020443 04 000216 003130 ----- 01 LN R5,8 # SHIFT THE LOOP INDEX TO SD16-19
0020444 02 CVCKST
0020444 04 000217 103117 ----- 03 LN R4,15 # TEST 16 PATTERNS PER LOOP
0020445 04 000220 010554 ----- 04 RLN R6,4 # SET UP NEXT FOUR SPECIAL PARITY BITS
0020446 04 000221 003200 ----- 05 ZR R8 # CLEAR RESULT REGISTER
0020447 04 000222 015735 ----- 06 COM R13 # COMPLEMENT PARITY PATTERN
0020450 07 CVCKLP
0020450 04 000223 106364 ----- 08 LR R15,R4 # INDEX USED TO FORM TEST PATTERN
0020451 04 000224 011365 ----- 09 RL R15,R5 # SHIFT TO HIGH DATA BITS(SD16-23)
0020452 10 CALL MEMOP
0020452 04 000225 037020 013027 CDG$BS -001- 11 BSA MEMOP # COLLECT RESULTS OF PARITY CONVERSION
0020454 12 SIOM ISOCHK
0020454 04 000227 137020 012667 CDG$IO -002- 13 BSA MASIOM # ISOLATE FROM FAR STORES & VERIFY VIA
0020456 04 000231 067214 137020 -001- 14 DATA ISOCHK SER
0020457 16 SRIO SERREAD
0020457 04 000232 137020 012667 CDG$IO -002- 17 BSA MASIOM # READ BACK STORE ERROR REGISTER(SER)
0020461 04 000234 047114 ----- -001- 18 DATA SERREAD
0020462 04 000235 124274 ----- 19 TBN R11,S(SDPCK)
0020463 04 000236 055002 ----- 0020465 20 BNC CVCKBX # IS PARITY BIT = 1 ?
0020464 04 000237 026604 ----- 21 SBR R8,R4 # IF SO, SET BIT IN RESULT REGISTER
0020465 22 CVCKBX
23 CSTCP4 OW 0(240) # 12991
-001- 24 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000240 *****

0020465 27 CVCKBX
28 CPATCH1 BGNP 0(504) # 12991
0020465 04 000240 137000 113266 0000504 -001- 29 BL XXX877
-001- 30 NOTE CPATCH1 'CSECT'
-001- 31 NOTE ***** PATCH AREA BEGINS AT 000504 *****

0113266 -001- 34 XXX877 PATCHAREA
0113266 06 000504 117500 001400 35 CIRM R4,0,0,0(3) # TAKE A BREAK EVERY 4TH TIME THRU LOOP
0113270 06 000506 055002 ----- 0113272 36 BNC NOBREK # TAKE A REAL TIME BREAK.
0113271 37 CALL WAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113271 06 000507 073025 ----- -001- 38 BSAI W$AIT
0113272 39 NOBREK
0113272 06 000510 136100 020450 0000223 40 BX R4,CVCKLP # 12991
0113274 41 ENDP
0113274 06 000512 037000 020467 0000242 -001- 42 BL XXX880
-001- 43 NOTE ***** LAST PATCH ADDRESS USED IS 000513 *****
-001- 44 NOTE ***** NUMBER OF PATCH WORDS USED IS 8 (DECIMAL) *****

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 103

TEST 40 SEGMENT 2

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

0020467
0020467 04 000242 115215 -----
0020470
-001- 01 XXX880 OWCONTINUE
02 XR R8,R13 # COMPARE WITH EXPECTED PARITY
03 EOW # 12991
-001- 04 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000242 *****

0020470 04 000243 055010 ----- 0020500 07 BNC PRCVFLT # IF FAILURE, EXIT THRU DIAGNOSTIC MACROS
0020471 04 000244 003545 005005 08 CI R6,B(0000101000000101) # SECOND TIME THRU?
0020473 04 000246 055002 ----- 0020475 09 BNC CVCKND # IF NOT, SKIP THE SHIFT INCREMENT
0020474 04 000247 004524 ----- 10 AN R5,A # SHIFT THE LOOP INDEX TO SD20-23
0020475 11 CVCKND
0020475 04 000250 103545 002412 12 CI R6,B(0000010100001010) # FINAL PASS?
0020477 04 000252 055745 ----- 0020444 13 BNC CVCKST # IF NOT, RETURN FOR ANOTHER PASS

0020500 15 PRCVFLT
0020500 04 000253 107470 ----- 16 LSR MCHB,R8 # PREPARE FOR COMPARE
0020501 17 RTN_TBL **4
0020501 04 000254 071400 ----- -001- 18 GA
0020502 04 000255 031000 020506 0020506 -001- 19 LAL R0,++4,RAO
0020504 04 000257 037000 011162 CDGNM -001- 20 BL INTRPN03

-001- 22 # COMPARE
-001- 23 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 24 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020506 04 000261 050014 ----- CDGNM -001- 25 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0020507 04 000262 000000 000000 -001- 26 ADDR 0(0000000)

-001- 28 # FAILTST
-001- 29 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PRCVFL.
-001- 30 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0020511 04 000264 020017 ----- CDGNM -001- 31 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0020512 04 000265 000022 ----- -001- 32 VFD 16,PRCVFL

34 # THE CIRCUIT WHICH CONVERTS THREE PARITY BITS TO TWO DURING WRITES HAS A FAULT

0020513 37 PRCVCKXT

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 104

TEST 40 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 40 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

```

0020513 04 000266 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(3) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THAT PART OF THE WIDE STORE PARITY CONVERSION CIRCUIT
12 # THAT GENERATES THE THREE STORE BUS PARITY BITS (SDPYZ,SDPX,SDPW) USING THE
13 # UPPER DATA BITS (SD16-23) AND THE TWO STORE DATA PARITY BITS (SDPL,SDPH) FROM
14 # MEMORY PLANE DATA. THIS SECTION OF CIRCUITRY IS TESTED BY APPLYING A
15 # SUFFICIENT SET OF DATA AND PARITY PATTERNS UNDER THE APPROPRIATE STORE
16 # CONTROLLER CONDITIONS.

```

```

-001- 19 # WIDE_TST
-001- 20 # IF WIDE STORE IS NOT PRESENT, GO TO TABLE ENTRY AT ADDRESS RDPRENXT.
0020514 04 000267 040046 000000 CDGNM -001- 21 VFD 1,0 2,2 7,0 6,NWDTST
0020515 04 000270 000000 020656 0020656 -001- 22 ADDR RDPRENXT

```

```

-001- 24 # N03_CODE
-001- 25 # PROCESS 3ACC CODED ROUTINE AT ADDRESS PRCVCK1.
0020517 04 000272 040043 000000 CDGNM -001- 26 VFD 1,0 2,2 7,0 6,NNO3CD
0020520 04 000273 000000 020522 0020522 -001- 27 ADDR PRCVCK1

```

```

0020522 31 PRCVCK1
0020522 32 SIOM MASCINT
0020522 04 000275 137020 012667 CDGSI0 -002- 33 BSA MASIOM
0020524 04 000277 046071 137020 -001- 34 DATA MASCINT # INITIALIZE STORE CONTROLLER
0020525 35 SIOM FNOTIMC
0020525 04 000300 137020 012667 CDGSI0 -002- 36 BSA MASIOM
0020527 04 000302 044470 ----- -001- 37 DATA FNOTIMC # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0020530 04 000303 131440 043140 CTSD 38 LAL R2,BASADDR,RA1
0020532 04 000305 040461 ----- 39 L R3,1(RA1)
0020533 04 000306 030400 012755 CDGSI0 40 LL R0,STRSIZE
0020535 04 000310 001440 ----- 41 AR R2,R0 # POINT TO NEXT HIGHER STORE
0020536 04 000311 003105 ----- 42 LN R4,5 # SET UP FOR SIX PASSES
0020537 04 000312 003541 045100 43 LI R6,B(0100101001000000) # SIX SETS OF SPECIAL PARITY BITS
0020541 04 000314 003561 106200 44 LI R7,NHLWR # MAIN MEMORY STATUS - NORMAL WRITE
0020543 04 000316 003200 ----- 45 ZR R8 # CLEAR RESULT REGISTER
0020544 04 000317 003340 ----- 46 ZR R14 # CLEAR LOW DATA BITS(SD0-15)
0020545 04 000320 003761 000021 47 LI R15,B(0000000000010001) # HIGH DATA(SD16-23) PATTERN(S)
0020547 48 CVCKLP1
0020547 49 CALL MEMOP

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 105

TEST 40 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

01 # NOTE: TWO OF THE PRECEDING PATTERNS CHECK THAT THE BUS-READ DISABLE (BUSRD0)
02 # ON THE WRITE-PARITY CONVERTER IS NOT STUCK ACTIVE

05 # CONCLUDE THIS TEST BY CHECKING THAT NEITHER THE STORE-SELECT ENABLE (SEL1)
06 # NOR THE BUS-READ ENABLE (BUSRD1) ARE STUCK ACTIVE IN THE READ-PARITY CONVERTER

0020572					08	RDPRENCK			
0020572					09	SIOM	MASCINT		
0020572	04	000345	137020	012667	-002-	BSA	MASIO M		
0020574	04	000347	046071	137020	-001-	DATA	MASCINT	# INITIALIZE STORE CONTROLLER	
0020575					12	SIOM	CLKSTOP		
0020575	04	000350	137020	012667	-002-	BSA	MASIO M		
0020577	04	000352	046074	-----	-001-	DATA	CLKSTOP	# DISABLE STORE CONTROLLER CLOCK OUTPUT	
0020600	04	000353	131440	043140		LAL	R2,BASADDR,RA1		
0020602	04	000355	040461	-----		L	R3,1(RA1)	# ADDRESS OF STORE UNDER TEST	
0020603	04	000356	003103	-----		LN	R4,3	# FOUR PASSES THRU THIS TEST	
0020604	04	000357	003541	000007		LI	R6,PRWOH1L1	# SET UP SPECIAL PARITY	
0020606	04	000361	003561	106200		LI	R7,NMLWR	# MAIN MEMORY STATUS - NORMAL WRITE	
0020610	04	000363	010614	-----		RLN	R8,4		
					21	# MAKE ROOM IN RESULT REGISTER FOR FOUR MORE BITS			
0020611	04	000364	003340	-----	22	ZR	R14	# CLEAR LOW DATA BITS (SD0-15)	
0020612	04	000365	003761	000021	23	LI	R15,B(000000000010001)	# HIGH DATA CONSTANTS (SD16-23)	
					25	CVCKLP2			
0020614					26	CALL	MEMOP		
0020614	04	000367	137020	013027	-001-	BSA	MEMOP		
0020616					28	SIOM	ISOCHKU FBUSRDN		
0020616	04	000371	137020	012667	-002-	BSA	MASIO M		
0020620	04	000373	027214	137020	-001-	DATA	ISOCHKU FBUSRDN	# APPLY ONES TO STORE DATA BUS(W/O ISOLATE)	
0020621					32	SRIOM	SERREAD		
0020621	04	000374	137020	012667	-002-	BSA	MASIO M		
0020623	04	000376	047114	-----	-001-	DATA	SERREAD	# READ BACK STORE ERROR REGISTER(SER)	
0020624	04	000377	124275	-----		TBN	R11,S(2EPCK)		
0020625	04	000400	055002	-----		BNC	DATSHFT	# WAS WIDE PARITY CHECK BIT SET?	
0020626	04	000401	026464	-----		SBR	R3,R4	# IF SO, RECORD THIS RESULT	
					39	DATSHFT			
0020627	04	000402	110770	-----	40	RLN	R15,8	# SHIFT IN NEXT DATA PATTERN	
0020630	04	000403	003505	000002	41	CI	R4,2	# SECOND PASS THRU?	
0020632	04	000405	055007	-----	42	BNC	CVCKBX2		
0020633	04	000406	030400	012755		LL	RD,STRSIZE		
0020635	04	000410	001440	-----	44	AR	R2,RD	# POINT TO NEXT STORE	
0020636					45	SIOM	REFSTOP FBUSRDN HALTCLK		
0020636	04	000411	037020	012667	-002-	BSA	MASIO M		
0020640	04	000413	026074	137000	-001-	DATA	REFSTOP FBUSRDN HALTCLK	# INHIBIT REFRESHING OF STORE	
					48	CSTCP4	OW	0(414)	# 12991
					-001-	49	NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000414 *****	

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 107

TEST 40 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

0020641          03 CVCKBX2
0020641 04 000414 137000 113303 0000521 -001- 04 CPATCH1 BGNP 0(521) # 12991
-001- 05 BL XXX922
-001- 06 NOTE CPATCH1 'CSECT'
-001- 07 NOTE ***** PATCH AREA BEGINS AT 000521 *****

0113303          -001- 10 XXX922 PATCHAREA
0113303 06 000521 136100 020614 0000367 11 BX R4,CVCKLP2
0113305          12 CALL WAIT # TAKE A REAL TIME BREAK.
0113305 06 000523 073025 ----- -001- 13 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113306          14 ENDP # 12991
0113306 06 000524 137000 020643 0000416 -001- 15 BL XXX925
-001- 16 NOTE ***** LAST PATCH ADDRESS USED IS 000525 *****
-001- 17 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0020643          -001- 20 XXX925 OMCONTINUE
0020643 04 000416 107470 ----- 21 LSR MCHB,R8 # PREPARE FOR COMPARE.
0020644          22 EOW # 12991
-001- 23 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000416 *****

0020644          26 RTN_TBL ++4
0020644 04 000417 071400 ----- -001- 27 GA
0020645 04 000420 031000 020651 0020651 -001- 28 LAL RD,++4,RAO
0020647 04 000422 037000 011162 CDGNM -001- 29 BL INTRPN03

-001- 31 # COMPARE
-001- 32 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0001560).
-001- 33 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020651 04 000424 050014 ----- CDGNM -001- 34 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0020652 04 000425 000000 001560 -001- 35 ADDR 0(0001560)

-001- 37 # FAILTST
-001- 38 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS PRCVFL.
-001- 39 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0020654 04 000427 020017 ----- CDGNM -001- 40 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0020655 04 000430 000022 ----- -001- 41 VFD 16,PRCVFL

```

43 # THE CIRCUIT WHICH CONVERTS TWO PARITY BITS TO THREE DURING READS HAS A FAULT

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 108

TEST 40 SEGMENT 3

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP

W77D

0020656

01 RDPRENXT

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 109

TEST 40 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W770

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 40 SEGMENT 4
-001- 04 # *
-001- 05 # *****

```

