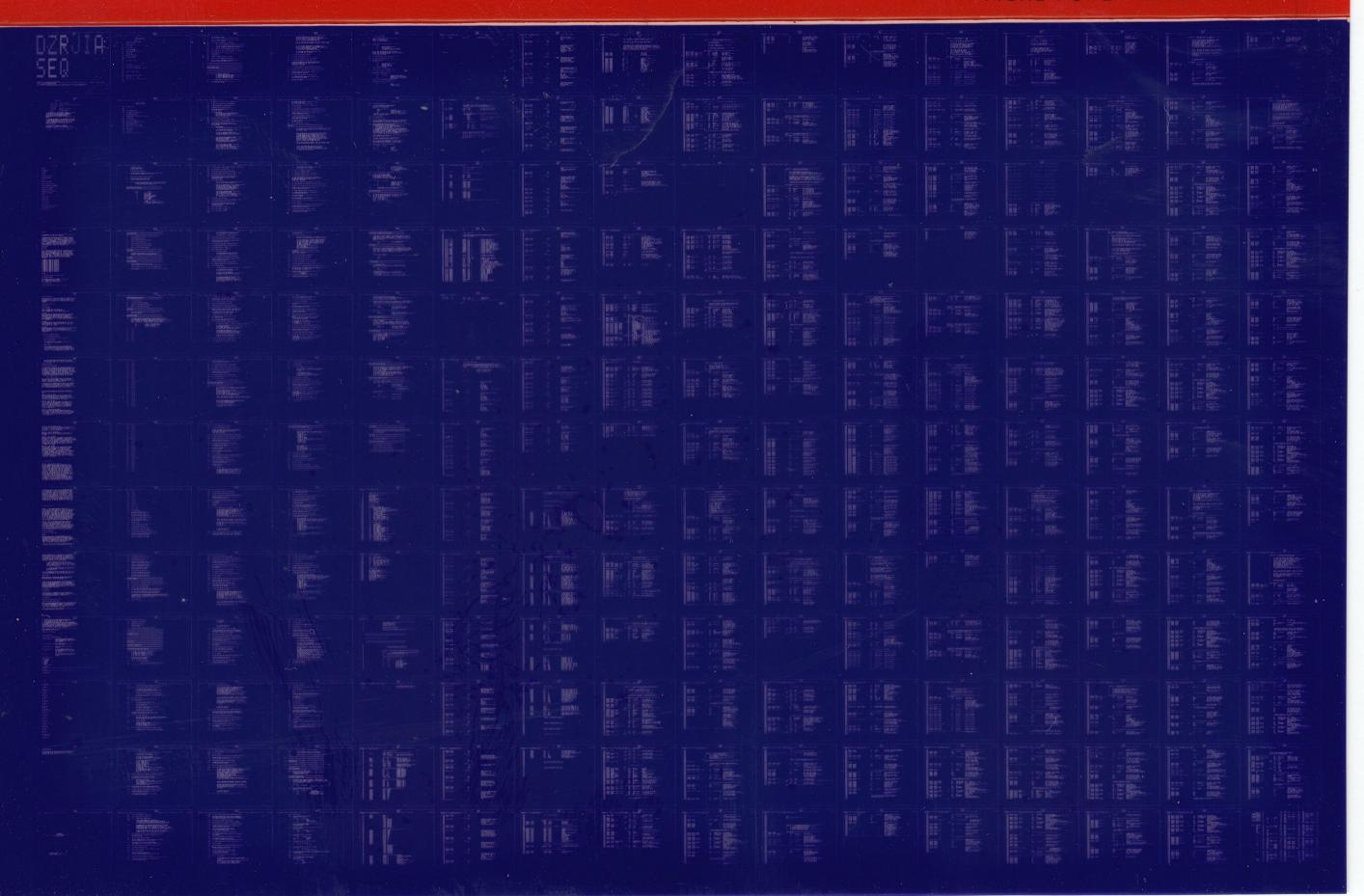
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MD-11-DZRJI-A

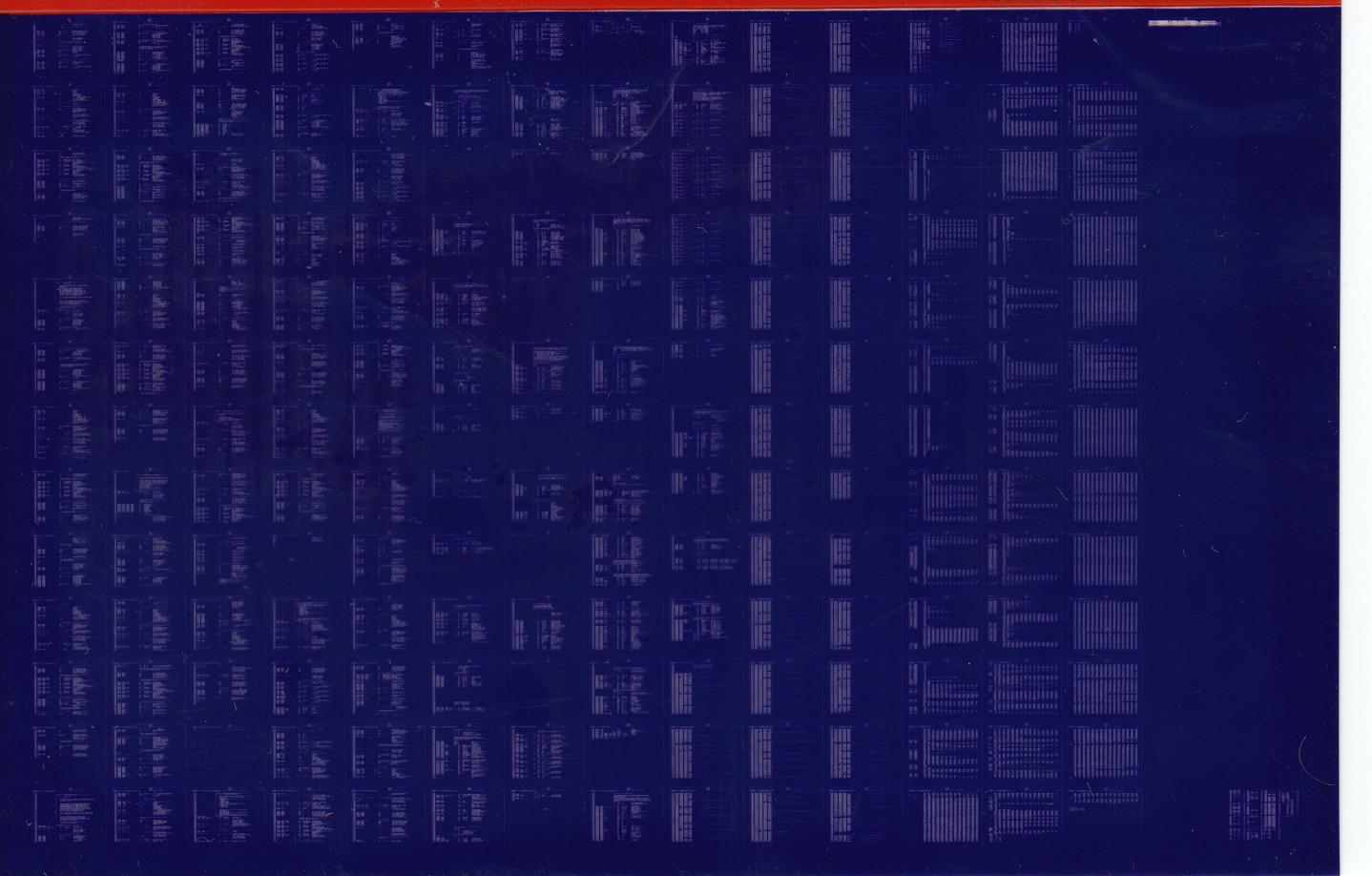


RP04/05/06

FUNCTION CONTROL PART 1
MD-11-DZRJI-A

EP-DZRJI-A-DL-A
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LPTSPL Version 101(2111) Running on MTA140

#START* User WELLINGHAM, A(400, 3722) Job DZRJIA Seq. 5167 Date 07-May-76 14:24:43 Monitor RV242A KI10 SYS*514 *START*

Request created: D7-May-76 14:17:27

F:1e: RP5B:DZRJIA.SEG(055)(400, 3722) Created: 03-May-76 10:14:41 Printed: 07-May-76 14:24:45

GUEUE Switches: /PRINT:ARROW /FILE:ASCII /COPIES:1 /SPACING:1 /LIMIT:2000 /FORMS:NORMAL

PRODUCT CODE:

MAINDEC-11-DZRJI-A-D

PRODUCT NAME:

RPC4/5/6 FUNCTIONAL CONTROLLER TEST PART I

DATE CREATED:

MAY 1976

MAINTAINER:

DIAGNOSTIC ENGINEERING

AUTHOR:

PETE BLACKSTONE

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- 8.4 PROGRAM REVISION HISTORY
- 9. PROGRAM DESCRIPTION

1.0 ABSTRACT

THIS DIAGNOSTIC IS USED TO TEST RP04/5/6 DEVICE CONTROL LOGIC CONNECTED TO AN RHII OR RH70 CONTROLLER.

IT USES THE DISK SURFACE AND THE DRIVE MECHANICS TO PROVE THE PROPER WORKING OF THE SUBSYSTEM. IT DOES NOT NEED A FORMATTED DISK PACK. A DISK PACK WITH NO VITAL INFORMATION WRITTEN ON IT IS ESSENTIAL. AFTER A SUCCESSFUL RUN (WITH NO ERRORS) OF THIS DIAGNOSTIC IT CAN BE ASSERTED THAT THE DCL IN THE RPD4/5/6 SUBSYSTEM WORKS SUCCESSFULLY WHILE STANDING ALONE. SYSTEMS INTERACTION AND DRIVE TIMING IS LEFT TO OTHER DIAGNOSTICS. THIS IS WITH THE ASSUMPTION THAT PROGRAMS DZRJGA AND DZRJHA HAVE BEEN RUN SUCCESSFULLY.

2.0 REQUIREMENTS

2.1 EQUIPMENT

PDP-11 COMPUTER WITH CONSOLE TELETYPE, AND A RPO4/5/6 DISK SYSTEM. THE RPO4/5/6 DISK SYSTEM WILL CONSIST OF AN RH11 CONTROLLER, A DISK CONTROL LOGIC (DCL), A DEC 733 DISK DRIVE, AND ITS APPROPRIATE DISK PACK. THE DISK PACK NEED NOT BE FORMATTED. USED SECTION OF THE DISK SURFACE SHALL BE GOOD (HOLE FREE). THE SURFACE FOR THE FOLLOWING SECTORS MUST BE GOOD, THAT IS, FREE OF ANY HOLES OR SURFACE IRREGULARITY BEFORE ANY DATA ERROR CAN BE ATTRIBUTED TO THE LOGIC.

CYLINDER OD, TRACK OD, SECTOR OD CYLINDER OS, TRACK OD, SECTOR OD CYLINDER OF, TRACK OD, SECTOR OD

2.2 STORAGE

THIS PROGRAM REQUIRES 16K WORDS OF MEMORY

2.3 PRELIMINARY PROGRAMS

THIS PROGRAM ASSUMES THAT MAINDEC-11-DZRJG-(LATEST REV) HAS BEEN RUN WITHOUT ERRORS.
AND IT ASSUMES THAT MAINDEC-11-DZRJH-(LATEST REV) HAS BEEN RUN WITHOUT ERRORS.

3.0 LOADING PROCEDURE

USE STANDARD PROCEDURE FOR LOADING .ABS TAPES

4.0 STARTING PROCEDURE

SWITCH 12 MUST BE SET WHEN THIS PROGRAM IS TO BE RUN USING AN RH7D CONTROLLER. IT CAN BE SET AT THE FRONT PANEL, OR IN THE SOFTWARE SWITCH REGISTER IF THE OPERATOR SO DESIRES. SEE PARAGRAPH 5.1 FOR A DESCRIPTION OF SOFTWARE SWITCH REGISTER OPERATION.

4.1 CONTROL SWITCH SETTINGS

SEE SECTION 5.1

4.2 STARTING ADDRESS

START AT ADDRESS 200---FOR NORMAL RUN START AT ADDRESS 210---FOR UNIT SELECTION START AT ADDRESS 220---FOR NO MANUAL INTERVENTION

200 START
ALL SWITCHES MUST BE DOWN FOR WORST CASE RUN. WITH THIS
STARTING ADDRESS ALL THE RPO4/5/65 ON THE SYSTEM WILL BE
TESTED ONE AT A TIME BEFORE "END PASS" IS PRINTED OUT.
TESTING WILL START WITH THE LOWEST UNIT NUMBER DRIVE
THAT IS POWERED UP (THAT IS THE LOWEST UNIT NUMBER RHAS REGISTER
THAT RESPONDS) THEN GO ON TO THE NEXT HIGHER UNIT NUMBER
THAT IS POWERED UP.

ALL SWITCHES MUST BE DOWN FOR WORST CASE RUN. WITH THIS STARTING ADDRESS THE CONSOLE TELETYPE WILL ASK FOR THE UNIT NUMBER TO BE TESTED. THEN ONLY THAT UNIT WILL BE TESTED FOR EACH PASS OF THE PROGRAM.

ALL SWITCHES MUST BE DOWN FOR WORST CASE RUN. WITH THIS STARTING ADDRESS THE PROGRAM WILL NOT RUN THOSE TESTS THAT NEED MANUAL INTERVENTION. THIS IS RECOMMENDED ONLY FOR DEBUGGING WHERE THE ERROR IS NOT IN A TEST THAT REQUIRES MANUAL INTERVENTION

4.3 PROGRAM AND/OR OPERATOR ACTION

- 1. LOAD THE PROGRAM INTO MEMORY.
- 2. SET STARTING ADDRESS ON THE SWITCH REGISTER
- 3. PRESS "LOAD ADDRESS".
- 4. SET "OPERATIONAL SWITCH SETTINGS" (SEE SECTION 5.1)
 WORST CASE IS ALL SWITCHES DOWN.
- 5. PRESS "START".
- 6. FOR THE FIRST PASS EACH TEST WILL BE EXECUTED ONCE ON THE DRIVES PRESENT OR DRIVE SELECTED BEFORE "END PASS" IS PRINTED. THE FIRST PASS WILL REQUIRE OPERATOR INTERVENTION IF THE PROGRAM IS NOT RUN UNDER AN "ACT-11" MONITOR. THE SECOND AND SUBSEQUENT PASSES WILL EXECUTE

EACH TEST FOUR TIMES ON EACH DRIVES PRESENT OR DRIVE SELECTED BEFORE "END PASS" IS PRINTED. THE SECOND AND SUBSEQUENT PASSED DO NOT NEED ANY OPERATOR INTERVENTION.

5.0 OPERATING PROCEDURE

5.1 OPERATIONAL SWITCH SETTINGS

IF THE PROGRAM IS BEIDNG RUN ON A SWITCHLES PROCESSOR (I. E. AN 11/34) IT WILL DETERMINE THAT A HARWARE SWITCH REGISTER IS NOT PRESENT, AND WILL USE "SOFTWARE" SWITCH REGISTER. THE SETTINGS OF THE SWITCHES ARE CONTROLLED THROUGH A KEYBOARD ROUTINE WHICH IS CALED BY TYPING A 'COBNTROL G'. THE PROGRAM WILL RECOGNIZE A 'CONTROL G' AT ANY TIME EXCEPT WHEN IT IS AR A HIGHER PRIORITY PROCESSING AN RPD4/5/6 INTERRUPT. THE "SOFTWARE" SWITCH VALUE S ARE ENTERED AS AN OCTAL NUMBER IN RESPONSE TO PROMPTING FROM THE SWITCH ENTRY ROUTINE:

'SWR = NNNNNN NEW ='

EACH TIME SWITCH SETTINGS ARE ENTERED. THE ENTIRE SWITCH REGISTER IMAGE MUST BE ENTERED. LEADING ZEROS ARE NOT REQUIRED. 'RUBOUT' AND 'CONTROL U' FUNCTIONS MAY BE USED TO CORRECT TYPING ERRORS DURING SWITCH ENTRY.

ON PROCESSORS WITH HARDWARE SWITCH REGISTER, THE "SOFTWARE" SWITCH REGISTER MAY ALSO BE USED. IF THE PROGRAM FINDS ALL 16 SWITCHES IN THE 'UP' POSITION WHEN IT IS STARTED, ALL SWITCH REGISTER REFERENCES WILL BE TO THE "SOFTWARE" REGISTER AND THE PROCEDURES DESCRIBED ABOVE MUST BE FOLLOWED.

SWITCH DEFINITIONS ARE GIVEN IN SECTION 9 "OPERATIONAL SWITCH SETTINGS" HOWEVER THE DETAIL DESCRIPTION ARE GIVEN HERE.

SWITCH 15 - HALT ON ERROR
WHEN THIS SWITCH IS SET, IF THE PROGRAM FINDS AN ERROR
THEN THE APPROPIATE INFORMATION WILL BE PRINTED OUT
AND THEN THE PROGRAM WILL HALT. AFTER THIS HALT, PRESSING
"CONTINUE" WILL CONTINUE WITH THE PROGRAM TILL THE NEXT
ERROR IS FOUND WHEN THE SAME THING WILL HAPPEN.

SWITCH 14 - LOOP ON TEST
WHEN THIS SWITCH IS SET THE PROGRAM WILL BEGIN TO LOOP
ON THE CURRENT TEST BEING EXECUTED. FOR EXAMPLE IF THIS
SWITCH IS SET WHEN THE PROGRAM IS IN TEST 10 THEN THE
PROGRAM WILL KEEP EXECUTING ALL OF TEST 10 REPEATEDLY.
ONE WAY TO BE SURE THAT THE PROGRAM IS IN THE EXPECTED
TEST IS TO SET THIS SWITCH DURING AN ERROR PRINTOUT OR
DURING A PROGRAM HALT.

SWITCH 13 - INHIBIT ERROR TYPEOUTS
WHEN THIS SWITCH IS SET FURTHER ERROR PRINTOUTS WILL
CEASE, HOWEVER OPERATOR INSTRUCTIONS SUCH AS "STOP DRIVE X"
WILL CONTINUE. AT THE END OF PASS "TOTAL NUMBER OF ERRORS
ON THIS PASS ON DRIVE X" WILL BE TRUE, THAT IS, ALTHOUGH
PRINTOUTS WERE INHIBITED IF THAT PASS FOUND 6 ERRORS,
IT WILL SAY SO.

SWITCH 12 - RH70 CONTROLLER SELECT
THIS SWITCH MUST BE SET AT THE START OF THE PROGRAM WHEN THE
DISK DRIVES TO BE TESTED ARE CONNECTED TO AN RH70
CONTROLLER. IT MUST NOT BE SET WHEN DISK DRIVES TO BE TESTED
ARE CONNECTED TO AN RH11 CONTROLLER.

SWITCH 11 - INHIBIT ITERATIONS
WHEN THIS SWITCH IS SET THE PROGRAM ON SECOND PASS WILL
NOT REPEAT EACH TEST FOUR TIMES BUT WILL DO EACH TEST
ONCE ONLY.

WHEN THIS SWITCH IS SET, IF THE PROGRAM FINDS AN ERROR
THE "BELL" OR "ALARM" WILL BE SOUNDED. THIS SWITCH IS USEFUL
WHEN SWITCH 11 IS SET YET INFORMATION IS NEEDED WHEN ANY ERROR
IS DETECTED. TAKE THE EXAMPLE OF A PROGRAM LOOPING ON A TEST WITH
SWITCH 11 SET TO HELP SCOPING. THEN IF THIS SWITCH IS
SET AND THE BELL OR ALARM SOUNDS IT MEANS THAT THE ERROR
IS PRESENT BUT IF THE BELL OR ALARM STOPS IT MEANS THAT
THE ERROR IS NOT PRESENT.

SWITCH 9 - LOOP ON ERROR
WHEN THIS SWITCH IS SET. IF THE PROGRAM FINDS AN ERROR
THEN GENERALLY THE PROGRAM WILL LOOP BACK TO THE LAST
EXECUTED "SCOPE" STATEMENT. IF ON THE SECOND TIME
THROUGH AN ERROR IS FOUND IT WILL AGAIN LOOP BACK TO
THAT "SCOPE" STATEMENT. THIS LOOPING WILL CONTINUE AS LONG
AS THE ERROR IS PRESENT AND THIS SWITCH IS SET. HOWEVER
IF THE ERROR IS NOT PRESENT AT ANY TIME THEN IT WILL
CONTINUE NORMALLY WITH THE PROGRAM. EACH TIME THE ERROR
IS ENCOUNTERED PRINTOUT WILL TAKE PLACE UNLESS SWITCH 11
IS ALSO SET. DURING BEGUG, USING A SCOPE, IT IS RECOMMENDED
THAT SWITCH 11 IS ALSO SET.

NOTE: SEE SECTION 8.3

SWITCH B - LOOP ON TEST IN SWR (7:0)
THIS IS A SPECIAL SWITCH. WHEN SET SWITCHES D THRU 7
HAVE ONE MEANING AND WHEN RESET SWITCHES D THRU 7 HAVE
ANOTHER MEANING. THIS MEANS THAT ANY SETTING OF SWITCH
D THRU 7 MUST BE DONE WITH SWITCH B IN THE APPROPIATE
POSITION. WHEN THIS SWITCH IS SET THEN SWITCHES D THRU
7 GIVE THE TEST NUMBER TO BE LOOPED ON. FOR EXAMPLE
WITH SWITCH B SET AND SWITCH 3 SET THE PROGRAM WILL LOOP
ON TEST 1D. HOWEVER THIS SETTING MUST BE DONE AT THE
BEGINNING OF THE PROGRAM THEN ALL THE TESTS FROM 1 TO 1D
WILL BE EXECUTED AND THEN TEST 1D WILL BE REPEATED OVER
AND OVER AGAIN. WHEN THIS SWITCH IS NOT SET THEN SWITCHES
D THRU 7 HAVE THE MEAING ITS NAME INDICATES.
FOR EXAMPLE SWITCH 7 IS "STOP FURTHER COMPARES: THAT IS
IF SWITCH B IS NOT SET AND SWITCH 7 IS SET THEN WHEN A
DATA ERROR IS DETECTED NO FURTHER COMPARES WILL BE DONE.
FOR EXAMPLE IN A 256 WORD BUFFER IF ALL THE WORDS ARE IN
ERROR THEN AFTER SEEING THE PRINTOUT FOR THE FIRST FEW

WORDS SETTING SWITCH 7 ONLY WILL STOP FURTHER PRINTOUTS OF THIS ERROR AND GO ON WITH THE TEST RATHER THAN PRINT ALL THE 256 WORDS. HOWEVER IF THIS WAS DONE WITH SWITCH 11 THEN THE NEXT ERROR THAT THE PROGRAM DETECTS IN A SUBSEQUENT TEST WILL ALSO BE LOST. BUT WITH SWITCH 7, ONLY THIS GROUP OF DATA ERRORS ARE NOT PRINTED OUT. ANOTHER EXAMPLE OF SWITCH 8 BEING LOW IS WITH SWITCH 6, WHICH IS "ECC TEST-COMPARE END RESULT ONLY". THAT IS IF SWITCH 8 IS NOT SET AND SWITCH 6 IS SET THEN ON ECC TESTS (TEST 120 THRU TEST 134) INSTEAD OF COMPARING CONTENTS OF THE POSITION REGISTER AND PATTERN REGISTER AFTER EVERY CLOCK, COMPARES WILL ONLY BE DONE AT THE END OF ALL THE CLOCKS.

NOTE: SEE SECTION 8.3

SWITCH 7 - STOP FURTHER COMPARES IF SWO8 IS LOW.

IF SWITCH 8 IS SET AND THIS SWITCH IS ALSO SET THEN THIS SWITCH GIVES THE TEST NUMBER TO BE LOOPED ON AS INDICATED IN THE DESCRIPTION OF SWITCH 8. IF SWITCH 8 IS NOT SET AND THIS SWITCH IS SET THEN THE PROGRAM WILL DO AS THE NAME INDICATES. FOR EXAMPLE IN A 256 WORD BUFFER IF ALL THE WORDS ARE IN ERROR THEN AFTER SEEING THE ERROR PRINTOUTS FOR THE FIRST FEW WORDS THEN SETTING SWITCH 7 WITH SWITCH 8 NOT SET WILL STOP THE PRINTOUT OF ANOTHER ERROR IN ANY SUBSEQUENT TEST. IT IS EXPECTED THAT SWITCH 7 AFTER BEING SET FOR A WHILE TO STOP PRINTING ALL THE 256 WORDS WILL BE RESET AGAIN TO ENABLE THE PRINTING OF OTHER DATA ERRORS.

SWITCH 6 - TYPE ALL REGISTERS WITH ERROR IF SWO8 IS LOW IF SWITCH 8 IS SET AND THIS SWITCH IS ALSO SET THEN THIS SWITCH GIVES THE TEST NUMBER TO BE LOCPED ON AS INDICATED IN THE DESCRIPTION OF SWITCH 8. IF SWITCH 8 IS NOT SET AND THIS SWITCH IS SET THEN THE PROGRAM WILL DO AS THE NAME INDICATES. THAT IS ON FINDING AN ERROR INSTEAD OF ONLY GIVING THE ERROR MESSAGE AND RELEVANT REGISTERS AS WILL BE DONE IF SWITCH 11 IS NOT SET BUT WILL ALSO GIVE ALL THE REGISTER CONTENTS (EXCEPT "DATA BUFFER" RHD8).

5.2 SUB-ROUTINE ABSTRACTS

SEE SECTION 9 "SUBROUTINES".

6.0 ERRORS

PERTINENT INFORMATION CONCERNING THE PARTICULAR FAILURE.
THIS INFORMATION MAY BE THE CONTENTS OF RELEVANT RP04/5/6
REGISTERS OR GOOD/RECEIVED DATA. IF THE ERROR OCCURRED IN A
SUBROUTINE, THE ADDRESS OF THE SUBROUTINE CALL IS ALSO
GIVEN. REFER TO THE PROGRAM LISTING AT THE STATED
ADDRESS TO DETERMINE THE CAUSE OF THE ERROR.

6.1 IN THE EVENT THAT THE DISK DRIVE BECOMES UNAVAILABLE TO THE CONTROLLER, POWERS DOWN, OR CERTAIN CRITICAL STATUS BITS

CANNOT BE CLEARED PRIOR TO THE START OF A TEST SEQUENCE THIS INFORMATION WILL BE COMMUNICATED TO THE OPERATIOR. IN
ADDITION, THE TTY BELL WILL RING AND THE PROGRAM WILL HALT.
IT IS SUGGESTED THAT IF THIS HAPPENS, THE OPERATOR LOAD
ADDRESS 200 (210) AND RESTART THE PROGRAM AS A FIRST ATTEMPT
TO SOLVE THE PROBLEM. IF THE FILURE CONTINUES TO OCCUR,
THERE ARE TWO OPTIONS OPEN TO THE OPERATOR:

1. LOOK IN THE TEST LISTING FOR THE 'HALT'
INSTRUCTION AND REPLACE IT, PLUS THE TWO WORDS
("TYPE CPHALT") ABOVE WITH 'NOP'S. WITH TTY ERROR
PRINTOUTS INHIBITED. A SCOPE LOOP CAN BE INITIATED
FOR THE TEST IN QUESTION.

2. GO BACK AND RERUN DZRPS, AS IT IS QUITE POSSIBLE THAT A HARD FAILURE HAS OCCURRED IN ONE OF THE HARDWARE REGISTERS.

IT IS ALSO POSSIBLE TO CONTINUE FROM THE 'HALT' POINT, BUT THIS IS NOT RECOMMENDED AS ALL FOLLOWISNG TESTS WILL EXHIBIT THE SAME SYMPTOMS AND GIVE MISLEADING ERROR PRINTOUTS.

7.0 RESTRICTIONS

BEFORE STARTING THE PROGRAM THE OPERATOR MUST HAVE THE DRIVE PORT SWITCH LOCKED EITHER ON PORT A OR PORT B BUT MUST NEVER LEAVE IT IN THE PROGRAMMABLE STATE.

SWITCH 12 MUST BE SET WHEN RUNNING ON AN RH70 CONTROLLER AND IT MUST NOT BE SET WHEN RUNNING ON AN RH11 CONTROLLER. BECAUSE OF THE REQUIREMENT FOR IT TO BE SET WHEN USING AN RH70, THE PROGRAM CANNOT BE RUN IN CHAIN MODE WHEN USING THE SOFTWARE SWITCH REGISTER FEATURE WHILE ON AN RH70. THIS IS BECAUSE THE ROUTINE WHICH GETS "SOFTWARE" SWITCH SETTINGS IS NOT OPERABLE WHEN IN CHAIN MODE.

- MISCELLANEOUS
- 8.1 EXECUTION TIME

THE FIRST PASS OF THE PROGRAM WILL TAKE APPROXIMATELY 1 MINUTES PROVIDED AN OPERATOR IS PRESENT TO CARRY OUT THE TYPED INSTRUCTIONS IMMEDIATELY. SUBSEQUENT PASSES WILL TAKE 30 SECONDS WHETHER AN OPERATOR IS THERE OR NOT.

8.2 STACK POINTER

THE STACK IS INITIALLY SET TO 1000

8.3 OPERATOR SELECTABLE SCOPE LOOPS

HERE IS A DETAILED EXPLAINATION OF HOW THE LOOP ON ERROR WORKS. FOR INSTRUCTIONS REGARDING THE USAGE OF THIS TECHNIQUE, HIT TO ANY TIME WHILE THE PROGRAM IS RUNNING. ON HITTING AN ERROR IF THE LOOP ON ERROR SWITCH IS SET, THE PROGRAM GOES BACK - USUALLY BACK TO THE BEGINNING OF THE TEST.

WHEN THIS OPERATOR SELECTABLE SCOPE LOOP IS USED THEN THE POINT THE PROGRAM GOES BACK TO CAN BE CHANGED.

THE RESTRICTIONS TO THE POINT WHERE THE PROGRAM CAN GO ARE:
1. IT MUST BE WITHIN THE TEST UNDER CONSIDERATION

2. LOOP ON ERROR SWITCH MUST BE SET

3. THE ERROR MUST OCCUR WITHIN THE TEST UNDER CONSIDERATION

IF THE ERROR DOES NOT OCCUR WITHIN THE TEST UNDER CONSIDERATION

THE PROGRAM WILL REVERT TO NORMAL OPERATION. HOWEVER, IF LOOP ON

TEST SWITCH IS SET AND THIS OPERATOR SELECTABLE SCOPE LOOP IS USED

THEN THE PROGRAM WILL LOOP BACK TO THE SELECTED POINT WHEN IT

COMES TO THE END OF THE TEST UNDER CONSIDERATION.

AFTER LOOPING FOR SOME TIME IF THE LOOP SWITCH IS PUT DOWN THEN NORMAL OPERATION WILL CONTINUE.

- 8.4 PROGRAM REVISION HISTORY
- 9.0 PROGRAM DESCRIPTION
- 9.1 LOGIC DIVISION IN HARDWARE MODULES

REGISTER BOARD (RG) - ERROR REGISTER 1 STATUS REGISTERS MUX FOR REGISTERS GO HANDLING REGISTER DECODE COMMAND DECODE EXECUTION OF MECH. COMMANDS

SYNC. DATA BOARD (SN) - DATA CONTROL PARALLEL TO SERIAL SYNC. BYTE DETECT.

SEEK AND SEARCH (SS) - SEEK LOGIC SEARCH LOGIC HEADER HANDLING.

ERROR CORRECTION (EC) - ECC LOGIC ERROR REGISTER 2 & 3
MUX FOR ERROR REG. 2 & 3 LOOK AHEAD
REG. SECTOR COUNTER DATA FORMATION
RING COUNTER.