```

0020656 04 000431 000400 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(4) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS THE WIDE PARITY ERROR DETECTION CIRCUIT. EIGHT DATA
12 # AND PARITY PATTERNS ARE SENT OVER THE DATA BUS AND REGISTERED IN THE STORE
13 # DATA FLOPS(FFSD). SINCE THE STORE IS FORCE-SELECTED BY THE ISOLATE MAINTENANCE
14 # OPTION AND THE STORE BUS IS IN THE IDLE (BUS-READ) STATE, THIS DATA IS GATED
15 # ONTO THE STORE BUS, AND, THUS, IS PRESENT ON THE INPUTS TO THE WIDE PARITY
16 # ERROR DETECTION CIRCUIT. THE TEST CONCLUDES BY CLEARING THE ISOLATE OPTION AND
17 # APPLYING TWO ADDITIONAL DATA/PARITY PATTERNS TO VERIFY THAT THE SELECT ENABLES
18 # (SELIB) ARE NOT STUCK ACTIVE ON THE OUTPUT OF THIS CIRCUIT.

```

```

-001- 21 # WIDE_TST
-001- 22 # IF WIDE_STORE IS NOT PRESENT, GO TO TABLE ENTRY AT ADDRESS NARSTRXT.
0020657 04 000432 0400A6 000000 CDGNM -001- 23 VFD 1,0 2,2 7,0 6,NWDTST
0020660 04 000433 000000 020742 0020742 -001- 24 ADDR NARSTRXT

```

```

-001- 26 # NO3 CODE
-001- 27 # PROCESS 3ACC CODED ROUTINE AT ADDRESS PRCVCK3.
0020662 04 000435 040043 000000 CDGNM -001- 28 VFD 1,0 2,2 7,0 6,NN03CD
0020663 04 000436 000000 020665 0020665 -001- 29 ADDR PRCVCK3

```

```

0020665 33 PRCVCK3
0020665 04 000440 131440 043140 CTSD 34 LAL R2,BASADDR,RA1
0020667 04 000442 030400 012755 CDGSI0 35 LL R0,STRSIZE
0020671 04 000444 001440 ----- 36 AR R2,R0 # POINT TO NEXT STORE
0020672 04 000445 040461 ----- 37 L R3,1(RA1)
0020673 04 000446 003107 ----- 38 LN R4,7 # EIGHT PASSES THRU THIS TEST
0020674 04 000447 003541 000020 39 LI R6,B(10000) # ENSURE SPECIAL PARITY
0020676 04 000451 003561 106200 40 LI R7,NMLWR # MAIN MEMORY STATUS = NORMAL WRITE
0020700 04 000453 003200 ----- 41 ZR R8 # CLEAR ERROR STORAGE REGISTER
0020701 04 000454 003340 ----- 42 ZR R14
0020702 04 000455 003761 000021 43 LI R15,B(0000000000010001) # BITS FOR DATA HIGH (SD16-23) PATTERNS
0020704 44 CVCKLP3
0020704 04 000457 124102 ----- 45 TBN R4,2
0020705 04 000460 030143 ----- 46 ICF R6,3 # PARITY WIDE(SDPW)=1 FOR FOUR PASSES
0020706 47
0020706 04 000461 037020 012667 CDGSI0 -002- 48 BSA MASIOM
0020710 04 000463 046071 137020 -001- 49 DATA MASCINT # INITIALIZE STORE CONTROLLER

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TEST 40 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

0020711					01	CALL	MEMOP		
0020711	04	000464	137020	013027	CDGSBS	-001-	02	BSA	MEMOP
0020713							03	SIOM	FBIT09
0020713	04	000466	137020	012667	CDGSI0	-002-	04	BSA	MASIOM
0020715	04	000470	146074	137020		-001-	05	DATA	FBIT09
0020716							06	SRI0	SERREAD
0020716	04	000471	137020	012667	CDGSI0	-002-	07	BSA	MASIOM
0020720	04	000473	047114	-----		-001-	08	DATA	SERREAD
0020721	04	000474	124272	-----			09	TBN	R11,S(PWER)
0020722	04	000475	055002	-----	0020724		10	BNC	CVCKBX3
0020723	04	000476	026604	-----			11	SBR	R8,R4
									# COLLECT ERRORS IN STORE ERROR REGISTER
0020724							13	CVCKBX3	
0020724	04	000477	110774	-----			14	RLN	R15,4
									# READ BACK STORE ERROR REGISTER(SER)
									# IS PARITY WIDE ERROR SET?
							16	CSTCP4	OW
						-001-	17	NOTE	0(S00)
									# IF SO, RECORD THIS
									***** THE FIRST ADDRESS OVERWRITTEN IS 000500 *****
							20	CPATCH1	BGNP
0020725	04	000500	037000	113310	0000526	-001-	21	BL	0(S26)
						-001-	22	NOTE	XXX945
						-001-	23	NOTE	CPATCH1 'CSECT'
									***** PATCH AREA BEGINS AT 000526 *****
0113310						-001-	26	XXX945	PATCHAREA
0113310	06	000526	117500	001400			27	CIRM	R4,0,0,0(3)
0113312	06	000530	055002	-----	0113314		28	BNC	NOBREAK
0113313							29	CALL	WAIT
0113313	06	000531	073025	-----		-001-	30	BSAI	WXAIT
0113314							31	NOBREAK	
0113314	06	000532	136100	020704	0000457		32	BX	R4, CVCKLP3
0113316							33	ENDP	
0113316	06	000534	037000	020727	0000502	-001-	34	BL	XXX948
						-001-	35	NOTE	***** LAST PATCH ADDRESS USED IS 000535 *****
						-001-	36	NOTE	***** NUMBER OF PATCH WORDS USED IS 8 (DECIMAL) *****
0020727						-001-	39	XXX948	OWCONTINUE
0020727	04	000502	107470	-----			40	LSR	MCHB,RB
0020730							41	EOW	
						-001-	42	NOTE	# FOR COMPARE
									# 12991
									***** THE LAST ADDRESS OVERWRITTEN IS 000502 *****
0020730							45	RTN_TBL	**4
0020730	04	000503	071400	-----		-001-	46	GA	
0020731	04	000504	031000	020735	0020735	-001-	47	LAL	RD,**4,RA0
0020733	04	000506	037000	011162	CDGNM	-001-	48	BL	INTRPN03

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 111

TEST 40 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000132).
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0020735 04 000510 050014 ----- CDGNM
0020736 04 000511 000000 000132 -001- 04 VFD 1,LFINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 05 ADDR 0(0000132)

```

```

-001- 07 # FAILTST
-001- 08 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WDCKFL.
0020740 04 000513 020017 ----- CDGNM
0020741 04 000514 000023 ----- -001- 09 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 10 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 11 VFD 16,WDCKFL

```

13 # THE WIDE PARITY ERROR DETECTION CIRCUIT HAS A FAULT

0020742

```

16 NARSTRXT
-001- 17 # NO3 CODE
-001- 18 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0020742 04 000515 040043 000000 CDGNM
0020743 04 000516 000000 020745 0020745 -001- 19 VFD 1,0 2,2 7,0 6,NNO3CD
-001- 20 ADDR **2

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 112

TEST 40 SEGMENT 4

23:23:17 2/05/81 ****

MAIN_STORE_CONTROL_AND_PARITY DIAGNOSTIC TEST

CDGSCP W77D

```

                                01 CSTCP4 OW      0(520),0(522)      # 12703
                                -001- 02  NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000520 *****

0020745                                05      FINALE CP4INIT
0020745 04 000520 137020 012771 CDGSI0 -002- 06      BSA      FINAL
0020747 04 000522 137000 020250 0020250 -001- 07      BL      BKCSTCP4
0020751 04 000524 171400 ----- -001- 08      GA
0020752 04 000525 037000 011725 CDGNM -001- 09      BL      PASSTST      # TEST COMPLETED
0020752                                10      EOM      # 12703
                                -001- 11  NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000526 *****

                                14 CSTCP1 MAXSIZE 0,553
                                15 CSTCP2 MAXSIZE 0,567
                                16 CSTCP3 MAXSIZE 0,545
                                17 CSTCP4 MAXSIZE 0,527

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 113

PATCH HISTORY

23:23:17 2/05/81 ****

LISTING OF INDIVIDUAL PATCHES

CDGSCP W77D

```

    **/**/**/012703/**/**/
-002- 01  PBEGIN  PROG=CDGSCP.
02 # THIS PATCH CORRECTS THE FOLLOWING PROBLEMS:
03 # 1. INCORRECT STORE NUMBER IN FAIL MESSAGE
04 # WHEN MORE THAN STORE 0 DEFINED
05 # 2. TESTS WOULD NOT DIAGNOSE ANY STORE
06 # HIGHER THAN STORE 1
07 TCEND
0020752 -001- 08  NOTE *****
                                     TRNO=12703  SERNOB=47290

    **/**/**/011938/**/**/
-002- 15  PBEGIN  PROG=CDGSCP
16 # SKIP TEST 39, SEG 6 BECAUSE OF PROCESSOR BUS.
17 # SEQUENCER INTERFERENCE.
18 # REF: TR 8598, TC 49037
19 TCEND
0020752 -001- 20  NOTE *****
                                     TRNO=11938  SERNOB=60695

    **/**/**/012991/**/**/
-002- 27  PBEGIN  PROG=CDGSCP
28 # THIS PATCH BREAKS UP TESTS 37 THRU 40 INTO SMALLER REAL TIME SEGMENTS.
29 TCEND
0020752 -001- 30  NOTE *****
                                     TRNO=12991  SERNOB=49729

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 114

TROUBLE LOCATION MANUAL
LISTING OF INDIVIDUAL PATCHES

23:23:17 2/05/81 ****
CDGSCP W77D

0020752
-001- 03 #& TBL 3701
-001- 04 #& TEST 37
-001- 05 #& SEGMENT 0, 1, 2,3 OR 4
-001- 06 #& PR CDGSCP
-001- 07 #
08 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER
09 # TEST FAILED TO COMPLETE PROPERLY.
10 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
11 # ADDRESS = FAILURE EXIT (FAILTST) IN 'MASIOM' SUBROUTINE
12 #
13 # MASCM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
14 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
15 # MASCM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

0020752
-001- 18 #& TBL 3702
-001- 19 #& TEST 37
-001- 20 #& SEGMENT 1
-001- 21 #& PR CDGSCP
-001- 22 #
23 # ERROR SIGNAL FROM STORE UNDER TEST WAS NOT PROPERLY RELAYED BACK TO ERROR
24 # REGISTER(ER) IN OFF-LINE CENTRAL CONTROL(3ACC)
25 #
26 # PROC 10-22 FA1028 ERROR REG/DISPLAY BUFFER HIGH BITS
27 # PROC 02-23 FA1046 DOUBLE STORE READ
28 # PROC 10-23 FA1027 ERROR REG/DISPLAY BUFFER LOW BITS
29 # PROC 02-18 FA1024 SPECIAL REGISTERS BITS PL AND PH
30 #

0020752
31 # >>>> THE FOLLOWING STORE CONTROLLER CIRCUIT PACK(S) <<<<
32 # >>>> MIGHT BE FAULTY IN ANY OF THE EQUIPPED STORES <<<<
33 # >>>> BECAUSE STORE ERROR 'A' CANNOT BE ISOLATED ON THE <<<<
34 # >>>> STORE BUS FROM SIGNALS COMING FROM HIGHER STORE <<<<
35 #

0020752
36 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
37 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
38 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
39 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
40 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
41 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
42 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
43 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
44 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
45 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
46 # MASCM 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
47 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
48 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
49 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 115

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3702 ERAFAL

CDGSCP W77D

01 # MASCH 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER

-001- 04 #& TBL 3703
 -001- 05 #& TEST 37
 -001- 06 #& SEGMENT 1
 -001- 07 #& PR CDGSCP
 -001- 08 #

0020752

09 # THE STORE BUSY (SBY) SIGNAL IS STUCK ACTIVE (LOW ON STORE BUS)

10

11 # PROC 02-21 FA1029 MAIN STORE CONTROL 0

12 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

13 # MASCH 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

-001- 16 #& TBL 3704
 -001- 17 #& TEST 37
 -001- 18 #& SEGMENT 2
 -001- 19 #& PR CDGSCP
 -001- 20 #

0020752

21 # SHIFTER CLEAR SIGNAL WAS NOT GENERATED IN THIS UNSELECTED STORE

22

23 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

-001- 26 #& TBL 3705
 -001- 27 #& TEST 37
 -001- 28 #& SEGMENT 2
 -001- 29 #& PR CDGSCP
 -001- 30 #

0020752

31 # INPUT TO HALT CYCLE(HLTCYC) GATE ON TIMING BOARD APPEARS STUCK ACTIVE

32

33 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 116

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3706 STBTRB

CDGSCP W77D

0020752

-001- 01 #8 TBL 3706
 -001- 02 #8 TEST 37
 -001- 03 #8 SEGMENT 2
 -001- 04 #8 PR CDGSCP
 -001- 05 #
 06 # INPUT TO SHIFT CLEAR CHECK(STBER) ON TIMING BOARD APPEARS STUCK ACTIVE
 07
 08 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

0020752

-001- 11 #8 TBL 3707
 -001- 12 #8 TEST 37
 -001- 13 #8 SEGMENT 3
 -001- 14 #8 PR CDGSCP
 -001- 15 #
 16 # INPUT TO STORE SELECT ERROR COLLECTION CIRCUIT(STAER) IS STUCK ACTIVE
 17
 18 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

0020752

-001- 21 #8 TBL 3708
 -001- 22 #8 TEST 37
 -001- 23 #8 SEGMENT 4
 -001- 24 #8 PR CDGSCP
 -001- 25 #
 26 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 27 # STORE DATA BIT 0 FROM FARTHER STORES IS STUCK ACTIVE.
 28
 29 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 30 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 31 # FIRST TIME BUS-READ GATE A (SC30A) ON COMMAND BOARD IS CHECKED
 32 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 33 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 34 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 35 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 117

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3709 BSRDBT01

CDGSCP W77D

0020752

-001- 01 #& TBL 3709
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA BIT 1 FROM FARTHER STORES IS STUCK ACTIVE.
 08
 09 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0020752

-001- 12 #& TBL 3710
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA BIT 2 FROM FARTHER STORES IS STUCK ACTIVE.
 19
 20 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0020752

-001- 23 #& TBL 3711
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # STORE DATA BIT 3 FROM FARTHER STORES IS STUCK ACTIVE.
 30
 31 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 118

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3712 BSRDBT04

CDGSCP W77D

0020752

-001- 01 #& TBL 3712
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA BIT 4 FROM FARTHER STORES IS STUCK ACTIVE.
 08 #
 09 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12

0020752

-001- 12 #& TBL 3713
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA BIT 5 FROM FARTHER STORES IS STUCK ACTIVE.
 19 #
 20 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 21 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 22 # FIRST TIME BUS-READ GATE B (SC30B) ON COMMAND BOARD IS CHECKED
 23 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 24 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 25 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

0020752

-001- 28 #& TBL 3714
 -001- 29 #& TEST 37
 -001- 30 #& SEGMENT 4
 -001- 31 #& PR CDGSCP
 -001- 32 #
 33 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 34 # STORE DATA BIT 6 FROM FARTHER STORES IS STUCK ACTIVE.
 35 #
 36 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 119

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3715 BSRDBT07

CDGSCP W77D

0020752

-001- 01 #& TBL 3715
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA BIT 7 FROM FARTHER STORES IS STUCK ACTIVE.
 08 #
 09 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0020752

-001- 12 #& TBL 3716
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA BIT 8 FROM FARTHER STORES IS STUCK ACTIVE.
 19 #
 20 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8

0020752

-001- 23 #& TBL 3717
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # STORE DATA BIT 9 FROM FARTHER STORES IS STUCK ACTIVE.
 30 #
 31 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 120

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3718 BSRDBT10

CDGSCP

W77D

0020752

-001- 01 #& TBL 3718
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA BIT 10 FROM FARTHER STORES IS STUCK ACTIVE.
 08 #
 09 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 &10

0020752

-001- 12 #& TBL 3719
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA BIT 11 FROM FARTHER STORES IS STUCK ACTIVE.
 19 #
 20 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 &11

0020752

-001- 23 #& TBL 3720
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # STORE DATA BIT 12 FROM FARTHER STORES IS STUCK ACTIVE.
 30 #
 31 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 &12

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 121

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3721 BSRDBT13

CDGSCP W77D

0020752

-001- 01 #& TBL 3721
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA BIT 13 FROM FARTHER STORES IS STUCK ACTIVE.
 08 #
 09 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13

0020752

-001- 12 #& TBL 3722
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA BIT 14 FROM FARTHER STORES IS STUCK ACTIVE.
 19 #
 20 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

0020752

-001- 23 #& TBL 3723
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # STORE DATA BIT 15 FROM FARTHER STORES IS STUCK ACTIVE.
 30 #
 31 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 122

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3724 BSRDBTPL

CDGSCP W77D

0020752

-001- 01 #& TBL 3724
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # STORE DATA PL BIT FROM FARTHER STORES IS STUCK ACTIVE.
 08
 09 # MASCH 08-16 FA106D MAIN STORE CONTROLLER - BITS PL&PH

0020752

-001- 12 #& TBL 3725
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # STORE DATA PH BIT FROM FARTHER STORES IS STUCK ACTIVE.
 19
 20 # MASCH 08-16 FA106D MAIN STORE CONTROLLER - BITS PL&PH

0020752

-001- 23 #& TBL 3726
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # WIDE STORE DATA BIT 16 OR 20 FROM FARTHER STORES IS STUCK ACTIVE.
 30
 31 # NOTE--1 MASCH 08-10 FA106D MAIN STORE CONTROLLER - BITS 16&20
 32 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 33 # FIRST TIME BUS-READ GATE C (SC30C) ON COMMAND BOARD IS CHECKED

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 123

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3727 BSRDBT17

CDGSCP W77D

0020752

-001- 01 #& TBL 3727
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # WIDE STORE DATA BIT 17 OR 21 FROM FARTHER STORES IS STUCK ACTIVE.
 08
 09 # NOTE--1 MASCH 08-11 FA1060 MAIN STORE CONTROLLER - BITS 17&21

0020752

-001- 12 #& TBL 3728
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # WIDE STORE DATA BIT 18 OR 22 FROM FARTHER STORES IS STUCK ACTIVE.
 19
 20 # NOTE--1 MASCH 08-12 FA1060 MAIN STORE CONTROLLER - BITS 18&22

0020752

-001- 23 #& TBL 3729
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # WIDE STORE DATA BIT 19 OR 23 FROM FARTHER STORES IS STUCK ACTIVE.
 30
 31 # NOTE--1 MASCH 08-13 FA1060 MAIN STORE CONTROLLER - BITS 19&23

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 124

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3730 BSRDBT20

CDGSCP W77D

0020752

-001- 01 #& TBL 3730
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # WIDE STORE DATA BIT 20 FROM FARTHER STORES IS STUCK ACTIVE.
 08
 09 # NOTE--1 MASCH 08-10 FA1060 MAIN STORE CONTROLLER - BITS 16&20

0020752

-001- 12 #& TBL 3731
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # WIDE STORE DATA BIT 21 FROM FARTHER STORES IS STUCK ACTIVE.
 19
 20 # NOTE--1 MASCH 08-11 FA1060 MAIN STORE CONTROLLER - BITS 17&21

0020752

-001- 23 #& TBL 3732
 -001- 24 #& TEST 37
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 29 # WIDE STORE DATA BIT 22 FROM FARTHER STORES IS STUCK ACTIVE.
 30
 31 # NOTE--1 MASCH 08-12 FA1060 MAIN STORE CONTROLLER - BITS 18&22
 32 # NOTE--1 MASCH 08-11 FA1060 MAIN STORE CONTROLLER - BITS 17&21
 33 # NOTE--1 MASCH 08-13 FA1060 MAIN STORE CONTROLLER - BITS 19&23
 34 # NOTE--1 MASCH 08-10 FA1060 MAIN STORE CONTROLLER - BITS 16&20

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 125

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3733 BSRDBT23

CDGSCP W77D

0020752

-001- 01 #& TBL 3733
 -001- 02 #& TEST 37
 -001- 03 #& SEGMENT 4
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 07 # WIDE STORE DATA BIT 23 FROM FARTHER STORES IS STUCK ACTIVE.
 08 #
 09 # NOTE--1 MASCM 08-13 FA1060 MAIN STORE CONTROLLER - BITS 19&23

0020752

-001- 12 #& TBL 3734
 -001- 13 #& TEST 37
 -001- 14 #& SEGMENT 4
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE BUS-READ SIGNAL (BUSRD) WHICH ENABLES THE REPEATING OF
 18 # WIDE STORE DATA PARITY BITFROM FARTHER STORES IS STUCK ACTIVE.
 19 #
 20 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 23 #& TBL 3801
 -001- 24 #& TEST 38
 -001- 25 #& SEGMENT 0, 1, 2, 3, 4, 5, 6 OR 7
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
 29 # TO COMPLETE PROPERLY.
 30 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
 31 # ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
 32 #
 33 # MASCM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 34 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 35 # MASCM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 126

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3802 WRDLPFLT

CDGSCP W77D

0020752

-001- 01 #& TBL 3802
 -001- 02 #& TEST 38
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # DATA LOW PARITY ERROR IS NOT BEING DETECTED DURING A WRITE OPERATION
 07 #
 08 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 09 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 11 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 12 # MASCM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 13 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER

0020752

-001- 16 #& TBL 3803
 -001- 17 #& TEST 38
 -001- 18 #& SEGMENT 1
 -001- 19 #& PR CDGSCP
 -001- 20 #
 21 # DATA HIGH PARITY ERROR IS NOT BEING DETECTED DURING A WRITE OPERATION
 22 #
 23 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 24 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 25 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0020752

-001- 28 #& TBL 3804
 -001- 29 #& TEST 38
 -001- 30 #& SEGMENT 2
 -001- 31 #& PR CDGSCP
 -001- 32 #
 33 # EITHER THE NORMAL WRITE (WR1) OR BLIND WRITE (BLDWR1) INPUT TO THE STROBE-
 34 # PARITY-ERROR GATES (TSPERA0/TSPERB0) IS STUCK ACTIVE, OR ELSE THIS STROBE
 35 # SIGNAL IS STUCK ACTIVE ON INPUT TO THE WRITE-PARITY-LOW-ERROR GATE (WTRPLERO)
 36 #
 37 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 38 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 127

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3805 TSPHEREN

CDGSCP W77D

0020752

-001- 01 #& TBL 3805
 -001- 02 #& TEST 38
 -001- 03 #& SEGMENT 2
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE WRITE-PARITY-CHECK STROBE (TWRTPC1) ON THE WRITE-PARITY-HIGH-ERROR
 07 # GATE (WTRPHERD) IS STUCK ACTIVE
 08 #
 09 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

0020752

-001- 12 #& TBL 3806
 -001- 13 #& TEST 38
 -001- 14 #& SEGMENT 3
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # THE NORMAL MODE INPUT (RMBO) TO ONE OF THE STROBE-PARITY-ERROR GATES
 18 # (TSPERA0/TSPERB0) IS STUCK ACTIVE (HIGH)
 19 #
 20 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0020752

-001- 23 #& TBL 3807
 -001- 24 #& TEST 38
 -001- 25 #& SEGMENT 4
 -001- 26 #& PR CDGSCP
 -001- 27 #
 28 # ONE OF THE STORE-COMPLEMENT-WRITE INPUTS (LSCW00) TO EITHER OF THE WRITE-
 29 # PARITY-ERROR GATES (WTRPLERO/WTRPHERO) IS STUCK ACTIVE
 30 #
 31 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 32 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 128

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3808 PLERSTK1

CDGSCP W77D

0020752

-001- 01 #8 TBL 3808
 -001- 02 #8 TEST 38
 -001- 03 #8 SEGMENT 5
 -001- 04 #8 PR CDGSCP
 -001- 05 #
 06 # THE PARITY-LOW-ERROR SIGNAL (PLER1C) IS STUCK ACTIVE BETWEEN THE DATA
 C7 # PARITY LOW CHECK CIRCUIT AND THE WRITE-PARITY-LOW-ERROR GATE (WTRPLERO).
 08
 09 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 10 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 11 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 12 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

0020752

-001- 15 #8 TBL 3809
 -001- 16 #8 TEST 38
 -001- 17 #8 SEGMENT 5
 -001- 18 #8 PR CDGSCP
 -001- 19 #
 20 # THE PARITY-HIGH-ERROR SIGNAL (PHER1C) IS STUCK ACTIVE BETWEEN THE DATA
 21 # PARITY HIGH CHECK CIRCUIT AND THE WRITE-PARITY-HIGH-ERROR GATE (WTRPHERO).
 22
 23 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 24 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 25 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 26 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

0020752

-001- 29 #8 TBL 3810
 -001- 30 #8 TEST 38
 -001- 31 #8 SEGMENT 6 OR 7
 -001- 32 #8 PR CDGSCP
 -001- 33 #
 34 # EITHER THE STORE COMPLETE BIT (SCM) OR ITS ASSOCIATED ENABLING CIRCUITRY
 35 # WHICH IS CONTROLLED BY THE DATA PARITY CHECK CIRCUITS IS FAULTY.
 36
 37 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 38 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

STORE CONTROL AND PARITY TESTS

PR-1C934-5C

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 129

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3811 SERCSTK

CDGSCP W77D

0020752

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-001- 01 #& TBL 3811
-001- 02 #& TEST 38
-001- 03 #& SEGMENT 6 OR 7
-001- 04 #& PR CDGSCP
-001- 05 #
06 #      EITHER THE STORE ERROR 'C' SIGNAL (SERC) OR ITS ASSOCIATED ENABLING
07 # CIRCUIT WHICH IS CONTROLLED BY THE DATA PARITY CHECK CIRCUITS IS FAULTY
08
09 #      MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
10 #      MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
11 #      PROC 02-23 FA1046 DOUBLE STORE READ
12 #      PROC 10-22 FA1028 ERROR REG/DISPLAY BUFFER HIGH BITS
-001- 13 #
-001- 14 # >>>> IF THE TTY PRINTOUT POINTS TO A STORE CONTROLLER <<<<
-001- 15 # >>>> OTHER THAN THE FIRST ONE (MAS 0), THEN THE FOLLOWING <<<<
-001- 16 # >>>> LIST OF SUSPECT CIRCUIT PACK(S) APPLIES TO BOTH THAT <<<<
-001- 17 # >>>> CONTROLLER AND NEXT LOWER-NUMBERED ONE. <<<<
-001- 18 #
19 #      MASCM 08-25 FC262 MAIN STORE CONTROLLER - POWER CONTROL

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0020752

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-001- 22 #& TBL 3812
-001- 23 #& TEST 38
-001- 24 #& SEGMENT 7
-001- 25 #& PR CDGSCP
-001- 26 #
27 #      ONE PARITY-HIGH INHIBIT (PHER1A/PHER1B) TO EITHER OF THE WIRED OR'S CALLED
28 # TWO-PARITY ERROR (TP2ER1A/TP2ER1B) IS STUCK ACTIVE (HIGH).
29
30 #      MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
31 #      MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER

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STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3901 IOPRTYER

CDGSCP W77D

-001- 01 #& TBL 3901
 -001- 02 #& TEST 39
 -001- 03 #& SEGMENT 0, 1, 2, 3, 4, 5, 6 OR 7
 -001- 04 #& PR CDGSCP
 -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
 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

0020752

-001- 16 #& TBL 3902
 -001- 17 #& TEST 39
 -001- 18 #& SEGMENT 1
 -001- 19 #& PR CDGSCP
 -001- 20 #
 21 # ONE PARITY-LOW INHIBIT (PLER1A/PLER1B) TO EITHER OF THE WIRED OR'S CALLED
 22 # TWO-PARITY ERROR (TP2ER1A/TP2ER1B) IS STUCK ACTIVE (HIGH).
 23
 24 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0020752

-001- 27 #& TBL 3903
 -001- 28 #& TEST 39
 -001- 29 #& SEGMENT 2
 -001- 30 #& PR CDGSCP
 -001- 31 #
 32 # EITHER THE STORE COMPLETE BIT (SCM) OR ITS ASSOCIATED ENABLING CIRCUITRY
 33 # WHICH IS CONTROLLED BY THE DATA PARITY CHECK CIRCUITS IS FAULTY.
 34
 35 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 36 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

0020752

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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3904 ERCSTK

CDGSCP W77D

0020752

-001- 01 #8 TBL 3904
 -001- 02 #8 TEST 39
 -001- 03 #8 SEGMENT 2
 -001- 04 #8 PR CDGSCP
 -001- 05 #
 06 # EITHER THE STORE ERROR 'C' SIGNAL (SERC) OR ITS ASSOCIATED ENABLING
 07 # CIRCUIT WHICH IS CONTROLLED BY THE DATA PARITY CHECK CIRCUITS IS FAULTY
 08
 09 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 10 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 11 # PROC 02-20 FA1030 MISC. DEC. - REGISTERS BITS 17 AND 19
 12 # PROC 02-23 FA1046 DOUBLE STORE READ

0020752

-001- 15 #8 TBL 3905
 -001- 16 #8 TEST 39
 -001- 17 #8 SEGMENT 2
 -001- 18 #8 PR CDGSCP
 -001- 19 #
 20 # DATA PARITY LOW BIT THAT IS BUFFERED IN DATA FLOP (FFSD) IN CONTROLLER
 21 # IS NOT BEING COMPLEMENTED (1->0) AFTER DETECTION OF DOUBLE DATA PARITY ERROR
 22 # DURING A READ WITH STORE AUTOMATIC CORRECTION ACTIVE
 23
 24 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 25 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0020752