DUAL PORT (DP) - DUAL PORT ARBITRATION ATTENTION LOGIC SERIAL NO REGISTER MASS BUS REGISTER STORAGE

9.2 DISK SURFACE USAGE

SYMBOLS USED
C = CYLINDER
T = TRACK
S = SECTOR
W = WRITE
R = READ
TT = TEST NUMBER

CO, TO, SO TT22-W,R, TT23-R, TT24-W,R, TT25-W,R, TT26-W,R, TT35-W,R, TT37-W, TT50-W, TT51-W,R, TT52-W,R, TT55-W,R

CO. TO, S1 TT27-W,R, TT37-W,R, TT40-R, TT41-W,R, TT42-W,R, TT43-W,R

CO. T18, S21 TT30-W, TT31-W,R

```
C1, T0, S0
TT30-W,R, TT31-W,R, TT53-W,R, TT54-W,R
```

C1, T18, S21 TT31-W

C2. TO, SO TT31-W,R

C2, T18, S21

C3, TC, SO TT31-W,R

C3, T18, S21

C4, T0, S0 TT31-W,R

C4, T18, S21 TT31-W

C5, TG, SO TT31-W,R

C5. T7, S4 TT33-W,R, TT34-W,R

C5, T18, S21 TT31-W

C6, T0, 50 TT31-W,R

C6, T18, S21 TT31-W

C7, T0, S0 TT31-W,R

C7, T18, S18 TT31-W

CB, TO, SO TT31-W,R

CB, T18, S21 TT31-W

C9, T0, S0 TT31-W

C9, T18, S21 TT31-W, TT32-R

C10, TO, SO TT31-W,R C410, T18, S21 TT36-W,R, TT50-W,R

THE FOLLOWING SECTION DESCRIBES EACH TEST AND SUBROUTINES IN DETAIL AND CAN BE USED AS AN INDEX TO THE LISTING. THE LEFT MOST COLUMN IS THE LINE NUMBER WITHIN THE LISTING WHERE THAT ITEM WILL BE FOUND.

NO1

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1

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11992 POWER DOWN AND UP ROUTINES

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PROGRAM BY PETE BLACKSTONE

THIS PROGRAM WAS ASSEMBLED USING THE PDP-11 MAINDEC SYSMAC PACKAGE (MAINDEC-11-DZQAC-CD), MAR 21, 1976.

DRIVE MUST BE LOCKED ON PORT A OR PORT B

28 INTERNAL PROGRAM MACROS BEGIN HERE

33 *

40

*NOTE: ALL MACRO CALLS BEGINNING WITH ". S" ARE SUPPLIED FROM AN EXTERNAL SYSMAC. SML PACKAGE WHICH MUST BE MADE AVAILABLE TO THE SOURCE PROGRAM AT ASSEMBLY TIME.

OPERATIONAL SWITCH SETTINGS

41	SWITCH	USE
	1511008	HALT ON ERROR LOOP ON TEST INHIBIT ERROR TYPEOUTS RH70 CONTROLLER SELECT INHIBIT ITERATIONS BELL ON ERROR LOOP ON ERROR LOOP ON TEST IN SWR<7:0>
53	7 6 5	STOP FURTHER COMPARES IF SWOS IS LOW TYPE ALL REG. WITH ERROR IF SWS LOW MULT ADDR PLUG TEST IF SWOS IS LOW

MATNOEC-11-DZE	77-A D	PO4/5/6 FUNCT. CONT. TST-PT 1	EO2	
MAINDEC-11-DZN			DECDOC VER DU.UT	
57	BASIC	DEFINITIONS	******	
	59	INITIAL ADDRESS OF THE STACK P	OINTER *** 1000 ***	
	64	MISCELLANEOUS DEFINITIONS		
	76	GENERAL PURPOSE REGISTER DEFIN	ITIONS	
	98	PRIORITY LEVEL DEFINITIONS		
	98	"SWITCH REGISTER" SWITCH DEFIN	ITIONS	
	126	DATA BIT DEFINITIONS (BITOD TO	BIT15)	
	154	BASIC "CPU" TRAP VECTOR ADDRES	SES	
168	**************************************	**************************************	*******	
	171	ALL UNUSED LOCATIONS FROM 4 - SEQUENCE TO CATCH ILLEGAL TRAPPLOCATION D CONTAINS D TO CATCH	776 CONTAIN A ".+2, HALT" S AND INTERRUPTS IMPROPERLY LOADED VECTORS	
178	ACT11		*******	
189	STARTI	NG ADDRESSES	*******	

200

STARTING ADDRESS 200 FOR NORMAL STARTS
THIS WILL TEST ALL DRIVES ON THE SYSTEM A SINGLE DRIVE AT A TIME
STARTING ADDRESS 210 WILL TEST ONLY ONE SPECIFIED DRIVE
STARTING ADDRESS 220 WILL JUMP OVER THE TESTS REQUIRING AN OPERATOR AT THE DRIVE

1

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					F02			
MAINDEC-11-DZR	JI-A, RPO	14/5/6 FU	NCT. CONT. TST-	PT 1		ER 00.04	30-MAR-76 23:05	PAGE D6
508	MEMORY	****** MANAGEME *****	NT DEFINITIONS		·*****************			
	210	KT11 VE	CTOR ADDRESS					
	214	KT11 ST	ATUS REGISTER A	DDRESSES				
	221	KERNEL	"I" PAGE DESCRI	PTOR REGISTERS				
	232	KERNEL	"I" PAGE ADDRESS	S REGISTERS				
245	COMMON	TAGS			**************************************			
	248	THIS TAI	BLE CONTAINS VAR THE PROGRAM.	RIOUS COMMON STO	PRAGE LOCATIONS			
303	ERROR P	DINTER T	ABLE		************			
	305	THE INF	ORMATION IS OBTE N SITEMB. THIS N IF SITEMB IS O	AINED BY USING T NUMBER INDICATES THE ONLY PERTIN	OR EACH ERROR THAT (THE INDEX NUMBER FOR WHICH ITEM IN THE BENT DATA IS (SERRP) IS 4 POINTERS EXPLAIN	UND IN TABLE IS P C).		
	311		EM DH DT DF	POINTS TO THE POINTS TO THE POINTS TO THE POINTS TO THE	E ERROR MESSAGE E DATA HEADER E DATA E DATA FORMAT			
	323	ITEM1						
	335	ITEM2						
	347	ITEM3		-				
	358	ITEM4						
	371	ITEM5						
	381	ITEME						
	391	ITEM7						

399

ITEM10

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MAINDEC-11-DZRJI-A,	RP04/5/6 FUNCT.	CONT.	TST-PT 1
412	ITEM11		
426	ITEM12		
440	ITEM13		
456	ITEM14		
466	ITEM15		
478	ITEM16		
. 492	ITEM17		
506	ITEM20		
519	ITEM 21		
526	ITEM 22		
533	ITEM 23		
543	ITEM 24		
552	ITEM 25		
563	ITEM 26		
575	ITEM 27		
586	ITEM 30		
596	ITEM 31		
607	ITEM 32		
615	ITEM 33		
525	ITEM 34		
631	ITEM 35		
. 541	ITEM 36		
648	ITEM 37		
659	ITEM 40		

ITEM 41

670

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947

959

972

ITEM70

ITEM 71

ITEM 74

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1208

1215

DESIRED SECTOR/TRACK ADDRESS REGISTER (RHDST) (#1) EACH BIT IS CALLED BY BIT NUMBER

DRIVE TYPE REGISTER (RHDT) (#06) EACH BIT IS CALLED BY BIT NUMBER



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MAINDEC-11-DZRJI-	A, RPC	04/5/6 FUNCT. CONT. TST-PT 1	DECDOC VER	00.04	30-MAR-76 23:05	PAGE 10	SE0 0021
1/	1555	LOOK-AHEAD REGISTER (RHLA) (#07)					
17	1241	ERROR REGISTER #2 (RHER2) (#10)					
17	1259	OFFSET REGISTER (RHOF) (#11)					
17	1273	DESIRED CYLINDER ADDRESS (RHCA) (#12) EACH BIT IS CALLED BY BIT NUMBER.					
18	1279	CURRENT CYLINDER ADDRESS (RHCC) (#13) EACH BIT IS CALLED BY BIT NUMBER					
. 18	1285	SERIAL NUMBER REGISTER (RHSN) (#14) EACH IS CALLED BY BIT NUMBER					
17	1291	ERROR REGISTER #03 (RHER3) (#15)					
15	305	ECC POSITION REGISTER (RHEC1) (#16) EACH BIT IS CALLED BY BIT NUMBER					
13	311	ECC PATTERN REGISTER (RHEC2) (#17) EACH BIT IS CALLED BY BIT NUMBER					
1322 RE	EGISTE	**************************************					
17	327	RP04/5/6 DISK I/O REGISTER LOCATED IN TH	HE RH11 CONTROLLER				
17	.334	RP04/5/6 DISK I/O REGISTERS LOCATED IN T	THE DEVICE CONTROL L	OGIC (DO	CL)		
1.	252	ADDITIONAL TAX PECTATERS LOCATED IN THE	PUZD CONTROLLER LOC	erc.			

1353 ADDITIONAL I/O REGISTERS LOCATED IN THE RH7D CONTROLLER LOGIC

1359 P-CLOCK (KW11-P) I/O REGISTERS

THE FOLLOWING LOCATIONS ARE RESERVED FOR REGISTER SNAPSHOTS ANY TIME THERE IS AN ERROR ALL THESE WILL BE FILLED

ONLY SOME MAY BE PRINTED BUT ALL WILL BE FILLED TRUE FOR THE TIME JUST AFTER THE "ERROR" ERROR COMMAND

THIS ASSUMES THAT A REGISTER SNAPSHOT HAS BEEN TAKEN WHICH IS NOT ALWAYS THE CASE - IF QUESTIONABLE CONTENTS APPEAR IN THE REGISTER PRINTOUTS, CHECK THE INLINE TEST CODE TO SEE IF THE REGISTER SNAPSHOT REFLECTS THE CURRENT STATE OF THE MACHINE

1407 FUNCTION EQUATES

1409 TABLE OF FUNCTIONS FOR RHCS1 THEN "GO" BIT HAS TO BE SET

Mas

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MAINDEC-11-DZR	II-A, RP	04/5/6 FUNCT. CONT.	TST-PT 1		DOC VER	00.04	30-MAR-76	23:05	PAGE	11
	1432	DATA BUFFERS FOR I	READ/WRITE							
	1440	RESERVED CORE LOCA	RTIONS							
	1461	TABLE FOR ATTENTION TABLE	ON BITS							
	1470	FLAGS AND INTERNAL	PROGRAM CONTROL	WORDS						
1505	*****	***********	**********	******	*****					
1505	*****	*******	**********	*******	*****					
1506	**DIAG	**************************************								
	*****	*************	******	*******	****					
1507	*****	********	******	*******	*****					
1510	******* SETUP 1			**************** **************						
1525	******* INITIAL	IZE THE COMMON TAGS		**************************************						
1612		LUE FOR SOFTWARE SWI	TCH REGISTER	·***************						
	1627	IF SO MAKE RPOY IN	RAPS GO TO 'WAIT.	TIME 1'						
	1633	THE NEXT LINE IS T AND THE JUMP AND N FOR NOW NO CLOCK W	IOP REMOVED						1	
	1576	TEST 1 REFERENCE	EACH REGISTER							
	1678	RE	FERENCE EACH REGI	STER BY A MOVE IN	STRUCTIO	N				
	1722	TEST 2 PARTIAL TE	ST OF RHAS FOR UN	IT NUMBERS PRESEN	T					

SE0 0022

				L02			
MAINDEC-11-DZRJ		4/5/6 FU	NCT. CONT. TST-PT 1	DECDOC VER O		-76 23:05	PAGE 12
	1724	TECT 3	CHECK THAT RHAS CAN BE CLEARED B		0 11		
		1231 3	TEST FOR DRIVES PRESENT USING RH				
	1747		THE NUMBER OF DRIVES PRESENT IS BY MOVING ALL ONES INTO RHER1 WI IN RHCS2 INCREMENTED FROM ZERO T	TH UNIT NUMBER			
	1751		THE BITS SET IN RHAS SHOULD GIVE	DRIVES PRESENT			
	1753		THE DRIVE TYPE IS CHECKED TO BE UNITS PRESENT ARE STORED IN A TA	AN RPO4/RPO6 AND THEN BLE CALLED 'UNITS'	l		
	1813	SET UP	UNITS TABLE		•		
	1848	NOIT	'S NOT AN RPO4/RPO5/RPO6 DEVICE S DEVICE TYPE	O TYPE			
	1891	TEST 4	TYPE SERIAL NUMBER AND DRIVE TYP	Ε			
	1893		SET APPROPRIATE ATTIENTION BIT OF	F UNIT UNDER TEST IN	'ATTENT'		
	1896		READ SERIAL NUMBER AND DRIVE TYPE THEM OUT AND PROCEED	E REGISTERS			
	1899		TO LOOP HERE SET SWITCH 8, AND TO SWITCHES D THRU 7 AND RESTART	HIS TEST NUMBER ON			
	1925	INCREMEN & DECREM	NT THE UNITS TABLE TO NEXT DRIVE MENT THE "NOUNITS" PRESENT (TO BE	(IF ANY) TESTED)			
	2052	TEST 5	CHECK MOL TO BE HIGH				
	2054		MAKE SURE THAT DRIVE IS ON LINE I IF DRIVE IS OFFLINE, THEN AFTER HANG FOR EVER WAITING FOR DRIVE	TYPE OUT THE PROGRAM I	AM WILL		
	2084	TEST 6	PROGRAM INTERRUPT				
	2085		PROGRAM INTERRUPT IS TESTED BY SEIN RHCS1 AT THE SAME TIME THIS SHOULD INTERRUPT THROUGH LOCATHE PROCESSOR PRIORITY IS SET TO	CATION 254			
	2125	TEST 7	INTERRUPT AT PROCESSOR AND DISK	RIORITY SAME			
	2127		PROCESSOR PRIORITY IS SET AT 5 (SIE AND RDY IS SET. THIS SHOULD NO	SAME AS THE DISK) OT ALLOW INTERRUPT			
				And the second s			

SE0 0023

2165 TEST 10 PACK ACKNOWLEDGE

2167 IF STARTING ADDRESS 220 IS USED THIS TEST WILL NOT BE PERFORMED

IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED

IF NO ACT-11 MONITOR IS PRESENT THEN THIS TEST IS PERFORMED ONLY ON THE FIRST PASS ON SUBSEQUENT PASSES THIS TEST IS NOT DONE

THIS TESTS THE ACKNOWLEDGE COMMAND=44

VV BIT - RHDS1 BIT #6

MOL BIT - RHDS1 BIT #12

DVA BIT - RHCS1 BIT #11

THE DRIVE IS STOPED MOL IS CHECKED TO BE D

AND DVA SHOULD BE D

THE DRIVE IS POWERED UP

VV SHOULD BE D, MOL SHOULD BE 1, DVA SHOULD BE 1

GO SHOULD BE O

ALL REGISTERS EXCEPT RHDB, RHLA AND RHCC ARE STORED

PACK ACKNOWLEDGE IS ISSUED

ALL STORED REGISTERS SHOULD BE UNCHANGED

EXCEPT VV

2202 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK

2304 NOW SAVE REGISTERS FOR COMPARISON AFTER PACK ACKNOWLEDGE

2345 NOW COMPARE REGISTERS SO THAT NO REGISTERS CHANGED EXCEPT VV IN RHDS1 AND IE IN RHCS1

TEST 11 SET VV BIT #6 IN RHDS1
THIS TEST SETS VV IN RHDS1 INCASE
ACT-11 MONITOR IS PRESENT AND THE PREVIOUS TEST
IS NOT PERFORMED
THERE IS A RESET AT THE BEGINING OF THIS TEST
FOR ERROR RECOVERY ONLY.

IN CASE THERE IS ANY DRIVE ERRORS DURING POWER UP OR POWER DOWN OR ANY PARITY ERRORS A RESET IS GIVEN

2409 NOW SAVE REGISTERS FOR COMPARISON AFTER PACK ACKNOWLEDGE

2444 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

2475 NOW COMPARE REGISTERS BEFORE PACK ACKNOWLEDGE WITH AFTER PACK ACKNOWLEDGE

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	MAINDEC-11-DZRJI-A, RE		GE 14
١	2517	TEST 12 MAKE CURRENT CYLINDER = 377	
١	• 2536	TEST 13 MAKE CURRENT CYLINDER = 777	
ı	2553	TEST 14 ADDRESS PLUG CHANGE ERROR	
	2555	CHECK PROPER ADDRESS PLUG FUNCTIONALITY BY PULLING THE ADDRESS PLUG DURING A COMMAND ISSUED IN DIAGNOSTIC MODE (TO GUARANTEE COMMAND IS STILL ACTIVE WHEN PLUG IS PULLED) AND VERIFYING THAT THE DRIVE GOES OFF LINE	
	. 2560	THE ADDRESS PLUG IS THEN REPLACED AND RETURN OF THE PROPER RESPONDING DRIVE IS VERIFIED. AS WELL AS THE FACT THAT ATTENTION BITS COME UP IN THE PROPER BIT LOCATION(?????), AND THE ADDRESS CHANGE ERROR (ACE) - RHER3 BIT #13 IS SET, AS WELL AS SC, TRE, ERR, AND MCPE; VV IS RESET AND RHCC = 000 (DRIVE RECALIBRATED)	
	2566	IN ADDITION VERIFICATION IS ALSO MADE THAT NO OTHER DRIVE NUMBERS APPEAR ON THE BUSS AFTER THE PLUG IS REPLACED. (??????)	
	2597	THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK	
	2611	SET DIAGNOSTIC MODE TO ENABLE A COMMAND ACTIVE WHILE THE PLUG IS PULLED	
	2616	TAKE AN INITIAL REGISTER SNAPSHOT	
	2626	ISSUE A COMMAND AND THE 'GO' BIT (NOT POSITIONING COMMAND) TO VERIFY COMMAND ABORT IF PLUG IS PULLED	
	2631	ISSUE SOME CLOCKS TO GET THE COMMAND STARTED (USE "SEARCH" WITH "DTETST" FLAG UP TO STOP CLOCKING ?)	7.
	2648	CHECK THAT THE UNIT NO. UNDER TEST HAS GONE OFFLINE	
	2659	NOW REPLACE THE ADDRESS PLUG	
	2674	CHECK THAT THE ORIGINAL UNIT HAS COME BACK ON LINE	
	2689	AFTER THE PLUG CHANGE	
	2733	TAKE A NEW REGISTER SNAPSHOT AND COMPARE THE REGISTER CONTENTS WITH EXPECTED VALUES	
-	2751	NOW CLEAR OUT THE CONTROLLER AND DRIVE	
-	2760	CHANGE THE REGISTER SNAPSHOT TO EXPECTED VALUES AFTER THE CLEAR	
-	2807	TAKE ANOTHER REGISTER SNAPSHOT AND COMPARE RESULTS WITH THE EXPECTED VALUES	

MAINDEC-11-DZRJI-A, RPC4-5-6 FUNCT. CONT. TST-PT 1 ES24 (USE NED METHOD TO VERTEY THAT ATTENTION BIT COMES UP IN THE PROPER LOCATION ??) 2830 SET 'NV'. IN RHOSI AFTER RESET FROM THE RECALISRATE CAUSED BY PULLING THE PLUG 2855 TEST 15 CHECK ALL ADDRESS PLUG ADDRESSES 2857 CHECK THAT ALL ADDRESS PLUG NUMBERS FUNCTION PROPERLY 2859 THIS TEST IS DONE FOR MEMOREX RPC9-5 AND RPO6-5 ONLY THIS TEST IS SELECTED BY SHAS AND THE DEFAULT IS NOT TO DO IT 2877 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED HITH SHS 2885 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'NV' IN RNDSI AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3020 ***********************************	
USE NED METHOD TO VERIFY THAT ATTENTION BIT COMES UP IN THE PROPER LOCATION ??) 2830 SET 'VV' IN RHOSI AFTER RESET FROM THE RECALIBRATE CRUSED BY PULLING THE PLUG 2855 CHECK ALL ADDRESS PLUG ADDRESSES 2857 CHECK THAT ALL ADDRESS PLUG NUMBERS FUNCTION PROPERLY 2859 THIS TEST IS DONE FOR MEMOREX RPD4'S AND RPD6'S ONLY THIS TEST IS SELECTED BY SW#S AND THE DEFAULT IS NOT TO DO IT 2877 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED WITH SWS 2895 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2959 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV' IN RHOSI AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT ***********************************	15
CAUSED BY PULLING THE PLUG 2855 TEST 15 CHECK ALL ADDRESS PLUG ADDRESSES 2857 CHECK THAT ALL ADDRESS PLUG NUMBERS FUNCTION PROPERLY 2859 THIS TEST IS DONE FOR MEMOREX RPD4'S AND RPD6'S ONLY THIS TEST IS SELECTED BY SW&S AND THE DEFAULT IS NOT TO DO IT 28.77 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED WITH SWS 2895 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHD51 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 3020 ***********************************	
CHECK THAT ALL ADDRESS PLUG NUMBERS FUNCTION PROPERLY THIS TEST IS DONE FOR MEMOREX RPD4'S AND RPD6'S ONLY THIS TEST IS SELECTED BY SWAS AND THE DEFAULT IS NOT TO DO IT 2877 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED WITH SWS 2895 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 298S SET 'VV'IN RHD51 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 3020 ***********************************	
THIS TEST IS DONE FOR MEMOREX RPDY'S AND RPDG'S ONLY THIS TEST IS SELECTED BY SWAS AND THE DEFAULT IS NOT TO DO IT 2877 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED WITH SWS 2885 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3020 ***********************************	
2877 CHECK TO SEE IF THIS TEST HAS BEEN SELECTED WITH SWS 2885 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 3020 ***********************************	
THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK 2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 ***********************************	
2927 CHANGE ADDRESS PLUG ON THE UNIT UNDER TEST 2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 3020 ***********************************	
2946 HOUSEKEEPING 2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV' IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 ***********************************	
2958 ATTEMPT TO ADDRESS THE NEW UNIT NUMBER 2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 ***********************************	
2979 CHECK IF ALL UNIT NUMBERS HAVE BEEN TRIED 2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 ***********************************	
2988 SET 'VV'IN RHDS1 AFTER RESET FROM THE RECALIBRATE CAUSED BY PULLING THE ADDRESS PLUGS OUT 3019 ***********************************	
CAUSED BY PULLING THE ADDRESS PLUGS OUT ***********************************	
3020 ***********************************	
3020 **DRIVE COMMAND TESTS** ********************************	
3020 **DRIVE COMMAND TESTS** ********************************	
3021	
3029 TEST 16 NO OPERATION FUNCTION TEST ALL POSSIBLE REGISTERS ARE CLEARED THEN A"NOP"=0 IS GIVEN NO CHANGE SHOULD HAPPEN ALL POSSIBLE REGISTERS ARE FILLED WITH ONES THEN A "NOP" IS GIVEN NO CHANGE SHOULD HAPPEN	

NOW SAVE REGISTERS FOR COMPARISON AFTER NO OPERATION

NOW COMPARE REGISTERS BEFORE NO-OP COMMAND WITH AFTER NO-OP COMMAND

3054

3087

SEG 0026

- 3107 NOW REPEAT TEST BY MOVING IN ALL POSSIBLE ONES
- 3135 NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT
- 3169 NOW SAVE REGISTERS FOR COMPARISON AFTER A NO-OP
- 3202 CHANGE REGISTERS TO EXPECTED VALUES
- 3223 NOW COMPARE REGISTERS BEFORE NO-OP WITH AFTER NO-OP COMMAND
- 3246 TEST 17 DRIVE CLEAR
 ALL WRITE BITS OF ALL REGISTERS ARE FILLED
 WITH ONES EXCEPT GO.CLR.IE.PAT.MCPE,UPE
 THEN A DRIVE CLEAR IS GIVEN
 THEN ALL REGISTERS ARE CHECKED TO HAVE APPROPIAVE VALUE
- 3266 WRITE ALL WRITABLE REGISTER BITS
- 3288 NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT
- 3338 NOW LOAD 'SAVERE' REGISTER SNAPSHOT WITH EXPECTED VALUES
- NOW THAT SAVERE TABLE HAS BEEN LOADED WITH EXPECTED VALUES, THE REGISTERS WILL BE COMPARED WITH SAVERE TABLE
- 3461 TEST 20 READ-IN-PRESET IF STARTING ADDRESS 220 IS USED THIS TEST WILL NOT BE PERFORMED

IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED

IF NO ACT-11 MONITOR IS PRESENT THEN
THIS TEST IS PERFORMED ONLY ON THE FIRST PASS
ON SUBSEQUENT PASSES THIS TEST IS NOT DONE

THIS TESTS THE READ-IN-PRESET COMMAND
FIRST THE DRIVE IS POWERED DOWN AND UP IN ORDER TO
RESET VV-BIT *6 IN RHDS1
THEN ALL WRITE BITS OF ALL REGISTERS ARE FILLED
WITH ONES EXCEPT GO, CLR. IE. PAT. MCPE. UPE
ATA FOR DRIVE UNDER TEST IS MADE = 0

THEN A READ-IN-PRESET COMMAND = 20 IS GIVEN
THEN ALL REGISTERS ARE TESTED
THE FOLLOWING SHOULD BE THE REGISTER CONTENTS
RHCA = D, RHDST = D, RHOF SHOULD HAVE
FMT22 = D, ECI = D, HCI = D, RHDS1 SHOULD HAVE VV = 1
ALL OTHER REGISTERS SHOULD BE UNCHANGED

MAINDEC-11-DZRJI-A. RPO4/5/6 FUNCT, CONT. TST-PT 1

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3497 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK

3544 NOW INITIALIZE ALL THE REGISTERS

3565 NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT

3595 NOW SAVE REGISTERS FOR COMPARISON AFTER READ-IN COMMAND

3643 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE

3670 NOW THAT SAVERE TABLE WITH SAVED REGISTERS HAVE THE EXPECTED VALUE AFTER A READ-IN COMMAND COMPARISONS ARE MADE

3702 TEST 21 READ-IN-PRESET

3704 THIS TEST IS THE SAME AS THE PREVIOUS TEST EXCEPT THAT IT DOES NOT TEST THE SETTING OF VV

THIS TEST IS HERE BECAUSE IF ACT-11 MONITOR IS PRESENT THEN THE PREVIOUS TEST WILL NOT BE PERFORMED THIS TESTS THE READ-IN-PRESET COMMAND ALL WRITE BITS OF ALL REGISTERS ARE FILLED WITH ONES EXCEPT GO, CLR. IE. PAT, MCPE, UPE ATA FOR DRIVE UNDER TEST IS MADE = 0

THEN A READ-IN-PRESET COMMAND = 20 IS GIVEN
THEN ALL REGISTERS ARE TESTED
THE FOLLOWING SHOULD BE THE REGISTER CONTENTS
RHCA = 0, RHDST = 0, RHOF SHOULD HAVE
FMT22 = 0, ECI = 0, HCI = 0, RHDS1 SHOULD HAVE VV = 1
ALL OTHER REGISTERS SHOULD BE UNCHANGED

3737 INITIALIZE ALL THE REGISTERS

3767 NOW SAVE REGISTERS FOR COMPARISON AFTER READ-IN COMMAND

3815 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE

NOW THAT SAVERE TABLE WITH SAVED REGISTERS HAVE THE EXPECTED VALUE AFTER A READ-IN COMMAND COMPARISONS ARE MADE

3883 TEST 22 MAKE CURRENT CYLINDER = 777

3902 TEST 23 MAKE CURRENT CYLINDER = 377

3921 TEST 24 RECALIBRATE COMMAND

3923 ALL FOSSIBLE REGISTERS ARE FILLED WITH ONES THEN A RECALIBRATE = 6 COMMAND IS GIVEN

3926 NO REGISTERS SHOULD CHANGE EXCEPT RHCC = 0

3962 NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT

3991 NOW SAVE REGISTERS FOR COMPARISON AFTER RECALIBRATE

4022 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

4054 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

4074 NOW COMPARE REGISTERS AFTER A RECALIBRATE COMMAND

4105 TEST 25 MAKE CURRENT CYLINDER = 777

4124 TEST 26 MAKE CURRENT CYLINDER = 377

4142 TEST 27 RECALIBRATE COMMAND

4144 ALL POSSIBLE REGISTERS ARE FILLED WITH D THEN A RECALIBRATE =6 COMMAND IS GIVEN

4147 NO REGISTERS SHOULD CHANGE EXCEPT RHCC=0

4191 NOW SAVE REGISTERS FOR COMPARISON AFTER RECALIBRATE

4222 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO

4245 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

4269 NOW COMPARE REGISTERS AFTER A RECALIBRATE COMMAND

4288 TEST 30 UNLOAD COMMAND

4290 IF STARTING ADDRESS 220 IS USED THIS TEST WILL NOT BE PERFORMED

IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED

IF NO ACT-11 MONITOR IS PRESENT THEN THIS TEST IS PERFORMED ONLY ON THE FIRST PASS ON SUBSEQUENT PASSES THIS TEST IS NOT DONE

ALL POSSIBLE REGISTERS ARE FILLED WITH ONES
THEN AN UNLOAD COMMAND =2 IS GIVEN
NO REGISTERS SHOULD CHANGE EXCEPT MOL SHOULD=0
THEN THE DRIVE IS POWERED UP BY OPERATOR
AND A PACK ACKNOWLEDGE COMMAND (ALREADY TESTED)
SETS VV-IN RHDS1

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IJΙ-A,	RPC4/5/6 FUNCT. CONT. TST-PT 1 DECDOC VER 00.04
4311	THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK
4337	THIS SETTING OF VV IS FOR LOOP ON ERROR ONLY WHERE UNLOAD TAKES EFFECT AND CYCLE UP BRINGS VV DOWN
4364	SET VV IN RHDS1 WITH PACK ACKNOWLEDGE
4392	LOAD ALL POSSIBLE REGISTERS WITH ONES
4434	NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT
4465	NOW SAVE REGISTERS FOR COMPARISON AFTER UNLOAD
4499	COMPARE CONTENTS OF RHCS1 AND RHDS1, WHICH WERE SAVED DURING THE UNLOAD COMMAND, WITH THE EXPECTED RESULTS
4547	NOW CHANGE REGISTERS SAVED BEFORE UNLOAD COMMAND TO EXPECTED VALUES AFTER UNLOAD COMMAND
4550	- AGAIN 'MOL' \$ 'VV' ARE DON'T CARES
4585	NOW COMPARE REGISTERS AFTER THE UNLOAD COMMAND WITH EXPECTED VALUES
4624	SET VV IN RHDS1 AFTER RESET FROM ACTUATING THE STANDBY SWITCH AND CYCLING UP (MOL = 1)
4646	TEST 31 OFFSET AND RETURN TO CENTER LINE COMMAND
4648	THIS TESTS TWO COMMANDS: (1)OFFSET, (2)RETURN-TO-CENTER-LINE
4650	ALL POSSIBLE REGISTERS ARE FILLED WITH ONES (EXCEPT RHOF) AND AN OFFSET IS GIVEN ALL REGISTERS ARE COMPARED, ONLY ATA SHOULD SET ALL OTHER REGISTERS SHOULD REMAIN UNCHANGED
4655	THEN A RETURN-TO-CENTER-LINE IS GIVEN ALL REGISTERS ARE COMPARED ONLY ATA SHOULD SET AND RHOF SHOULD CLEAR (EXCEPT HCI, ECI, FMT22) ALL OTHER REGISTERS SHOULD REMAIN UNCHANGED
4660	THE ABOVE PROCESS IS REPEATED FOR OFFSET REGISTER VALUES OF 1 TO 377 IE. 377 TIMES

THE OFFSET REGISTER WILL BE INCREMENTED FROM 0 TO 377

4721 NOW SET BITS IN RHAS FOR ALL DRIVES PRESENT

4748 NOW SAVE REGISTERS FOR COMPARISON AFTER OFFSET

SEQ 0031

4782 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

4814 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

4835 NOW COMPARE REGISTERS AFTER AN OFSET COMMAND

4856 NOW A RETURN TO CENTER LINE COMMAND WILL BE GIVEN

4869 NOW REGISTERS ARE SAVED FOR COMPARISON AFTER COMMAND

4902 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO

4934 NOW CHANGE SAVED REGISTER TO EXPECTED VALUE

4958 NOW COMPARE REGISTERS AFTER RETURN-TO-CENTER-LINE

4991 TEST 32 OFFSET COMMAND

4993 THIS TEST WILL ONLY GIVE REPEATED OFFSETS

5055 READ/WRITE TESTS USING MEDIA

5058 TEST 33 WRITE/READ HEADER AND DATA (0'S)

WRITE HEADER AND DATA CYLINDER D. FORMAT 16 BITS PER WORD TRACK D. SECTOR D. KEYS=D. NUMBER OF WORDS 256 WORDS

OF D
THEN READ HEADER AND DATA FOR ABOVE.
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
10000.0.0.0. AND 256 OF D
THE WRITE COMMAND IS THEN LOADED INTO THE REGISTERS EXCEPT
THE GO BIT, AND ALL THE REGISTERS ARE SAVED
THEN GO IS GIVEN FOR WRITE HEADER AND DATA

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGED THEN WRITE FROM BUFFER IS CHECKED TO SEE THAT NOTHING CHANGED

NOW FOR THE READ COMMAND READ INTO BUFFER IS FILLED WITH ALL ONES, COMMAND IS LOADED INTO REGISTERS EXCEPT GO BIT AND ALL REGISTERS ARE SAVED GO IS GIVEN FOR THE READ COMMAND

ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE THEN THE READ DATA IS COMPARED.

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT, CONT. TST-PT 1

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SEG 0032

5092	FILL WRITE F	ROM BUFFER	WITH HEADER
5103	FILL WRITE F	ROM BUFFER	WITH DATA

NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO MAKE SURE THAT WRITE DID NOT CHANGE WRITE FROM BUFFER

5130 NOW THE WRITE HEADER AND DATA COMMAND WILL BE FILLED

5150 NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATA

5182 ONE REVOLUTION=16670 MICRO SEC. ONE SECTOR = 760 MICRO SEC

5192 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO

5216 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

5228 NOW COMPARE REGISTERS BEFORE WRITE HEADER AND DATA WITH REGISTERS AFTER COMMAND

5248 NOW WRITE FROM BUFFER WILL BE CHECKED TO SEE THAT NOTHING GOT CHANGED

5254 NOW A READ HEADER AND DATA COMMAND WILL BE GIVEN READ INTO BUFFER IS FILLED WITH ONES

5279 NOW FILL COMMAND

5299 NOW SAVE REGISTERS FOR COMPARISON AFTER READ HEADER AND DATA

5339 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO

5353 CHANGE SAVED REGISTERS TO EXPECTED VALUES

5375 COMPARE REGISTER BEFORE READ HEADER AND DATA WITH REGISTERS AFTER COMMAND

5394 NOW READ INTO BUFFER WILL BE CHECKED TO SEE THE READ WAS GOOD

5415 TEST 34 READ DATA (0'S)

5417

THIS TEST READS DATA WRITTEN BY THE PREVIOUS TEST THE WRITE FROM BUFFER IS FILLED WITH ALL OS THE COMMAND IS FILLED. THEN ALL REGISTERS SAVED THEN READ DATA COMMAND IS GIVEN ALL REGISTERS ARE COMPARED FOR PROPER VALUES READ DATA INTO 'READ INTO' BUFFER IS CHECKED





5574

SEQ 0033

5434 FILL WRITE FROM BUFFER WITH EXPECTED DATA

5442 NOW THE READ DATA COMMAND WILL BE FILLED

5461 NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND

5501 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

5525 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

5537 NOW COMPARE REGISTERS BEFORE READ DATA WITH AFTER COMMAND

NOW READ INTO BUFFER WILL BE CHECKED TO SEE THAT READ WAS GOOD

5572 TEST 35 WRITE/READ DATA (1'S & 125252)

THIS TEST GIVES A WRITE DATA COMMAND FRO CYLINDER D
TRACK D. SECTOR D. KEYS D. 200 WORDS OF ALL ONES
THIS SECTOR IS FORMATED BY PREVIOUS TEST
THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN
SAME CYLINDER. TRACK, SECTOR, KEYS
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
200 ONES AND 56 125252
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE
ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATA

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE

THEN READ INTO BUFFER IS FILLED WITH 200 OF ZEROS AND 56 OF 377, WRITE FROM BUFFER IS FILLED WITH 200 ONES AND 56 OF 377.
THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN

ALL REGISTERS ARE CHECKED READ DATA IS CHECKED

5608 NOW FILL WRITE FROM BUFFER -200 OF 1'S AND 56 OF 125252

NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SC THAT AFTER A WRITE COMPARISONS CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER

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SEQ 0034

5636 NOW WRITE DATA COMMAND WILL BE LOADED

5655 NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE DATA

5687 ONE REVOLUTION = 16670 MICRO SEC, ONE SECTOR=760 MICRO SEC

5697 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

5721 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE

5733 NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS AFTER COMMAND

5752 NOW WRITE FROM BUFFER WILL BE CHECKED FOR NO CHANGE

5767 NOW A READ DATA COMMAND WILL BE GIVEN

5769 FILL READ INTO BUFFER WITH 200 ZEROS AND 56 OF 377

5788 FILL WRITE FROM BUFFER WITH 200 ONES AND 56 OF 377

5801 NOW FILL COMMAND

5936

5820 NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND

5860 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

5884 CHANGE SAVED REGISTERS TO EXPECTED VALUES

5896 COMPARE REGISTERS BEFORE READ DATA COMMAND WITH REGISTERS AFTER COMMAND

5914 NOW READ INTO BUFFER IS CHECKED FOR GOOD READ

5934 TEST 36 WRITE/READ DATA (125252)

THIS TEST GIVES A WRITE DATA COMMAND FOR CYLINDER D
TRACK D. SECTOR D. KEYS D. 256 WORDS OF 125252
THIS SECTOR IS FORMATED BY PREVIOUS TEST
THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN
SAME CYLINDER. TRACK. SECTOR. KEYS
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
256 OF 125252
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE
ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATI

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE

THEN READ INTO BUFFER IS FILLED WITH 256 OF ZEROS WRITE FROM BUFFER IS FILLED WITH

KO3

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SEQ 0035

256 OF 125252 THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN

ALL REGISTERS ARE CHECKED READ DATA IS CHECKED

	The state of the s
5970	NOW FILL WRITE FROM BUFFER - 256 OF 125252
5978	NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER
5988	NOW WRITE DATA COMMAND WILL BE LOADED
6007	NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE DATA
6039	ONE REVOLUTION=16670 MICROSEC, ONE SECTOR=760 MICROSEC
6049	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
6073	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE
6085	NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS AFTER COMMAND
5104	NOW WRITE FROM BUFFER WILL CHECKED FOR NO CHANGE
6119	NOW A READ DATA COMMAND WILL BE GIVEN FILL READ INTO BUFFER WITH 256 ZEROS
6134	FILL WRITE FROM BUFFER WITH 256 OF 125252
6142	NOW FILL COMMAND
6161	NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND
6201	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO
6225	CHANGE SAVED REGISTERS TO EXPECTED VALUES
6237	COMPARE REGISTERS BEFORE READ DATA COMMAND WITH REGISTERS AFTER COMMAND
6255	NOW READ INTO BUFFER IS CHECKED FOR GOOD READ

6273 TEST 37 WRITE/READ DATA (052525)

6275

THIS TEST GIVES A WRITE DATA COMMAND FOR CYLINDER D
TRACK D. SECTOR D. KEYS D. 200 WORDS OF 052525
THIS SECTOR IS FORMATED BY PREVIOUS TEST
THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN
SAME CYLINDER. TRACK. SECTOR. KEYS
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
200 OF 052525 AND 56 OF 377
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE
ALL REGISTERS ARE SAVED AND THEN GO IS TO WRITE DATI

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE

THEN READ INTO BUFFER IS FILLED WITH 200 IF ZEROS AND 56 ALL ONES, WRITE FROM BUFFER IS FILLED WITH 200 WORDS OF 52525 AND 56 WORDS OF 0 THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN

ALL REGISTER ARE CHECKED READ DATA IS CHECKED

6309	NOW FILL WRITE FROM BUFFER-200 OF 52525 AND 56 OF 377
6355	NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER
6337	NOW WRITE DATA COMMAND WILL BE LOADED
6356	NOW SAVE REGISTER FOR COMPARISON AFTER WRITE DATA
6388	ONE REVOLUTION=16670 MICROSEC, ONE SECTOR=760 MICROSEC
6398	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
6422	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE
6434	NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS AFTER COMMAND
6453	NOW WRITE FROM BUFFER WILL BE CHECKED FOR NO CHANGE
6468	NOW A READ DATA COMMAND WILL BE GIVEN

6638

6470 FILL READ INTO BUFFER WITH 200 ZEROS AND 56 OF ALL ONES

6489 FILL WRITE FROM BUFFER WITH 200 OF 52525 AND 56 OF D

6502 NOW FILL COMMAND

6521 NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND

6561 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

6585 CHANGE SAVED REGISTERS TO EXPECTED VALUES

6597 COMPARE REGISTERS BEFORE READ DATA COMMAND WITH REGISTERS AFTER COMMAND

6615 NOW READ INTO BUFFER IS CHECKED FOR GOOD READ

6636 TEST 40 WRITE/READ DATA USING UNIBUS B

THIS TEST USES UNIBUS B IF CONNECTED TO THE RH
IF UNIBUS B IS NOT CONNECTED THEN THIS TEST IS NOT PERFORMED
THIS TEST GIVES A WRITE DATA COMMAND FOR CYLINDER O
TRACK O, SECTOR O, KEYS O, 200 WORDS OF 052525
THIS SECTOR IS FORMATED BY PREVIOUS TEST
THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN
SAME CYLINDER, TRACK, SECTOR, KEYS
THESE COMMANDS USE UNIBUS B FOR DATA
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
200 OF 052525 AND 56 OF 377
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE
ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATA

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE

THEN READ INTO BUFFER IS FILLED WITH 200 IF ZEROS AND 56 ALL ONES, WRITE FROM BUFFER IS FILLED WITH 200 WORDS OF 52525 AND 56 WORDS OF 0
THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN

ALL REGISTER ARE CHECKED READ DATA IS CHECKED

6676 CHECK TO SEE IF THE PROGRAM IS RUNNING WITH AN RH70

	NO3.	
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6685	NOW FILL WRITE FROM BUFFER-200 OF 52525 AND 56 OF 377	
6698	NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER	
6713	NOW WRITE DATA COMMAND WILL BE LOADED	
6734	NOW SAVE REGISTER FOR COMPARISON AFTER WRITE DATA	
6765	ONE REVOLUTION=16670 MICROSEC, ONE SECTOR=760 MICROSEC	
5775	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO	
6800	CHECK IF NEM NON EXISTANT MEMORY IS SET IF SET IT MEANS UNIBUS B IS NOT CONNECTED SO THIS TEST IS NOT PERFORMED	
6822	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE	
6834	NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS AFTER COMMAND	
6854	NOW WRITE FROM BUFFER WILL BE CHECKED FOR NO CHANGE	
6870	NOW A READ DATA COMMAND WILL BE GIVEN FILL READ INTO BUFFER WITH 200 ZEROS AND 56 OF ALL ONES	
6890	FILL WRITE FROM BUFFER WITH 200 OF 52525 AND 56 OF 0	
6903	NOW FILL COMMAND	
6924	NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND	
6963	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO	
6987	CHANGE SAVED REGISTERS TO EXPECTED VALUES	
6999	COMPARE REGISTERS BEFORE READ DATA COMMAND WITH REGISTERS AFTER COMMAND	
7018	NOW READ INTO BUFFER IS CHECKED FOR GOOD READ	
7043	TEST 41 IMPLIED SEARCH	
7045	ONLY NEW ADDITION IN THIS TEST IS AN IMPLIED SEARCH A WRITE HEADER AND DATA IS GIVEN FOR MORE THAN ONE SECTOR OF WORDS WRITE HEADER AND DATA CYLINDER O, FORMAT 16 BITS PER WORD TRACK O, SECTOR O, KEYS=O, NUMBER OF WORDS 266 (4 HEADER 256 DATA=O 4 HEADER 2 DATA=1 THEN READ HEADER AND DATA FOR ABOVE SECTOR 1 ONLY	

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SE0 0038

SEQ 0039

WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH 10000,0.0.0 AND 256 OF 0. 10000,1.0.0. AND 2 OF 1 THE WRITE COMMAND IS THEN LOADED INTO THE REGISTERS EXCEPT THE GO BIT, AND ALL THE REGISTERS ARE SAVED THEN GO IS GIVEN FOR WRITE HEADER AND DATA

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE THEN WRITE FROM BUFFER IS CHECKED TO SEE THAT NOTHING CHANGED

NOW FOR THE READ COMMAND READ INTO BUFFER IS FILLED WITH 377, WRITE FROM BUFFER IS FILLED WITH 10000,1,0,0,1,1 AND 254 OF ZEROS COMMAND IS LOADED INTO REGISTERS EXCEPT GO AND IE THEN ALL REGISTERS ARE SAVED GO IS GIVEN FOR THE READ COMMAND, 256 WORDS

ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE THEN THE READ DATA IS COMPARED

	THEN THE READ DATA IS COMPARED
7081	FILL WRITE FROM BUFFER WITH HEADER
7091	FILL WRITE FROM BUFFER WITH DATA
7098	FILL WRITE FROM BUFFER WITH NEXT SECTOR HEADER
7108	FILL WRITE FROM BUFFER WITH NEXT SECTOR DATA
7115	NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO MAKE SURE THAT WRITE DID NOT CHANGE WRITE FROM BUFFER.
7147	NOW THE WRITE HEADER AND DATA COMMAND WILL BE FILLED
7167	NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATI
7198	ONE REVOLUTION = 16670 MICRO SEC, ONE SECTOR = 760 MICRO SEC
7208	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
7232	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES
7244	NOW COMPARE REGISTERS BEFORE WRITE HEADER AND DATA WITH REGISTERS AFTER COMMAND
7264	NOW WRITE FROM BUFFER WILL BE CHECKED TO SEE THAT

NOTHING GOT CHANGED

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SEQ 0040

200

7280 NOW A READ HEADER AND DATA COMMAND WILL BE GIVEN FOR SECTOR 1, 256 WORDS READ INTO BUFFER IS FILLED WITH ONES

7295 WRITE FROM BUFFER IS FILLED WITH EXPECTED DATA

7313 NOW FILL COMMAND

7333 NOW SAVE REGISTERS FOR COMPARISON AFTER READ HEADER AND DATA

7365 ONE REVOLUTION = 16670 MICRO SEC, ONE SECTOR 760 MICRO SECONDS

7375 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RC AND RS IMMEDIATELY AFTER GO

7399 CHANGE SAVED REGISTERS TO EXPECTED VALUES

7411 COMPARE REGISTERS BEFORE READ HEADER AND DATA WITH REGISTERS AFTER COMMAND

7431 NOW READ INTO BUFFER WILL BE CHECKED TO SEE

7452 TEST 42 IMPLIED SEEK TO CYL DOI

7454 SEEK TESTS

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7456

ONLY NEW ADDITION IN THIS TEST IS AN IMPLIED SEEK FROM CYLINDER OF TO CYLINDER 1. A WRITE HEADER AND DATA IS GIVEN FOR MORE THAN ONE SECTOR OF WORDS

WRITE HEADER AND DATA CYLINDER C. FORMAT 16 BITS PER WORD TRACK 18, SECTOR 21, KEYS=0, NUMBER OF WORDS 266 WORDS (4 HEADER, 256 DATA=1125, 4 HEADER 2 DATA = 2000 THEN READ HEADER AND DATA FOR ABOVE, TRACK O. SECTOR D. CYL=1 WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH 10000,0,0 and 256 OF 1125, 10001,0,0,0 and 2 of 2000 THE WRITE COMMAND IS THEN LOADED INTO THE REGISTERS EXCEPT THE GO BIT, AND ALL THE REGISTERS ARE SAVED THEN GO IS GIVEN FOR WRITE HEADER AND DATA

THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE THEN WRITE FROM BUFFER IS CHECKED TO SEE THAT NOTHING CHANGED

NOW FOR READ COMMAND READ INTO BUFFER IS FILLED WITH ALL ONES, WRITE FROM BUFFER IS LOADED WITH 10001,0,0 and 2 of 2000,254 of Zeros Command Is Loaded Into Registers except go and IE all Registers are Saved GO IS GIVEN FOR THE READ COMMAND

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7825

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SEQ 0041

ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE THEN THE READ DATA IS COMPARED.

	THEN THE READ DATA IS COMPARED.
7494	FILL WRITE FROM BUFFER WITH HEADER
7504	FILL WRITE FROM BUFFER WITH DATA
7511	FILL WRITE FROM BUFFER WITH NEXT TRACK HEADER
7521	FILL WRITE FROM BUFFER WITH NEXT TRACK DATA
7528	NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS CAN BE MADE TO MAKE SURE THAT WRITE DID NOT CHANGE WRITE FROM BUFFER.
7560	NOW THE WRITE HEADER AND DATA COMMAND WILL BE FILLED
7580	NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATAL
7612	ONE REVOLUTION = 15670 MICRO1 SEC, ONE SECTOR = 760 MICRO1 SEC
7622	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
7545	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES
7664	NOW COMARE REGISTERS BEFORE WRITE HEADER AND DATA WITH REGISTERS AFTER COMMAND
7684	NOW WRITE FROM BUFFER WILL BE CHECKED TO SEE THAT NOTHING GOT CHANGED
7700	NOW A READ HEADER AND DATA COMMAND WILL BE GIVEN READ INTO BUFFER IS FILLED WITH ONES
7715	WRITE FROM BUFFER IS FILLED WITH 10001,0,0,0,2000,2000, AND 254 OF 0
7732	NOW FILL COMMAND
7751	NOW SAVE REGISTERS FOR COMPARISON AFTER READ HEADER AND DATA
7791	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
7815	CHANGE SAVED REGISTERS TO EXPECTED VALUES

COMPARE REGISTERS BEFORE READ HEADER AND DATA WITH REGISTERS AFTER COMMAND

7845 NOW READ INTO BUFFER WILL BE CHECKED TO SEE

7967 TEST 43 SEEK & WRT TEST (CYL = 0-10)

7869 THIS TEST GETS THE HEADS OUT TO CYLINDER 10 NOT BY ONE SEEK BUT BY TEN IMPLIED SEEKS ONE CYLINDER AT A TIME

THIS TEST STARTS WITH A (ALREADY TESTED) RECALIBRATE
THAT IS CYLINDER ZERO. THEN ON CYLINDER D SECTOR
#21 TRACK #18 IT WRITES 266 WORDS THERE BY GETTING
THE HEAD TO CYLINDER 1 THEN IT WRITES 266 WORDS ON
CYLINDER 1 SECTOR #21 TRACK #18 THERE BY GETTING
THE HEADS TO CYLINDER 2
THIS IS REPEATED 10 TIMES GETTING THE
HEADS TO CYLINDER 10
THEN A SEEK COMMAND IS GIVEN TO CYLINDER D
AND DATA ALREADY WRITTEN IS CHECKED

7893 THE FOLLOWING MOVES ARE TO INITIALIZE TEST FROM CYLINDER 0
THESE LOCATIONS ARE CHANGED DURING TEST TO ENABLE GOING TO NEXT CYLINDER

7909 THIS IS TO GET THE HEADS TO CYLINDER O

7940 FILL WRITE FROM BUFFER WITH HEADER

7951 FILL WRITE FROM BUFFER WITH DATA

7959 FILL WRITE FROM BUFFER WITH NEXT TRACK HEADER

7970 FILL WRITE FROM BUFFER WITH NEXT TRACK DATA

7978 THE WRITE HEADER AND DATA COMMAND WILL BE FILLED

7998 SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATA

ONE REVOLUTION = 16670 MICRO SECONDS, ONE SECTOR = 760 MICRO SEC.

MAX TIME ALLOWED = ONE REVOLUTION + SEEK + 2 SECTORS

MIN TIME ALLOWED = 2 SECTORS + SEEK

2042 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO

9056 NOW CHANGES SAVED REGISTERS TO EXPECTED VALUES

2085 COMPARE REGISTERS BEFORE WRITE HEADER AND DATA WITH REGISTERS AFTER COMMAND

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SEG 0043

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810	03	SETUP TO READ HEADER AND DATA FOR NEXT TRACK FILL READ INTO BUFFER WITH ALL ONES
911	18	FILL WRITE FROM BUFFER WITH EXPECTED DATA
814	41	FILL COMMAND INTO REGISTERS
816		SAVE REGISTERS FOR COMPARISON AFTER READ HEADER AND DATA
920	02	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO
922	26	CHANGE SAVED REGISTERS TO EXPECTED VALUES
823	38	COMPARE REGISTERS BEFORE READ HEADER AND DATA WITH REGISTERS AFTER COMMAND
829	57	READ INTO BUFFER IS CHECKED FOR PROPER READ
827		THE HEADS HAVE ADVANCED ONE CYLINDER BY AN IMPLIED
		CHANGES WILL BE MADE TO ENABLE GOING TO THE NEXT CYLINDER AND THEN THE ABOVE WILL BE REPEATED TILL CYLINDER 10 IS REACHED
829		THE HEADS ARE NOW AT CYLINDER 10 ALL REGISTERS WILL BE SAVED AND A SEEK WILL BE GIVEN TO CYLINDER 0 FILL REGISTERS FOR A SEEK COMMAND
831	12 5	SAVE REGISTERS FOR COMPARISON AFTER SEEK COMMAND
933	37 5	SEEK FOR ONE CYLINDER=7MILI SEC., FOR TEN=70 MILI SEC
834	15	COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RD AND RS IMMEDIATELY AFTER GO
837	70 1	NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE
839	94 (COMPARE REGISTERS AFTER A SEEK COMMAND
341	1	AT THIS POINT THE CURRENT CYLINDER IS GOOD AND THERE ARE NO ERROR BITS A READ HEADER AND DATA WILL BE DONE ON CYLINDER D SECTOR 21 TRACK 18, EXPECTED DATA IS 1125 FOR 10 WORDS CLEAR READ INTO BUFFER WITH ALL ONES

9425 FILL WRITE FROM BUFFER WITH EXPECTED DATA

8445 FILL READ HEADER AND DATA COMMAND FOR 10 WORDS

8493 CHECK READ WORDS

9513 TEST 44 SEEK & READ TEST (CYL = 009)

THIS TEST DEPENDS ON HEADER AND DATA WRITTEN BY THE PREVIOUS TEST. AT THIS POINT THE HEADS ARE ON

CYLINDER D

ALL REGISTERS ARE SAVED A SEEK IS GIVEN TO CYLINDER 9 ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE DATA WRITTEN ON CYLINDER 9 IS CHECKED

8533 THIS GETS HEADS TO CYLINDER D

9559 FILL REGISTERS FOR A SEEK COMMAND

8564 SAVE REGISTERS FOR COMPARISON AFTER SEEK COMMAND

8589 SEEK FOR ONE CYLINDER=7 MILI SEC., FOR TEN=70 MILI SEC

8598 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

8622 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE

8646 COMPARE REGISTERS AFTER A SEEK COMMAND

AT THIS POINT THE CURRENT CYLINDER IS GOOD AND THERE ARE NO ERROR BITS
A READ HEADER AND DATA WILL BE DONE ON CYLINDER 9
SECTOR 21 TRACK 18, EXPECTED DATA IS 23125
FOR 2D WORDS
CLEAR READ INTO BUFFER WITH ALL ONES

8682 FILL WRITE FROM BUFFER WITH EXPECTED DATA

9703 FILL READ HEADER AND DATA COMMAND FOR 10 WORDS

9751 CHECK READ WORDS

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9770
   WRITE CHECK DATA & WRITE PROTECT TESTS
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8773 TEST 45 WRITE CHECK HEADER AND DATA

WRITE CHECK HEADER AND DATA CYLINDER 5 FORMAT 16 BITS PER WORD TRACK ? SECTOR 4, KEYS D, NUMBER OF WORDS 266 CONSISTING OF 8775

10 WORDS OF 12344 (6 BITS FOR CYL, 5 FOR TRACK, 5 FOR SECTOR)
10 WORDS OF 177777
10 WORDS OF 0
10 WORDS OF 052525
10 WORDS OF 125252
16 WORDS OF LEFT ROTATING ZERO (EG 177776,177775)
16 WORDS OF LEFT ROTATING ONE (EG 1,2,4,10)

174 WORDS OF 377 4 WORDS OF HEADER 2 WORDS OF 12345

FIRST THE ABOVE DATA IS WRITTEN BY A WRITE HEADER AND

DATA COMMAND

CHECK FOR NO ERRORS
THEN THE ABOVE DATA IS READ BY A READ HEADER AND DATA
CHECK FOR NO ERRORS

THEN THE ABOVE WRITE CHECK HEADER AND DATA IS GIVEN

GET HEADS TO CYLINDER 5 8811

FILL WRITE FROM BUFFER WITH HEADER 2846

10 WORDS OF OF THE FOLLOWING DATA 8856 12344, 17777, 0, 52525, 125252

8885 FILL LEFT ROTATING ZEROS FROM WRFROM+(54.*2)

8997 FILL LEFT ROTATING ONE INTO WRFROM+(65. *2)

8907 FILL REST OF DATA

8929 READ INTO BUFFER WILL BE CLEARED

9936 THE WRITE HEADER AND DATA COMMAND WILL BE LOADED

2955 NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATA

8993 NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES

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9004
         NOW COMPARE REGISTERS BEFORE WRITE HEADER AND DATA
         WITH REGISTERS AFTER COMMAND
9024
         NOW FILL COMMAND FOR READ
9050
         NOW SAVE REGISTERS FOR COMPARISON AFTER READ HEADER AND DATA
9089
         CHANGE SAVED REGISTERS TO EXPECTED VALUES
9100
         COMPARE REGISTERS BEFORE READ HEADER AND DATA
         WITH REGISTERS AFTER COMMAND
         NOW READ INTO BUFFER WILL BE CHECKED TO SEE THAT READ WAS GOOD
3151
        A WRITE, READ HAS BEEN SUCCESSFULLY COMPLETED NOW A WRITE CHECK HEADER AND DATA WILL BE GIVEN
9140
        FILL THE WRITE CHECK HEADER AND DATA
9168
         SAVE REGISTERS FOR COMPARISON AFTER WRITE CHECK
9209
         COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN
         RO AND RS IMMEDIATELY AFTER GO
9233
        CHANGE SAVED REGISTERS TO EXPECTED VALUES
```

COMPARE REGISTERS BEFORE WRITE CHECK HEADER AND DATA WITH REGISTERS AFTER COMMAND 9245

TEST 46 WRITE CHECK DATA
THE DATA FOR THIS TEST IS WRITTEN ON DISK BY PREVIOUS TEST
WRITE CHECK DATA CYLINDER 5, FORMAT 16 BITS PER WORDS
TRACK 7, SECTOR 4, KEYS 0, NUMBER OF WORDS 258
CONSISTING OF 9269 10 WORDS OF 12344 (6 BITS FOR CYL, 5 FOR TRACK, 5 FOR SECTOR)
10 WORDS OF 177777
10 WORDS OF 0
10 WORDS OF 052525
10 WORD OF 125252 16 WORDS OF LEFT ROTATING ZERO (EG177776,177775)
16 WORDS OF LEFT ROTATING ONE (EG 1,2,4,10)
174 WORDS OF 377 2 WORDS OF 12345

FIRST THE ABOVE DATA IS FILLED INTO WRITE FROM BUFFER THEN THE ABOVE WRITE CHECK DATA IS GIVEN

9302 GET HEADS TO CYLINDER 5

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J04
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                        9337
                                     10 WORDS OF EACH 12344,17777.0,52525.125252
                        9365
                                    FILL LEFT ROTATING ZEROS FROM WRFROM+(5D.*2)
                        9377
                                    FILL LEFT ROTATING ONE INTO WRFROM+(65.*2)
                        9386
                                    FILL REST OF DATA
                        9399
                                    FILL THE WRITE CHECK HEADER AND DATA
                        9417
                                    SAVE REGISTERS FOR COMPARISON AFTER WRITE CHECK
                                    COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO
                        9456
                        9480
                                    CHANGE SAVED REGISTERS TO EXPECTED VALUES
                        9492
                                     COMPARE REGISTERS BEFORE WRITE CHECK HEADER AND DATA
                                     WITH REGISTER AFTER COMMAND
                                    TEST 47 WRITE CHECK DATA USING UNIBUS B
THIS TEST USES UNIBUS B IF CONNECTED TO THE RH
IF UNIBUS B IS NOT CONNECTED THEN THIS TEST IS NOT PERFORMED
THE DATA FOR THIS TEST IS WRITTEN ON DISK BY PREVIOUS TEST
WRITE CHECK DATA CYLINDER 5, FORMAT 16 BITS PER WORDS
TRACK 7, SECTOR 4, KEYS 0, NUMBER OF WORDS 258
                        9516
                                                 CONSISTING OF
                                                10 WORDS OF 12344 (6 BITS FOR CYL, 5 FOR TRACK, 5 FOR SECTOR)
10 WORDS OF 177777
10 WORDS OF 0
10 WORDS OF 052525
10 WORD OF 125252
16 WORDS OF LEFT ROTATING ZERO (EG177776,177775)
16 WORDS OF LEFT ROTATING ONE (EG 1,2,4,10)
                                                 174 WORDS OF 377
                                                 2 WORDS OF 12345
                                                FIRST THE ABOVE DATA IS FILLED INTO WRITE FROM BUFFER THEN THE ABOVE WRITE CHECK DATA IS GIVEN
                        9546
                                    CHECK TO SEE IF THE PROGRAM IS RUNNING WITH AN RH70
                        9562
                                    GET HEADS TO CYLINDER 5
```

9598

9626

10 WORDS OF EACH 12344,17777,0,52525,125252

FILL LEFT ROTATING ZEROS FROM WRFROM+(50. *2)

SEQ 0047

9638 FILL LEFT ROTATING ONE INTO WRFROM+(65. *2)

9647 FILL REST OF DATA

9659 FILL THE WRITE CHECK HEADER AND DATA

9681 SAVE REGISTERS FOR COMPARISON AFTER WRITE CHECK

9702 SET PORT SELECT .

9721 COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN RO AND RS IMMEDIATELY AFTER GO

9745 CHANGE SAVED REGISTERS TO EXPECTED VALUES

9757 COMPARE REGISTERS BEFORE WRITE CHECK HEADER AND DATA WITH REGISTER AFTER COMMAND

9785 TEST 50 WRITE PROTECT OPERATION
IF STARTING ADDRESS 220 IS USED THIS TEST WILL NOT BE PERFORMED

IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED

IF NO ACT-11 MONITOR IS PRESENT THEN THIS TEST IS PERFORMED ONLY ON THE FIRST PASS ON SUBSEQUENT PASSES THIS TEST IS NOT DONE

WRITE FROM BUFFER IS FILLED WITH ALL ONES AND SECTOR D, TRACK D, CYLINDER D IS FILLED WITH ALL ONES ALL REGISTERS ARE SAVED THEN WRITE LOCK BUTTON IS PRESSED AND ALL REGISTERS ARE CHECKED.
WRITE FROM BUFFER IS FILLED WITH 377 AND A WRITE IS ATTEMPTED TO SECTOR D. TRACK D, CYLINDER D 70. WORDS ALL REGISTERS ARE CHECKED THE SAME SECTOR IS READ AND DATA COMPARED TO SEE THAT NOTHING GOT DESTROYED (READ DATA SHOULD BE ALL ONES AND NOT 377) THEN WRITE LOCK BUTTON IS PRESSED TO UNLOCK WRITE LOCKS AND ALL REGISTERS ARE COMPARED