-001- 28 #8 TBL 3906
 -001- 29 #8 TEST 39
 -001- 30 #8 SEGMENT 2
 -001- 31 #8 PR CDGSCP
 -001- 32 #
 33 # DATA PARITY HIGH BIT THAT IS BUFFERED IN DATA FLOP (FFSD) IN CONTROLLER
 34 # IS NOT BEING COMPLEMENTED (1->0) AFTER DETECTION OF DOUBLE DATA PARITY ERROR
 35 # DURING A READ WITH STORE AUTOMATIC CORRECTION ACTIVE
 36
 37 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 38 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

3907 RD1STK

CDGSCP W77D

0020752

-001- 01 #& TBL 3907
 -001- 02 #& TEST 39
 -001- 03 #& SEGMENT 3
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # A NORMAL READ ENABLE (RD1) ON ONE OF THE READ-PARITY-ERROR GATES (RDPLER0/
 07 # RDPHEK0) IS STUCK ACTIVE (HIGH).
 08 #
 09 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL

0020752

-001- 12 #& TBL 3908
 -001- 13 #& TEST 39
 -001- 14 #& SEGMENT 4, 5 OR 6
 -001- 15 #& PR CDGSCP
 -001- 16 #
 17 # A NORMAL LOAD GATING SIGNAL (NLDD/NLDB1) ON AN INPUT TO EITHER THE STORE
 18 # COMPLEMENT WRITE FLOP (SCW) OR THE STORE AUTOMATIC CORRECTION FLOP (SAC)
 19 # IS STUCK ACTIVE (HIGH).
 20 #
 21 # MASCM 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 22 # PROC 02-23 FA1046 DOUBLE STORE READ
 23 # PROC 02-22 FA1029 MAIN STORE CONTROL 1

0020752

-001- 26 #& TBL 3909
 -001- 27 #& TEST 39
 -001- 28 #& SEGMENT 7
 -001- 29 #& PR CDGSCP
 -001- 30 #
 31 # THE CIRCUITRY WHICH IS SUPPOSED TO DIVERT STORE ERROR 'C' TO STORE
 32 # COMPLETE WITH THE BLOCK ERROR CORRECT BIT (BECO) SET IN THE MAIN MEMORY
 33 # STATUS REGISTER (MMSR) IS NOT PERFORMING THIS FUNCTION.
 34 #
 35 # PROC 02-21 FA1029 MAIN STORE CONTROL 0
 36 # PROC 02-23 FA1046 DOUBLE STORE READ

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

4001 IOPRTYER

CDGSCP W77D

0020752

-001- 01 #& TBL 4001
 -001- 02 #& TEST 40
 -001- 03 #& SEGMENT 0, 1, 2, 3,4 OR 5
 -001- 04 #& PR CDGSCP
 -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
 10 #
 11 # MASCH 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 12 # MASCH 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 13 # MASCH 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

0020752

-001- 16 #& TBL 4002
 -001- 17 #& TEST 40
 -001- 18 #& SEGMENT 1
 -001- 19 #& PR CDGSCP
 -001- 20 #
 21 # THE FIRST DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 22 # PARITY LOW CHECK CIRCUIT.
 23 #
 24 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 25 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 28 #& TBL 4003
 -001- 29 #& TEST 40
 -001- 30 #& SEGMENT 1
 -001- 31 #& PR CDGSCP
 -001- 32 #
 33 # THE FIRST DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 34 # PARITY HIGH CHECK CIRCUIT.
 35 #
 36 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 37 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 134

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

4004 SDPRFLO2

CDGSCP W77D

0020752

-001- 01 #& TBL 4004
 -001- 02 #& TEST 40
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE SECOND DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 07 # PARITY LOW CHECK CIRCUIT.
 08 #
 09 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 13 #& TBL 4005
 -001- 14 #& TEST 40
 -001- 15 #& SEGMENT 1
 -001- 16 #& PR CDGSCP
 -001- 17 #
 18 # THE SECOND DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 19 # PARITY HIGH CHECK CIRCUIT.
 20 #
 21 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 22 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 25 #& TBL 4006
 -001- 26 #& TEST 40
 -001- 27 #& SEGMENT 1
 -001- 28 #& PR CDGSCP
 -001- 29 #
 30 # THE THIRD DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 31 # PARITY LOW CHECK CIRCUIT.
 32 #
 33 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 34 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 135

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

4007 SDPRFLO5

CDGSCP W77D

0020752

-001- 01 #& TBL 4007
 -001- 02 #& TEST 40
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE THIRD DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 07 # PARITY HIGH CHECK CIRCUIT.
 08 #
 09 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 10 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 13 #& TBL 4008
 -001- 14 #& TEST 40
 -001- 15 #& SEGMENT 1
 -001- 16 #& PR CDGSCP
 -001- 17 #
 18 # THE FOURTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 19 # PARITY LOW CHECK CIRCUIT.
 20 #
 21 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 22 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 25 #& TBL 4009
 -001- 26 #& TEST 40
 -001- 27 #& SEGMENT 1
 -001- 28 #& PR CDGSCP
 -001- 29 #
 30 # THE FOURTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 31 # PARITY HIGH CHECK CIRCUIT.
 32 #
 33 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 34 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 136

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

4010 SDPRFLO8

CDGSCP W77D

0020752

-001- 01 #8 TBL 4010
 -001- 02 #8 TEST 40
 -001- 03 #8 SEGMENT 1
 -001- 04 #8 PR CDGSCP
 -001- 05 #
 06 # THE FIFTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 07 # PARITY LOW CHECK CIRCUIT.
 08 #
 09 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 13 #8 TBL 4011
 -001- 14 #8 TEST 40
 -001- 15 #8 SEGMENT 1
 -001- 16 #8 PR CDGSCP
 -001- 17 #
 18 # THE FIFTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 19 # PARITY HIGH CHECK CIRCUIT.
 20 #
 21 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 22 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 25 #8 TBL 4012
 -001- 26 #8 TEST 40
 -001- 27 #8 SEGMENT 1
 -001- 28 #8 PR CDGSCP
 -001- 29 #
 30 # THE SIXTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 31 # PARITY LOW CHECK CIRCUIT.
 32 #
 33 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 34 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 137

4013 SDRFL11

CDGSCP W77D

0020752

-001- 01 #& TBL 4013
 -001- 02 #& TEST 40
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE SIXTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 07 # PARITY HIGH CHECK CIRCUIT.
 08 #
 09 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 10 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 13 #& TBL 4014
 -001- 14 #& TEST 40
 -001- 15 #& SEGMENT 1
 -001- 16 #& PR CDGSCP
 -001- 17 #
 18 # THE SEVENTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 19 # PARITY LOW CHECK CIRCUIT.
 20 #
 21 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 22 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

0020752

-001- 25 #& TBL 4015
 -001- 26 #& TEST 40
 -001- 27 #& SEGMENT 1
 -001- 28 #& PR CDGSCP
 -001- 29 #
 30 # THE SEVENTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 31 # PARITY HIGH CHECK CIRCUIT.
 32 #
 33 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 34 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 138

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

4016 SDPRFL14

CDGSCP W77D

0020752

-001- 01 #& TBL 4016
 -001- 02 #& TEST 40
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSCP
 -001- 05 #
 06 # THE EIGHTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 07 # PARITY LOW CHECK CIRCUIT.
 08
 09 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

-001- 13 #& TBL 4017
 -001- 14 #& TEST 40
 -001- 15 #& SEGMENT 1
 -001- 16 #& PR CDGSCP
 -001- 17 #
 18 # THE EIGHTH DATA-PARITY CHECK PATTERN PRODUCED AN ERRONEOUS RESULT IN THE
 19 # PARITY HIGH CHECK CIRCUIT.
 20 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 21 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

-001- 24 #& TBL 4018
 -001- 25 #& TEST 40
 -001- 26 #& SEGMENT 2 OR 3
 -001- 27 #& PR CDGSCP
 -001- 28 #
 29 # THE PARITY CONVERTER CIRCUIT FOR THE 26-BIT WIDE MAIN STORE
 30 # HAS A FAULT EITHER IN THE WRITE OR READ PARITY CONVERSION.
 31 # DATA = CONTENTS OF RESULT REGISTER ON EXIT FROM CHECK LOOP
 32 # NOTE--1 MASCH 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 139

4019 WDCKFL

CDGSCP W77D

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-001- 01 #& TBL 4019
-001- 02 #& TEST 40
-001- 03 #& SEGMENT 4
-001- 04 #& PR CDGSCP
-001- 05 #
06 # AN ERRONEOUS RESULT FROM THE WIDE PARITY CHECK CIRCUIT
07 # INDICATES A FAULT IN EITHER THE STORE BUS PARITY WIDE BIT (SDPW)
08 # OR THE WIDE PARITY CHECK CIRCUIT ON THE PARITY CONVERSION BOARD.
09 # DATA = CONTENTS OF RESULT REGISTER ON EXIT FROM CHECK LOOP
10 # NOTE--1 PROC 02-07 FA1040 WIDE STORE BUS INTERFACE BITS 28-PH
11 # NOTE--1 MASCM 08-14 FA1067 MAIN STORE CONTROLLER - PARITY TRANSLATOR
12 # NOTE--1 MASCM 08-12 FA1060 MAIN STORE CONTROLLER - BITS 18&22
13 # NOTE--1 MASCM 08-13 FA1060 MAIN STORE CONTROLLER - BITS 19&23
-002- 14 PBEGIN PROG=CDGSCP TRNO=780315 SERNOB=52540
15 # CU DIAGNOSTIC TEST 37 SOMETIMES CAUSED THE MAS
16 # POWER CONVERTERS TO SHUT DOWN DUE TO OVERCURRENT.
17 # THIS PATCH CHANGES THE TEST SO THE MAS IS NOT PUT
18 # IN A HIGH POWER STATE.
19 TCEND
-001- 20 NOTE *****

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0020752

0020752

27 END

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'APPLY ERROR EQUUS ORDER(S /8) TO CHECK ER'	T	BADCODET				
'PAGSCR+30'	T	BASADDR				
			W=4 S=0 N=36 CL=2	29-15, 30-23, 32-31, 33-28, 34-05, 35-20, 38-32, 41-33, 50-35, 52-34, 54-40, 56-19, 58-35, 60-32, 62-46, 63-04, 66-03, 66-13, 75-38, 75-48, 77-49, 78-10, 81-36, 84-17, 84-24, 86-34, 86-44, 88-44, 91-38, 99-01, 102-43, 105-38, 107-15, 110-34		
	0	U	BBX			
0000000	A	BIT0	17-05	67-39, 76-11		
0000001	A	BIT1	17-06			
0000012	A	BIT10	17-15			
0000013	A	BIT11	17-16			
0000014	A	BIT12	17-17			
0000015	A	BIT13	17-18			
0000016	A	BIT14	17-19			
0000017	A	BIT15	17-20			
0000020	A	BIT16	17-21			
0000021	A	BIT17	17-22			
0000022	A	BIT18	17-23			
0000023	A	BIT19	17-24			
0000002	A	BIT2	17-07			
0000003	A	BIT3	17-08			
0000004	A	BIT4	17-09			
0000005	A	BIT5	17-10			
0000006	A	BIT6	17-11			
0000007	A	BIT7	17-12			
0000010	A	BIT8	17-13			
0000011	A	BIT9	17-14			
06 0016141	L	BKCSTCP1	26-39	45-07		
06 0016714	L	BKCSTCP2	48-46	69-07		
06 0017503	L	BKCSTCP3	73-39	93-07		
06 0020250	L	BKCSTCP4	96-39	113-07		
	2	R	BLKMSK	8-15		
0000161	A	BRXT		LIBNUM=14 89-13		
0145312	A	BRXMSX		LIBNUM=14 89-18		
0000010	A	BSRDBT	117-21	42-12, 43-26		
0000031	A	BSRDBTPH	123-12	42-42, 123-12		
0000030	A	BSRDBTPL	123-01	42-27, 123-01		
0000042	A	BSRDBTPW	126-12	43-41, 126-12		
0000010	A	BSRDBT00	117-21			
0000011	A	BSRDBT01	118-01			
0000012	A	BSRDBT02	118-12			
0000013	A	BSRDBT03	118-23			
0000014	A	BSRDBT04	119-01			
0000015	A	BSRDBT05	119-12			
0000016	A	BSRDBT06	119-28			
0000017	A	BSRDBT07	120-01			
0000020	A	BSRDBT08	120-12			
0000021	A	BSRDBT09	120-23			

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 142

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
0000022	A	BSRDBT10	121-01			
0000023	A	BSRDBT11	121-12			
0000024	A	BSRDBT12	121-23			
0000025	A	BSRDBT13	122-01			
0000026	A	BSRDBT14	122-12			
0000027	A	BSRDBT15	122-23			
0000032	A	BSRDBT16	123-23			
0000033	A	BSRDBT17	124-01			
0000034	A	BSRDBT18	124-12			
0000035	A	BSRDBT19	124-23			
0000036	A	BSRDBT20	125-01			
0000037	A	BSRDBT21	125-12			
0000040	A	BSRDBT22	125-23			
0000041	A	BSRDBT23	126-01			
'#	P					
ROC 02-18						
FA1024	SPEC					
IAL REGISTER						
S BITS PL AN						
D PH'	T	BS1PLPH		LIBNUM=12		
'#	P					
ROC 02-20						
FA1030	MISC					
. DEC. - REG						
ISTERS BITS						
17 AND 19'	T	BS1719		LIBNUM=12		
06 0016472	L	BT3STK	38-28	38-26		
0047214	A	BUSCHK	19-08			
'CHECK BUS I						
SOLUTION USI						
NG SER'	T	BUSCHKT				
06 0016567	L	BUSRDC	41-23	41-21		
06 0016662	L	BUSRDEND	44-07	41-39		
06 0016657	L	BUSRDX	44-01	43-04		
'SER+0'	T	CHDIF		W=1 S=2 N=0 CL=2		
10	R	CHKNDX	8-04			
'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	19-10	30-16, 35-18, 41-26, 52-28, 54-33, 56-12		
'INITIALIZE						
ALL STORE CO						
NTRROLLER CIR						
CUITS'	T	CKTINITT				
0046074	A	CLKSTOP	19-15	33-27, 39-03, 88-41, 107-14		
'DISABLE STO						
RE CONTROLLE						
R CLOCK OUTP						
UT'	T	CLKSTOPT				

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 143

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0046070	A	CLKSTRT	19-17	29-12, 36-15
'ENABLE STOR E CONTROLLER CLOCK OUTPU T'	T	CLKSTRTT		
0177771	A	CLOCKON	23-01	
06 0020100	L	CLP768	89-02	89-07
0043310	A	CLRSER	19-13	
'CLEAR STORE ERROR REGIS TER'	T	CLRSERT		
0000004	A	CLSHTRB	116-16	33-06, 116-16
06 0016255	L	CLSHTST	32-26	32-22
'SERREAD'	T	COMENT		