9813 THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK

9834 FILL SECTOR D. TRACK D, CYL D WITH ONES FILL WRITE FROM BUFFER

9842 FILL WRITE DATA COMMAND

9881	TIME	IS	NOT	CRI	TICAL

9890 SAVE REGISTERS FOR COMPARISON AFTER WRITE PROTECT

9891 BUTTON HAS BEEN HIT

9911 THE ONLY REGISTER THAT SHOULD CHANGE IS RHDS1 - BIT #11

9921 COMPARE ALL REGISTERS BEFORE WRITE WAS LOCKED OUT WITH REGISTER VALUES AFTER WRITE WAS LOCKED OUT

NOW A WRITE WILL BE ATTEMPTED WITH WRITE LOCKED OUT BY BUTTON FILL WRITE FROM BUFFER WITH 377

9958 TRY A ONE WORD WRITE

9976 SAVE REGISTERS

9998 TIME IS NOT CRITICAL

10007 CHANGE SAVED REGISTERS TO EXPECTED VALUE

10048 COMPARE REGISTERS BEFORE WRITE WAS ATTEMPTED WITH REGISTERS AFTER ATTEMPT

10069 NOW A READ WILL BE DONE TO DETERMIN THAT READS CAN BE DONE WITH WRITE LOCKED OUT AND THAT NO DATA ON DISK GOT CHANGED, BUT FIRST CLEAR ERROR

10080 FILL READ INTO BUFFER WITH O

10087 FILL WRITE FROM BUFFER WITH EXPECTED DATA FROM READ

10094 FILL COMMAND

10135 COMPARE READ DATA

10155 SAVE REGISTERS FOR COMPARISON AFTER WRITE LOCK HAS BEEN UNLOCKED

10179 THE ONLY BIT THAT SHOULD CHANGE IS WRL-BIT #11 IN RHDS1

10188 COMPARE ALL REGISTERS BEFORE WRITE LOCK WAS UNLOCKED WITH REGISTERS AFTER WRITE WAS UNLOCKED

10216 TEST 51 END OF DRIVE

			MO4
MAINDEC-11-DZR	II-A, RP04/5/6 F	UNCT. CONT. TST-PT 1	DECDOC VER 00.04
	10518	THIS IS THE END OF TES	ST FOR ONE DRIVE
	10220	IF THERE ARE MORE DRIV	VES. THEN THE PROGRAM ESTING THE NEXT DRIVE
	10553	END PASS IS REACHED OF	NLY AFTER ALL DRIVES ARE TESTED
10000	*******	********	*******
10266	*******	********	*******
10267	**SUBROUTINES*		*******
10000	**********	********	*******
10268	********	*********	*******
10271	END OF PASS ROL	JTINE	******
	TYPE "E	ENT THE PASS NUMBER (\$PA END PASS #XXXXX" (WHERE RES A MONITOR GO TO IT RE ISN'T JUMP TO TST1	ASS) XXXXX IS A DECIMAL NUMBER)
10315	**************************************		******
	10314 THIS ROBY GIVE PY GIVE 'RHCC' THAT TH	OUTINE WILL CHANGE THE C ING A 'SEEK' COMMAND FOL WITH THE DESIRED CYLIND HE LOADED VALUE IS CORRE	CURRENT CYLINDER REGISTER - 'RHCC' LOWED BY AN INIT WHICH WILL LOAD DER VALUE. THE ROUTINE THEN CHECKS CCT.
	CALL IS	JSR RO, D#MAKECYL	;DESIRED VALUE OF CURRENT CYLINDER
	10363 THIS FI	LLS MEMORY WITH GIVEN D	NATA NATION
		JSR RO, D#FLHEAD LOC XN XD1 XD2	FILL HEADER LOCATION WHERE SAVED NUMBER OF WORDS DATA REPEATED XN TIMES DATA REPEATED XN TIMES

30-MAR-76 23:05 PAGE 39

SEQ 0050

SEQ 0051

```
NOW FILL DATA
10381
```

10392 THIS CLEARS ANY BLOCK OF MEMORY.

FILLING IT WITH ANY DATA CALL IS

JSR RO. D#CLAREA

:FROM NUMBER OF WORDS DATA TO BE FILLED

R1 WILL HAVE STARTING ADDRESS OF BLOCK TO BE FILLED R2 WILL HAVE NUMBER OF WORDS R3 WILL HAVE DATA

THIS IS A SUBROUTINE TO FILL SAVED REGISTER LOCATION WITH GIVEN VALUE 10424 CALL IS

RO, D#FILLRE RHXX : REGISTER NAME D DATA

THIS SUBROUTINE SETS UP FOR SEARCH CALL IS 10445

RO. D#SRCH

CYLINDER SECTOR .BYTE TRACK

THIS SUBROUTINE SETS UP FOR SEEK COMMANDS CALL IS 10464

RO, 0#SEEKCY ; CYLINDER

10474 THIS SUBROUTINE SETS UP FOR OFFSET COMMANDS CALL IS

RO. D#OFSET MICRO INCHES OFSET

THIS CHECKS THAT DEVICE AVAILABLE (DVA) AND READY (RDY) IN RHCS1 = 1 AND CHECKS MEDIUM ON LINE (MOL), DEVICE PRESENT (DPR), DEVICE READY (DRY) IN RHDS1 = 1 10497

10501 IT ALSO CHECKS THAT THERE ARE NO BLIS STUCK AT 1 IN RHDS1

THIS IS A SUBROUTINE TO SAVE REGISTERS 10541 IN THE REGISTER TABLE TO ANY LOCATION THE CALL IS RO, D#SAVER ;FROM : TO

NUMBER OF WORDS SAVED

F MUST ALWAYS BE RHCS1

```
T MUST ALWAYS BE SAVRE
```

MAINDEC-11-DZRJI-A. RP04/5/6 FUNCT. CONT. TST-PT 1

```
WHEN AN EVENT IS TO BE TIMED THE RPD4 VECTORS TO "TIME 1" PRIORITY OF PROCESS OR IS 4 PRIORITY OF TRAPS MUST BE 6 PRIORITY OF RPD4 INTERRUPTS IS 7
10580
```

```
THIS IS A WAIT LOOP WHEN AN EVENT IS TO BE TIMED
THE CALL IS
WAT
A :ABSOLUTE REGISTER ADDRESS
B :BIT WAITED FOR
TA :TIME ALLOWED GIVEN IN 10 MICROSE
10594
```

TIME ALLOWED GIVEN IN 10 MICROSEC :TOLERANCE PLUS/MINUS IN 10 MICROSEC TO

RI-WILL HAVE TIME ALLOWED IN 10 MICRO SECONDS R2-WILL HAVE TOLERANCE PLUS/MINUS IN 10 MICRO SECONDS MINIMUM TIME THAT CAN BE MEASURED IS ABOUT 12 MICRO SECONDS FOR THE SLOWEST PROCESSOR

10627 THIS SECTION WAITS FOR BIT, THROUGH TWO COUNT DOWNS

10549 NOW TIME AND TOLERANCE WILL BE CHECKED

THIS IS A WAIT LOOP WHEN NO P-CLOCK IS AVAILABLE NO TIMING IS DONE 10695 CALL IS

:ABSOLUTE REGISTER ADDRESS :BIT_WAITE) FOR TIME-NOT USED HERE R3-IS A TEMPORARY COUNTER

10707 THIS HAS THE TWO COUNT DOWNS FROM 177777

BIT DID SET SO CHECK IF INTERRUPT OCCURED 10730

THIS CHANGES REGISTER SAVED VALUE CALL IS 10743

RO. D*CHREG REGISTER TO BE CHANGED NUMBER OF BITS TO BE CHANGED NEW VALUE OF BIT MUST BE 0 OR1 POSITION OF BIT TO BE CHANGED NEW NEW AND P WILL BE REPEATED N NUMBER OF TIMES

THIS FILLS A BLOCK WITH INCREMENTAL DATA 10773

RO. 3#FILL : FROM NUMBER OF WORDS N 5 STARTING VALUE OF DATA



: INCREMENT DATA BY

10790 NOW DATA WILL BE FILLED

THIS IS A SUBROUTINE TO COMPARE REGISTERS GOOD DATA IS ALREADY SAVED IN 'SAVERE' TEST DATA IS IN THE REGISTERS 10806

JSR RO. D#COMREG

SAVERE RHC51

GOOD DATA ADDRESS OF ADDRESS TEST DATA RETURN FOR ERROR

RETURN FOR GOOD COMPARISON

ON RETURN WITH ERROR 'SGDDAT' HAS GOOD DATA, 'SBDDAT' HAS BAD DATA 'REGADR' HAS REGISTER ADDRESS

10829 NOW SAVE REGISTERS

10833 NOW COMPARES WILL MADE

HERE IS A DETAILED EXPLAINATION OF HOW THE LOOP ON ERROR WORKS. ON HITTING AN ERROR IF THE LOOP ON ERROR SWITCH IS SET, THE 10951 PROGRAM GOES BACK - USUALLY BACK TO THE BEGINNING OF THE TEST.

WHEN THIS OPERATOR SELECTABLE SCOPE LOOP IS USED THEN THE POINT THE PROGRAM GOES BACK TO CAN BE CHANGED.
THE RESTRICTIONS TO THE POINT WHERE THE PROGRAM CAN GO ARE:
1. IT MUST BE WITHIN THE TEST UNDER CONSIDERATION

2. LOOP ON ERROR SWITCH MUST BE SET

3. THE ERROR MUST OCCUR WITHIN THE TEST UNDER CONSIDERATION IF THE ERROR DOES NOT OCCUR WITHIN THE TEST UNDER CONSIDERATION THE PROGRAM WILL REVERT TO NORMAL OPERATION. HOWEVER, IF LOOP ON TEST SWITCH IS SET AND THIS OPERATOR SELECTED POINT WHEN IT COMES TO THE END OF THE TEST UNDER CONSIDERATION. 10865

> AFTER LOOPING FOR SOME TIME IF THE LOOP SWITCH IS PUT DOWN THEN NORMAL OPERATION WILL CONTINUE.

THIS SAVES THE CONTENTS OF ALL HARDWARE REGISTERS IN MEMORY LOCATIONS TAGED FROM "WC" TO "EC2" 10928

10931 THIS IS DONE SO THAT COMPARES ARE DONE WITH SAVED LOCATIONS AND NOT THE REGISTERS THEMSELVES. THIS WILL MAKE ERROR PRINTOUTS FOR GOOD AND BAD DATA ALWAYS DIFFRENT

10955 THIS IS A DATA COMMAND SETUP SUBROUTINE THE CALL IS

RO. D*RUN

.BYTE

:CYLINDER :SECTOR :TRACK WORD COUNT BUS ADDRESS

D05 MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT, CONT. TST-PT 1 DECDOC VER 00.04 . 30-MAR-76 23:05 :BUS ADDRESS INHIBIT :FMT22=1 =16 BIT WORDS :ECI = ECC CORRECTION INHIBIT :HCI = HEADER COMPARE INHIBIT FMT22!ECI!HCI COM : COMMAND ADDRESS 10993 THIS IS A SUBROUTINE TO COMPARE TWO BLOCKS IN MEMORY R1 HAS GOOD DATA BUFFER ADDRESS
R2 HAS TEST DATA BUFFER ADDRESS
R5 HAS ADDRESS OF RETURN ON ERROR
R3 HAS NUMBER OF WORDS TO BE COMPARED
R4 HAS ONE MORE THAN NUMBER OF WORDS TO BE COMPARED 10985 10991 CALL IS: JSR RD. D*COMPAR ADDRESS OF GOOD DATA ADDRESS OF TEST DATA NUMBER OF WORDS TO BE COMPARED RETURN ON ERROR RETURN ON NO ERROR THIS ROUTINE WILL ALLOW THE CHANGE OF THE BASE ADDRESS FROM 176700 TO ANY TYPED VALUE 11038 11114 SCOPE HANDLER ROUTINE ************************* 11117

THIS ROUTINE CONTROLS THE LOOPING OF SUBTESTS. IT WILL INCREMENT AND LOAD THE TEST NUMBER(\$TSTNM) INTO THE DISPLAY REG.(DISPLAY(7:0)) AND LOAD THE ERROR FLAG (\$ERFLG) INTO DISPLAY(15:08) THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:

SWI4=1 LOOP ON TEST
SWI1=1 INHIBIT ITERATIONS
SWO9=1 LOOP ON ERROR
SWO9=1 LOOP ON TEST IN SWR(7:0)
CALL

SCOPE ::SCOPE=IOT

in the second

8

PAGE 43

SEG 0054

SEQ 0055

11177 CONVERT BINARY TO DECIMAL AND TYPE ROUTINE

THIS ROUTINE IS USED TO CHANGE A 16-BIT BINARY NUMBER TO A 5-DIGIT SIGNED DECIMAL (ASCII) NUMBER AND TYPE IT. DEPENDING ON WHETHER THE NUMBER IS POSITIVE OR NEGATIVE A SPACE OR A MINUS SIGN WILL BE TYPED BEFORE THE FIRST DIGIT OF THE NUMBER. LEADING ZEROS WILL ALWAYS BE REPLACED WITH SPACES. CALL:

MOV NUM, -(SP)

: PUT THE BINARY NUMBER ON THE STACK :: GO TO THE ROUTINE

TYPDS ;; GO TO THE ROUTIN

11244 TYPE ROUTINE

ROUTINE TO TYPE ASCIZ MESSAGE. MESSAGE MUST TERMINATE WITH A D BYTE. THE ROUTINE WILL INSERT A NUMBER OF NULL CHARACTERS AFTER A LINE FEED. NOTE1: SNULL CONTAINS THE CHARACTER TO BE USED AS THE FILLER CHARACTER. NOTE2: SFILLS CONTAINS THE NUMBER OF FILLER CHARACTERS REQUIRED. NOTE3: SFILLC CONTAINS THE CHARACTER TO FILL AFTER.

CALL:
1) USING A TRAP INSTRUCTION
TYPE , MESADR

:: MESADR IS FIRST ADDRESS OF AN ASCIZ STRING

OR

TYPE MESADR

TK INITIALIZE ROUTINE
THIS ROUTINE WILL INITIALIZE THE TTY KEYBOARD INPUT GUEUE
SETUP THE INTERRUPT VECTOR AND TURN ON THE KEYBOARD INTERRUPT
CALL:

JSR PC, STKINT

TK SERVICE ROUTINE
THIS ROUTINE WILL SERVICE THE TTY KEYBOARD INTERRUPT
BY READING THE CHARACTER FROM THE INPUT BUFFER AND PUTTING
IT IN THE QUEUE.
IF THE CHARACTER IS A "CONTROL-C" (†C) STKINT IS CALLED AND
UPON RETURN EXIT IS MADE TO THE "CONTROL-C" RESTART ADDRESS (OPERSEL)

SEG 0056

SOFTWARE SWITCH REGISTER CHANGE ROUTINE.
ROUTINE IS ENTERED FROM THE TRAP HANDLER, AND WILL
SERVICE THE TEST FOR CHANGE IN SOFTWARE SWITCH REGISTER TRAP
CALL WHEN OPERATING IN TTY INTERRUPT MODE.

11409 CONTROL IS PASSED TO THIS POINT FROM EITHER THE TTY INTERRUPT SERVICE ROUTINE OR FROM THE SOFTWARE SWITCH REGISTER TRAP CALL, AS A RESULT OF A CONTROL-G BEING TYPED, AND THE SOFTWARE SWITCH REGISTER BEING SELECTED.

11480 THIS ROUTINE WILL INPUT A SINGLE CHARACTER FROM THE TTY

RDCHR RETURN HERE ::GET A CHARACTER FROM THE QUEUE ::CHARACTER IS ON THE STACK ::WITH PARITY BIT STRIPPED OFF

11504 THIS ROUTINE WILL INPUT A STRING FROM THE TTY CALL:

RDLIN RETURN HERE ::INPUT A STRING FROM THE TTY :: ADDRESS OF FIRST CHARACTER WILL BE ON THE STACK ::TERMINATOR WILL BE A BYTE OF ALL D'S

READ AN OCTAL NUMBER FROM THE TTY

THIS ROUTINE WILL READ AN OCTAL (ASCII) NUMBER FROM THE TTY AND CHANGE IT TO BINARY.

THE INPUT CHARACTERS WILL BE CHECKED TO INSURED THEY ARE LEGAL OCTAL DIGITS. IF AN ILLEGAL CHARACTER IS READ A "?" WILL BE TYPED FOLLOWED BY A CARRIAGE RETURN-LINE FEED. THE COMPLETE NUMBER MUST THEN BE RETYPED. THE INPUT IS TERMINATED BY TYPING A CARRIAGE RETURN. CALL:

RDOCT RETURN HERE : READ AN OCTAL NUMBER : LOW ORDER BITS ARE ON TOP OF THE STACK : HIGH ORDER BITS ARE IN SHIOCT

11595 ERROR HANDLER ROUTINE

THIS ROUTINE WILL INCREMENT THE ERROR FLAG AND THE ERROR COUNT.

SAVE THE ERROR ITEM NUMBER AND THE ADDRESS OF THE ERROR CALL

AND GO TO SERRTYP ON ERROR

THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:

SWIS=1 HALT ON ERROR

SWI3=1 INHIBIT ERROR TYPEOUTS

SWI0=1 BELL ON ERROR

SWO9=1 LOOP ON ERROR

CALL

ERROR N ::ERROR=EMT AND N=ERROR ITEM NUMBER

SEQ 0057

```
11644 ;******************
```

11546 ERROR MESSAGE TYPEOUT ROUTINE

THIS ROUTINE USES THE "ITEM CONTROL BYTE" (\$ITEMB) TO DETERMINE WHICH ERROR IS TO BE REPORTED. IT THEN OBTAINS, FROM THE "ERROR TABLE" (\$ERRTB). AND REPORTS THE APPROPRIATE INFORMATION CONCERNING THE ERROR. IT IS A COPY OF THE \$ERRTYP SUBROUTINE FROM SYSMAC. WITH ONLY MINOR CHANGES FIRST IF SWITCH 6 IS SET AND SWITCH 8 RESET THEN ALL REGISTER CONTENTS WILL BE TYPED BEFOR REPORTING THE ERROR SECOND IF THE CURRENT ERROR HAS THE SAME ITEM NUMBER AS THE PREVIOUS ERROR THEN ONLY THE DATA WILL BE TYPED AND NOT THE ERROR MESSAGE AND HEADER.

11877 BINARY TO OCTAL (ASCII) AND TYPE

THIS ROUTINE IS USED TO CHANGE A 16-BIT BINARY NUMBER TO A 6-DIGIT OCTAL (ASCII) NUMBER AND TYPE IT.

\$TYPOS---ENTER HERE TO SETUP SUPPRESS ZEROS AND NUMBER OF DIGITS TO TYPE CALL:

MOV NUM, -(SP)

TYPOS

BYTE N

SYTE N

\$TYPON----ENTER HERE TO TYPE OUT WITH THE SAME PARAMETERS AS THE LAST STYPOS OR \$TYPOC CALL:

MOV NUM,-(SP) :: NUMBER TO BE TYPED TYPON :: CALL FOR TYPEOUT

STYPOC---ENTER HERE FOR TYPEOUT OF A 16 BIT NUMBER CALL:

MOV NUM, -(SP) :: NUMBER TO BE TYPED TYPOC :: CALL FOR TYPEOUT

	LOC
MATNOEC-11-DZB1	HO5 II-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DECDOC VER DD.04 30-MAR-76 23:05 PAGE 47 SEQ 0058
MAINDEC-11-DENG	1-4, REGYS/8 FUNCT. CONT. 151-FT 1 DECDOC VER 80.04 30-MAR-78 23:85 FAGE 47 SEG 8058
11954	**************************************
	THIS ROUTINE WILL PICKUP THE LOWER BYTE OF THE "TRAP" INSTRUCTION AND USE IT TO INDEX THROUGH THE TRAP TABLE FOR THE STARTING ADDRESS OF THE DESIRED ROUTINE. THEN USING THE ADDRESS OBTAINED IT WILL GO TO THAT ROUTINE.
11970	**************************************
	THIS TABLE CONTAINS THE STARTING ADDRESSES OF THE ROUTINES CALLED BY THE "TRAP" INSTRUCTION.
11992	**************************************
	12037 ************************************
	ERROR AND MESSAGE TABLE CONDIMENTS

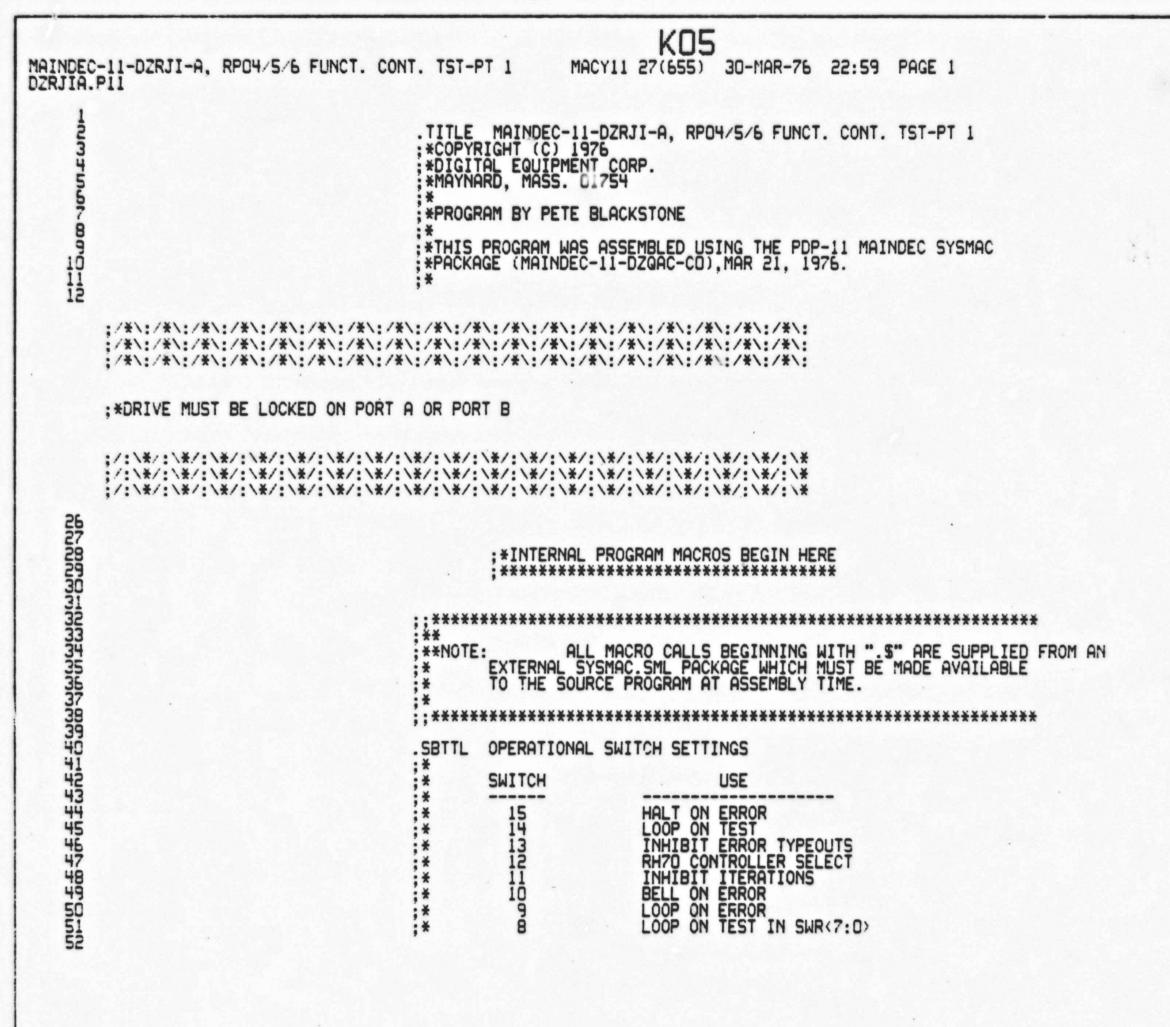

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IO5
MACY11 27(655) 30-MAR-76 22:59
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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 TABLE OF CONTENTS

```
**ERROR TABLE, BIT DEFINITIONS & STARTING ADDRESSES**
                                                                                       OPERATIONAL SWITCH SETTINGS
BASIC DEFINITIONS
TRAP CATCHER
                                                                                       ACT11 HOOKS
                                                                                        STARTING ADDRESSES
                                                                                        MEMORY MANAGEMENT DEFINITIONS
                                                                                       COMMON TAGS
                                                                                       ERROR POINTER TABLE
REGISTER ADDRESSES
                                                                                      **DIAGNOSTIC CODE**
                                                                                 SETUP TESTS
INITIALIZE THE COMMON TAGS
GET VALUE FOR SOFTWARE SWITCH REGISTER
TI REFERENCE EACH REGISTER
T2 PARTIAL TEST OF RHAS FOR UNIT NUMBERS PRESENT
T3 TEST FOR DRIVES PRESENT USING RHAS AND RHCS2
T4 TYPE SERIAL NUMBER AND DRIVE TYPE
                                                                                       T5
T6
T7
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20
                                                                                                                                         CHECK MOL TO BE HIGH
                                                                                                                                        PROGRAM INTERRUPT
INTERRUPT AT PROCESSOR AND DISK PRIORITY SAME
                                                                                      T10
                                                                                                                                       PACK ACKNOWLEDGE
                                                                                                                                     SET VV BIT #6 IN RHDS1
MAKE CURRENT CYLINDER = 377
MAKE CURRENT CYLINDER = 777
ADDRESS PLUG CHANGE ERROR
CHECK ALL ADDRESS PLUG ADDRESSES
                                                                                      T112
T13
T14
                                                                                      T15
                                                                                     **DRIVE COMMAND TESTS**
                                                                                      T15
                                                                                                                                      NO OPERATION FUNCTION TEST
                                                                                                                                       DRIVE CLEAR
                                                                                                                                   READ-IN-PRESET
READ-IN-PRESET
MAKE CURRENT CYLINDER = 777
MAKE CURRENT CYLINDER = 377
RECALIBRATE COMMAND
MAKE CURRENT CYLINDER = 777
MAKE CURRENT CYLINDER = 777
MAKE CURRENT CYLINDER = 377
RECALIBRATE COMMAND
                                                                                     T20
T21
T22
T23
T24
T25
T26
T27
T30
T31
                                                                UNLOAD COMMAND

T31 OFFSET AND RETURN TO CENTER LINE COMMAND
T32 OFFSET COMMAND
READ/WRITE TESTS USING MEDIA
T33 WRITE/READ HEADER AND DATA (0'S)
T34 READ DATA (0'S)
T35 WRITE/READ DATA (1'S & 12F2
T36 WRITE/READ DATA
T37 WRITE/READ DATA
4314
4673
5019
5086
5087
5445
5566
                                                                                                                                     WRITE/READ DATA (1'S & 125252)
WRITE/READ DATA (125252)
WRITE/READ DATA (052525)
WRITE/READ DATA USING UNIBUS B
```

7078
7488
7492
7492
SEEK TESTS
7904
TH3
SEEK & WRT TEST (CYL = 0-10)
8551
TH4
SEEK & READ TEST (CYL = 009)
8810
WRITE CHECK DATA & WRITE PROTECT TESTS
8812
TH5
WRITE CHECK DATA
9309
TH6
WRITE CHECK DATA
9557
TH7
WRITE CHECK DATA
9827
T50
WRITE PROTECT OPERATION
10259
T51
END OF DRIVE
10312
SUBROUTINES
10313
10316
END OF PASS ROUTINE
1159
SCOPE HANDLER ROUTINE
11223
CONVERT BINARY TO DECIMAL AND TYPE ROUTINE
11290
TYPE ROUTINE
11290
TYPE ROUTINE
11360
TTY INPUT ROUTINE
11589
READ AN OCTAL NUMBER FROM THE TTY
11642
ERROR MANDLER ROUTINE
11593
ERROR MESSAGE TYPEOUT ROUTINE
11924
PERROR TAPP TABLE
12017
TRAP DECODER
12017
TRAP TABLE
12039
POWER DOWN AND UP ROUTINES



SEQ 0061

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 2 DZRJIA.P11 OPERATIONAL SWITCH SETTINGS					SEQ 0062
	53 54 55 56	; * ; * ; *	7 65	STOP FURTHER COMPARES IF SWOOD IS LOW TYPE ALL REG. WITH ERROR IF SWO LOW MULT ADDR PLUG TEST IF SWOOD IS LOW	

DZRJIA.P11	BASIC DEFINITIONS			
57		.SBTTL	BASIC DEFINITION	NS
57890123456789012345678901234567890123456789012345678901234567	001000	:*INITI STACK= .EQUIV .EQUIV	AL ADDRESS OF TH 1000 EMT, ERROR IOT, SCOPE	E STACK POINTER *** 1000 *** ;;BASIC DEFINITION OF ERROR CALL ;;BASIC DEFINITION OF SCOPE CALL
	000011 000012 000015 000200 177776	; *MISCE HT= LF= CR= CRLF= PS= .EQUIV STKLMT=	LLANEOUS DEFINIT 11 12 15 200 177776 PS.PSW 177774	CODE FOR HORIZONTAL TAB CODE FOR LINE FEED CODE FOR CARRIAGE RETURN CODE FOR CARRIAGE RETURN-LINE FEED PROCESSOR STATUS WORD
	177774 177772 177570 177570	PIRQ= DSWR= DDISP=	177772 177570 177570	;;STACK LIMIT REGISTER ;;PROGRAM INTERRUPT REQUEST REGISTER ;HARDWARE SWITCH REGISTER ;HARDWARE DISPLAY REGISTER
	000000 000001 000002 000003 000004 000005 000006	: *GENERI RO= R1= R2= R3= R4= R5= R6= . EQUIV . EQUIV	AL PURPOSE REGIST %0 %1 %2 %3 %4 %5 %6 %7 R6,SP R7,PC	TER DEFINITIONS ; GENERAL REGISTER ; FROGRAM COUNTER
	000000 000040 000100 000140 000200 000240 000300 000340	*PRIOR! PRO= PR1= PR2= PR3= PR4= PR5= PR6= PR7=	ITY LEVEL DEFINIT 0 40 100 140 200 240 300 340	PRIORITY LEVEL 0 PRIORITY LEVEL 1 PRIORITY LEVEL 2 PRIORITY LEVEL 3 PRIORITY LEVEL 4 PRIORITY LEVEL 4 PRIORITY LEVEL 5 PRIORITY LEVEL 5 PRIORITY LEVEL 6 PRIORITY LEVEL 7
92 93 94 95 96 97 98 100 102 103 104 105 106 109 110	100000 040000 020000 010000 004000 002000 001000 000400 000100 000020	:*"SWITO \$W15= \$W14= \$W13= \$W10= \$W10= \$W09= \$W09= \$W06= \$W05= \$W05= \$W04=		CH DEFINITIONS

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. DZRJIA.P11 BASIC DEFINITIONS	NO5 CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 4	SEQ 0064
111 000010 112 000002 114 000001 115 116 117 118 119 120 121 122 123 124	SW03= 1U SW02= 4 SW01= 2 SW00= 1 .EQUIV SW09, SW9 .EQUIV SW08, SW8 .EQUIV SW07, SW7 .EQUIV SW06, SW6 .EQUIV SW05, SW5 .EQUIV SW03, SW3 .EQUIV SW03, SW3 .EQUIV SW01, SW1 .EQUIV SW00, SW0	
1112 0000000 1113 0000000000000000000000000000000000	**DATA BIT DEFINITIONS (BITCO TO BIT15)	
143 144 145 146 147 148 149 150 151 152 153 154 155 000014 156 000014 159 000014 159 000014 160 000020 161 000024 162 000030 163 164 0000060	**BASIC "CPU" TRAP VECTOR ADDRESSES ERRVEC= 4	

BO6 MACY11 27(655) 30-MAR-76 22:59 PAGE 5

SE0 0065

165

P40000

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 BASIC DEFINITIONS

::TTY PRINTER VECTOR ::PROGRAM INTERRUPT REQUEST VECTOR



*STARTING ADDRESS 210 WILL TEST, ONLY ONE SPECIFIED DRIVE *STARTING ADDRESS 220 WILL JUMP OVER THE TESTS REQUIRING AN OPERATOR

- 1	-	-	-	
	n		_	
SE . I			п	
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SE0 0067

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT DZRJIA.PII MEMORY MANAGEMENT	T. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 7 DEFINITIONS
	.SBTTL MEMORY MANAGEMENT DEFINITIONS
\$10	;*KT11 VECTOR ADDRESS
212 000250	MMVEC= 250
214	;*KT11 STATUS REGISTER ADDRESSES
216 177572 217 177574 218 177576 219 172516	SRO= 177572 SR1= 177574 SR2= 177576 SR3= 172516
221 221	** ** ** ** ** ** ** ** ** ** ** ** **
209 210 211 212 213 214 215 217 218 177574 177576 172516 220 2201 2202 2204 2205 2204 2205 2204 2205 2206 2207 2208 2209 2209 2209 2209 2209 2209 2209	KIPDRO= 172300 KIPDR1= 172302 KIPDR2= 172304 KIPDR3= 172306 KIPDR4= 172310 KIPDR5= 172312 KIPDR6= 172314 KIPDR7= 172316
232	; *KERNEL "I" PAGE ADDRESS REGISTERS
234 235 172342 236 172344 237 172346 238 172350 239 172352 240 172354 241 172356	KIPARO= 172340 KIPAR1= 172342 KIPAR2= 172344 KIPAR3= 172346 KIPAR4= 172350 KIPAR5= 172352 KIPAR6= 172354 KIPAR7= 172356
243 244 001110	.=1110

```
.SBTTL CUMMON TAGS
$47*$$C-107*$40*8$C-107*$40*8$C-107*$547*8$C-107*$40*8$
                                                                                                                                                                                                                                                                                                                           *THIS TABLE CONTAINS VARIOUS COMMON STORAGE LOCATIONS
                                                                                                                                                                                                                                                                                                                    SCMTAG:
SPASS: .WORD O
STSTNM: .BYTE O
STSTNM: .BYTE O
SERFLG: .BYTE C
SICNT: .WORD O
SLPADR: .WORD O
SLPERR: .WORD O
SLPERR: .WORD O
SITEMB: .BYTE O
SERMAX: .BYTE I
SERRAX: .BYTE I
SERRAX: .BYTE I
SERRPC: .WORD O
SGDADR: .WORD O
SHORD O
SHORD O
SHORD O
SAUTOB: .BYTE O
SINTAG: .BYTE O
SINTAG: .BYTE O
STKS: .WORD DDISP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONTAINS PASS COUNT
CONTAINS THE TEST NUMBER
CONTAINS ERROR FLAG
CONTAINS SUBTEST ITERATION COUNT
CONTAINS SCOPE LOOP ADDRESS
CONTAINS SCOPE RETURN FOR ERRORS
CONTAINS TOTAL ERRORS DETECTED
CONTAINS ITEM CONTROL BYTE
CONTAINS MAX. ERRORS PER TEST
CONTAINS PC OF LAST ERROR INSTRUCTION
CONTAINS ADDRESS OF 'GOOD' DATA
CONTAINS ADDRESS OF 'BAD' DATA
CONTAINS 'GOOD' DATA
CONTAINS 'BAD' DATA
CONTAINS 'BAD' DATA
RESERVED-NOT TO BE USED
                                                                                                                                                                                                                                                                                                                                                                                              .=1100
                                                                                                                 001100
                                          000000
000000
000000
000
000
000
000
177570
177560
177564
177564
177564
177566
000
002
000
000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :: AUTOMATIC MODE INDICATOR
:: INTERRUPT MODE INDICATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ### INTERRUPT MODE INDICATOR

### ADDRESS OF SWITCH REGISTER

### ADDRESS OF DISPLAY REGISTER

### ADDRESS OF TITY PRINTER STATUS REG. ADDRESS

### ADDRESS CONTAINS NULL CHARACTER FOR FILLS

### CONTAINS NULL CHARACTER FOR FILLS

### CONTAINS OF FILLER CHARACTERS REQUIRED

### INSERT FILL CHARS. AFTER A "LINE FEED"

### TERMINAL AVAILABLE" FLAG (BIT (07) = 0 = YES)

### CONTAINS THE ADDRESS FROM

### HICH ($REGD) HOS OBTAINED

### CONTAINS (($REGAD) + 0)

### CONTAINS (($REGAD) + 0)

### CONTAINS (($REGAD) + 10)

### CONTAINS (($REGAD) + 10)

### CONTAINS (($REGAD) + 12)

### USER DEFINED

###
                                                                                                                                                                                                                                                                                                                                                                                       177564
177566
.BYTE
.BYTE
.BYTE
.BYTE
.BYTE
.WORD
                                                                                                                                                                                                                                                                                                                          STPS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              00-00
                                                                                                                                                                                                                                                                                                                         SNULL:
SFILLS:
SFILLC:
STPFLG:
SREGAD:
                                                                                                                                                                                                                                                                                                                        SREGO:
SREGI:
SREG2:
SREG3:
SREG4:
SREG5:
STMPO:
                                           001162
001164
001166
001170
                                                                                                             000000
000000
000000
000000
                                                                                                                                                                                                                                                                                                                                                                                  . WORD
                                                                                                                                                                                                                                                                                                                                                                                      . WORD
                                                                                                                                                                                                                                                                                                                                                                                          . WORD
. WORD
. WORD
. WORD
                                          001170
001174
001176
001200
001202
001204
001210
001214
001214
                                                                                                              STMP1:
STMP2:
STMP3:
                                                                                                                                                                                                                                                                                                                                                                                              . WORD
                                                                                                                                                                                                                                                                                                                                                                                           . WORD
. WORD
. WORD
                                                                                                                                                                                                                                                                                                                           STMP4:
                                                                                                                                                                                                                                                                                                                        STMPS: .WORD
                                                                                                                                                                                                                                                                                                                        $TIMES: 0 : MAX. NUMBER OF ITERATIONS
$ESCAPE: 0 : ESCAPE ON ERROR ADDRESS
$BELL: .ASCIZ <207> <377> <377> : CODE FOR BELL
                                                                                                                                                                                   000377
```

MAINDEC-11-DZRJI-A, RPD4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 9 DZRJIA.P11 COMMON TAGS

SE0 0069

99 D01222 D77 SGUES: .ASCII /?/ ::QUESTION MARK
D0 D01223 D15 SCRLF: .ASCII (15) ::CARRIAGE RETURN
D1 D01224 D00012 SLF: .ASCIZ (12) ::LINE FEED
D2

		COTT			
		.SBTTL			
		*THIS *THE I *LOCAT *NOTE1 *NOTE2	TABLE CONTAINS T NFORMATION IS OB ION SITEMB. THIS : IF SITE : EACH IT	HE INFORMATION FOR EACH ERROR THAT CAN OCCUR. TAINED BY USING THE INDEX NUMBER FOUND IN NUMBER INDICATES WHICH ITEM IN THE TABLE IS PERTINENT. MB IS 0 THE ONLY PERTINENT DATA IS (SERRPC). EM IN THE TABLE CONTAINS 4 POINTERS EXPLAINED AS FOLLOWS:	
		* * *	EM DH DT DF	POINTS TO THE ERROR MESSAGE POINTS TO THE DATA HEADER POINTS TO THE DATA POINTS TO THE DATA FORMAT	
001226		SERRIB:			
001226	050570	:*ITEM1	EM1	RPO4 DID NOT INTERRUPT	
001230	066642		DH1	· PC	
001232	071170 071476		DT1 DF1	SERRPC WAITPC, WAITBT, WAITRE, SBDDAT, CS1 ;0,0,0,0,0	
001536	050617	:*ITEM2	EM2	INTERRUPT ENABLE BIT DOWN BUT	
001240	066642		DH1	PC WAT PC BIT WAITED REG ADDRESS REG CONTENTS	
001242 001244	071170 071476		DT1 DF1	SERRPC, WAITPC, WAITBT, WAITRE, \$BDDAT, CS1 :0,0,0,0,0	
001246	050706	:*ITEM3	EM3	RPO4 DID NOT INTERRUPT WHEN	
001250	066642		DH1	PC WAT PC BIT WAITED REG ADDRESS RHCS1 CONTENTS	
001252	071170 071476		DT1 DF1	SERRPC WAITPC, WAITBT, WAITRE, SBDDAT, CS1	
	001236 001234 001234 001240 001244 001246 001250	001225 001226 001230 001230 001232 071170 001234 071476 001240 001240 001240 001244 071476 001246 001250 001250 001252 071476	#THIS **THE I **LOCAT **NOTES **NOTES **NOTES *** ** ** ** ** ** ** ** ** *	#THIS TABLE CONTRINS TO STITE INFORMATION IS OB #LOCATION SITEMS. THIS #NOTES: EACH ITE #NO	#THIS TABLE CONTAINS THE INFORMATION FOR EACH ERROR THAI CAN OCCUR. *THE INFORMATION IS OBTAINED BY USING THE INDOOR NUMBER FOUND. IS PERTINENT. ***VOTE IN THE PASS OF THE ONE PERTINENT IS SERVED. IS PERTINENT. ***VOTE IN THE PASS OF THE ONE PERTINENT IS SERVED. IS PERTINENT. ***VOTE IN THE PASS OF THE ONE PERTINENT IS SERVED. IS PERTINENT. ***VOTE IN THE PASS OF THE ONE PERTINENT IS SERVED. IS PERTINENT. ***VOTE IN THE PASS OF THE ONE PERTINENT IS SERVED. IS PERTINENT. ***VOTE IN THE PASS OF THE P

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPO4/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-P	T 1 MACY11 27(655)	30-MAR-76 22:59 PAGE 11	SEQ 0071
357 358 359 350 361	001256	050767	;*ITEM4	PMII	; WAITED ON BIT DID SET BUT TIME IS IN ERROR ; TIME IS GIVEN IN 10 MICRO SEC.	
7890123456789012345678901234567 3555666666678901234567 35556666678901234567	001260	067021		DH4	; (DECIMAL) ;PC ;WAT PC ;BIT WAITED ;REG ADDRESS	
367 368 369 370	001262 001264	071210 071505		DT4 DF4	TIME IN 10 MSEC SERRPC, WAITPC, WAITBT, WAITRE, SBDDAT, WAITIM ;0,0,0,0,0,1	
371 372	001266	051100	;*ITEM5	EM5	RHAS DOES NOT CLEAR BY	
373 374 375 376	001270	067162		DHS	MOVING IN ALL ONES PC REG. ADDR. GOOD DATA RECEIVED DATA SERRPC REGADR, SGDDAT, SBDDAT	*
379 379 380	001272 001274	071230 071514		DTS DF5	SERRPC REGADR, SGDDAT, SBDDAT ;0,0,0,0	- W
383 383	001276	051152	;*ITEM6	EM6	LOADING RHER1 FOR ALL UNITS DID NOT SET ANY BITS IN RHAS-NO UNITS PRESENT PC	
385 386 387	001300	067301		DH6	PC REG ADDR	
399 389 388	001302	071244 071521		DT6 DF6	REG ADDR RECEIVED DATA SERRPC, REGADR, SBDDAT ,0,0,0	
392	001306	051240	;*ITEM7	EM7	SPECIFIED REGISTER NONEXISTANT	
394	001310	067400		DH7	PC	
396 397 398	001312	071256 071525		DT7 DF7	ADDR. OF REG. SERRPC, TEMP1 0,0	
399 400	001316	051322	;*ITEM10	EM10	STOPED DRIVE HAS MOL BIT	
890-1237547890-1237547890 9899999999999999 9333335555555555555555	001320	067440		DH10	STOPED DRIVE HAS MOL BIT IN RHDS1 = 1 PC TEST NO FAILING REG ADDR CONTENTS OF RHCS1 CONTENTS OF RHCS2 CONTENTS OF RHDS1 CONTENTS OF RHER1 SERRPC, STSTNM, \$BDADR, CS1, CS2, DS1, ER1 0,0,0,0,0,0,0	
409	001322	071266 071530		DT10 DF10	SERRPC. \$TSTNM, \$BDADR, CS1, CS2, DS1, ER1 ;0,0,0,0,0,0	41

MOTNEE		T-O PROUGE AS SUNCT A	ONT TOT DT 1	106	20 MOD 75 22.50	BOCE 12		CEO 0072
DZRJIA.	PII	II-A. RP04/5/6 FUNCT. C	ON1. 151-P1 1	MACY11 27(655)	30-MAR-76 22:59	PHGE 12		SEG 0072
1100111	001330	051371 057440	;*ITEM11 EM11 DH10		PC NO			
	D01332 D01334	071266 071530	DT10 DF10		FAILING REG. ADE CONTENTS OF RHCS CONTENTS OF RHCS CONTENTS OF RHCS CONTENTS OF RHEE SERRPC, STSTNM, SE 0,0,0,0,0,0,0	R 51 52 51 R1 BDADR,CS1,CS2.DS1,ER1		
425 426 427 428	001336	051476	;*ITEM12 EM12		; AFTER A POWER UF	WITH EDGE COMMAND		
70 433 433 433 435	001340	067440	DH10		RHDS1 SHOULD HAV PC TEST NO FAILING REGISTER CONTENTS OF RHCS CONTENTS OF RHCS CONTETNS OF RHDS	R ADDR.		
436 437 438 439	001342	071266 071530	DT10 DF10		CONTENTS OF RHER SERRPC STSTNM, SB CO, O, O, O, O, O	DADR, CS1, CS2, DS1, ER1	- 1	
######################################	001346	051604	;*ITEM13 EM13		;AFTER A POWER UP ;ANY INIT RHCS1 S ;HAVE GO=0. DVA=1 ;IE=0. DISREGARD ;ALL OTHER BITS	WITHOUT SHOULD , RDY=1	NE.	
7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.	001350	067440	DH10			ADDR. 1 2 1 1 1 DADR, CS1, CS2, DS1, ER1		
453 454 455	001352 001354	071266 071530	DT10 DF10		SERRPC STSTNM, \$8 ,0,0,0,0,0,0,0	DADR,CS1,CS2,DS1,ER1		
456	001356	051726	;*ITEM14 EM14		AFTER POWER UP R	нсс		
450 460 461	001360	067162	DH5		SHOULD BE=0 PC REG. ADDR. GOOD DATA			
264 464	001362 001364	071230 071514	DTS DFS		RECEIVED DATA SERRPC REGADR, SGI 10,0,0,0	DDAT, \$BDDAT		

MAINDEC	-11-DZRJ	II-A. RPO4/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	JO6 MACY11 27(655)		SEG 0073
DZRJIA. 465 466			:*ITEM15			
457 468 469	001366	052001	EM15	1 /	PACK ACKNOWLEDGE CAUSED AN ERROR GOOD DATA IS BEFORE COMMAND RECEIVED DATA IS AFTER COMMAND	
471 472 473	001370	067162	DH5		PC ANNE	
474 475 476	001372 001374	071230 071514	DTS DFS		GOOD DATA RECEIVED DATA SERRPC REGADR, SGDDAT, SBDDAT 0,0,0,0	
478 479 490	001376	052142	;*ITEM16 EM16		GIVING A NO-OP COMMAND CAUSED	
481 482 483					GOOD DATA GIVES REGISTER CONTENTS BEFORE COMMAND RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND PC	
485 485 487	001400	067162	DHS		GOOD DATA	
489 489 490	201402	071230 071514	DT5 DF5		RECEIVED DATA SERRPC REGADR, SGDDAT, SBDDAT ,0,0,0,0	
492 493 494	001406	052270	;*ITEM17 EM17		; DRIVE CLEAR COMMAND ; CAUSED AN ERROR	
496 497 498					GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND	
500 501	001410	067162	DH5		PC REG. ADDR. GOOD DATA RECEIVED DATA	
503 504 505	001412	071230 071514	DT5 DF5		SERRPC, REGADR, SGDDAT, SBDDAT ;0,0,0,0	
506 507 508	001416	052425	;*ITEM20 EM20		READ-IN COMMAND GAVE AN ERROR GOOD DATA HAS WHAT SHOULD BE THERE RECEIVED DATA HAS WHAT WAS AFTER COMMAND	
510 511 512	001420	067162	DHS		AFTER COMMAND PC REG. ADDR.	3034
######################################	001422	071230 071514	DT5 DF5		PC REG. ADDR. GOOD DATA RECEIVED DATA SERRPC, REGADR, SGDDAT, SBDDAT 0,0,0,0	11.16.

MAINDEO DZRJIA.	-11-DZRJ	I-A. RP04/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 14	SEG 0074
	001426	052571	;*ITEM 21 EM21		;RHCS1 CONTENTS DURING ;COMMAND WAS IN ERROR	
523 524 525	001430 001432 001434	067162 071230 071514	DHS DTS DFS			
526 527 528	001436	052644	;*ITEM 22 EM22		RHDS1 CONTENTS DURING COMM ANS WAS IN ERROR	
530 531 532	001440 001442 001444	067162 071230 071514	DHS DTS DFS			
533 534 535 536	001446	052717	;*ITEM 23 EM23		;UNLOAD COMMAND GAVE AN ERROR ;GOOD DATA GIVES WHAT SHOULD ;BE THERE	
537 539 539 540 541	001450 001452 001454	067162 071230 071514	DHS DTS DFS		RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND	
543 545 546	001456	053062	;*ITEM 24 EM24		OFFSET COMMAND CAUSED AN ERROR GOOD DATA IS WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER AN OFFSET COMMAND	
548 549 550	001460 001462 001464	067162 071230 071514	DHS DTS DFS		, ALTER AN OFFSET CONTAINS	
5553 5554 5555 5557	001466	053225	;*ITEM 25 EM25		RETURN TO CENTER LINE COMMAND CAUSED AN ERROR GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND	
559 560 561 562	001470 001472 001474	067162 071230 071514	DHS DTS DFS		; THERE HETER COMMAND	
\$ 0-12375567890-12375567890-12375567890-12375567890-1237567800-12375000-1237567890-1237567890-1237567890-1237567890-1237567890-1237567890-1237567890-1237567890-1237	001476 001500	053407 067617	;*ITEM 26 EM26 DH26		500 OFFSETS CAUSED AN ERROR PC CONT. OF RHCS1 CONT. OF RHCS2 CONT. OF RHDS1 CONT. OF RHER1 CONT. OF RHER2 CONT. OF RHER3	
571 572	001502	071306	DT26		CONT. OF RHER3 SERRPC, CS1, CS2, DS1, ER1, ER2, ER3	

MAINDEC DZRJIA.	-11-DZRJ	I-A. RP04/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	LO6 MACY11 27(655)	30-MAR-76 22:59	PAGE 15	SEQ 0075
	001504		DF26		;0,0,0,0,0,0,0		
7777777888888888888897979797597999999999	001506	053477	;*ITEM 27 EM27		:WRITE HEADER AND CAUSED IMPROPER GOOD DATA GIVES SHOULD BE THERE RECEIVED DATA GI WAS THERE AFTER	PATA REGISTER CHANGE WHAT	
581 582 583 584 585	001510 001512 001514	067162 071230 071514	DHS DTS DFS		; WAS THERE AFTER	COMMAND	
586 587 588 589 590	001516	053715 070016	;*ITEM 30 EM30 DH30		WRITE HEADER AND CHANGED WRITE FREE WORD NO GOOD DATA	DATA OM BUFFER	
592 593 594	001522 001524	071330 071547	DT30 DF30		BAD DATA SERRPC ERWORD, SGI 0,0,0,0	DDAT, \$BDDAT	
596 597 598 599 600 601	001526	053775	;*ITEM 31 EM31		READ HEADER AND I IMPROPER REGISTER GOOD DATA HAS WHO BE THERE RECEIVED DATA GIV	R CHANGE AT SHOULD	
602 603 604 605	001530 001532 001534	067162 071230 071514	DHS DTS DFS		RECEIVED DATA GIY WAS THERE AFTER	COMMAND	
507 608 609	001536	054212	;*ITEM 32 EM32		;WRITE HEADER AND ;BY A READ HEADER ;CAUSED A READ/WRI	DATA FOLLOWED	
613 613	001540 001542 001544	070016 071330 071547	DH30 DT30 DF30		; CHUSED H REHD/WR	ITE ERRUR .	
615 616 617 618	001546	054321	;*ITEM 33 EM33		CHANGE	IMPROPER REGISTER WHAT SHOULD BE THERE WES WHAT WAS THERE AFTER	
620 621 623	001550 001552 001554	067162 071230 071514	DHS DTS DFS		; COMMAND	ES WHAT WAS THERE AFTER	
625 625	001556	054523	;*ITEM 34 EM34		;READ DATA INCORRE	CT	

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RP04/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	MO6 MACY11 27(655)		PAGE 16		SEQ 0076
	001560 001562 001564	070016 071330 071547	DH30 DT30 DF30					
531 632 633 634	001566	054547	;*ITEM 35 EM35		;WRITE DĂTA COMMA ;IMPROPER REGISTE ;GOOD DATA GIVES ;RECEIVED DATA GI ;CONTENTS AFTER W	IND CAUSED R CHANGE WHAT SHOULD BE VES REGISTER	THERE	
636 637 638 639	001570 001572 001574	067162 071230 071514	DHS DTS DFS		CONTENTS AFTER W	RITE DATA		
641	001576	054765	;*ITEM 36 EM36		;WRITE DATA COMMA ;WRITE FROM BUFFE	ND CHANGED		
645 645	001600 001602 001604	070016 071330 071547	DH30 DT30 DF.30		; WKITE FROM BUFFE	*		
649 650 651 652 653	001606	055042	;*ITEM 37 EM37		SEEK COMMAND CAU ERROR GOOD DATA GIVES BE THERE RECEIVED DATA GI	WHAT SHOULD		
654 655 656	001610 001612 001614	067162 071230 071514	DHS DTS DFS		WAS THERE AFTER	SEEK COMMAND		
659 660 661 662 663	001616	055257	;*ITEM 40 EM40		WRITE CHECK CAUSE IMPROPER REGISTER GOOD DATA GIVES IN BE THERE			
565 666 667 668	001620 001622 001624	067162 071230 071514	DHS DTS DFS		RECEIVED DATA GIV THERE AFTER COMM	AND WHI WHS		
7890-103+547890-103+547890-103+547890-103+547890-103+547890 1222333333333334+1+1+1+1+1+1+555555555555644444464444444444	001626	055466	;*ITEM 41 EM41		LOCKING OUT WRITE LOCK BUTTON CAUSE REGISTER CHANGE GOOD DATA GIVES WE BE THERE RECEIVED DATA GIVEN WAS THERE AFTER W	ES BY WRITE ED IMPROPER WHAT SHOULD VES WHAT WRITES		
678 679 680	001630	067162	DH5		WERE LOCKED OUT E	łΥ		

				NO6				
MAIND! DZRJI	C-11-DZRJ PII	II-A. RP04/5/6 FUNCT. (ERROR POINTER TABLE	CONT. TST-PT 1	MACY11 27(655)	30-MAR-76 22:59	PAGE 17		SEQ 0077
68	001632	071230 071514	Drs DFS					
686	001636	055747	;*ITEM 42 EM42		ATTEMPTING TO WE LOCKED OUT CAUSE REGISTER CHANGE GOOD DATA GIVES BE THERE RECEIVED DATA GITTER ATTER	RITE WITH WRITE D IMPROPER WHAT SHOULD VES WHAT WAS		
693	001640 001642 001644	067162 071230 071514	DHS DTS DFS		; IMERE HEIER HITE	MPI		
696 697 698 700 700 700 700	001646	056225	;*ITEM 43 EM43		WRITING WITH WRI OUT CHANGED DISK GOOD DATA GIVES ON DISK BEFORE W WRITE LOCK WAS A RECEIVED DATA GI READ BACK AFTER WRITE LOCK WAS A	TE LOCKED AND AND AND AND AND AND AND AND AND AN		
705 705 706 707 708	001650 001652 001654	070016 071330 071547	DH30 DT30 DF30		;WRITE LOCK WAS A	TTEMPTED		
709 710 711 712	001656	056567	;*ITEM 44 EM44		ENABLING WRITES BUTTON CAUSED AN GOOD DATA GIVES	BY WRITE LOCK ERROR WHAT SHOULD	*	
715		•			BE THERE RECEIVED DATA GI THERE AFTER WRITI BUTTON ENABLED W	VES WHAT WAS		
717 718 719 720	001660 001662 001664	067162 071230 071514	DHS DTS DFS		, BOTTON ENABLED W	NITES		
719 720 721	001666	057061	;*ITEM 45 EM45		TRANSFERRING ON 1910, SECTOR 21, CAUSED IMPROPER 1910, CHANGE GOOD DATA GIVES 1910, THERE AFTER TRANSFERRING ON 1910, THE AFTER TRANSFERRING ON 1910, TH	MMH! SHUU!! U	CYLINDER	
729 730 731 733 733	001670 001672 001674	067162 071230 071514	DHS DTS DFS ;*ITEM 46		;THERE AFTER TRANS	SFER		

MAINDEC DZRJIA.	-11-DZRJ	I-A. RP04/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	B07	30-MAR-76 22:59 PAGE 18	SE9 0078
	001676	057355	EM46		:DATA READ FROM LAST :BLOCK IE. CYLINDER 410 :SECTOR 21, TRACK 18 IS IN :ERROR	
738 739 740 741	001700 001702 001704	070016 071330 071547	DH30 DT30 DF30		; ERROR	
567.890-N97.647.890-N97.650.65445 577.777.777.7777.777777777777777777	001706	057470	:*ITEM 47 EM47		TRANSFERRING FROM NONEXISTANT SECTOR CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER ATTEMPTED	
752 753 754	001710 001712 001714	067162 071230 071514	DHS DTS DFS		TRANSFER	
755 757 757 759 750 760	001716	057752	:*ITEM 50 EM50		:TRANSFERRING FROM NONEXISTANT :SECTOR CAUSED DATA ERROR :GOOD DATA GIVES WHAT :SHOULD BE IN BUFFER :RECEIVED DATA GIVES WHAT WAS :IN BUFFER AFTER TRANSFER	
763 764 765	001720 001722 001724	070016 071330 071547	DH30 DT30 DF30		; IN BUFFER AFTER TRANSFER	
767 769 769 770 771	001726	060171	:*ITEM 51 EM51		GIVING ILLEGAL FUNCTION CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES REGISTER CONTENTS AFTER ILLEGAL FUNCTION	
773 774 775 776	001730	070132	DH51		• DC	
778 779 780 781	001732 001734	071344 071554	DTS1 DFS1		REG. ADDR. GOOD DATA RECEIVED DATA ILLEGAL FUNCTION SERRPC REGADR, SGDDAT, SBDDAT, ILLEGL 0,0,0,0	
7557 7567 7569 7773 7775 7775 7776 7776 7776 7776 7776	001736	060436	:*ITEM 52 EMS2		WRITE DATA ON NONEXISTANT SECTOR CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE	

-11-DZRJI- P11	RROR POINTER TABLE	ONT. TST-PT 1	CO7	30-MAR-76 22:59 PAGE 19	SEQ O
				RECEIVED DATA GIVES WHAT WAS THERE AFTER ATTEMPTED WRITE DATA	
001740 0 001742 0 001744 0	67162 71230 71514	DHS DTS DFS		, MRITE DH'H	
001746 0	60713	:*ITEM 53 EM53		READ HEADER AND DATA AFTER	
001750 0 001752 0 001754 0	70016 71330 71547	DH30 DT30 DF30		, H SERRON CHOSED HIT ERROR	
001756 0	61001	;*ITEM 54 EM54		ATTEMPTED OPERATION WITH INVALID ADDRESS CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER OPERATION	
001760 0 001762 0 001764 0	67162 71230 71514	DHS DTS DFS		THERE AFTER OPERATION	
001766 0	61246	:*ITEM 55 EM55		WRITING/READING WITH EXPECTED ADDRESS OVERFLOW ERROR CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER OPERATION	
001770 0 001772 0 001774 0	67162 71230 71514	DHS DTS DFS		; WAS THERE AFTER OPERATION	
001776 0	61534	:*ITEM 56 EM56		:DATA READ WITH AN EXPECTED :ADDRESS OVERFLOW ERROR IS :INCORRECT :WORD NO 1 TO 260 SHOULD :BE READ :WORD NOS 261 TO 266 SHOULD :NOT CHANGE DUE TO READ	
0 200200 0 200200 0 400200	70016 71330 71547	DH30 DT30 DF30		WORD NOS 261 TO 266 SHOULD NOT CHANGE DUE TO READ	<.
002006 0	61744	;*ITEM 57 EM57		:ATTEMPTING DATA COMMAND :WITH WRONG FORMAT BIT CAUSED :IMPROPER REGISTER CHANGE	

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RP04/5/6 FUNCT. ERROR POINTER TABLE	CONT. TST-PT 1	D07	30-MAR-76 22:59 PAGE 20	SE0 0080
943 945 946					GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER ATTEMPTED DATA TRANSFER	
949 949 950	002010 002012 002014	067162 071230 071514	DHS DTS DFS		; TRANSFER	
######################################	005016	062236	:*ITEM 60 EM60		ATTEMPTING TO MODIFY REGISTER DURING AN OPERATION CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER OPERATION WAS COMPLETE PC REG. ADDR. GOOD DATA RECEIVED DATA MODFING REGISTER SERRPC.REGADR, SGDDAT, SBDDAT, SEDADR C.O.O.O.O.O	
961 962 963 964	005050	070271	DHEO		WAS COMPLETE PC REG. ADDR. GOOD DATA RECEIVED DATA	
955 955 957	250500 450500	071362 071562	DT60 DF60		SERRPC REGISTER ;SERRPC REGADR, SGDDAT, SBDDAT, SBDADR ;0,0.0,0,0	
869 870 871 872 873	005030	062647 070426	:*ITEM 61 EM61 DH61		:DEVICE NOT AVAILBLE BEFORE COMMAND :PC :TEST NO. :PC OF JSR	WAS TO BE GIVEN
974 975 976	002032 002034	071400 071570	DT61 DF61		TEST NO. PC OF JSR RHCS1 CONTENTS SERRPC STSTNM, PCJSR SBDADR 10,0,0,0	
978 979 990 981 982	002036	062730 070521	:*ITEM 62 EM62 DH62		RHDS1 HAS STATUS BITS STUCK AT ONE	
983 984 985 986	002042 002044	071412 071574	DT62 DF62		TEST NO. PC OF JSR RHDS1 CONTENTS SERRPC, STSTNM, PCJSR, SBDADR 0,0,0,0	
887 888 889	002046	063011	:*ITEM 63 EM63		:RHDS1 CONTENTS DURING :COMMAND WAS IN ERROR	
993 993 993 993	002050 002052 002054	067162 071230 071514	DHS DTS DFS		COMMIND WAS IN ERROR	
368			:*ITEM 64			