CDGSCP W77D

```

$.<(+18
!$*);
~/
%_>?
:#@'=" ab
cdefghi n<<+
+ jklmnopqr~
n)z~"stuvw
xyz=L[>012
3456789+~]#
-(abcdefghi
)jklmno
pqr \ #
tuvwxyz
0123456789

```

T CONLC

LIBNUM=10

'n

```

z
te<hplx
vsfgs
~al
ix>k
jo#b'd" ab
cdefghi n<<+
+ jklmnopqr~

```

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 144

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
<pre> x)z=-stuvw xyz+lr[3#012 3456789+],]# -CABCDEFHGI JJKLMNO PQR \ S TUVWXYZ 0123456789 T CONSC V CONTPREP 'DGREQL0+' T CONTROLBITS A COUNT LIBNUM=10 26-38, 48-45, 73-38, 96-38 W=7 S=11 N=0 CL=2 LIBNUM=15 46-11, 70-11, 94-11, 115-01, 115-03, 115-18, 116-04, 116-16, 116-26, 117-01, 117-11, 117-21, 118-01, 118-12, 118-23, 119-01, 119-12, 119-28, 120-01, 120-12, 120-23, 121-01, 121-12, 121-23, 122-01, 122-12, 122-23, 123-01, 123-12, 123-23, 124-01, 124-12, 124-23, 125-01, 125-12, 125-23, 126-01, 126-12, 126-21, 126-23, 127-01, 127-16, 127-28, 128-01, 128-12, 128-23, 129-01, 129-15, 129-29, 130-01, 130-22, 130-32, 131-01, 131-16, 131-27, 132-01, 132-15, 132-28, 133-01, 133-12, 133-26, 133-37, 134-01, 134-16, 134-28, 135-01, 135-13, 135-25, 136-01, 136-13, 136-25, 137-01, 137-13, 137-25, 138-01, 138-13, 138-25, 139-01, 139-13, 139-24, 140-01 2-03 36-28, 55-06, 83-36, 100-02, 103-29, 106-25, 108-05, 111-21 2-04 2-05 2-06 2-07 26-05 48-12 73-05 96-05 1-44 24-11 1-45 46-11 1-46 70-11 1-47 94-11 W=1 S=16 N=0 CL=2 103-22 103-20, 103-27 106-12 106-10 108-03 107-42 111-13 111-10 103-07 103-40 105-48 106-31 107-25 108-11 110-44 111-32 104-11 104-09 103-02 104-13 24-11 46-11, 70-11, 94-11 98-27 98-45 107-39 107-36 </pre>						
0111432	L	CPATCH	2-03			
0112562	L	CPATCH1	2-04	36-28, 55-06, 83-36, 100-02, 103-29, 106-25, 108-05, 111-21		
0114107	L	CPATCH2	2-05			
0115073	L	CPATCH3	2-06			
0121236	L	CPATCH7	2-07			
06 0016117	L	CP1INIT	26-05			
06 0016672	L	CP2INIT	48-12			
06 0017461	L	CP3INIT	73-05			
06 0020226	L	CP4INIT	96-05			
06 0016116	L	CSTCP1	1-44	24-11		
06 0016671	L	CSTCP2	1-45	46-11		
06 0017460	L	CSTCP3	1-46	70-11		
06 0020225	L	CSTCP4	1-47	94-11		
'CHKWRD+0'	T	CTRLCK		W=1 S=16 N=0 CL=2		
06 0020465	L	CVCKBX	103-22	103-20, 103-27		
06 0020562	L	CVCKBX1	106-12	106-10		
06 0020641	L	CVCKBX2	108-03	107-42		
06 0020724	L	CVCKBX3	111-13	111-10		
06 0020450	L	CVCKLP	103-07	103-40		
06 0020547	L	CVCKLP1	105-48	106-31		
06 0020614	L	CVCKLP2	107-25	108-11		
06 0020704	L	CVCKLP3	110-44	111-32		
06 0020475	L	CVCKND	104-11	104-09		
06 0020444	L	CVCKST	103-02	104-13		
0000000	A	DATAWD		24-11 46-11, 70-11, 94-11		
06 0020265	L	DATPATBL	98-27	98-45		
06 0020627	L	DATSHFT	107-39	107-36		

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 145

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
<pre> t.<(+ & !\$*); - / X_>? : # @ ' = " n < < + + n) ± w - - + t, [≥ = 0 1 2 3 4 5 6 7 8 9 + ,] # - C A B C D E F G H I) J K L M N O P Q R \ S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9 </pre>						
	T	DELLC		LIBNUM=10		
CTSD	V	DGNLIM	7-12			
CTSD	V	DGREQ	7-37			
'SER+0'	T	DHPER		W=1 S=11 N=0 CL=2	51-19, 53-21, 56-42, 59-20, 61-19, 99-37	
'SER+0'	T	DLPER		W=1 S=15 N=0 CL=2	51-04, 53-04, 55-37, 59-04, 61-04, 87-12, 89-41, 99-42	
06 0020407	L	DPCKXT	101-32	101-07, 101-30		
	O	R DRD		W=1 S=10 N=0 CL=1	LIBNUM=14	34-35, 63-26, 66-35, 78-32, 82-14, 84-46, 90-23, 92-14
#	P					
ROC 02-23						
FA1046	DOUB					
LE STORE	REA					
D'	T	DSR		LIBNUM=12		
06 0020570	L	DTSFSKP	106-23	106-16		
0000252	A	ERXF		LIBNUM=14	63-42, 67-05, 78-49	
06 0016221	L	ERACLR	30-13	30-09		
0000002	A	ERAFAL	115-18	29-41, 30-46, 115-18		
06 0016157	L	ERASET		29-03	28-42	
06 0016215	L	ERA1XT		30-01		
0000011	A	ERCDIVNG	133-26	92-21, 133-26		
0146074	A	ERCOLL	19-19	52-40, 54-49, 56-29		
'COLLECT ERR						
ORS IN STORE						
ERROR REG'	T	ERCOLLT				
0000004	A	ERCSTK	132-01	79-16, 132-01		
06 0020161	L	ERCTOSCM	91-28	91-26		
#	P					
ROC 10-22						
FA1028	ERRO					
R REG/DISPLA						
Y BUFFER HIG						
H BITS'	T	ERHL1910		LIBNUM=12		
10 R ERSAVE			8-21			

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'#	P					
ROC 10-23						
FA1027		ERRO				
R REG/DISPLA						
Y BUFFER LOW						
BITS'	T	ER0900		LIBNUM=12		
	D	J ESS2	1-10			
	1	J ESS2E	1-09			
CSYSUB	V	EXCOFLPG	7-28			
0145454	A	EXERLD	19-21			
'ENABLE EXTE						
RNAL LOAD OF						
STORE ERROR						
REG'	T	EXERLDT				
0145454	A	EXLDB15	19-24			
'ENABLE EXTE						
RNAL LOAD OF						
STORE ERROR						
REG W/ ERRO						
R COLLECT OP						
TION'	T	EXLDB15T				
CDGN0F	V	FAIL0FF	4-41			
0010000	A	FAK010	22-36	89-04, 89-06		
0005440	A	FASTREF	19-26			
'PERFORM FAS						
T REFRESH ON						
STORE'	T	FASTREFT				
0045454	A	FASTRNC	19-28			
'FORCE FAST						
REFRESH W/O						
CLOCK'	T	FASTRNCT				
0146074	A	FBIT09	19-32	29-09, 40-07, 99-33,111-05		
0146064	A	FBIT09R	19-35			
'COLLECT ERR						
ORS IN SER W						
/ REFRESH ON'	T	FBIT09RT				
'COLLECT ERR						
ORS IN STORE						
ERROR REGIS						
TER'	T	FBIT09T				
0146076	A	FBRMB15	19-37			
'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	22-38	41-30,106-04,107-30,107-47		
0046314	A	FCHKBT	19-39	30-20, 34-04		
0046304	A	FCHKBTR	19-41			

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'ACTIVATE SH IFTER CHECK BIT W/ REFRE SH ENABLED'	T	FCHKBTRT				
'ACTIVATE MA IN SHIFTER C HECK BIT'	T	FCHKBTT				
0040574	A	FCHKOS	19-43			
'FORCE ZEROS TO MODULE S ELECT XOR CH ECK & WRITE PROTECT SELE CT XOR CHECK CIRCUITS'	T	FCHKOST				
0041274	A	FCHK1S	19-46			
'FORCE ONES TO MODULE S ELECT XOR CH ECK & WRITE PROTECT SELE CT XOR CHECK CIRCUITS'	T	FCHK1ST				
0140574	A	FCKOS15	19-49			
'FORCE ZEROS TO CHECK CK TS W/ ERROR COLLECT'	T	FCKOS15T				
0141274	A	FCK1S15	20-02			
'FORCE ONES TO CHECK CK TS W/ ERROR COLLECT'	T	FCK1S15T				
0043074	A	FDISIDLE	20-04			
'FORCE DISAB LE OF IDLE F LOP'	T	FDISIDLET				
0000002	A	FFOBRM	22-44			
0145454	A	FFRMB15	19-30			
'FORCE FAST REFRESH & BI T 15'	T	FFRMB15T				
0020016	A	FGLDNCFR	23-02			
1	J	FIELD	1-09			
CDGSIO	V	FINAL	7-24	45-06, 69-06, 93-06, 113-06		
0046156	A	FLSHO	20-06			
0046154	A	FLSHONC	20-09			
'PRESENT ZER O TO INPUT O						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 148

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
F MAIN SHIFT ER'	T	FLSHONCT				
'START ZERO INTO MAIN SH IFTER'	T	FLSHOT				
0044474	A	FNOTIM	20-16	102-39		
0044470	A	FNOTIMC	20-19	62-40, 66-10, 75-45, 78-07, 84-11, 89-29, 91-35, 105-37		
'BLOCK TIMIN G TO FANOUT BOARDS(W/CLO CK)'	T	FNOTIMCT				
'INHIBIT TIM ING SIGNALS TO FANOUT BO ARDS'	T	FNOTIMT				
0045434	A	FNOWRT	20-12			
0045430	A	FNOWRTC	20-14			
'FORCE WRITI NG OF ONES W / CLOCK RUNN ING'	T	FNOWRTCT				
'FORCE WRITI NG OF ALL-ON ES DATA'	T	FNOWRTT				
10	R	FOBCNT	8-05			
0041550	A	FOBMT	20-21			
'FANOUT BOAR D MAINTENANC E TEST'	T	FOBMTT				
CDGSFA	V	FOBNDX	7-17			
'PAGSCR+26'	T	FOBNUM		W=20 S=0 N=32 CL=2		
'SER+0'	T	FOBPAPER		W=1 S=10 N=0 CL=2		
'SER+0'	T	FOBTERRA		W=1 S=7 N=0 CL=2		
'SER+0'	T	FOBTERRB		W=1 S=0 N=0 CL=2		
0000004	A	FOUR	17-25			
0041474	A	FRFSELO	20-23			
'CANCEL SELE CT FROM FOBO DURING REFR ESH'	T	FRFSELOT				
0042334	A	FRFSEL1	20-25			
'CANCEL SELE CT FROM FOB1 DURING REFR ESH'	T	FRFSEL1T				
0042534	A	FRFSEL2	20-27			
'CANCEL SELE CT FROM FOB2 DURING REFR						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
ESH'		T FRFSEL2T				
0043234	A	FRFSEL3	20-29			
'CANCEL SELE						
CT FROM FOB3						
DURING REFR						
ESH'		T FRFSEL3T				
0043434	A	FRFSEL4	20-31			
'CANCEL SELE						
CT FROM FOB4						
DURING REFR						
ESH'		T FRFSEL4T				
0044354	A	FRFSEL5	20-33			
'CANCEL SELE						
CT FROM FOB5						
DURING REFR						
ESH'		T FRFSEL5T				
0044554	A	FRFSEL6	20-35			
'CANCEL SELE						
CT FROM FOB6						
DURING REFR						
ESH'		T FRFSEL6T				
0045254	A	FRFSEL7	20-37			
'CANCEL SELE						
CT FROM FOB7						
DURING REFR						
ESH'		T FRFSEL7T				
0044334	A	FRREQA	20-39			
'SET REFRESH						
REQUEST ON						
TIMING BOARD						
(FA1071)'						
	T	FRREQAT				
0040674	A	FRREQB	20-42			
0040664	A	FRREQBR	20-45			
'SET REFRESH						
REQUEST ON						
FA1062 W/ RE						
FRESH ENABLE						
D'						
	T	FRREQBRT				
'SET REFRESH						
REQ COPY ON						
CHECK BOARD						
A (FA1062)'	T	FRREQBT				
0100000	A	FSBIT09	22-41			
'CIOBUF+0'	T	FSEL		W=1 S=16 N=0 CL=2		
0046074	A	FSELA	20-47			
'FORCE STORE						
SELECT (ISOL						
ATE) SIGNAL						
ON FA1071'	T	FSELAT				

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 150

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
0004714	A	FSELB	21-02			
0004710	A	FSELBC	21-05			
'FORCE DUPLICATED STORE SELECT(SELB) W/ CLOCK'						
	T	FSELBCT				
'FORCE DUPLICATED STORE SELECT(SELB) ACTIVE'						
	T	FSELBT				
0046516	A	FSTFBRM	21-07			
'FORCE CONTROLLER & FANOUT BOARDS TO REFRESH'						
	T	FSTFBRMT				
0042354	A	FSTNM	21-09			
0052354	A	FSTNMFRT	21-11			
'FORCE NORMAL MODE IN CONTROLLER & REFRESH TO FANOUT BOARDS'						
	T	FSTNMFRT				
0042344	A	FSTNMR	21-13			
'FORCE MODE TO NORMAL W/ REFRESH ENABLED'						
	T	FSTNMRT				
'FORCE MODE FLOP TO NORMAL STATE'						
	T	FSTNMT				
0046514	A	FSTRM	21-15	33-46, 36-08, 39-13, 54-46, 56-26		
'FORCE MODE FLOP TO REFRESH STATE'						
	T	FSTRMT				
0046234	A	FTINWP	21-17			
'FORCE IN-WRITE-PROTECT INHIBIT'						
	T	FTINWPT				
'CHKWRD+0'						
	T	FXORG		W=1 S=17 N=0 CL=2		
0000004	A	HALTCLK	22-46	107-47		
1	R	HIPATBAK	8-13			
		HIPATBAKXT	8-14	IS A SYNONYM OF R1XT		
06 0016310	L	HLTIN	33-21			
0000005	A	HLTTRB	116-26	35-01,116-26		
'ILLEGAL CONDITIONAL IN THE IF MACRO'						
	T	IFERROR1				
'DATA > 0 OR DATA < 0 IS						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