MAINDEC DZRJIA.	-11-DZRJ	I-A, RP04/5/6 FUNCT. CO ERROR POINTER TABLE	NT. TST-PT 1	E07	30-MAR-76 22:59 PAGE 21	SE	E0 0081
	002056		EM64		RECALIBRATE COMMAND CAUSED IMPROPER REGISTER CHANGE. GOOD DATA GIVES WHAT SHOULD BE THERE. RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND		
	002062 002062 002064	067162 071230 071514	DH5 DT5 DF5		; AFTER COMMAND		
908			:*ITEM65				
9999	002066 002070	053304 070614	EM65 DH65		INTERRUPT FAILING PC TEST NO CONTENTS OF RHCS1		
9910	002072 002074	071424 071600	DT65 DF65		CONTENTS OF RHCS1 CONTENTS OF RHAS CONTENTS OF RHDS1 SERRPC TSTNM, CS1, AS, DS1 0.0,0,0,0		
	270200	063326	:*ITEM66 EM66		HEADER AND DATA COMMAND FOR HEAD SELECTION TEST CAUSED AN ERROR RHDST GIVES WHAT TRACK WAS BEING WRITTEN ON CYLINDER D		
9227 9229 9232 9232 9232	002100	070737	DH66		RHDST GIVES WHAT TRACK WAS BEING WRITTEN ON CYLINDER D SECTOR D PC RHDST RHER1 RHER2 RHER3 RHCS1 RHCS2 SERRPC.DST.ER1.ER2,ER3.CS1.CS2 O.O.O.O.O.O.O		
934	002102	071440 071605	DT66 DF66		SERRPC.DST.ER1.ER2,ER3.CS1.CS2	(1	
	002106	063520	;*ITEM67 EM67		READ HEADER AND DATA ERROR IN HEAD SELECTION TEST FIRST FOUR WORDS GIVE HEADER NEXT WORDS ARE DATA GOOD DATA WORDS GIVE THE TRACK NUMBER IN BITS 4,5,6,7,8		
945	002110	070016 071330 071547	DH30 DT30 DF30 ;*ITEM70				
949 950	002116	064010	EM70		:READ HEADER AND DATA ERROR :IN DIFFERENCE LINE TEST :WORD NOS. 1-4 GIVE		

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MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO4/5/6 FUNCT. COI ERROR POINTER TABLE	NT. TST-PT 1	F07	30-MAR-76 22:59 PAGE 22	SEG 0082
					:HEADER :WORD NOS. 5-260 GIVE DATA :WHICH IS THE CYLINDER :ADDRESS	
955 956 957	002120 002122 002124	070016 071330 071547	DH30 DT30 DF30			
959 950 962 963	002126	064216	;*ITEM 71 EM71		FORCING OPI CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE	
955 955 955 957 958	002130	067162	DHS		RECEIVED DATA GIVES WHAT WAS THERE AFTER 3 INDEX PULSES PC REG. ADDR. GOOD DATA RECEIVED DATA SERRPC, REGADR, SGDDAT, SBDDAT	
970 971	002132	071230 071514	DTS DFS		SERRPC REGADR, SGDDAT, SBDDAT ;0,0,0,0	
99555557890-1297557890-1297557890-12 9955555555555555555555555555555555555	002136	064761	:*ITEM 74 EM74		WHILE USING UNIBUS B READ DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER	
979 980 981	002140 002142 002144	067162 071230 071514	DHS DTS DFS		COMMAND	
983	002146	064707	:*ITEM 73 EM73		:WHILE USING UNIBUS B ;READ DATA INCORRECT	
986 987 989	002150 002152 002154	070016 071330 071547	DH30 DT30 DF30		, nene entra inconnect	
9834545454545990122345454599012234545454545454545454545454545454545454	002156	064761	;*ITEM 74 EM74		WHILE USING UNIBUS B WRITE DATA COMMAND CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITE DATA	
999	002160	067162 071230 071514	DHS DTS DFS		CONTENTS HETER WRITE DHIH	
1001	002166	065225	;*ITEM 75 EM75		WHILE USING UNIBUS B WRITE DATA COMMAND CHANGED WRITE FROM BUFFER	

MAINDEC DZRJIA.	-11-DZRJ	I-A. RP04/5/6 FUNCT. COI ERROR POINTER TABLE	NT. TST-PT 1	GD7	30-MAR-76	22:59 PAGE	23			SEQ 0083
	002170 002172 002174	070016 071330 071547	DH30 DT30 DF30							
	002176	055330	:*ITEM 76 EM76		WHILE USIN WRITE CHEC IMPROPER R GOOD DATA BE THERE RECEIVED D THERE AFTE	IG UNIBUS B CK CAUSED AN REGISTER CHA GIVES WHAT	I INGE SHOULD IHAT WAS	is 61	t	
1019	002200 002202 002204	067162 071230 071514	DHS DTS DFS		; IMERE HFIE	R CUMMAD				
1023	002210	065565 071035	;*ITEM 77 EM77 DH77		CURRENT CY PC PC OF JSR REGISTER A GOOD DATA BADEDATA		NOT REFLECT	DESIRED 'RH	icc;	
1027 1029 1029	002212	071460 071615	D177 DF77		BAD DATA SERRPC PCJ 0,0.0,0,0	SR, REGADR, \$	GDDAT.\$BDDAT			
1031 1032 1033 1034 1035	005550	066010 067162	;*ITEM 100 EM100 DHS		:ERROR AFTE	R ADDRESS P	LUG CHANGE			
1036 1037 1038	002222	071230 071514	DTS DFS		REGISTER AND GOOD DATA RECEIVED DO SERRPC. REGIO, 0, 0, 0	ATA ADR, SGDDAT,	SBDDAT			
1040	005556	066072	;*ITEM 101 EM101		:UNIT DID NO	OT GO OFFLI	NE WHEN ADDR			
1043 1044 1045 1046 1047	002230	067617	DH26		CONT OF RHI	CS1 CS2 DS1 ER2	NE WHEN ADDR			
1049	002232	071306 071537	DT26 DF26		SERRPC.CS1,0,0,0,0,0	.CS2,DS1.ER	2,ER3			
1052	002236	066154	;*ITEM 102 EM102				ONLINE WHEN			
1055 1056 1057 1058	002240	067617	DH26		PC CONT OF RHO CONT OF RHO					

						H07			
MAI	NDEC	-11-DZRJ P11	I-A. RP04/5/6 FUNCT. (ERROR POINTER TABLE	CONT. TST-P	т1.	MACY11 27(655)	30-MAR-76 22:59 PAGE 24		SEG 0084
i	059 060 061 062 063	242500	071306 071537		DT26 DF26		;CONT OF RHER2 ;CONT OF RHER3 ;SERRPC.CS1.CS2,DS1,ER2,ER3 ;0,0,0,0,0,0		
İ	064	002246	066233	:*ITEM	103 EM103		REGISTER CONTENTS INCORRECT SEFORE A)	
1	067 068 069 070	002250	067617		DHSP		CONT OF RHCS1 CONT OF RHCS2 CONT OF RHDS1 CONT OF RHER2 CONT OF RHER3 SERRPC.CS1.CS2.DS1.ER2.ER3 O,0,0,0,0,0,0		
1	073	002252	071306 071537		DT26 DF26		SERRPC.CS1.CS2,DS1,ER2,ER3 ;0,0,0,0,0,0,0		
İ	076 077	002256	066317	:*ITEM	104 EM104				
1	050 050 050 050 050 050 050 050 050 050	005520	067617		DH26		REGISTER CONTENTS INCORRECT AFTER A DIAGNOSTIC SEEK PC CONT OF RHCS1 CONT OF RHCS2 CONT OF RHDS1 CONT OF RHER2 CONT OF RHER3 SERRPC, CS1, CS2, DS1, ER2, ER3 D, D, D, D, D, D, D	2	
1	085 086 087	002264	071306 071537		DT26 DF26		\$ERRPC.CS1.CS2,DS1,ER2.ER3	•	

SEQ 0085

```
***********************
                                                                                                     *RPD4 REGISTERS
                                                                                                    :*CONTROL AND STATUS 1 REGISTER. (#00)
                                                                                                                                                                                        ;GO (BIT #0)
                                                                                                                                                                                      GO (BIT #0);
INTERRUPT ENABLE (BIT #6);
READY (BIT #7);
HIGH ORDER UNIBUS BITS (BIT #8);
HIGH ORDER UNIBUS BITS (BIT #9);
PORT SELECT (BIT #10);
DEVICE AVAILABLE (BIT #11);
MASSBUSS PARITY ERROR (BIT #13);
TRANSFER ERROR (BIT #14);
SPECIAL CONDITION (BIT #15)
                                    001000
000200
000200
000400
                                                                                                  IE=
RDY=
A16=
                                                                                                   A17= 1000
PSEL= 2000
1144
                                    002000
1145
1146
1147
1148
1149
                                    00000
020000
040000
040000
                                                                                                                       4000
20000
40000
                                                                                                   DVA=
                                                                                                   MCPE=
                                                                                                   TRE=
1150
1151
1153
1154
                                                                                                :*STATUS REGISTER (RHDS1) (#01)
                                                                                          DFF5= 1
DFF20= 2
DIGB= 4
DIGB= 40
DL64= 20
DE1= 40
VY= 100
DRY= 200
DPR= 400
PROG= 1000
LBT= 2000
WRL= 4000
                                                                                                                                                                                       :DRIVE FORWARD 5"/SEC. (BIT #0)
:DRIVE FORWARD 20"/SEC. (BIT #1)
;DRIVE TO INNER GAVRD BAND (BIT #2)
                                   000001
000002
000004
                                                                                                                                                                                     DRIVE TO INNER GAVRD BAND (BIT #2)
GO REVERSE (BIT #3)
DIFFERENCE LESS THAN 64 (BIT #4)
DIFFERENCE EQUALS 1 (BIT #5)
VOLUME VALID (BIT #6)
DRIVE READY (BIT #7)
DRIVE PRESENT (BIT #8)
PROGRAMABLE (BIT #9)
LAST SECTOR TRANSFERRED (BIT #10)
WRITE LOCK (BIT #11)
MEDIUM ON-LINE (BIT #12)
POSITIONING OPERATION IN PROGRESS (BIT #13)
COMPOSIT ERROR. (BIT #14)
ATTENTION ACTIVE (BIT #15)
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
                                    000010
                                    000020
                                   000100
000200
000400
000400
                                   002000
                                    010000
                                                                                                                        10000
                                                                                                  MOL=
                                                                                                                       20000
                                    020000
                                                                                                  PIP=
1166
1167
1168
1169
1170
1171
1172
1173
1174
                                    040000
                                                                                                  ERR=
                                                                                                                        100000
                                                                                                  **ERROR REGISTER #01 (RHER1) (#02)
                                                                                                                                                                                    ; ILLEGAL FUNCTION (BIT #0)
; ILLEGAL REGISTER (BIT #1)
; REGISTER MODIFICATION REFUSED (BIT #2)
PARITY ERROR (BIT #3)
FORMAT ERROR (BIT #4)
; WRITE CLOCK FAIL (BIT #5)
; ECC HARD ERROR (BIT #6)
; HEADER COMPARE ERROR (BIT #7)
; HEADER CRC ERROR (BIT #8)
; ADDRESS OVERFLOW ERROR (BIT #9)
; INVALID ADDRESS ERROR (BIT #10)
; WRITE LOCK ERROR (BIT #11)
; DRIVE TIMING ERROR (BIT #12)
; OPERATION INCOMPLETE (BIT #13)
; DRIVE UNSAFE (BIT #14)
                                                                                                                       200002
                                                                                                    ILR=
                                                                                                  RMR=
                                    000020
                                                                                                  PAR=
                                                                                                  FER=
                                    000040
1176
                                    000100
                                    000200
1178
1179
1180
1181
1182
1183
                                    000400
                                    001000
                                                                                                  AOE=
IAE=
                                    002000
                                    004000
                                    020000
                                                                                                                                                                                      :DRIVE UNSAFE (BIT #14)
```

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K07
MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1
DZRJIA.P11 ERROR POINTER TABLE
                                                                                                            MACY11 27(655) 30-MAR-76 22:59 PAGE 27
                                 100000
                                                                                                    100000
                                                                                   DCK=
                                                                                                                                                      :DATA CHECK ERROR (BIT 15)
    :*MAINTAINABILITY REGISTER (RHMR)(#03)
                                 000001
000004
000010
000020
000020
000040
000000
                                                                                                                                                      ;DIAGINOSTIC MODE (BIT #0)
;MAINTAINABILITY CLOCK (BIT #1)
;MAINTAINABILITY INDEX (BIT #2)
;MAINTAINABILITY SECTOR CLOCK (BIT #3)
;MAINTAINABILITY READ (BIT #4)
;MAINTAINABILITY WRITE (BIT #5)
                                                                                    MCLK=
                                                                                    MINX=
                                                                                   MSTCK=
                                                                                                    20
                                                                                   MRD=
                                                                                    MWR=
                                                                                   DTSY=
                                                                                                    1000
                                                                                                                                                      MAINTAINABILITY SYNC DETECTED (BIT #9)
                                                                                   :*ATTENTION SUMMARY PSEUDO-REGISTER (RHAS) (#04)
                                                                                                                                                      ;DEVICE O (BIT #0);DEVICE 1 (BIT #1);DEVICE 2 (BIT #2);DEVICE 3 (BIT #3);DEVICE 4 (BIT #4);DEVICE 5 (BIT #5);DEVICE 6 (BIT #6);DEVICE 7 (BIT #7)
                                 000001
000002
000004
000010
                                                                                   AT1=
                                                                                   ATZ=
ATZ=
                                                                                                    100
                                                                                   AT4=
                                                                                   ATS=
                                                                                                   100
                                                                                   AT6=
                                                                                   :*DESIRED SECTOR/TRACK ADDRESS REGISTER (RHDST) (#1)
:*EACH BIT IS CALLED BY BIT NUMBER
                                                                                   :*DRIVE TYPE REGISTER (RHDT) (#06)
                                                                                   : *EACH BIT IS CALLED BY BIT NUMBER
                                                                                   :*LOCK-AHEAD REGISTER (RHLA) (#07)
                                                                                                                                                     EXTENSION 1 (BIT #0)
EXTENSION 2 (BIT #1)
EXTENSION 3 (BIT #2)
                                 000001
                                                                                   EXT1=
                                                                                   EXT2=
                                 200002
                                 000004
                                                                                                                                                    EXTENSION 3 (BIT #2)
EXTENSION 4 (BIT #3)
EXTENSION 5 (BIT #4)
EXTENSION 6 (BIT #5)
SECTOR COUNT FIELD 0 (BIT #6)
SECTOR COUNT FIELD 1 (BIT #7)
SECTOR COUNT FIELD 2 (BIT #8)
SECTOR COUNT FIELD 3 (BIT #9)
SECTOR COUNT FIELD 4 (BIT #10)
TRACK FIELD 1 (BIT #11)
TRACK FIELD 2 (BIT #12)
TRACK FIELD 3 (BIT #13)
TRACK FIELD 4 (BIT #14)
                                 000010
000020
000040
                                                                                  EXT10=
                                                                                  SC1=
SC2=
SC4=
SC10=
SC20=
TRK1=
                                                                                                   100
200
400
                                 000100
                                 000200
                                 000400
001000
002000
                                                                                                   1000
2000
4000
                                 0004000
                                 010000
                                                                                   TRK2=
                                                                                                    10000
                                                                                                   20000
                                 020000
                                                                                  TRK4=
                                 040000
                                                                                  TRK10=
```

SEQ 0087

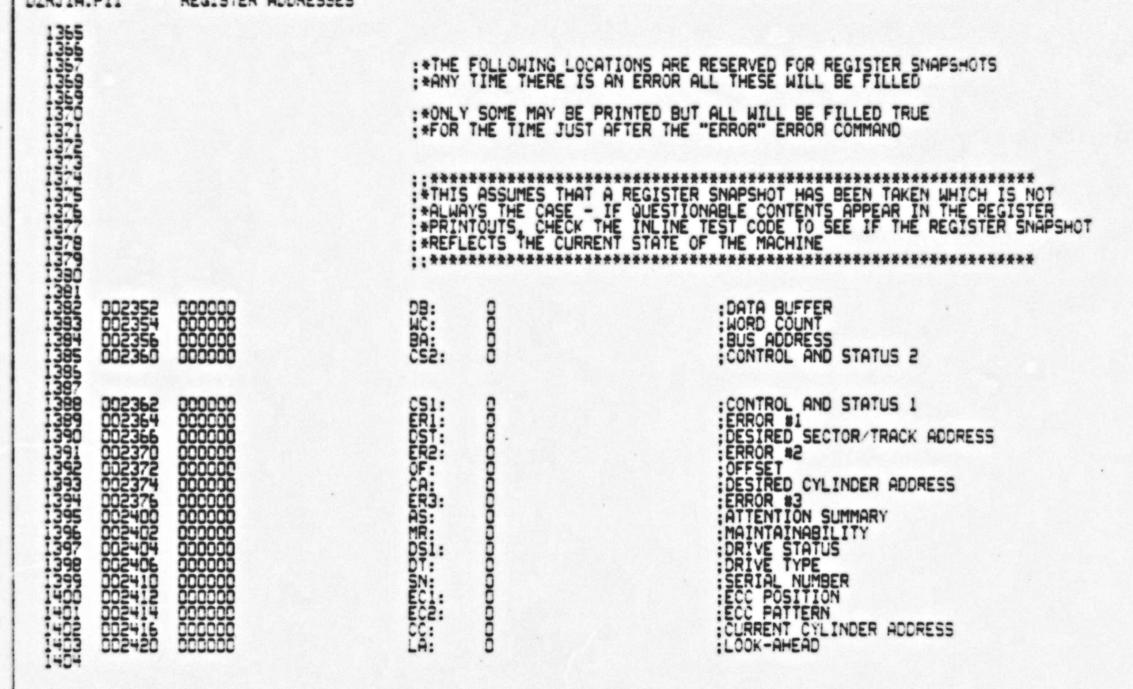
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MAINDEC-11-0 DZRJIA.P11	DZRJI-A, RPO4/5/6 FUNCT ERROR POINTER TABL		SEQ 0089
1293 1294 1295 1296 1297 1298 1299 1300 1300 1300 1300 1300 1300 1311 1312 1313 1314 1315 1317 1318 1319 1319 1321	000001 000002 000020 000020 000000 040000 040000 040000	PSU= 1 VUF= 2 VELOCITY UNSAFE (BIT *1) VELOCITY UNSAFE (BIT *1) VELOCITY UNSAFE (BIT *1) ANY UNSAFE EXCEPT READ/WRITE (BIT *3) PRE= 20 PCL= 40 PCL= 40 PCL= 100 PCL=	
1303 1304 1305 1306 1307 1308		**ECC POSITION REGISTER (RHEC1) (#16) **EACH BIT IS CALLED BY BIT NUMBER	
1310 1311 1312 1313 1314 1315 1316 1317 1318		:*ECC PATTERN REGISTER (RHEC2) (#17) :*EACH BIT IS CALLED BY BIT NUMBER	
1320			

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 30 DZRJIA.P11 REĞISTER ADDRESSES

		.SBTTL	REGISTER ADDRESSES						
					2				
		; *RP04	5/6 DISK I/O REGISTER LO	CATED IN THE RH11 CONTROLLER					
002270 002272 002274 002276	176722 176702 176704 176710	RHDB: RHWC: RHBA: RHCS2:	176722 176702 176704 176710	DATA BUFFER WORD COUNT BUS ADDRESS CONTROL AND STATUS 2					
		; *RP04	5/6 DISK I/O REGISTERS L						
002300 002302 002304 002310 002312 002314 002316 002320 002322 002324 002326 002334 002336	176700 176714 176706 176740 176732 176734 176742 176716 176716 176726 176726 176730 176744 176746 176736 176736	RHCS1: RHER1: RHER2: RHOF: RHCA: RHCA: RHCS1: RHCS1: RHCS1: RHCC1: RHCC2: RHCC2: RHCC3:	176700 176714 176706 176740 176732 176734 176742 176716 176724 176712 176726 176730 176744 176746 176736	CONTROL AND STATUS 1 ERROR #1 DESIRED SECTOR/TRACK ADDRESS ERROR #2 OFFSET DESIRED CYLINDER ADDRESS ERROR #3 ATTENTION SUMMARY MAINTAINABILITY DRIVE STATUS DRIVE TYPE SERIAL NUMBER ECC POSITION ECC PATTERN CURRENT CYLINDER ADDRESS LOOK-AHEAD	.,				
		;*ADDIT	; *ADDITIONAL I/C REGISTERS LOCATED IN THE RH70 CONTROLLER LOGIC						
002340 002342	176750 176752	RHBAE: RHCS3:	176750 176752	BUS ADDRESS EXTENSION REGISTER CONTROL AND STATUS REGISTER #3					
		; *P-CLC	OCK (KW11-P) I/O REGISTER	S					
002344 002346 002350	172540 172542 172544	PCLCSR: PCLBUF: PCLCTR:	172540 172542 172544	CONTROL AND STATUS REGISTER COUNT SET BUFFER COUNTER					