23:23:17 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSCP ISSUE 05 PAGE 151

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
MEANINGLESS 'USE DATA -' = 0'	T	IFERROR2				
'TWO CONSTAN TS ARE BEING 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				
CSYSUB	V	INIT_OCC		7-29		
0000001	A	INITBIT		22-42		
CSYSUB	V	INITOST		7-30		
CSYSUB	V	INSYNC		7-31		
CDGNN	X	INTRPN03		4-38	26-45, 29-25, 30-30, 32-49, 34-41, 37-07, 37-23, 40-17, 40-31, 41-49, 49-03, 50-47, 52-48, 55-32, 56-37, 58-47, 60-44, 63-11, 66-20, 73-45, 76-06, 78-17, 81-44, 84-31, 87-07, 89-36, 91-45, 96-45, 100-30, 101-36, 104-20, 108-29, 111-48	
'PAGSCR+25'	T	IOADDR				
'I&'	T	IOBRK				
0006220	A	IOGO		21-19		
'ENABLE ON-L INE I/O ACCE SS TO OFF-LI NE STORE'	T	IOGOT				
000J001	A	IOPRTYER		115-03	126-23, 131-01, 134-01	
0125252	A	IOTSTA		21-21		
'I/O TEST PA TTERN #1'	T	IOTSTAT				
0052525	A	IOTST5		21-23		
'I/O TEST PA TTERN #2'	T	IOTST5T				
'CHKWRD+0'	T	ISOBTS				
0067214	A	ISOCHK		21-25	103-14, 106-04	
'ISOLATE FRO						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
M FAR STORES & VERIFY VI						
A SER'	T	ISOCHKT				
0027214	A	ISOCHKU	21-29	41-30,107-30		
'APPLY ONES TO STORE DAT A BUS(W/O IS OLATE)'						
0040000	A	ISOLATE	22-40	38-31		
0043454	A	KILL12	21-31			
'CLEAR SHIFT ER BIT IN PO SITION 12'						
'CIOBUF+0'	T	KILL12T				
0020000	A	LDFG		W=1 S=15 N=0 CL=2		
'PAGSCR'	T	LOADCHK	22-39			
'SER'	T	LONAM_BASADD R				
'CIOBUF'	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				
'MASCIOSC'	T	LONAM_MSSC1				
'MASCIOSC'	T	LONAM_MSSC2				
'MASCIOSC'	T	LONAM_MSSC3				
'STRSTAT'	T	LONAM_PASBT				
'STRSTAT'	T	LONAM_PHBAK				

STORE CONTROL AND PARITY TESTS

PR-1C934-50

TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W770
'STRSTAT'	T	LONAM_PLBAK				
'SER'	T	LONAM_PHER				
'CIOBUF'	T	LONAM_REFST				
'SER'	T	LONAM_RSELER				
'RSLCHK'	T	LONAM_RSELO6				
'RSLCHK'	T	LONAM_RSEL7				
'CHKWRD'	T	LONAM_RSVD0				
'RSLCHK'	T	LONAM_RSVD1				
'RSLCHK'	T	LONAM_SAPHLF				
'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_OSSCO				
'MASCIOSC'	T	LONAM_OSSC1				
'MASCIOSC'	T	LONAM_OSSC2				
'MASCIOSC'	T	LONAM_OSSC3				
'STRSTAT'	T	LONAM_OWDSTR				
		D				
'CIOBUF'	T	LONAM_010TM				
'CHKWRD'	T	LONAM_2EPCK				
CDGNM	V	LOOPIND	7-09	26-34, 26-35, 26-37, 26-37, 26-39, 26-39, 48-41, 48-42, 48-44, 48-44, 48-46, 48-46, 73-34, 73-35, 73-37, 73-37, 73-39, 73-39, 96-34, 96-35, 96-37, 96-37, 96-39, 96-39		
'PAGSCR+24'	T	LOOPSUB				
0000000	A	LPINDX	29-31	29-34, 30-36, 30-39, 42-02, 42-05, 42-17, 42-20, 42-32, 42-35, 43-16, 43-19, 43-31, 43-34, 51-01, 51-04, 51-16, 51-19, 53-01, 53-04, 53-18, 53-21, 55-34, 55-37, 56-39, 56-42, 59-01, 59-04, 59-17, 59-20, 61-01, 61-04, 61-16, 61-19, 63-23, 63-26, 64-01, 64-04, 66-32, 66-35, 67-11, 67-14, 67-36, 67-39, 76-08, 76-11, 78-29, 78-32, 79-06, 79-09, 79-35, 79-38, 80-04, 80-07, 82-11, 82-14, 84-43, 84-46, 87-09, 87-12, 89-38, 89-41, 90-20, 90-23, 92-11, 92-14, 100-37, 100-40, 101-12, 101-15, 104-22, 104-25, 108-31, 108-34, 112-01, 112-04		
				W=20 S=0 N=30 CL=2		
0000007	A	LSCWSTK1	128-23	59-11, 59-27, 128-23		
	R	LSTPAT	8-17			
TTYTBL	X	MXAS	26-28	26-28, 48-35, 73-28, 96-28		
'#	M					
ASCM		08-24				
FA1068		MAIN				
		STORE CONTR				
		OLLER - BUS				

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
CONTROL'	T	MASCBSCL		LIBNUM=12		
'#	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		
'# NOTE--1	M					
ASCM 08-11						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
17&21'	T	MASCBS10		LIBNUM=12		
'# NOTE--1	M					
ASCM 08-12						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
18&22'	T	MASCBS11		LIBNUM=12		
'# NOTE--1	M					
ASCM 08-13						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
19&23'	T	MASCBS12		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		

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'#	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	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		

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'#	M	ASCM 08-21 FA1065 MAIN STORE CONTR OLLER - COMM AND DECODER'	T MASCSCMD 0046071 A MASCINT	LIBNUM=12 21-33 26-41, 29-05, 29-21, 33-24, 38-31, 48-48, 50-29, 58-29, 60-26, 62-36, 65-46, 73-41, 75-31, 77-43, 81-30, 83-44, 86-28, 88-38, 91-31, 96-41, 98-49, 102-36, 105-34, 107-11, 110-49		
'INITIALIZE STORE CONTR OLLER'	T	MASCINTT MASACS V MASCIOSC 0046076 A MASCLK 0046074 A MASCLKN		7-04 21-37 33-49, 89-04 21-40 89-06		
'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 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		
'# NOTE--1	M	ASCM 08-14 FA1067 MAIN STORE CONTR OLLER - PARI TY TRANSLATO R'	T MASCPAR	LIBNUM=12		
'#	M	ASCM 08-25 FC262 MAIN STORE CONTR OLLER - POWE R CONTROL'	T MASCPWRCL	LIBNUM=12		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'#	M					
ASCM 08-18						
FA1071	MAIN					
STORE CONTR						
OLLER - TIM						
ING GENERATO						
R'						
CTSD	T	MASCTIM	7-35	LIBNUM=12		
V		MASERCNT				
CDGSI0	X	MASIOH	7-19	26-40, 29-04, 29-08, 29-11, 29-20, 30-15, 30-19, 32-28, 32-41, 33-23, 33-26, 33-45, 33-48, 34-03, 35-17, 35-35, 36-07, 36-14, 36-35, 38-30, 39-02, 39-12, 39-19, 39-42, 40-06, 40-09, 41-25, 41-29, 48-47, 50-28, 50-41, 52-27, 52-39, 52-42, 54-32, 54-45, 54-48, 55-13, 56-11, 56-25, 56-28, 56-31, 58-28, 58-41, 60-25, 60-38, 62-35, 62-39, 65-45, 66-09, 73-40, 75-30, 75-44, 77-42, 78-06, 81-29, 83-43, 84-10, 86-27, 87-01, 88-37, 88-40, 89-03, 89-05, 89-28, 89-31, 91-30, 91-34, 96-40, 98-48, 99-32, 99-35, 102-35, 102-38, 103-13, 103-17, 105-33, 105-36, 106-03, 106-07, 107-10, 107-13, 107-29, 107-33, 107-46, 110-48, 111-04, 111-07		
MASACS	V	MASONOFF	7-39			
3	R	MCHB		LIBNUM=14 32-46, 34-30, 34-37, 37-04, 40-14, 50-43, 52-44, 55-28, 56-33, 58-43, 60-40, 87-03, 100-22, 104-16, 108-21, 111-40		
0000231	A	MCHBZF		LIBNUM=14 26-20, 48-27, 73-20, 89-13, 96-20		
0000231	A	MCHBXT		LIBNUM=14 34-19, 43-10, 63-17, 63-42, 66-26, 67-05, 67-30, 78-23, 78-49, 79-29, 82-05		
0	R	MCHTR		LIBNUM=14 34-20, 35-38, 39-22, 89-09, 89-14, 89-19		
0000164	A	MCSXF		LIBNUM=14 34-19, 63-17, 66-26, 78-23, 82-05		
CDGSI0	V	MSELMSK	7-20			
14	P	MEMADDR	8-25			
14	R	MEMADDR0	8-23			
15	R	MEMADDR1	8-24			
CDG SBS	V	MEMOP	7-14	29-18, 30-26, 32-39, 33-36, 34-15, 35-29, 38-40, 41-45, 50-39, 52-37, 54-43, 56-23, 58-39, 60-36, 63-01, 63-07, 66-07, 66-16, 75-42, 76-02, 78-04, 78-13, 81-40, 84-21, 84-27, 86-38, 86-48, 88-47, 91-41, 99-30, 103-11, 106-01, 107-27, 111-02		
CDG SBS	V	MEMOPI	7-15			
7	R	MNRNDX	8-20			
'SER+0'	T	MODER		W=1 S=5 N=0 CL=2		
CDGSI0	V	MODSIZE	7-21			
0000000	A	MOD0	17-27			
0000001	A	MOD1	17-28			
0000002	A	MOD2	17-29			
0000003	A	MOD3	17-30			
0000004	A	MOD4	17-31			
0000005	A	MOD5	17-32			
0000006	A	MOD6	17-33			
0000007	A	MOD7	17-34			
'SER+0'	T	MPXER		W=1 S=1 N=0 CL=2		
0000215	A	MSXT		LIBNUM=14 26-20, 48-27, 73-20, 96-20		
0006071	A	MSCITNS	21-35	32-29		
'INITIALIZE						
STORE CONTR						
OLLER W/O FOR						
CE SELECT'	T	MSCITNST				
'MASCIOSC+0'	T	MSSCO		W=20 S=0 N=0 CL=2		

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'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	MSTCONTO		LIBNUM=12		
'#	P					
ROC 02-22						
FA1029		MAIN				
		STORE CONTR				
OL 1'	T	MSTCONT1		LIBNUM=12		
	12	R MSTRER		W=1 S=7 N=0 CL=1 LIBNUM=14		29-34, 30-39
0106263	A	MTCRD	18-24			
0106203	A	MTCWR	18-26	52-31		
CDGNM	V	NABT	4-31			
CDGNM	V	NADD_OFF	4-22			
CDGNM	V	NADMIC	4-23			
06 0020377	L	NARPAT	101-11	100-35		
06 0020742	L	NARSTRXT	112-16	110-24		
CDGNM	V	NBEGIN	4-28			
CDGNM	V	NBGN	4-39	24-14, 46-14, 70-14, 94-14		
CDGNM	V	NCLRMS	4-33			
CDGNM	V	NCOMPARE	4-26	29-34, 30-39, 42-05, 42-20, 42-35, 43-19, 43-34, 51-04, 51-19, 53-04, 53-21, 55-37, 56-42, 59-04, 59-20, 61-04, 61-19, 63-26, 64-04, 66-35, 67-14, 67-39, 76-11, 78-32, 79-09, 79-38, 80-07, 82-14, 84-46, 87-12, 89-41, 90-23, 92-14, 100-40, 101-15, 104-25, 108-34, 112-04		
CDGNM	V	NDISABA	4-07			
CDGNM	V	NDISABB	4-08			
CDGNM	V	NEXECUTE	4-25			
CDGNM	V	NFAILTST	4-16	29-40, 30-45, 33-05, 34-47, 37-12, 40-22, 42-26, 42-41, 43-40, 51-10, 51-25, 53-10, 53-27, 55-43, 56-48, 59-10, 59-26, 61-10, 61-25, 63-32, 64-10, 66-41, 67-20, 67-45, 76-17, 78-38, 79-15, 79-44, 80-13, 82-20, 85-04, 87-18, 92-20, 104-31, 108-40, 112-10		
CDGNM	V	NFLBITS	4-37	42-11, 43-25, 100-46, 101-21		
CDGNM	V	NFRZ	4-27			
06 0017727	L	NLDCK0	83-34	83-28		
06 0020002	L	NLDCK1	86-25	86-23		
06 0020060	L	NLDCK2	88-35	88-33		
CDGNM	V	NLDMIR	4-24			
0000010	A	NLDSTK1	133-12	85-05, 87-19, 133-12		
CDGNM	V	NLP_END	4-29			
CDGNM	V	NHASK	4-18			
CDGNM	V	NHICRO	4-02	26-19, 43-09, 48-26, 62-25, 63-16, 63-41, 65-35, 66-25, 67-04, 67-29, 73-19, 77-32, 78-22, 78-48, 79-28, 82-04, 84-36, 90-13, 92-04, 96-19		
0106260	A	NHLRD	18-28			
0106200	A	NHLWR	18-30	98-43, 102-47, 105-44, 107-19, 110-40		
CDGNM	V	NNO3CD	4-34	26-24, 28-41, 30-08, 32-21, 38-25, 41-20, 44-04, 48-31, 50-23, 52-22, 54-27, 56-06, 58-23, 60-20, 62-30, 65-40, 68-06, 73-24, 75-26, 77-37, 81-24, 83-27, 86-22, 88-32, 91-25, 92-28, 96-24, 98-20, 101-06, 101-29, 102-26, 105-26, 110-28, 112-19		

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	M77D
0113314	L	NOBREAK	111-31	111-28		
0113272	L	NOBREAK	103-39	103-36		
0113262	L	NOBRK	100-13	100-10		
CDGMM	V	NOSTPMES	7-10			
CDGMM	V	NPASSTST	4-19			
CDGMM	V	NPROS	4-14			
CDGMM	V	NRDMICRO	4-32			
CDGMM	V	NRESCLK	4-12			
CDGMM	V	NRETRN	4-03	29-29, 30-34, 43-14, 63-21, 63-46, 66-30, 67-09, 67-34, 78-27, 79-04, 79-33, 82-09, 84-41, 90-18, 92-09		
CDGMM	V	NRTNBLM	4-45	26-08, 48-15, 73-08, 96-08		
0006074	A	NSELA	20-49			
'RESET STORE						
SELECT (ISOL						
ATE) SIGNAL						
ON FA1071'						
	T	NSELAT				
CDGMM	V	NSEND	4-20			
CDGMM	V	NSKIP	4-30			
CDGMM	V	NSTOP	4-06			
CDGMM	V	NSTPCLK	4-10			
CDGMM	V	NSTRT	4-05			
CDGMM	V	NSTRCLK	4-09			
CDGMM	V	NTESTSEG	4-15	28-08, 32-08, 38-08, 41-08, 50-08, 52-08, 54-08, 58-08, 60-08, 62-08, 65-08, 75-08, 77-08, 81-08, 83-08, 86-08, 88-08, 91-08, 98-08, 102-08, 105-08, 110-08		
CDGMM	V	NTGCLK	4-11			
CDGMM	V	NTMTEST	4-35			
CDGMM	V	NTTY	4-17			
0000000	A	NUM	23-11	45-16, 69-14, 93-14		
CDGMM	V	NWDST	4-46	43-03, 100-34, 102-21, 105-21, 110-23		
	R	NXTPAT	8-18			
CDGMM	V	NZERO_ER	4-13	28-37, 30-04		
CDGMM	V	NZERPT	4-36			
CDGMM	V	N2RETRN	4-04			
CDGMM	V	N2SEND	4-21	26-13, 48-20, 73-13, 96-13		
0000200	A	OFLNCHNK	17-37			
0007760	A	OFLNDONE	17-38			
0000001	A	ONE	17-35			
0177777	A	ONES	17-36			

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STORE CONTROL AND PARITY TESTS

PR-1C934-50

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
<pre> cdefghi n<<+ + jklmnopqr~ x)z#~stuvw xyz+L[>=012 3456789+~]# -(IBCLEFGHI)JKLMNO PQR \ S LLLWLYZ 0123456789 </pre>						
	T	OPTR				
0001462	A	ORG_000001	26-02	48-09, 73-02, 96-02		
0001514	A	ORG_000127	99-48			
0001034	A	ORG_000203	55-02			
0001553	A	ORG_000240	103-24			
0001323	A	ORG_000247	83-31			
0000602	A	ORG_000303	35-31			
0000615	A	ORG_000323	36-10			
0000623	A	ORG_000326	36-24			
0001604	A	ORG_000343	106-20			
0000655	A	ORG_000400	39-15			
0001630	A	ORG_000414	107-49			
0000666	A	ORG_000415	39-38			
0001421	A	ORG_000464	89-45			
0001430	A	ORG_000473	90-27			
0001516	A	ORG_000474	100-08			
0001657	A	ORG_000500	111-17			
0001555	A	ORG_000504	103-35			
0001606	A	ORG_000514	106-31			
0001674	A	ORG_000520	113-02			
0001632	A	ORG_000521	108-11			
0001661	A	ORG_000526	111-27			
0001453	A	ORG_000536	93-02			
0000734	A	ORG_000544	45-02			
0001204	A	ORG_000560	69-02			
0000625	A	ORG_000564	36-34			
0001036	A	ORG_000571	55-12			
0001325	A	ORG_000576	83-42			
16	R	OVLOF				
CTSD	V	PAGSCR	7-36	W=1 S=0 N=0 CL=1 LIBNUM=14 26-29, 29-15, 30-23, 32-31, 33-28, 34-05, 35-20, 38-32, 41-33, 48-36, 50-35, 52-34, 54-40, 56-19, 58-35, 60-32, 62-46, 63-04, 66-03, 66-13, 73-29, 75-38, 75-48, 77-49, 78-10, 81-36, 84-17, 84-24, 86-34, 86-44, 88-44, 91-38, 96-29, 99-01, 102-43, 105-38, 107-15, 110-34		
0000002	A	PARITY	26-10	48-17, 73-10, 96-10		
10	R	PARSLT	8-22			
3	R	PASBT	16-08	W=1 S=6 N=0 CL=1		
CDGNOF	V	PASSOFF	4-40			
CDGNM	V	PASSTST	7-11	45-09, 69-09, 93-09, 113-09		
16	P	PATADDR	8-26			
0	R	PATBAK	8-12			

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
6	R	PATNDX	8-19			
0000025	A	PH		LIBNUM=14 42-35, 43-34, 80-07		
3	R	PHBAK	16-04	W=1 S=1 N=0 CL=1		
0000006	A	PHCMPEP	132-28	80-14, 132-28		
0000014	A	PHERSTK	130-22	67-46, 130-22		
0000011	A	PHERSTK1	129-15	61-26, 129-15		
0000024	A	PL		LIBNUM=14 42-20, 79-38		
3	R	PLBAK	16-03	W=1 S=0 N=0 CL=1		
0000005	A	PLCMPEP	132-15	79-45, 132-15		
0000002	A	PLERSTK	131-16	76-18, 131-16		
0000010	A	PLERSTK1	129-01	61-11, 129-01		
'CDGSCP'	T	PNAME				
06	0020513	L	PRCVCKXT	104-37 102-22		
06	0020423	L	PRCVCKO	102-33 102-27		
06	0020522	L	PRCVCK1	105-31 105-27		
06	0020665	L	PRCVCK3	110-33 110-29		
0000022	A	PRCVFL		139-24 104-32, 108-41, 139-24		
06	0020500	L	PRCVFLT	104-15 104-07		
0000020	A	PRHOLD		17-45 50-37, 52-36, 54-39, 56-21, 58-37, 81-38, 84-19, 86-36, 86-46		
0000005	A	PRHOL1		17-46 75-40		
0000012	A	PRH1LO		17-47 66-05		
0000017	A	PRH1L1		17-48 78-02		
CBLM	V	PRTMASER		7-06		
0000002	A	PRWOH1LO		17-49		
0000007	A	PRWOH1L1		18-01 107-18		
0000010	A	PRW1HOLD		18-02		
0000015	A	PRW1HOL1		18-03		
'SER+0'	T	PWER		W=1 S=12 N=0 CL=2 111-09		
06	0016310	L	P357	33-09 32-45		
06	0016401	L	P379	35-04 34-36		
06	0016461	L	P414	37-16 37-03		
06	0016556	L	P448	40-26 40-13		
11	R	RANGE		8-07		
14	P	RA0		LIBNUM=3 8-25, 26-44, 29-15, 29-16, 29-24, 30-23, 30-24, 30-29, 32-48, 34-40, 37-06, 37-22, 40-16, 40-30, 41-48, 49-02, 50-35, 50-36, 50-46, 52-34, 52-35, 52-47, 54-40, 54-41, 55-31, 56-19, 56-20, 56-36, 58-35, 58-36, 58-46, 60-32, 60-33, 60-43, 62-46, 62-47, 63-04, 63-05, 63-10, 66-03, 66-04, 66-13, 66-14, 66-19, 73-44, 75-38, 75-39, 75-48, 75-49, 76-05, 77-49, 78-01, 78-10, 78-11, 78-16, 81-36, 81-37, 81-43, 84-17, 84-18, 84-24, 84-25, 84-30, 86-34, 86-35, 86-44, 86-45, 87-06, 88-44, 88-45, 89-35, 91-38, 91-39, 91-44, 96-44, 98-45, 99-03, 100-29, 101-35, 104-19, 108-28, 111-47		
16	P	RA1		LIBNUM=3 8-26, 32-31, 32-32, 35-20, 35-21, 38-32, 38-33, 99-01, 99-02, 102-43, 102-44, 105-38, 105-39, 107-15, 107-16, 110-34, 110-37		
0047410	A	RDAD		21-42		
0047414	A	RDADNC		21-45		
'GATE STORE ADDRESS BITS TO STORE DATA BUS'	T	RDADNCT				
'GATE STORE						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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TROUBLE LOCATION MANUAL

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
ADDRESS BUS (SAO-16, PL) T						
O STORE DATA BUS (SDO-15, PL, PH) W/ CL						
OCK'						
	T	RDADT				
06	0017276	L RDPRCK0	62-33	62-31		
06	0017361	L RDPRCK1	65-43	65-41		
06	0017523	L RDPRCK2	75-32	75-27		
06	0017572	L RDPRCK3	77-40	77-38		
06	0017667	L RDPRCK4	81-27	81-25		
06	0020572	L RDPRENCK	107-08			
06	0020656	L RDPRENXT	109-01	105-22		
	0000007	A RD1STK	133-01	82-21, 133-01		
'CIOBUF+0'	T	REFST		W=1 S=3 N=0 CL=2		
0006070	A	REFSTOP	21-47	39-43, 107-47		
'INHIBIT REFRESHING OF STORE'						
	T	REFSTOPT				
0006060	A	REFSTRT	21-49			
'RESUME REGULAR REFRESHING OF STORE'						
	T	REFSTRTT				
0046060	A	RFWISOL	22-02			
'RESUME REGULAR REFRESH W/ STORE ISOLATED'						
	T	RFWISOLT				
CSYSUB	V	RGCHKADR	7-32			
0000006	A	RMBOSPER	128-12	55-44, 56-49, 128-12		
'BASE ADDRESS OF STORE/MOD UNDER TEST'						
	T	RMK_BASADDR				
'ERROR INDICATED BY STORE COMMAND CHECKER'						
	T	RMK_CHDIF				
'MAIN STORE CONTROLLER INITIALIZATION'						
	T	RMK_CINIT				
'CONTROLLER CLOCK HALT'						
	T	RMK_CKHLT				
'CONTROLLER CLOCK STEP'						
	T	RMK_CKSTP				
	T	RMK_CONTROLB				
	T	ITS				
'RESULT OF						

STORE CONTROL AND PARITY TESTS

PR-1C934-5D

TROUBLE LOCATION MANUAL

23:23:17 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	M77D
		STORE CONTROL LEADS ISOLATION'				
	T	RMK_CTRLCK				
		' ERROR IN PARITY OVER HIGH DATA BITS'				
	T	RMK_DHPER				
		' ERROR IN PARITY OVER LOW DATA BITS'				
	T	RMK_DLPER				
		' FORCE BIT 15 ACTIVE IN MAIN SHIFTER'				
	T	RMK_FBT09				
		' NUMBER OF MEMORY MODULES (OR FANOUT BOARDS) IN STORE CURRENTLY UNDER TEST'				
	T	RMK_FOBNUM				
		' PARITY ERROR DETECTED IN ADDRESS REACHING FANOUT BOARD(S)'				
	T	RMK_FOBPARER				
		' STORE TIMING ERROR FROM SELECTED FOB'				
	T	RMK_FOBTERA				
		' STORE TIMING ERROR FROM UNSELECTED FOB'				
	T	RMK_FOBTERB				
		' STORE SELECT FORCE ON TIMING BOARD A'				
	T	RMK_FSEL				
		' I/O ORDER CHECKER EXCLUSIVE-OR RESULT'				
	T	RMK_FXORG				
		' I/O SUBCHANNEL ADDRESS FOR CURRENT STORE CONTROL ROLLER'				
	T	RMK_IOADDR				
		' SDD-6, SDB-14 ISOLATE T				

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
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						
UBCHANNEL 0'	T	RMK_MSSCO				
' 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						

STORE CONTROL AND PARITY TESTS

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
' TED DURING R EFRESH'	T	RMK_RSELER				
' REFRESH SE LECTS FROM F ANOUT BOARDS D-6'	T	RMK_RSELO6				
' 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 - FOBTERRA IS SET AFTER IN IT'	T	RMK_RSVD1				
' STORE ADDR 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 MAINT NANCE STATE CODE'	T	RMK_STORDER				
' STORE SELE CT ADDRESS B ITS LOOP RES ULT'	T	RMK_STRSLP				
' ERROR DETE						

STORE CONTROL AND PARITY TESTS

PR-1C934-50

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'CTED ON TIMING BOARD'	T	RMK_TBER				
'SAVE TIMING CONSTANT FOR TIMEOUT SUBROUTINE'	T	RMK_TMSAV				
'DIAGNOSTIC TEST NUMBER REQUESTED'	T	RMK_TSTNUM				
'ADDRESS OF NEXT BLOCK OF MEMORY TO BE UPDATED AFTER MEMORY PATTERN TEST'	T	RMK_UPADDR				
'RESULTS OF WIDE DATA(S D16-23) ISOLATE'	T	RMK_WDISOL				
'ADDRESS OF OTHER STORE SUBCHANNEL 0'	T	RMK_OSSCO				
'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 BIT'	T	RMK_OWDSTRO				
'0-10 BIT TIMING SHIFTER FAKE'	T	RMK_O10TM				
'RESULT OF EXTENDED(3 BIT) PARITY ISOLATE'	T	RMK_2EPCK				
0010177	A	RSELBTS	15-22	15-23		
0167600	A	RSELBTSN	15-23			
'SER+0'	T	RSELER		W=1 S=6 N=0 CL=2		