	002272 002274 002276 002302 002304 002306 002310 002314 002316 002324 002324 002324 0023324 0023324 0023324 0023324 0023324 0023324 0023324	002272 176702 002274 176704 002276 176710 002300 176700 002302 176714 002304 176706 002306 176740 002310 176732 002312 176734 002314 176742 002314 176716 002320 176724 002322 176712 002324 176726 002324 176726 002336 176746 002331 176746 002331 176746 002332 176746 002334 176736 002336 176720	;*RP04/ 002270 176722 RHDB: 002272 176702 RHWC: 002274 176704 RHBA: 002276 176710 RHCS2: ;*RP04/ 002300 176700 RHCS1: 002302 176714 RHER1: 002304 176706 RHDST: 002306 176740 RHER2: 002310 176732 RHOF: 002312 176734 RHCA: 002314 176742 RHER3: 002314 176742 RHER3: 002316 176715 RHMS: 002320 176724 RHMR: 002320 176724 RHMR: 002324 176726 RHDT: 002325 176730 RHSN: 002330 176744 RHEC1: 002331 176736 RHCC: 002334 176736 RHCC: 002334 176720 RHLA: ;*ADDIT	;*RP04/5/6 DISK I/O REGISTER LO 002270 176722 RHDB: 176722 002274 176704 RHBA: 176704 002276 176710 RHCS2: 176710 ;*RP04/5/6 DISK I/O REGISTERS L 002300 176700 RHCS1: 176710 002302 176714 RHCS1: 176704 002302 176714 RHCS1: 176706 002304 176706 RHCS1: 176706 002306 176740 RHCS1: 176706 002306 176740 RHCS1: 176708 002310 176732 RHOF: 176732 002312 176734 RHCC: 176734 002314 176734 RHCR3: 176742 002315 176734 RHCR3: 176742 002316 176716 RHRS: 176716 002320 176724 RHRS: 176716 002321 176724 RHRS: 176716 002322 176712 RHDS1: 176724 002323 176724 RHDS1: 176724 002324 176726 RHDT: 176726 002326 176730 RHSN: 176730 002330 176744 RHCC: 176730 002331 176746 RHCC: 176730 002332 176746 RHCC: 176736 002334 176726 RHCC: 176736 002334 176720 RHCR: 176720 ;*ADDITIONAL I/O REGISTERS LOCAL 002340 176750 RHCS3: 176752 ;*P-CLOCK (KW11-P) I/O REGISTER	;*RP04/5/6 DISK I/O REGISTER LOCATED IN THE RH11 CONTROLLER DD2270 176722 RHDB: 176722 WORD COUNT DD2274 176702 RHDB: 176704 BUS ADDRESS DD2274 176704 RHB8: 176704 BUS ADDRESS DD2276 176710 RHCS2: 176710 ;CONTROL AND STATUS 2 ;*RP04/5/6 DISK I/O REGISTERS LOCATED IN THE DEVICE CONTROL LOGIC (DCL) DD2300 176704 RHCS1: 176700 CONTROL AND STATUS 1 DD2301 176706 RHCS1: 176706 BUS SECTOR/TRACK ADDRESS DD2302 176714 RHER1: 176716 BUS ADDRESS DD2303 176706 RHDST: 176706 BUS SECTOR/TRACK ADDRESS DD2304 176708 RHCR2: 176709 ERROR #2 DD2310 176732 RHOF: 176732 OFFSET DD2311 176732 RHOF: 176732 OFFSET DD2312 176734 RHCR1: 176734 DESIRED CYLINDER ADDRESS DD2314 176740 RHER2: 176740 HRS: 176740 DD2316 176716 RHGS: 176716 HRS: 176740 HRS: 176740 DD2316 176716 RHGS: 176716 HRS: 176740 HRS: 176740 HRS: 176740 DD2320 176724 RHRS: 176740 HRS: 17				



	MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. DZRJIA.P11 REGISTER ADDRESSES	CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 32
The second secon	1405 1407 1408 1410 002422 000000 1411 002424 000002 1412 002424 000006 1413 002426 000006 1414 002430 000010 1415 002432 000010 1416 002434 000050 1417 002436 000050 1418 002440 000052 1419 002444 000062 1420 002444 000062 1421 002450 000070 1422 002450 000070 1423 002450 000072 1423 002450 000014 1425 002460 000016	;*FUNCTION EQUATES ;*TABLE OF FUNCTIONS FOR RHCS1 THEN "GO" BIT HAS TO BE SET FUTABL: NOPERA: D UNLOAD: 2 RECALI: 6 DCLEAR: 10 RELEAS: 12 RELEAS: 12 RELEAS: 12 RELEAS: 10 REL
-	1427 002462 000020 1429 002464 000000 1429	READIN: 20 :READ IN :COMPUTED ILLEGAL FUNCTION

:*DATA BUFFERS FOR READ/WRITE

WRFROM: .BLKW 274. :WRITE FROM THIS BUFFER REINTO: .BLKW 274. :READ INTO THIS BUFFER

				D08		
	PII-DZRJ	I-A. RPO4/5/6 FUNCT. REGISTER ADDRESSES	CONT. TST-PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 33	SE
1439 1439 1441 1442 1443			;*RESERVED CORE	LOCATIONS		
	904606 904606 904606	000000 000000 000000	REGACR: 0 ERWORD: 0 TSTNY: 0 RP4VEC: 0		SAVE REGISTER ADDRESS HERE SAVE ERROR WORD NUMBER HERE TEST NUMBER CONTAINS ADDRESS OF LOCATION WHERE AN RPOY INTERRUPT IS TO VECTOR TO THIS MUST BE MOVED INTO 'RPVEC' TO BE EFFECTIVE.	
1450	004610	000000	OFSTVL: 0		; OFFSET VALUE USED IN OFFSET TEST	
1452 1453 1454 1455	004612	000024	SAVERE: .BLKW	20.	BLOCK TO SAVE REGISTERS FOR PRETEST HARDWARE REGISTER SNAPSHOTS - THESE ARE USUALLY THEN CHANGED TO REFLECT	
1457	29960	000000	FINALA: D FINACC: D		EXPECTED CONDITIONS AFTER THE TEST SAVE LOOK AHEAD REGISTER AT END OF OPERATION SAVE CURRENT CYLINDER REGISTER AT END OF OPERATION	ON

: *TABLE FOR ATTENTION BITS :*ATTENTION TABLE

ATABLE: .BYTE 1,2,4,10,20,40,100,200

SEG 0093

					EU
MAINDEC-11-DZRJI-A,	RP04/5/6 FUNCT.	CONT.	TST-PT	1	MACY11 27(655)
DEPTTA PIL PER	TETER OPPRESEES				

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1468 1469 1470			:*FLAGS	AND INT	ERNAL PROGRAM CO	NTROL WORDS
1472	004676 004716 004720	000010 000000 000000	UNITS: UNIT: NOUNIT:	.BLKW .WORD .WORD	s. 0	THIS IS FILLED WITH -1 UNIT UNDER TEST NUMBER OF UNITS PRESENT USED TO KEEP TRACK OF UNIT UNDER TEST
1476	004722	000000	NUNIT:	. WORD	0	USED TO DETERMIN IF THERE ARE MORE
1478	004724	000000	NOPUSH:	0		USED TO DETERMIN IF THERE ARE MORE THAN ONE UNIT ALL ONES INDICATE NONE OF THE OPERATOR INTERVENTION TESTS WILL BE PERFORMED
1480	004726 004730 004732	000000 000000 000000	SELECT: UNITSL: UBUSB:	. WORD . WORD	0	ALL ONES INDICATE UNIT TO BE SELECTED UNIT NO. SELECTED IF ZERO UNIBUS PRESENT IF ONES NO UNIBUS B ERROR FLAG
1485 1485 1485	004734 004736	000000	ERFLGS: FIRST:	0		ERROR FLAG IF ZERO WILL TYPE HEADER IF ONES WILL NOT TYPE HEADER
1489	004740 004742	000000	ATTENT: TOTALAT:	0		:ATTENTION BIT FOR PRESENT UNIT
1492	004744 004746 004750	000000 000000 000000	RP06: RP05: RH70:	000		:RPO6 DEVICE TYPE FLAG LOCATION :MEMOREX RPO4 DEVICE TYPE FLAG :IF = 1, PROGRAM IS RUNNING ON RWPO4 SYSTEM :IF = 0, PROGRAM IS RUNNING ON RJPO4 :INITIAL UNIT NO USED DURING :CHECKING ALL ADDRESS PLUG ADDRESSES
990-1237557890-1237557890-1237 55777777779988888889999999999900000 47777777779888888889999999999900000	004752	000000	INUNIT:	0		:INITIAL UNIT NO USED DURING :CHECKING ALL ADDRESS PLUG ADDRESSES
1500 1501 1502 1503 1504	004754 004756 004760	000000 000000 000000	TMPO: TMP1: TMP4:	. WORD . WORD . WORD	000	;TEMP STORAGE :TEMP STORAGE

A.P11	RJI-A. RP WORD	0		; TEMP S	TORAGE			
00476 00477 00477 00477 00501 00501 00501 00503 00503 00503 00503				SBTTL SBTTL SBTTL	**DIAGN	OSTIC CODE**		
					.SBTTL	SETUP TESTS		
00476	2 012737 0 005037 4 000412 6 012737 4 005037 0 000404	177777 004726	004724	BEGIN1:	MOV CLR BR	#-1.2#NOPUSH 2#SELECT START	JUMP OVER OPERATOR REQUIRED TESTS	
00477	6 012737 4 005037	177777 004724	004726	BEGIN2:	MOV CLR BR	#-1, a*SELECT a*NOPUSH	SELECT UNIT DO NOT JUMP OVER ANY TEST	
00476 00477 00477 00500 00501 00501	2 005037 6 005037	004726 004724		BEGIN:	CLR	#-1, a*SELECT a*NOPUSH START a*SELECT a*NOPUSH	DO NOT SELECT UNIT DO NOT JUMP OVER ANY OPERATOR INTERVENTION TESTS - NORMAL RUN	
00502	2 000005			START:	RESET			
00502 00503 00503 00503	9 012706 0 005026 2 022706 6 001374 0 012706	001100 001140 001000		SBTTL ;;CLEAR	THE COM MOV CLR CMP BNE MOV	IZE THE COMMON T MON TAGS (SCMTAG #SCMTAG, R6 (R6)+ #SWR, R6;;DONE? -6 #STACK.SP	::FIRST LOCATION TO BE CLEARED ::CLEAR MEMORY LOCATION ::LOOP BACK IF NO ::SETUP THE STACK POINTER	
00504 00505 00506 00506 00507	012737 012737 0 012737 6 012737 9 012737	044414 000340 046612 000340 050336	000020 000020 000030 000032 400000 40000000000	;;INITI	MOV MOV MOV MOV MOV MOV	FEW VECTORS #\$SCOPE.a#IOTVE #340.a#IOTVEC+2 #\$ERROR.a#EMTVEC+2 #340.a#EMTVEC+2 #\$TRAP.a#TRAPVEC+	C :: IOT VECTOR FOR SCOPE ROUTINE C :: EMT VECTOR FOR ERROR ROUTINE C :: TRAP VECTOR FOR TRAP CALLS 2: LEVEL 7	
00511 00511 00512	0 012737 6 012737 4 005037	050406 000340 001212	920000		MOV MOV CLR	#SPWRDN, @#PWRVE #340, @#PWRVEC+2 STIMES	C'::POWER FAILURE VECTOR ::LEVEL 7 ::INITIALIZE NUMBER OF ITERATIONS	
00506 00506 00507 00511 00511 00512 00513 00513	0 012737 6 012737 9 012737 0 012737 0 012737 6 012737 9 005037 112737 112737 0 012737	046612 000340 050336 000340 050406 000340 001212 001214 000001	001115 001106 001110	;;SIZE	MOV CLR CLR MOV MOV MOV FOR A HA	SESCAPE #1, SERMAX #., SLPADR #. SLPERR RDWARE SWITCH RE	CLEAR THE ESCAPE ON ERROR ADDRESS ; ALLOW ONE ERROR PER TEST ; INITIALIZE THE LOOP ADDRESS FOR SCOPE : SETUP THE ERROR LOOP ADDRESS GISTER. IF NOT FOUND OR IT IS	
00515 00516 00517 00517 00520 00521	6 013746 2 012737 0 012737 6 012737 4 022777 2 001012	000004 005216 177570 177570 177777	000004 001140 001142 173726	;;EQUAL	MOV MOV MOV CMP BNE	a*ERRVEC(SP) *64\$.a*ERRVEC *DSWR.SWR *DDISP.DISPLAY *-1.aSWR	;;CLEAR MEMORY LOCATION ;;LOOP BACK IF NO ;;SETUP THE STACK POINTER C ;;IOT VECTOR FOR SCOPE ROUTINE ;;LEVEL 7 C ;:EMT VECTOR FOR ERROR ROUTINE ;;LEVEL 7 C ;:TRAP VECTOR FOR TRAP CALLS 2;LEVEL 7 C ;:POWER FAILURE VECTOR ;;LEVEL 7 ;INITIALIZE NUMBER OF ITERATIONS ;CLEAR THE ESCAPE ON ERROR ADDRESS ;ALLOW ONE ERROR PER TEST ;INITIALIZE THE LOOP ADDRESS FOR SCOPE ;SETUP THE ERROR LOOP ADDRESS GİSTER. IF NOT FOUND OR IT IS SOFTWARE SWITCH REGISTER. ;SAVE ERROR VECTOR ;SET UP ERROR VECTOR ;SET UP ERROR VECTOR ;SET UP FOR A HARDWARE SWICH REGISTER ;TRY TO REFERENCE HARDWARE SWR ;BRANCH IF NO TIMEOUT TRAP OCCURRED ;AND THE HARDWARE SWR IS NOT = -1 ;BRANCH IF NO TIMEOUT ;SET UP FOR TRAP RETURN	
00521 00521 00522 00522		005224		645:	BR MOV	65\$ #65\$,(SP)	::BRANCH IF NO TIMEOUT ::SET UP FOR TRAP RETURN	
00522	2 000002	000176	001140	65\$:	MOV	#SWREG, SWR	;;POINT TO SOFTWARE SWR	

SEQ 0095

-	MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO INITIAL	14/5/6 FU IZE THE	NCT. CON COMMON T	IT. TST-F	т 1	GO8 MACY11 27(655) 30-MAR-76 22:59 PAGE 36 SEG 5096
	1559 1560 1561 1562 1563	005232	012737 012637	000174	201142	66\$:	MOV	#DISPREG.DISPLAY (SP)+,@#ERRVEC ;;RESTORE ERROR VECTOR
-	556123755678901237567890012375678901237567890123756789012375678901237567890123756789012375678901237567890123756789012375678901237567890123756789012375678901237567890123756789012375678901237567890123756789001237567890012375678900123756789001237567890012375678900123756789000123756789000123756789000123756789000000000000000000000000000000000000	005244 005252 005260 005264 005270	012737 012737 013700 012720 012710	000000 00000 002066 044352 000340	177775 000036		MOV MOV MOV MOV	#0.PS #200.3#TRAPVEC+2 TRAP PRIORITY = 4 3#RPVEC.RO GET RP VECTOR ADDRESS #RPVECT.(RO)+ THIS IS FOR UNTIMELY INTERRUPTS #340,(RO) DRIVE INTERRUPT SERVICE ROUTINE PRIORITY = 7
-	1572 1573 1574 1575 1576	005274 005300 005304 005306 005310	004737 005737 001001 000402 000137	045352 004736 006110		15:	JSR TST BNE BR JMP	PC. D#\$TKINT :INITIALIZE THE TTY KEYBOARD D#FIRST :IS THIS FIRST TIME ROUND? DON'T GIVE HEADER IF NOT HEADER IST TIME THROUGH NO HEADER
-	1579 1579 1580	005314 005314 005326	104400	005322		25:	TYPE BR .ASCIZ	.68\$:: TYPE ASCIZ STRING 67\$:: GET OVER THE ASCIZ (15)(12)?RPO4/5/6 FUNCTIONAL CONTROLLER TEST - PART I - DZRJI-A?
-	1582 1583 1584 1585 1586	005414 005414 005420 005460	104400 000417	005422		575: 575: 1:705: 695:	TYPE BR .ASCIZ	.70\$::TYPE ASCIZ STRING 69\$::GET OVER THE ASCIZ (15><12>/REVISION DATE: 21-MAR-76/<15><12>
-	1587 1588 1589 1590	005460	104400	005466			TYPE BR .ASCIZ	72\$::TYPE ASCIZ STRING 71\$::GET OVER THE ASCIZ (15)<12>/ALL DCL'S UNDER TEST MUST BE LOCKED ON THE CORRECT PORT/
-	1591 1592 1593 1594	005560 005560 005564	104400	005566		71\$: 71\$:	TYPE BR .ASCIZ	.74\$:: TYPE ASCIZ STRING 73\$:: GET OVER THE ASCIZ (15) <12> / IF CHANGE IS REQUIRED ON PORT SWITCH, THEN A CYCLE/
-	1595 1596 1597 1598 1599	005654 005654 005660 005754	104400 000435	005662		73\$: 73\$: 1176\$: 75\$:	TYPE BR .ASCIZ	.76\$::TYPE ASCIZ STRING 75\$::GET OVER THE ASCIZ <15><12>/UP SEQUENCE IS REQ FOR STROBING THE PORT SELECT FLOP/<15><12>
-	1600 1601 1603	005754 005760	104400	005762			TYPE BR .ASCIZ	.78\$::TYPE ASCIZ STRING 77\$::GET OVER THE ASCIZ (15)<12>/ALL DCL'S NOT UNDER TEST MUST BE SWITCHED/
	1604 1605 1606	006045 006036 006036	104400	006044		::78\$: 77\$:	TYPE BR .ASCIZ	.80\$::TYPE ASCIZ STRING 79\$::GET OVER THE ASCIZ (15) <12> /OFF, OR LOCKED ON THE OTHER PORT/
-	1608 1609 1610 1611 1612	006110	012737	177777	004736	::80\$: 79\$: SND1: .SBTTL	MOV	#-1,@#FIRST ; NEXT TIME DO NOT GIVE HEADER UE FOR SOFTWARE SWITCH REGISTER
-								

MAINDEO DZRJIA.	-11-DZRJ	I-A RPO	14/5/6 FU LUE FOR S	INCT. CON	IT. TST-P SWITCH R	T 1 EGISTER	HO8	30-MAR-76 22:59 PAGE 37
1613	006116	005737 001006 023727	2000042	222.24		TST	3#42 54\$ SWR. #SWREG 65\$: ARE WE RUNNING UNDER XXDP/ACT? : BRANCH IF YES : SOFTWARE SWITCH REG SELECTED?
1615 1616 1617	005116 006122 006124 006132 006134 006136	001005 104405 000403	001140	000176		TST BNE CMP BNE GTSWR BR		: SOFTWARE SWITCH REG SELECTED? : BRANCH IF NO : GET SOFT-SWR SETTINGS
	006140 006146	000403	000001	001134	64\$: 65\$:	BR MOVB	65\$ #1,\$AUTOB	;;SET AUTO-MODE INDICATOR
1622	006146	032777 001403 012737	010000	172764	RH70CK:	BIT BEQ MOV	#SW12, 3SWR 3\$:LOOK TO SEE IF USING RH70 :IF SW12 = 0, SKIP NEXT :IF SW12 = 1, CU IS AN RH70
1624	006146 006154 006156 006164	012737	177777	004750	35:	MOV	#-1,3#RH70	: IF SW12 = 0, SKIP NEXT : IF SW12 = 1, CU IS AN RH70

R

SE0 0097

		108				
MAINDEC-11-DZRJI-A. DZRJIA.PII GET	RP04/5/6 FUNCT. CONT. TST-PT 1 VALUE FOR SOFTWARE SWITCH REGISTER	MACY11 27(655)	30-MAR-76	22:59	PAGE 38	

					*IS THERE A P-CLOCK (KW11-P) ON THE SYSTEM *IF SO MAKE 'WAT" TRAPS GO TO 'WAIT.P' *IF SO MAKE RPO4 INTERRUPTS GO TO 'TIME 1' *IF NOT MAKE 'WAT' TRAPS GO TO 'WAIT.T' *IF NOT MAKE RPO4 INTERRUPTS GO TO 'TIME 2' *THE NEXT LINE IS TO BE ADDED LATER *AND THE JUMP AND NOP REMOVED *FOR NOW NO CLOCK WILL BE USED							
1636 1637						MOV	3#15, 3#ERRVEC	:SET TIME-OUT VECTOR				
1639						JMP	0#1S	;DO NOT USE CLOCK				
1640						NOP TST		나이 아이는 아이는 아이를 가는 것이다. 그는 사람이 있는 것이 없어 있다면 살아 되어 가장 가득하셨다.				
1643						MOV	#WAIT.P. D#\$TRPA	REFERENCE P-CLOCK STATUS REGISTER ADDRESS = 172540 D+20 : THERE IS A P-CLOCK THERE IS A P CLOCK SO VECTOR TO TIME1				
1645 1646 1647 1648 1650 1651 1652					15:	BR MOV	C3	D+20 : THERE IS NO P-CLOCK				
1649							**					
1652	006164	012737 012737	041600 177777	004606 046760	25:	MOV MOV	#TIME2, 2#RP4VEC #-1, 2#PRITEM	:RP04/5/6 INTERRUPTS GC TO 'TIME 2' :CLEAR PREVIOUS ITEM NUMBER				
1653 1654 1655 1656 1657 1658 1659												
1657 1658	006500	005737	004726			TST	a#SELECT	:WAS IT A 200 START BRANCH IF STARTING FROM 200				
1659 1660 1661	006204 006206 006212	104400	006214			BEG TYPE	TST1 ;	BRANCH IF STARTING FROM 200 ::TYPE ASCIZ STRING ::GET OVER THE ASCIZ				
1662		000424			::65\$: 64\$:	BR .ASCIZ	645 (15)(12)/SELECT	UNIT NUMBER TO BE TESTED ? /415>412>				
1564	006264	104411	177770		513:	RDOCT	#177770. (SP)	ONLY KEEP LAST 3 BITS				
1666 1667 1668	006264 006264 006266 006272 006275	104411 042716 011637 012637	004716			MOV MOV	#177770,(SP) (SP),@#UNIT (SP)+,@#UNITSL	ONLY KEEP LAST 3 BITS SAVE UNIT TO BE TESTED SAVE UNIT TO BE TESTED				
1669												
1663 1664 1665 1665 1667 1669 1670 1671 1673	006304	001403	004730	004716		MOV MOV	TST1 2#UNITSL, 2#UNIT	BRANCH IF STARTING FROM 200 ;SET UNIT NUMBER				

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 39 DZRJIA.P11 GET VALUE FOR SOFTWARE SWITCH REGISTER

1674 1675								
1675 1676					*TEST	1	REFERENCE EACH F	REGISTER
1676 1677 1678 1679					;*		REFERENCE EACH F	REGISTER BY A MOVE INSTRUCTION
1681	006315	000004			†\$T1:	SCOPE	***********	*********
1682 1683	006314	012737	000001	001212		VOM	#1,STIMES #2-1, D#TSTNM	; DO 1 ITERATION THIS SAVES TEST NUMBER
1684 1685	006314 006322 006330 006334	012737 012737 012706 012737	001000	000030		MOV	*STACK SP *REGSA1, 0*EMTVEC	; DO 1 ITERATION THIS SAVES TEST NUMBER SET UP STACK POINTER ERROR VECTOR SO THAT NO REGISTERS ARE SAVED SET UP FOR BUS TIMEOUT
1686	006342	012737	006370	000004		MOV	#25, @#ERRVEC	; SET UP FOR BUS TIMEOUT
1681 1682 1683 1684 1685 1687 1688 1689 1690 1691 1693 1693 1699 1700 1700 1700 1700 1700 1700 1700 17	006350 006354 006360 006362 006364 006376 006376 006400 006410	012700 012701 013102 005300 001375 000470	000024		1\$:	MOV MOV DEC BNE	#24.R0 #RHDB.R1 @(R1)+,R2 RO 1\$	THERE ARE 24 REG TO TEST RI NOW HAS ADDR OF ADDR OF FIRST REG. READ HARDWARE REG. COUNT DOWN BRANCH IF 24 NOT DONE BRANCH IF 24 DONE CC : RESTORE TRAP CATCHER CLEAN STACK STORE FAILING REG ADDR REGISTER NON EXISTANT INHIBIT ERROR PRINTOUT? BRANCH IF YES
1695	006366	012737	000006	000004	25:	BR	#ERRVEC+2, Q#ERRV	EC RESTORE TRAP CATCHER
1597	006400	012737 022626 016137	177776	001200		CMP MOV	#ERRVEC+2.3#ERRV (SP)+,(SP)+ -2(R1),\$TMP1	STORE FAILING REG ADDR
1699 1700	006410	104007 032777 001052	020000	172522		ERROR BIT BNE	#SW13, DSWR	: REGISTER NON EXISTENT : INHIBIT ERROR PRINTOUT ? : BRANCH IF YES
1702 1703 1704	006420	104400	006426		65\$:	TYPE BR .ASCIZ		::TYPE ASCIZ STRING ::GET OVER THE ASCIZ ADDRESS IS TO BE CHANGED HALT/
1705 1706 1707	006476 006476 006502	104400	006504		;:65\$: 64\$:	TYPE BR		::TYPE ASCIZ STRING ::GET OVER THE ASCIZ AND RESTART AT /
1708 1709	005535	000113			;;67\$: 66\$:	.ASCIZ	<15><12>/PROGRAM	AND RESTART AT
1711 1712 1713	006536	012746	043522			MOV	*BASECH,-(SP)	GET READY TO TYPE STARTING ADDRESS OF "CHANGE OF BASE ADDRESS" ROUTINE
1714	006542 006544	104401 000137	040714		45:	TYPOC JMP		GO TO END OF PROGRAM
1715 1716 1717 1718	006550	012737	046612	000030	3\$:	MOV	#SERROR, @#EMTVEC	RESTORE ERROR VECTOR
1718	006556	012737	000006	000004		MOV	#ERRVEC+2, @#ERRV	RESTORE ERROR VECTOR SO THAT REGISTERS ARE SAVED EC RESTORE TRAP CATCHER

ERROR

5

005635

104005

SEG 0100

RHAS DOES NOT CLEAR BY WRITING ALL ONES INTO IT

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 41 DZRJIA.P11 T2 PARTIAL TEST OF RHAS FOR UNIT NUMBERS PRESENT

170								
174 174 174 174	5				; ***** ; *TEST	3	TEST FOR DRIVES	PRESENT USING RHAS AND RHCS2
174	7				*	BY MOV	BER OF DRIVES PRING ALL ONES INTO	RESENT IS FOUND RHER1 WITH UNIT NUMBER ROM ZERO TO SEVEN
175	1				;*	THE BIT	S SET IN RHAS SH	HOULD GIVE DRIVES PRESENT
175 175 175	3					THE DRI	TVE TYPE IS CHECK	ED TO BE AN RPO4/RPO6 AND THEN ED IN A TABLE CALLED 'UNITS'
175					::****	******	*******	********
1750 1750 1760 1760	7 006640 8 006642 9 006650 0 006656 1 006660	000004 012737 012737 000005 004737	000001 000003 045352	001212	ŤŠT3:	SCOPE MOV MOV RESET JSR	#1,STIMES #4-1,2#TSTNM PC,2#\$TKINT	;:DO 1 ITERATION THIS SAVES TEST NUMBER START WITH AN INIT ;INITIALIZE TTY KEYBOARD
176 176 176 176 176	006664 006672 006674 006700	032777 001026 104400 000423	020000 006702	172246	;:65\$: 64\$:	BIT BNE TYPE BR .ASCIZ	#SW13, DSWR 4\$,65\$ 64\$ <15><12><15><12	; INHIBIT ERROR TYPEOUT? ; BRANCH IF YES ; TYPE ASCIZ STRING ; GET OVER THE ASCIZ > LOOKING AT RHAS - DRIVES PRESENT
174 175 175 175 175 175 175 175 176 176 176 176 176 176 176 176 176 177 177	006750 006750 006754 006760 006762 006766 006776 006776 007000	013701 013702 005012 012700 013704 012714 005212 005300 001373	002316 002276 000010 002302 177777		15:	MOV CLR MOV MOV MOV INC DEC BNE	a#RHAS.R1 a#RHCS2,R2 aR2 #8.,R0 a#RHER1,R4 #-1,aR4 aR2 R0 1\$	R1 HAS ADDR. OF RHAS R2 HAS ADDR. OF RHCS2 CLEAR RHCS2 COUNT R4 HAS ADDR. OF RHER1 MOVE ERRORS INTO RHER1 INCREMENT UNIT NO. COUNT DOWN DRIVE COUNTER DO NEXT UNIT IF 8 NOT DONE
1779	007004	111137	004742			MOVB	aR1,a#TOTALAT	SAVE TOTAL ATTENTION
178 178 178 178	007010 007014 007016 007020	105037 105711 001402 000137	004743			CLRB TSTB BEQ JMP	a#TOTALAT+1 ari 2\$ XE2	SAVE TOTAL ATTENTION USED IN DRIVE CLEAR TEST CLEAR UPPER BYTE TEST 'RHAS' FOR ANY DRIVES PRESENT NONE RESPONDING - TYPE THE MESSAGE SOME THERE - GO FILL "UNITS" TABLE
1779 1780 1780 1780 1780 1780 1780 1780 1790 1790 1790 1790 1790 1790	007024 007032 007034	032777 001402 000137	020000 007730	172106	2\$:	BIT BEQ JMP	#SW13, DSWR 3\$ SELTST	INHIBIT ERROR TYPE OUT? "NO DRIVES" MESSAGE IF NOT CHECK FOR SELECTED UNIT START AND LOAD "UNITS" TABLE WITH SELECTED ONE IF SO
179 179 179 179	007040 007040 007044	104400	007046		3\$: ::67\$:	TYPE BR .ASCIZ	.67\$ 66\$ <15><12>/NO DRIV	;; TYPE ASCIZ STRING :: GET OVER THE ASCIZ VES PRESENT - RHAS = 0/
179	007106	104400	007114		;;67\$: 66\$:	TYPE	,69\$;;TYPE ASCIZ STRING

....

MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RP04/5/	FUNCT. CONT. TST-P	T 1 USING	MACY11 27(655) RHAS AND RHCS2		22:59 P	AGE 4	2
1797	007112	000430		BR	68\$	GET OVE	R THE ASCI	Z	Lis