STORE CONTROL AND PARITY TESTS

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
'RSLCHK+0'	T	RSELO6		W=7 S=0 N=0 CL=2 15-22		
'RSLCHK+0'	T	RSEL7		W=1 S=14 N=0 CL=2 15-22		
'CHKWRD+0'	T	RSVDO		W=1 S=7 N=0 CL=2		
'RSLCHK+0'	T	RSVD1		W=1 S=7 N=0 CL=2		
0047214	A	RTNADHI	22-04			
'LOAD SA17 & SAPH INTO S ER'	T	RTNADHIT				
'DGSCP'	T	RTNAME				
0000261	A	RTNMCHB				
0	R	RO				
				LIBNUM=14 34-26		
				LIBNUM=3 8-12, 26-44, 29-24, 30-29, 32-48, 34-19, 34-20, 34-26, 34-40, 35-22, 35-23,		
				35-37, 35-38, 37-06, 37-22, 39-21, 39-22, 40-16, 40-30, 41-37, 41-38, 41-48, 49-02, 50-46,		
				52-47, 54-42, 55-31, 56-36, 58-46, 60-43, 63-10, 66-19, 73-44, 76-05, 78-16, 81-43, 84-30,		
				87-06, 89-08, 89-09, 89-13, 89-14, 89-18, 89-19, 89-35, 91-44, 96-44, 99-12, 99-13, 100-29,		
				101-35, 104-19, 105-40, 105-41, 107-43, 107-44, 108-28, 110-35, 110-36, 111-47		
				LIBNUM=3 8-13, 41-34, 41-35, 98-45, 99-03, 99-04, 99-05, 99-06, 99-07, 99-09, 99-15,		
				99-16, 99-23, 99-26, 99-27		
				LIBNUM=14 8-14		
				LIBNUM=3 32-44, 32-46, 37-02, 37-04, 40-12, 40-14, 50-43, 52-44, 55-28, 56-33, 58-43,		
				60-40, 87-03, 99-37, 99-42, 103-19, 106-09, 107-35, 111-09		
				LIBNUM=3 8-23, 32-31, 32-33, 32-36, 33-28, 33-29, 33-33, 34-05, 34-10, 35-20, 35-23,		
				35-26, 38-32, 38-34, 38-37, 41-33, 41-35, 41-38, 41-42, 89-01, 89-07		
				LIBNUM=3 8-24, 32-32, 32-37, 33-30, 33-34, 34-11, 35-21, 35-27, 38-33, 38-38, 41-32,		
				41-43, 102-48, 103-06, 104-02		
				LIBNUM=3 50-32, 52-32, 54-37, 56-16, 58-32, 60-29, 62-43, 65-49, 75-35, 77-46, 81-33,		
				84-14, 86-31, 86-41, 99-04, 99-27, 102-49, 105-46, 107-22, 110-42		
				LIBNUM=3 50-33, 52-33, 54-38, 56-17, 58-33, 60-30, 62-44, 66-01, 75-36, 77-47, 81-34,		
				84-15, 86-32, 86-42, 99-05, 99-07, 103-08, 103-09, 105-47, 106-17, 107-23, 107-40, 110-43, 111-14		
				LIBNUM=3 8-15, 29-15, 30-23, 32-36, 33-33, 34-10, 35-26, 38-37, 41-42, 50-35, 52-34,		
				54-40, 56-19, 58-35, 60-32, 62-46, 63-04, 66-03, 66-13, 75-38, 75-48, 77-49, 78-10, 81-36,		
				84-17, 84-24, 86-34, 86-44, 88-44, 91-38, 99-01, 102-43, 105-38, 105-41, 107-15, 107-44, 110-34,		
				110-36		
				LIBNUM=3 8-16, 29-16, 30-24, 32-37, 33-34, 34-11, 34-35, 34-37, 35-27, 38-38, 41-43,		
				50-36, 52-35, 54-41, 56-20, 58-36, 60-33, 62-47, 63-05, 66-04, 66-14, 75-39, 75-49, 78-01,		
				78-11, 81-37, 84-18, 84-25, 86-35, 86-45, 88-45, 91-39, 99-02, 102-44, 105-39, 107-16, 107-37,		
				110-37		
				LIBNUM=3 8-17, 26-28, 26-29, 48-35, 48-36, 73-28, 73-29, 96-28, 96-29, 98-41, 99-03,		
				100-08, 100-14, 103-03, 103-08, 103-21, 103-35, 103-40, 105-42, 106-11, 106-15, 106-31, 107-17, 107-37,		
				107-41, 108-11, 110-38, 110-45, 111-11, 111-27, 111-32		
				LIBNUM=3 8-18, 98-42, 99-39, 99-41, 99-44, 99-46, 103-01, 103-09, 104-10		
				LIBNUM=3 8-19, 29-17, 30-25, 32-38, 33-35, 34-13, 35-28, 38-39, 41-44, 50-37, 52-36,		
				54-39, 56-21, 58-37, 60-34, 62-48, 63-06, 66-05, 66-15, 75-40, 76-01, 78-02, 78-12, 81-38,		
				84-19, 84-26, 86-36, 86-46, 88-46, 91-40, 99-09, 99-16, 99-25, 102-45, 103-04, 104-08, 104-12,		
				105-43, 106-13, 106-14, 107-18, 110-39, 110-46		
				LIBNUM=3 8-20, 29-14, 30-22, 32-35, 33-32, 34-08, 35-25, 38-36, 41-41, 50-31, 52-31,		
				54-36, 56-15, 58-31, 60-28, 62-42, 63-03, 65-48, 66-12, 75-34, 75-47, 77-45, 78-09, 81-32,		
				84-13, 84-23, 86-30, 86-40, 88-43, 91-37, 98-43, 102-47, 105-44, 107-19, 110-40		
				LIBNUM=3 8-21, 8-22, 98-44, 99-39, 99-44, 100-22, 103-05, 103-21, 104-02, 104-16, 105-45,		
				106-11, 107-20, 108-21, 110-41, 111-11, 111-40		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
CTVTAB	V	SXMCH		LIBNUM=10 34-29		
14	P	SXMCHX_XCSYS				
		UB		LIBNUM=10		
'RSLCHK+0'	T	SAPHLF		W=1 S=10 N=0 CL=2		
'RSLCHK+0'	T	SA17LP		W=1 S=11 N=0 CL=2		
06	0020347	L	SBRSPK0	99-40 99-38		
06	0020353	L	SBRSPK1	99-45 99-43		
	0000003	A	SBYFAL	116-04		
'SER+0'	T	SCMER		W=1 S=3 N=0 CL=2		
	0000003	A	SCMFLT	131-27 78-39,131-27		
	0000012	A	SCMSTK	129-29 63-33, 66-42,129-29		
06	0020275	L	SDPARCK	98-40 98-21		
06	0020304	L	SDPARLP	98-46 100-14		
06	0020330	L	SDPAR16	99-24 99-14		
'CHKWRD+0'	T	SDPCK		W=1 S=14 N=0 CL=2	103-19	
	0000002	A	SDPRFL	134-16 100-47,101-22		
	0000002	A	SDPRFLO0	134-16		
	0000003	A	SDPRFLO1	134-28		
	0000004	A	SDPRFLO2	135-01		
	0000005	A	SDPRFLO3	135-13		
	0000006	A	SDPRFLO4	135-25		
	0000007	A	SDPRFLO5	136-01		
	0000010	A	SDPRFLO6	136-13		
	0000011	A	SDPRFLO7	136-25		
	0000012	A	SDPRFLO8	137-01		
	0000013	A	SDPRFLO9	137-13		
	0000014	A	SDPRFL10	137-25		
	0000015	A	SDPRFL11	138-01		
	0000016	A	SDPRFL12	138-13		
	0000017	A	SDPRFL13	138-25		
	0000020	A	SDPRFL14	139-01		
	0000021	A	SDPRFL15	139-13		
	0015471	A	SDRX	LIBNUM=14 35-37, 39-21		
	0000056	A	SDRXF	LIBNUM=14 67-30, 79-29		
	0000055	A	SDR1XF	LIBNUM=14 43-10		
	0000013	A	SERCSTK	130-01 64-11, 67-21,130-01		
	0001706	A	SERNO_047290	114-02		
	0001716	A	SERNO_049729	114-28		
	0002041	A	SERNO_052540	140-15		
	0001712	A	SERNO_060695	114-16		
	0047114	A	SERREAD	22-09 32-42, 36-36, 40-10, 50-42, 52-43, 55-14, 56-32, 58-42, 60-39, 87-02, 89-32, 99-36,103-18, 106-08,107-34,111-08		
'READ BACK S						
T						
ORE ERROR R						
EGISTER(SER)	T	SERREADT				
'SER+0'	T	SHER		W=1 S=4 N=0 CL=2		
CDGMM	V	SLDMCHBF	4-42			
CSYSUB	V	SLDMIRL	34-22	34-24, 35-40, 35-41, 39-24, 39-25, 89-11, 89-12, 89-16, 89-17, 89-21, 89-22		
CDGMM	V	SLDMIRLF	4-43			

STORE CONTROL AND PARITY TESTS

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
CSYSUB	V	SMCH	34-27			
CDGNM	V	SMCHF	4-44			
	3	R SNGBTER	16-07	W=1 S=5 N=0 CL=1		
'DGREQLO+0'	T	SPARE		W=2 S=7 N=0 CL=2		
0044714	A	SPAREA	22-07			
'SPARE I/O 0						
RDER'	T	SPAREAT				
0106274	A	SPRRD	18-32			
0106214	A	SPRWR	18-34	54-36		
'MXAS'	T	SPWORD				
	12	R SRPER		W=1 S=12 N=0 CL=1 LIBNUM=14		64-04, 67-14, 79-09
0000007	A	STATRB	117-11	40-23, 117-11		
06 0016401	L	STBCHK	35-15			
0000006	A	STBTRB	117-01	37-13, 117-01		
0000045	A	STCP1		LIBNUM=15 23-11		
0000046	A	STCP2		LIBNUM=15 45-16		
0000047	A	STCP3		LIBNUM=15 69-14		
0000050	A	STCP4		LIBNUM=15 93-14		
0000002	A	STEPCLK	22-45			
0000010	A	STOPREF	22-47			
'CIOBUF+0'	T	STORDER		W=10 S=4 N=0 CL=2		
TDATA	V	STRLIM	7-41	99-12		
CDGSIO	V	STRSIZE	7-22	35-22, 41-34, 105-40, 107-43, 110-35		
'RSLCHK+0'	T	STRSLP		W=1 S=12 N=0 CL=2		
	3	R STRSTAT	8-16	16-03, 16-04, 16-06, 16-07, 16-08		
0041634	A	STSBY	22-11	35-36, 39-20		
0041630	A	STSBYCL	22-13			
'SET STORE B						
USY(SBY) W/						
CLOCK'	T	STSBYCLT				
'SET STORE B						
USY(SBY) SIG						
NAL'	T	STSBYT				
CDGSIO	V	STSELMASK	7-23	41-37		
0000000	A	SUCCESS	29-31	29-34, 30-36, 30-39, 42-02, 42-05, 42-17, 42-20, 42-32, 42-35, 43-16, 43-19, 43-31, 43-34, 51-01, 51-04, 51-16, 51-19, 53-01, 53-04, 53-18, 53-21, 55-34, 55-37, 56-39, 56-42, 59-01, 59-04, 59-17, 59-20, 61-01, 61-04, 61-16, 61-19, 63-23, 63-26, 64-01, 64-04, 66-32, 66-35, 67-11, 67-14, 67-36, 67-39, 76-08, 76-11, 78-29, 78-32, 79-06, 79-09, 79-35, 79-38, 80-04, 80-07, 82-11, 82-14, 84-43, 84-46, 87-09, 87-12, 89-38, 89-41, 90-20, 90-23, 92-11, 92-14, 100-37, 100-40, 101-12, 101-15, 104-22, 104-25, 108-31, 108-34, 112-01, 112-04		
0000000	A	SV_REG				
'SER+0'	T	TBER		W=1 S=13 N=0 CL=2 32-44, 37-02, 40-12		
0000050	A	TESTNO	23-11	45-16, 69-14, 93-14, 115-01, 126-21, 130-32, 133-37		
0116774	L	TFAPCH2	2-09			
0000003	A	THREE	18-05			
'PAGSCR+27'	T	TIMSAV		W=20 S=0 N=33 CL=2		
0000045	A	TLMFRST	6-01	23-11, 115-01		
0600000	L	TPATCH	2-11			
0001712	A	TR_011938	114-16			

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
0001706	A	TR_012703	114-02			
0001716	A	TR_012991	114-28			
0001430	A	TR_11938	89-45	90-27		
0001674	A	TR_12703	26-02	45-02, 48-09, 69-02, 73-02, 93-02, 96-02, 113-02		
0001661	A	TR_12991	36-24	36-34, 55-02, 55-12, 83-31, 83-42, 99-48, 100-08, 103-24, 103-35, 106-20, 106-31, 107-49, 108-11, 111-17, 111-27		
0002041	A	TR_780315	35-31	36-10, 39-15, 39-38, 140-15		
06 0020745	L	TRORG	26-02	35-31, 36-10, 36-24, 39-15, 39-38, 45-02, 48-09, 55-02, 69-02, 73-02, 83-31, 89-45, 90-27, 93-02, 96-02, 99-48, 103-24, 106-20, 107-49, 111-17, 113-02		
0000005	A	TSPHEREN	128-01	53-28, 128-01		
0000004	A	TSPLEREN	127-28	53-11, 127-28		
'DGREALO+0'	T	TSTNUM		W=7 S=0 N=0 CL=2		
	U	TTYTBL				
0000002	A	TWO	18-06			
'4'	T	TXTSEG				
'PAGSCR+28'	T	UPADDR		W=4 S=0 N=34 CL=2		
CSYSUB	V	UPD_OTS	7-33			
0007114	A	USERRED	22-15			
'READ STORE						
ERROR REG (W						
/O ISOLATE)'	T	USERREDT				
CTVTAB	V	WXAIT		LIBNUM=10 36-45, 55-23, 84-03, 100-12, 103-38, 106-33, 108-13, 111-30		
	14	P WXAITX_XCBLM		LIBNUM=10		
CBLM	V	WAIT	7-07			
'# NOTE--1 P						
ROC 02-07						
FA1040 WIDE						
STORE BUS I						
INTERFACE BIT						
S 28-PH'	T	WDBUS28PH		LIBNUM=12		
0000023	A	WDCKFL	140-01	112-11, 140-01		
'CHKWRD+0'	T	WDISOL		W=4 S=10 N=0 CL=2		
TDATA	V	WDSTR	7-42	99-13		
0010000	A	WPBLKSZE	18-07			
0046061	A	WPCLR	22-17			
'STORE INITI						
ALIZE, INCL.						
WRITE PROTE						
CT'	T	WPCLRT				
TDATA	V	WPTBL	7-43			
0000003	A	WRDHPFLT	127-16	51-26, 127-16		
0000002	A	WRDLPFLT	127-01	51-11, 127-01		
06 0017163	L	WRPRCKCW	58-26	58-24		
06 0016731	L	WRPRCKD	50-26	50-24		
06 0016776	L	WRPRCK1	52-25	52-23		
06 0017230	L	WRPRCK2	60-23	60-21		
06 0017045	L	WRPRCK2A	54-30	54-28		
06 0017114	L	WRPRCK2B	56-09	56-07		
0025750	A	ZERX		LIBNUM=14 62-26, 65-36, 77-33		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSCP	W77D
0000000	A	ZERO	18-08			
0000000	A	ZEROS	18-09	50-32, 50-33, 52-32, 54-37, 54-38, 56-16, 56-17, 58-32, 58-33, 60-29, 60-30, 62-43, 62-44, 65-49, 66-01, 75-35, 75-36, 81-33, 81-34, 84-14, 84-15, 86-31, 86-32, 86-41, 86-42		
'MASCIOSC+1'	T	OSSCO		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	O TEST	18-10			
3	R	OWDSTRO	16-06	W=1 S=4 N=0 CL=1		
0052354	A	O10NOR	22-19			
'0-10 TIMING (O10TIM)THEN REFRESH REQ						
WEST CLEAR'	T	O10NORT				
0054334	A	O10REF	22-22			
'0-10 TIMING (O10TIM)THEN REFRESH REQ						
WEST SET'	T	O10REFT				
0056074	A	O10TIM	22-25			
'FORCE 0-10 TIMING SIGNA L ACTIVE'	T	O10TIMT				
'CIOBUF+0'	T	O10TM		W=1 S=14 N=0 CL=2		
0000001	A	1TEST	18-11			
'CHKWRD+0'	T	2EPCK		W=1 S=15 N=0 CL=2		106-09,107-35
1	J	3ACC	1-09			

NO FLAG(S) FOUND IN THIS ASSEMBLY

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