```
.HSCIZ (15)(12)/WRITING ONES INTO RHER1 FOR ALL UNIT NUMBERS/
                                                                ;;695:
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
         007174
                                                                                          71$ ;; TYPE ASCIZ STRING
70$ ;; GET OVER THE ASCIZ
(15)(12)/DOES NOT SET ANY BIT IN RHAS SO ABORT PROGRAM/
                       104400
                                    007202
                                                                             TYPE
                       000430
          007200
                                                                ::71$:
70$:
                                                                             .ASCIZ
         007262
007262
007266
                                                                                          ;; TYPE ASCIZ STRING
72$
::GET OVER THE ASCIZ
(15)(12)/TO LOOP ON THIS TEST WO PRINTOUT SET SWITCHES 13, 8, 1, & 0/
                       104400
                                    007270
                                                                             TYPE
                                                                             BR
                                                                725:
                                                                             . ASCIZ
         007366
                                                                             JMP
         007366
                       000137
                                    040714
                                                                                           a#SEOP
                                                                                                                     :GO OUT----->
:*SET UP UNITS TABLE
         007372
007372
                                                               XE2:
                      012700
012703
012723
005300
001374
                                    000010
004676
177777
                                                                                          #8..R0
#UNITS.R3
#-1,(R3)+
                                                                                                                      ; COUNTER
                                                                             MOV
                                                                            MOV MOV DEC BNOV CLR MOV ROCE
                                                                                                                      POINTER
          007376
          007402
                                                               35:
                                                                                                                      PRESET BLOCK TO ALL ONES
                                                                                          RO 35
         007406
                                                                                                                      COUNT
         007410
007412
007416
007420
                                                                                                                      BRANCH IF 8 NOT DONE
                                                                                                                     POINTER
INITIALIZE UNIT NO. TO 0
NO. OF UNITS PRESENT
                                                                                          #UNITS, R3
                       012703
005005
                                    004676
                       005037
                                                                                          TIMUON#6
                                     004720
         007424
007430
007434
007434
                       012700
011137
006037
103120
                                                                                                                     COUNTER
                                                                                          #8.,R0
aR1.a#STMP0
a#STMP0
                                    000010
                                                                                                                     TEMPORARY STORAGE
SET CARRY IF ONE IN C BIT
CHECK NEXT UNIT IF ONE NOT IN BIT O
                                    001176
001176
                                                                                          R5, aRHCS2
#24020, aRHDT
6$
         007442
                                    172630
                                                                                                                      INSERT UNIT NUMBER INTO RHCS2 UA BITS
                                                                             MOV
                       010577
                                                                                                                    IS THIS A DUAL PORT RPO4 ?
TYPE THE UNIT NO. IF YES
IS THIS A SINGLE PORT RPO4 ?
TYPE UNIT NO. IF YES
                      022777
001503
022777
001477
         007446
                                                                             CMP
                                                  172650
         007454
007456
007464
                                                                            BEQ
                                    020020
                                                                                          #20020, 2RHDT
                                                  172640
                                                                             BEQ
                                                                                                                     ; DUAL PORT RPOS ?
; TYPE UNIT NO. IF SO
; SINGLE PORT RPOS ?
         007466
007474
007476
                       022777
001473
022777
                                                                                         #24021, DRHDT
                                                                            CMP
BEQ
CMP
                                    024021
                                                  172630
                                    020021
                                                                                          #20021, DRHDT
                                                 172620
                       001467
         007504
                                                                             BEQ
                                                                                                                     TYPE UNIT NO. IF SO
         007506
007514
007516
007524
                                                                                                                     IS THIS A DUAL PORT RPO6 ?
TYPE THE UNIT NO. IF SO
IS THIS A SINGLE PORT RPO6 ?
TYPE UNIT NO. IF SO
                      022777
001463
022777
001457
                                                                                          #24022, aRHDT
6$
                                    024022
                                                  172610
                                                                            BEQ
                                                                                          #20022, aRHDT
                                    020022 172600
                                                                            BEQ
                                                                                          6$
                                                               ::*******************
```

:*NO...IT'S NOT AN RPO4/RPO5/RPO6 DEVICE SO TYPE :*OUT THE DEVICE TYPE

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 43 DZRJIA.P11 T3 TEST FOR DRIVES PRESENT USING RHAS AND RHCS2

1851 1852 1853	007526 007532	104400	007534	Ł	::65\$:	TYPE BR .ASCIZ	.65\$ 64\$ <15><12>/UNIT N	;; TYPE ASCIZ STRING ;; GET OVER THE ASCIZ UMBER /
1854 1855 1856	007554 007554 007556	010546			;;65\$: 64\$:	MOV TYPDS	R5,-(SP)	GET READY TO TYPE UNIT NUMBER
1857 1858 1859	007560	104400	007566		;;67\$: 66\$:	TYPE BR .ASCIZ	66\$ /, RHDT = /	;; TYPE ASCIZ STRING ;; GET OVER THE ASCIZ
1861	007602 007602 007606	017746	172516		pp2:	MOV TYPOC	aRHDT,-(SP)	GET READY TO TYPE RHDT
1863 1864 1865	007610	104400	007616		::69\$:	TYPE BR .ASCIZ	.69\$ 68\$? - NOT AN RPO4/	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ /RPO5/RPO6 DEVICE !!?
1866	007662 007662	000407			::69\$: 68\$:	BR	5\$; NO RPO4/RPO5/RPO6 FOUND SO TEST NEXT UNIT
1869	007664 007666	010523	001223		6\$:	MOV TYPE	R5,(R3)+ ,\$CRLF	;LOAD TABLE POSITION AND INCR IT
1871	007672	010546	COILLES			MOV TYPDS	Ř5,-(SP)	PUT DRIVE NO. ON STACK TYPE DRIVE NO. INCR THE TOTAL NO. OF UNITS
1873 1874	007676	005237	004720			INC	11NUON#6	INCR THE TOTAL NO. OF UNITS
1851 1852 1853 1854 1855 1855 1856 1856 1863 1864 1865 1866 1866 1867 1867 1877 1878 1877 1878 1877 1878 1883 1883	007702 007704 007706	005205 005300 001252			5\$:	INC DEC BNE	R5 R0 4\$; 'RHCS2' UNIT ADDRESS DRIVE COUNTER DOWN ONE TEST AND DO NEXT UNIT IF 8 NOT DONE
1879	007710 007716	013737	004676	004716		MOV	a#UNITS.a#UNIT	SET UNIT NO. TO FIRST ONE FOUND OR O
1881	007724	005337	004722			DEC	a#NUNIT	;SET UNIT NO. TO FIRST ONE FOUND OR D ;SAVE NO. OF UNITS ;IF NUNIT = D THEN ONLY ONE UNIT ;IF NUNIT > D THEN MORE THAN ONE UNIT
1884	007730 007734	005737 001403	004726		SELTST:			SKIP NEXT IF STARTING FROM 200; CHANGE UNIT NUMBER TO SELECTED ONE
1886	007736	013737	004730	004716		MOV	อะแห่งเราะ ว่า	; CHANGE UNIT NUMBER TO SELECTED ONE

1987														
1997 1999 1999 1999 1999					: TEST	TYPE SERIAL NUMBER AND DRIVE TYPE								
1993														
1895 1896 1897					:	* READ SERIAL NUMBER AND DRIVE TYPE REGISTERS								
1999 1999 1900					:	* TO LOOP HERE SET SWITCH 8, AND THIS TEST NUMBER ON								
1901	007744	nonna.			†\$T4:	SCOPE	***********	********						
1990 1900 1900 1900 1900 1900 1900 1900	007746 007754 007762 007765	012737 012737 012706 012737	000001 010706 001000 000004	001212 001100 404604	1514.	MOV MOV MOV	#1.STIMES #15.SLPADR #STACK.SP #4.3#TSTNM	::DO 1 ITERATION ::SET SCOPE LOOP ADDRESS :RESET STACK ;SAVE TEST NUMBER						
1909	007774	004737	041366			JSR	PC, ascLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER						
1913	010000	005037	004740			CLR	DEATTENT	CLEAR						
	010004 010010 010010 010010	005737 001107 012700 122710 001102	000041 000011			TST BNE MOV CMPB BNE	3*UNIT 9\$ *41.R0 *11,(R0)	IS "UNIT O" NEXT IN THE UNITS TABLE? IF NOT TEST THIS UNIT IF SO, CHECK THE LOAD MEDIA LOCATION WAS IT AN RPD4/5/6? NO - GO AHEAD WITH TESTING UNIT #0						
1921	010024	005737	004726			TST	3#SELECT	:WAS UNIT #D SELECTED ? :(IE. WAS IT A 210 START ?) :IF SO, CHANGE PACKS						
1923	010030	001006				BNE	12\$	IF SO, CHANGE PACKS						
1925						*INCRE	*INCREMENT THE UNITS TABLE TO NEXT DRIVE (IF ANY) ** DECREMENT THE "NOUNITS" PRESENT (TO BE TESTED)							
1929	010036	012700 005720	004676			MOV	*UNITS.RO	:LOAD UNITS TABLE POINTER :SELECT THE NEXT UNIT IN THE TABLE						
1932	010040	022710	177777		125:	CMP BNE	#-1.(RO)	(DOUBLE INCREMENT THE POINTER, RO) IS THERE ANOTHER TABLE ENTRY PRESENT? IF SO, USE THE NEXT DRIVE & DEC "NOUNITS" IF NOT, MUST USE DRIVE #0 & CHANGE PACK						
1934 1935 1936	010046	104400	010054			TYPE BR .ASCIZ	65\$ 64\$ (15) (12) (15) (12)	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ DISMOUNT PACK FROM UNIT #0 AND MOUNT A SCRAT	CH PACK/					
1938 1939 1940	010144	104400	010152		::65\$: £4\$:		67\$ 66\$:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ						

1941	010214	000000			;;67\$: 66\$:	. ASCIZ	<15><12>/PRESS	CONTINUE WHEN FINISHED/(15)(12)
1943	912510	000000				BR	9\$	CONTINUE, USING SCRATCH PACK ON UNIT #0
1946	010220	011037 005337	004716 004720		115:	MOV	(RO), D#UNIT D#NOUNITS	SET UP TO BE THE UNIT UNDER TEST DECREMENT BECAUSE UNIT #0 WON'T BE TESTED
\$\frac{1}{1}\$\frac	010230	013700	004716		9\$:	MOV	a≋UNIT,R0	;RO CONTAINS UNIT UNDER TEST
1952					::****	******	*************	********
1954	010234	005037	004744 172032 024022	172052		CLR MOV	a#RPO6 RO. aRHCS2 #24022.aRHDT	CLEAR RPO6 DEVICE TYPE FLAG SET UP UNIT ADDRESSING IS IT A DUAL PORT RPO6 ?
1957	010252	010077 022777 001405 022777 001401 000404 012737	020055	172042		MOV CMP BEG BEG BR MOV	2\$ #20022, DRHDT	:YESSET THE FLAG :IS IT A SINGLE PORT RPO6 ?
1960	010599 010595	001401	177777	004744	or.	BR	2\$	YESSET FLAG DON'T SET FLAG - CHECK FOR RPD4 SET THE FLAG
1962	010274	000416	Little	דדיודטט	25:	BR	#-1, @#RP06 9\$	DON'T CHECK FOR RPD4, IT WAS RPD6
1964	010276	005037 022777 001405 022777	024746	172014	35:	CLR	3*RP05 *24021,3RHDT	:CLEAR MEMOREX RPD4 DEVICE FLAG :IS IT A DUAL PORT MEMOREX RPD4 ?
1967	010322 010320 010320	022777	050051	172004		BEG CMP BEG BR	7\$ #20021,2RHDT 7\$	YESSET THE FLAG FOR ADDR PLUG TESTS IS IT A SINGLE PORT MEMOREX RPD4 ? YESSET THE FLAG FOR ADDR PLUG TESTS
1969	010322 010324 010332	001401 000403 012737	177777	004746	75: 95:	MOV	8\$ #-1,2#RP05	DON'T SET FLAG - NOT MEMOREX DRIVE SET THE FLAG ASSUME THE NEXT UNIT IS AN RPO4
1972	010000				;;*****	******	************	***************************************
1974								
1976 1977 1978	010332 010340 010344	116037 104400 000414	004666	004740		MOVB TYPE BR	ATABLE(RO), 2:AT	TENT :SET APPROPRIATE ATTENTION SIT ::TYPE ASCIZ STRING ::GET OVER THE ASCIZ G DRIVE NUMBER/
1979					685:	.ASCIZ	(15) (12) /TESTIN	G DRIVE NUMBER/
1981	010376 010376 010402 010404 010410	013746	004716			TYPDS	JaUNIT,-(SP)	TYPE DRIVE NO.
1983	010404	104400	010412		718.	TYPE BR	705	:UNIT NO. TO STACK :TYPE DRIVE NO. ::TYPE ASCIZ STRING ::GET OVER THE ASCIZ NO. = /
1986	010432	017746	171670		705:	.ASCIZ	aRHSN (SP)	SAVE BRHSN FOR TYPEOUT
1988	010432 010436 010440 010444	104401	010446			TYPOC TYPE	.73\$:: GO TYPEOCTAL ASCII(ALL DIGITS)
1990		000410			::73\$:	BR .ASCIZ	73\$ 72\$ <15><12>/DRIVE	::SAVE DRHSN FOR TYPEOUT ::GO TYPEOCTAL ASCII(ALL DIGITS) ::TYPE ASCIZ STRING ::GET OVER THE ASCIZ TYPE = /
1992	010466 010466 010472	017746	171632		725:	MOV TYPOC	aRHDT,-(SP)	::SAVE ARHOT FOR TYPEOUT ::GO TYPEOCTAL ASCII(ALL DIGITS)

MAINDEC-11-DZRJI-A, RPD4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 46 DZRJIA.P11 T4 TYPE SERIAL NUMBER AND DRIVE TYPE

SEG 0106

1995



MAINDEC-11-DZRJI-A. RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 47 DZRJIA.P11 T4 TYPE SERIAL NUMBER AND DRIVE TYPE

1996						: IYPE 0	UT THE DRIVE TYP	PE IN ASCII
2000 2001 2002 2003	010474 010502 010504 010512	022777 001425 022777 001421	020020	171622	;;*****	CMP BEQ CMP BEQ	*24020, JRHDT 4\$ *20020, JRHDT 4\$	DUAL PORT RP04 ? TYPE ASCII MSG OUT SINGLE PORT RP04 ? TYPE THE MESSAGE
2005 2006 2007 2009	010514 010522 010524 010532	022777 001453 022777 001447	020051	171602 171572		CMP BEQ CMP BEQ	#24021, GRHDT 6\$ #20021, GRHDT 6\$	DUAL PORT RPOS ? TYPE THE MESSAGE SINGLE PORT RPOS ? TYPE THE MESSAGE
1999 1999 1999 1999 1999 1999 1999 199	010534 010542 010544 010552 010554	022777 001424 022777 001420 000454	020022	171562 171552		CMP BEG CMP BEG BR	#24022, JRHDT 5\$ #20022, JRHDT 5\$ 1\$	DUAL PORT RPO6 ? TYPE THE MESSAGE SINGLE PORT RPO6 ? TYPE THE MESSAGE DRIVE IS NOT AN RPO4/RPO5/RPO6 DON'T TYPE ASCII MESSAGE OUT
2018								:-SHOULD NEVER HAPPEN AT THIS POINT :UNLESS DRIVE GOT SICK WHILE TESTING :WAS IN PROGRESS
5051	010556 010562	104400	010564		4\$: ::75\$:	TYPE BR .ASCIZ	.75\$ 74\$ <15><12>/DRIVE	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ IS AN RP04/(15)(12)
2025 2026	010615	000435			745: 745:	BR	15	;SKIP NEXT MESSAGE
2023 2023 2023 2023 2023 2023 2023 2023	010614	104400	010655			TYPE BR .ASCIZ	775 765	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ IS AN RPO6/<15><12>
5035	010650 010650 010652 010652 010656	000416			765: 65:	BR	15	;SKIP NEXT MESSAGE
2034	010652	104400	010650			TYPE BR	79\$ 78\$::TYPE ASCIZ STRING ::GET OVER THE ASCIZ IS AN RPOS/<15><12>
2037 2038	010706				795:	.ASCIZ		**************************************
2040								
203357890-123455	010706 010712 010716 010724	005777 005777 017737 017737	171414 171406 171404 171374	002406	15:	TST TST MOV MOV	arhsn arhdt arhsn, a*sn arhdt, a*dt	READ SERIAL NO. AND DRIVE TYPE THESE TWO ARE TO HELP SCOPE LOOPS SAVE TO CHECK IF DRIVE CLEAR CLEARS ANY BITS SAVE TO CHECK IF DRIVE CLEAR CLEARS ANY BITS

7990-1234557890-1234557990-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-1234557890-123457890-12357800-12357800-123577890-12357800-123578000-123578000-12357777777					**************************************		CHECK MOL TO BE HIGH JRE THAT DRIVE IS ON LINE BEFORE STARTING PROGRAM VE IS OFFLINE, THEN AFTER TYPE OUT THE PROGRAM WILL OR EVER WAITING FOR DRIVE TO GO ON LINE.
2058 2059 2061 2061 2063 2063	010732 010734 010742 010746 010752 010754 010760	000004 012737 004737 032713 001151 104400 000420	000005 041366 010000	004604	†\$75:	SCOPE MOV JSR BIT BNE TYPE BR .ASCIZ	#6-1.a*TSTNM :THIS SAVES TEST NUMBER PC.a*CLDISK :GIVE INITIALIZE #MOL,aR3 :CHECK MOL IN RHDS1 TST6 : BRANCH IF MOL HIGH .65\$::TYPE ASCIZ STRING 64\$::GET OVER THE ASCIZ <15><12>/DRIVE IS OFFLINE - MOL IS LOW/
2067 2069 2069 2070	011059 011055 011055	104400	011030		;;65\$: 64\$: ;;67\$:	TYPE BR .ASCIZ	.67\$:: TYPE ASCIZ STRING .65\$:: GET OVER THE ASCIZ .15><12>/HIT START ON DRIVE TO GET IT ON LINE/
2071 2072 2073 2074	011100 011100 011104	104400	011106			TYPE BR .ASCIZ	.69\$:: TYPE ASCIZ STRING 68\$:: GET OVER THE ASCIZ (15)<12> / PROGRAM WILL HANG TESTING MOL TILL MOL IS HIGH/
2076 2076 2078 2079 2090 2090	011170 011170 011174 011176 011202 011276	032713 001775 104400 000435	010000		::69\$: 683: 1\$:	BIT BEG TYPE BR .ASCIZ	#MOL, DR3 : CHECK MOL IN RHDS1 1\$:BRANCH IF MOL IS HIGH .71\$:TYPE ASCIZ STRING 7D\$:GET OVER THE ASCIZ <15><12> GOOD - MOL IS NOW HIGH. PROGRAM WILL NOW BE EXECUTED <15><12>

	092 093 094					: TEST	****** 5	PROGRAM INTERRU	**************************************
	092 093 094 095 096 097 099). 		PROGRAM IN RHCS THIS SH THE PRO	INTERRUPT IS TEST OULD INTERRUPT TO CESSOR PRIORITY	STED BY SETTING RDY AND IE ME HROUGH LOCATION 254 IS SET TO 4
	5031	011276	000004			†\$T6:	SCOPE	**********	********
	093	011300	012737 012706	000006 001000	004604		MOV	#7-1. D#TSTNM #STACK, SP	THIS SAVES TEST NUMBER
		011315	004737	041366			JSR	PC. 3#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER
	103	011325 011325 011326	013700 012720 012710	002266 011370 000340			MOV MOV	0#RPVEC,R0 #RPTRP1 (RO)+ #340,(RO)	GET RP VECTOR ADDRESS THIS IS FOR TIMELY INTERRUPTS RPO4 INTERRUPT SERVICE ROUTINE PRIORITY = 7
	105	011332 011340	012737 012711	000300 000500	177776		MOV MOV	#200.PS #RDY!IE, 3R1	SET PROCESSOR PRIORITY 2 4 (DISK 2 5) RDY, IE IN RHSC1 SHOULD CAUSE INTERRUPT
	109	011344 011352 011356	013737 005337 001375	001200	001500	15:	MOV DEC BNE	astiment, assimpl assimpl is	COUNTER WAIT FOR INTERRUPT BRANCH IF NOT ZERO BEFORE THIS IS ZERO INTERRUPT SHOULD OCCUP
	113	011366 011362 011366	104065 012712 000407	000040			ERROR MOV BR	65 #40, ar2 TST? :	BRANCH IF NOT ZERO BEFORE THIS IS ZERO INTERRUPT SHOULD OCCUR INTERRUPT DID NOT OCCUR CLEAR CONTROLLER VIA CS2 CLR BIT BRANCH TO NEXT TEST
	1134545	011370 011372 011376 011400	022626 022711 001403 104065	004200		RPTRP1:	CMP CMP BEG ERROR	(SP)+ (SP)+ *DVA! RDY, aR1 TST7 65	:RESTORE STACK :IE SHOULD BE LOW AS RUPT OCCURRED CONTINUE IF GOOD
1	iži	011402	012712	000040			MOV	#40.9R2	CLEAR CONTROLLER VIA CS2 CLR BIT

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T6 PROGRAM INTERRUPT

5155 5155 5155					:***** ;*TEST	****** 7	**************************************	**************************************
2127 2128 2129 2130	011406	000004			:* :* :******	PROCESS IE AND ******* SCOPE	OR PRIORITY IS SI RDY IS SET. THIS	ET AT 5 (SAME AS THE DISK) SHOULD NOT ALLOW INTERRUPT
5133 5133	011410 011416	012737 012706	000007 001000	004604		MOV	#10-1, @#TSTNM #STACK, SP	THIS SAVES TEST NUMBER
	011422	004737	041366			JSR	PC, @#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
2141	011426 011432 011436	013700 012720 012710	002266 011476 000340			MOV MOV	0#RPVEC,R0 #RPTRP2,(RO)+ #340,(RO)	GET RP VECTOR ADDRESS THIS IS FOR UNTIMELY INTERRUPTS RP04 INTERRUPT SERVICE ROUTINE PRIORITY = 7 SET PROCESSOR PRIORITY 2 F
2145	011442	012737 012711	000240 000300	177776		MÔV MOV	#240.PS #RDY!IE, 2R1	SET PROCESSOR PRIORITY 2 5 RDY, IE IN RHSC1 WHOULD CAUSE INTERRUPT
2148 2149 2150	011454 011462 011465	013737 005337 001375	042064	001200	15:	MOV DEC BNE	a#TIMCNT, a#STMP: a#STMP1 15	COUNTER WAIT FOR INTERRUPT BRANCH IF NOT ZERO BEFORE THIS IS ZERO INTERRUPT WHOULD
2152	011470 011474	012712	000040			MOV BR	#40, aR2 TST10 ;	OCCUR CLEAR THE CONTROLLER VIA CS2 CLR BIT NO INTERRUPT SO CONTINUE)
2155	011476 011500 .	022626			RPTRP2:	CMP ERROR	(SP)+,(SP)+ 65	RESTORE STACK INTERRUPT OCCURRED WITH PROCESSOR PROCESSOR STATUS SAME AS DISK CLEAR THE CONTROLLER VIA CS2 CLR BIT
2158	011502	012712	000040			MOV	#40, 3R2	CLEAR THE CONTROLLER VIA CS2 CLR BIT



2164					; *****; ; *TEST	10	PACK ACKNOWLED	**************************************
2167					:*	IF STA	RTING ADDRESS 22	O IS USED THIS TEST WILL NOT BE PERFORMED
2155 2155 2155 2155 2155 2155 2155 2155					*	IF THE	PROGRAM WORKS U	NDER ACT-11 MONITOR PERFORMED
2172					* *	IF NO F	ACT-11 MONITOR I HIS TEST IS PERF SEQUENT PASSES T	S PRESENT ORMED ONLY ON THE FIRST PASS HIS TEST IS NOT DONE
7777777789901234567890123456789 77777777789888888999999999999999999					* * * *	THIS TE VV BIT MOL BIT DVA BIT	STS THE ACKNOWL - RHDS1 BIT #6 - RHDS1 BIT #1 - RHCS1 BIT #1	EDGE COMMAND=44
5181	## THEN THIS TEST IS NOT PERFORMED ## IF NO ACT-11 MONITOR IS PRESENT ## THEN THIS TEST IS PERFORMED ONLY ON THE ## ON SUBSEQUENT PASSES THIS TEST IS NOT DO ## THIS TESTS THE ACKNOWLEDGE COMMAND=44 ## VV BIT - RHDS1 BIT #6 ## MOL BIT - RHDS1 BIT #12 ## DVA BIT - RHCS1 BIT #11 ## THE DRIVE IS STOPED MOL IS CHECKED TO BE ## AND DVA SHOULD BE 0 ## THE DRIVE IS POWERED UP ## VV SHOULD BE 0, MOL SHOULD BE 1, DVA SHO ## AND DVA SHOULD BE 0, MOL SHOULD BE 1, DVA SHO ## AND DVA SHOULD BE 0 ## AND DVA SHOULD BE 0 ## AND DVA SHOULD BE 1, DVA SHO ## ACK ACKNOWLEDGE IS ISSUED ## ALL REGISTERS EXCEPT RHDB, RHLA AND RHCC ## PACK ACKNOWLEDGE IS ISSUED ## ALL STORED REGISTERS SHOULD BE UNCHANGED ## EXCEPT VV ## STORED REGISTERS SHOULD BE UNCHANGED ## EXCEPT VV ## STORED REGISTERS SHOULD BE UNCHANGED ## EXCEPT VV ## STORED REGISTERS SHOULD BE UNCHANGED ## ISSUED ## ISS							L IS CHECKED TO BE D
2183					*	VV SHOL	JLD BE O, MOL SH	OULD BE 1, DVA SHOULD BE 1
2185					*	ALL REC	ISTERS EXCEPT R KNOWLEDGE IS IS	HDB. RHLA AND RHCC ARE STORED
2188					*			HOULD BE UNCHANGED
2190	011506	000004			IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED IF NO ACT-11 MONITOR IS PRESENT THEN THIS TEST IS PERFORMED ONLY ON THE FIRST PASS ON SUBSEQUENT PASSES THIS TEST IS NOT DONE THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS TESTS THE ACKNOWLEDGE COMMAND=""> THIS THE PRIVE IS STOPED MOL IS CHECKED TO BE D AND DAY SHOULD BE D THE DRIVE IS POWERED UP THE DRIVE IS POWERED UP THE DRIVE IS POWERED UP THE DRIVE IS POWERED UP THE DRIVE IS POWERED UP THE DRIVE IS SOULD BE I, DVA SHOULD BE I ALL REGISTERS EXCEPT RHDB, RHLA AND RHCC ARE STORED ALL REGISTERS EXCEPT RHDB, RHLA AND RHCC ARE STORED ALL REGISTERS EXCEPT RHDB, RHLA AND RHCC ARE STORED ALL REGISTERS SHOULD BE UNCHANGED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS ISSUED THE DRIVE IS THE THE THE THE THE THE THE THE THE THE			
2192	011510	012706	001000	004604		MOV	#STACK, SP #10, 2#TSTNM	; RESET STACK ; SAVE TEST NUMBER
2195	011522	004737	041366			JSR	PC, a#CLDISK	SET R1-RHCS1, R2-RHCS2
2198	011526	012737	000000	177776		MOV	#0,PS	SETUP UNIT NUMBER SET PROCESSER STATUS TO D
5505						;*THIS	CODE CHECKS TO	SEE IF MANUAL INTERVENTION TESTS ARE CK
2204	011534	005737	004724			TST BNE	a#NOPUSH	; IS THIS A 220 START ?
2206	011540 011542 011546 011550 011554	001007 005737 001004	000042			BNE	15	MONITOR (ACT 11) RETURN ADDRESS ?
22003456789011234567	011554	005737 001001 000402	001100			BNE	1\$PASS 1\$ 2\$	SKIP THIS TEST IF NOT CONTINUE WITH THIS TEST
5513	011560 011560 011564	000137	015566		1\$:	JMP	TST11 :	JUMP TO NEXT TEST)
2214	2\$: 15 011564 104400 011572 16 011570 000407					TYPE		
2217	0112/0	000407			;;65\$:	.ASCIZ	(15) (12) /STOP [DRÍVE /

MAINDE:	C-11-DZRJ .P11	71-A. RPC 710	04/5/6 FUNCT. COI PACK ACKNOWLED	NT. TST-F	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 52
2218 2220 2221 2222 2221 2223	011610 013110 413110 313110 313110	013746 104404 104400 000413	004716 011624	54\$:	MOV TYPDS TYPE BR .ASCIZ		;GET UNIT UNDER TEST ;;TYPE ASCIZ STRING ;;GET OVER THE ASCIZ TINUE <<15><12>
######################################	011652 926110 926110 926110 926110	000000 032713 001403 010337 104010	010000	;;67\$: 66\$:	HALT BIT BEQ MOV ERROR	#MOL, DR3 3\$ R3, D#\$BDADR	;MOL IN RHDS1 SHOULD BE = 0 ;BRANCH IF MOL=0 ;FAILING REGISTER ADDRESS-RHDS1 ;ON SPINPLE POWERED DOWN ;MOL SHOULD BE 0 ;UNIT NUMBER ;INCLUDE IR ;ONLY UNIT NO. AND IR SHOULD BE ;HIGH IN RHCS2 ;BRANCH IF RHCS2 GOOD ;FAILING REGISTER ADDRESS-RHCS2 ;WITH SPINDLE POWERED DOWN ;ONLY UNIT NO. AND IR SHOULD BE
2232 2232 2233 2233	011670 011674 011700	013746 052716 022612	004716 000100	3\$:	MOV BIS CMP	a#UNIT(SP) #IR.(SP) (SP)+, aR2	; MOL SHOULD BE D ; UNIT NUMBER ; INCLUDE IR ; ONLY UNIT NO. AND IR SHOULD BE
2235 2236 2237 2238 2239	011702 011704 011710	001403 010237 104011	001155		BEQ MOV ERROR	4\$ R2,3#\$BDADR 11	BRANCH IF RHCS2 GOOD FAILING REGISTER ADDRESS-RHCS2 WITH SPINDLE POWERED DOWN ONLY UNIT NO. AND IR SHOULD BE HIGH
2240	011712			45:			
2243 2244 2245	011712	004737	041366		JSR	PC, a#CLDISK	:SET R1-RHCS1, R2-RHCS2 :R3-RHDS1, R4-RHER1 :GIVE RH-11 INITIALIZE :SETUP UNIT NUMBER :TYPE ASCIZ STRING :GET OVER THE ASCIZ
2247 2248 2249	011716 011722	104400 000407	011724	::69\$:	TYPE BR .ASCIZ	69\$ 68\$ (15)(12)/START	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ DRIVE/
2250 2251 2253	011742 011742 011746 011750 011754	013746 104404 104400 000420	004716 011756	685:	MOV TYPDS TYPE		GET UNIT UNDER TEST
2254		000420		;;71 \$:	BR .ASCIZ	70\$ / AFTER HEAD LO	;;TYPE ASCIZ STRING ;;GET OVER THE ASCIZ)AD HIT CONTINUE/<15><12>
2249 2249 2245 2255 2225 2225 2225 2225	012016 012020 012024 012026 012032 012034 012040 012046 012050	000000 032713 001411 032713 001406 032713 001403 032713 001403 010337 104012	010000 000400 000200 000100 001122	5\$:	HALT BIT BEQ BIT BEQ BIT BEQ MOV ERROR	*MOL, DR3 5\$ *DPR, DR3 5\$ *DRY, DR3 5\$ *VV, DR3 6\$ R3, D*\$BDADR	MOL IN RHDS1 SHOULD BE = 1 BRANCH IF MOL = 0 DPR IN RHDS1 SHOULD BE = 1 BRANCH IF DPR = 0 DRY IN RHDS1 SHOULD BE = 1 BRANCH IF DRY =0 VV IN RHDS1 SHOULD BE = 0 BRANCH IF VV = 0 (GOOD) FAILING REGISTER ADDRESS - RHDS1 WITH SPINDLE POWERED UP RHDS1 SHOULD HAVE VV = 0, MOL = 1
2270	012056	011100 042700	160076	6\$:	MOV	aR1 R0 #SC!TRE!MCPE!76	GET RHCS1 CONTENTS

							KD9	
AINDEC ZRJIA.	-11-DZRJ P11	TI-A. RPC	PACK AC	INCT. CON	T. TST-F	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 53
2272	012064	022700	004200			CMP	*DVA!RDY,RO	; ALL FUNCTION BITS ; RHCS1 SHOULD HAVE
77777789012345678901234567890003	012070 012072 012076	001403 010137 104013	001122			BEQ MOV ERROR	7\$ R1, J#\$BDADR 13	;ALL FUNCTION BITS ;RHCS1 SHOULD HAVE ;GO = 0, DVA = 1, RDY = 1 :BRANCH IF RHCS1 IS GOOD ;FAILING REGISTER RHCS1 ;AFTER A POWER UP WITHOUT ANY ;INIT RHCS1 SHOULD HAVE ;GO = 0, DVA = 1, RDY = 1, IE = 0 ;DISREGARD ALL OTHER BITS
	012100 012104 012106 012114 012120	005777 001411 013737 005037 017737 104014	170230 002334 001124 170210	001156	7\$:	TST BEQ MOV CLR MOV ERROR	arhcc 10\$ a*Rhcc.a*Regadr a*\$gddat arhcc,a*\$bddat	; TEST RHCC, IT SHOULD = 0 ; BRANCH IF RHCC = 0 ; FAILING REGISTER RHCC ; RHCC SHOULD BE = 0 ; BAD DATA ; AFTER POWER UP RHCC ; SHOULD BE 0
Ö	012130				105:			
	012130	004737	041366			JSR	PC, @#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CHECK THAT DVA.RDY.MOL.DPR.DRY = 1 AND THAT NO STATUS BITS ARE STUCK = 1
	012134	004737	041424			JSR	PC, D#CHECK	CHECK THAT DVA, RDY, MOL, DPR, DRY = 1
	012140	104400	066402			TYPE	,CPHALT	CHANGI CONTINUE 15313 IF THE MENT
	012146	013777	002460	170124		MOV'	a*PKACK, aRHCS1	STOP GET READY FOR PKACK PACK ACKNOWLEGDE WITH 22 IN RHCS1
						;*NOW S	SAVE REGISTERS FOR	R COMPARISON AFTER PACK ACKNOWLEDGE
	012154 012160 012162	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
	012164	000022				18.		NUMBER OF REGISTERS SAVED = 18.
	012166	013777	004606	170072		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
								CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
	012174	013746 052716	000001			MOV	a#PKACK,-(SP) #GO,(SP)	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE GO WITH ;22 IN RHCS1 FOR PACK ACKNOWLEDGE
	012204	012677	170070			MOV	(SP)+, aRHCS1	WITHOUT INTERRUPT ENABLE
5								;22 IN RHCS1 FOR PACK ACKNOWLEDGE

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MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO	14/5/6 FL PACK AC	UNCT. CON	NT. TST-F	т 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 54
2326 2327 2328								;WITH INTERRUPT DISABLED
22222222222222222222222222222222222222	012210 012214 012216 012210	000001 000001 000001				WAT RHDS1 VV 1: 1:		HAIT FOR VV BIT TO SET NAIT FOR RHDS1 REGISTER HAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN OD AND 20 MICRO SECONDS
5338 5338 5337	01555P 015555	004037 002322	042246			JSR RHDS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER; CHANGE RHDS1 REGISTER
2342	012230 012232 012234	000001 000001 000100				i VV		;1 BIT/BITS TO BE CHANGED NEW VALUE OF VV IS 1 ;CHANGE VV BIT
2345 2346 2347						;*NOW C ;*CHANG	OMPARE REGISTERS ED EXCEPT VV IN	SO THAT NO REGISTERS RHDS1 AND IE IN RHCS1
2349	015536	004037	042354			JSR	RO, 0#COMREG	COMPARE SAVED REGISTERS WITH
2351 2352 2353 2354 2355	012242 012244 012246 012250 012252	004612 002354 000022 012254 012260				SAVERE WC 18. 11\$ 12\$		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 11\$ ON ERROR RETURN TO 12\$ ON NO ERROR
2355 2358 2359 2351 2352 2353 2354 2355 2355 2356 2357 2371 2372 2373	012254	104015 000207			115:	ERROR	15 PC	GIVING A PACK ACKNOWLEDGE CAUSED AN ERROR PACK ACKNOWLEDGE SHOULD SET VV IN RHDS1 INTERRUPT SHOULD MAKE IE = 0 NO OTHER REGISTERS SHOULD CHANGE GOOD DATA GIVES CONTENTS OF REGISTER BEFORE PACK ACKNOWLEDGE RECEIVED DATA GIVES CONTENTS OF REGISTER AFTER PACK ACKNOWLEDGE
2372 2373	015560	012737	177777	046760	12\$:	MOV	#-1,2#PRITEM	; CLEAR PREVIOUS ITEM NUMBER

SEQ 0114

2374 2375 2376 2377 2378 2379 2381 2382 2383 2384					****** *TEST * * *	THIS TE ACT-11 IS NOT THERE I FOR ERR	SET VV BIT #6 I SET SETS VV IN RH MONITOR IS PRESE PERFORMED S A RESET AT THE FOR RECOVERY ONLY	**************************************
2385 2386 2387	012256	000004			†\$T11:	SCOPE	**********	********
2388 2389 2390 2391 2392 2393	012270 012272	000005 004737	045352			;*IN CA ;*OR PO RESET JSR	SE THERE IS ANY WER DOWN OR ANY PC, 0#\$TKINT	DRIVE ERRORS DURING POWER UP PARITY ERRORS A RESET IS GIVEN ;INITILIZE TK
2394 2395 2396 2397	012276 012302	012706 012737	001000	004604		MOV MOV	#STACK SP #11, 2#TSTNM	; RESET STACK ; SAVE TEST NUMBER
2395 2397 2398 2399 2400	015310	004737	041365			JSR	PC, @#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE_RH-11 INITIALIZE
2400	012314	004737	041424			JSR	PC, D#CHECK	SETUP UNIT NUMBER CHECK THAT DVA, RDY, MOL, DPR, DRY = 1
2404 2404 2405 2406 2407	015356 015356	104400 000000 013777	066402	167744		TYPE HALT MOV	, CPHALT @#PKACK, @RHCS1	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CHECK THAT DVA.RDY, MOL.DPR.DRY = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTS IF THEY AREN'T STOP GET READY FOR PKACK PACK ACKNOWLEGDE WITH 22 IN RHCS1
2409 2409 2410 2411						; *NOW S	AVE REGISTERS FOR	R COMPARISON AFTER PACK ACKNOWLEDGE
2412	012334 012340 012342	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
2415	012344	000055				18.		NUMBER OF REGISTERS
1111567890-1231562 11111111111111111111111111111111111	012346	013777	004606	167712		MOV	a*RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
2425 2426 2427	012354	013746 052716	002460			MOV BIS	a*PKACK,-(SP)	GET READY TO MOVE COMMAND

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MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPC	04/5/6 FUNCT. CO SET VV BIT #6	NT. TST-F	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 56	SEQ 0116
2428		012677			MOV	(SP)+, aRHCS1	;WITHOUT INTERRUPT ENABLE ;GO WITH ;22 IN RHCS: FOR PACK ACKNOWLEDGE ;WITH INTERRUPT DISABLED	
2432 2433 2434 2435	012370 012372	011100 011305			MOV	aR1.R0 aR3,R5	SAVE RHCS1 DURING ABOVE OFFRATION SAVE RHDS1 DURING ABOVE OPERATION	
90-1007554\890-1007554\890-1007554\8 17777777777777777754\890-100755555 177777777777777755555555555555	012374 012376 012400 012402 012404	104412 002322 000100 000001 000001			WAT RHDS1 VV 1.		WAIT FOR VV BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN OO AND 20 MICRO SECONDS	
2444					*COMPA		HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
2447 2448 2449 2450	012406 012416 012416 012422	013746 052716 011637 022600	002460 004200 001124		MOV BIS MOV CMP	a*PKACK,-(SP) *DVA!RDY,(SP) (SP),a*\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE DVA!RDY SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!RDY AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND DVA!RDY SHOULD BE SET -(SP) SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!DRY!VV	
2452 2453 2454 2455	012424 012432 012436	001405 010037 010137 104021	001126 004600		BEQ MOV MOV ERROR	64\$ RO, 0#\$BDDAT R1, 0#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY	
2457 2458 2459	012440 012444 012450	012746 011637 022605	010700	64\$:	MOV MOV CMP	#MOL!DPR!DRY!VV (SP), @#\$GDDAT (SP)+,R5	;COMMIND HAD DVH:RUT SHOULD BE SET ,-(SP) ;SAVE BITS SET DURING OPERATION IN RHDS1 ;SAVE FOR PRINTOUT ;DURING ABOVE OPERATION ONLY MOL!DPR!DRY!VV	
245634567890122477789901 245634567890122477778901	012452 012454 012460 012464	001405 010537 010337 104063	001126		BEG MOV MOV ERROR	66\$ R5, a#\$BDDAT R3, a#REGADR 63	DURING ABOVE OPERATION ONLY MOL!DPR!DRY!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!DRY!VV SHOULD BE SET	
2466	012466			66\$:				
2468 2469	012466 012472	004037 002322	045546		JSR RHDS1	RO, 0#CHREG	; CHANGE BITS IN SAVED REGISTER ; CHANGE RHDS1 REGISTER	
2472 2472 2473	012474 012476 012500	000001 000001 000100			1 VV		; 1 BIT/BITS TO BE CHANGED NEW VALUE OF VV IS 1 ; CHANGE VV BIT	
2475 2476 2477 2478					*NOW C *WITH	OMPARE REGISTERS AFTER PACK ACKNOW	BEFORE PACK ACKNOWLEDGE	
2479 2480 2481	012502	004037	042354		JSR	RD, @#COMREG	COMPARE SAVED REGISTERS WITH	

2501 2502 2503 2504 2505 2506	012524 012530 012532 012536 012540	005737 001005 005737 001004 000137	004744 004746 014664		;;****	TST BNE TST BNE JMP	******** 3#RP05 3\$ 2#RP05 4\$ TST16	******	;TEST FOR RPO6 DRIVE :IF = 1 DO "MAKECYL" 777 :TEST FOR RPOS DRIVE :IF = 1 DO "MAKECYL" 377 IF BOTH = 0. DON'T DO EITHER "MAKECYL") ;OR THE ADDRESS PLUG TESTS
25009	012544	000137	015610		35: 45: ::*****	JMP	TST13	· :	; OR THE ADDRESS PLUG TESTS DO "MAKECYL" 777
	012550 012552 012556	000004 012706 012737	001000	004604	******* **TEST *******	12 SCOPE MOV MOV	*******	******	RESET STACK THIS SAVES TEST NUMBER
2522 2523 2524 2525 2526 2527	012564 012570 012576	004737 012777 004037	041366 000001 041036	167522		JSR MOV JSR	PC. 3*CL *DMD. 3R RO, 3*MA	DISK	INIT DRIVE SET DIAGNOSTIC MODE SUBROUTINE TO GIVE A SEEK COMMAND FOLLOWED BY A INIT THIS SHOULD CHANGE RHCC TO 377
2529 2529 2531 2532	015904	000377	012644			377 JMP	TST14		SKIP NEXT "MAKECYL")
25345	015919 015915 015910	000004 012706 012737	001000		; ***** ; *TEST †\$T13:	SCOPE	MAKE CU	******	RESET STACK THIS SAVES TEST NUMBER
	012636 012636 012636	012737 004737 012777 004037	041366 000001 041036	167462		JSR MOV JSR	PC. 3*CLI *DMD, 3RI RO, 3*MAI	DISK	INIT DRIVE SET DIAGNOSTIC MODE SUBROUTINE TO GIVE A SEEK COMMAND FOLLOWED BY A INIT
2545 2547 2548 2549	012642	000777				777			THIS SHOULD CHANGE RHCC TO 777

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T13 MAKE CURRENT CYLINDER = 777

				*TEST	14	ADDRESS PLUG	**************************************
				:	CHECK IN DIA	PROPER ADDRESS (LING THE ADDRESS GNOSTIC MODE (TO S PULLED) AND VI	PLUG FUNCTIONALITY S PLUG DURING A COMMAND ISSUED O GUARANTEE COMMAND IS STILL ACTIVE WHEN ERIFYING THAT THE DRIVE GOES OFF LINE
	:			* * * *	THE ADI RESPON ATTENT ADDRESS SC, TRE	ORESS PLUG IS TO DING DRIVE IS VE ION BITS COME UP CHANGE ERROR ERR, AND MCPE;	HEN REPLACED AND RETURN OF THE PROPER ERIFIED. AS WELL AS THE FACT THAT P IN THE PROPER BIT LOCATION(?????), AND THE (ACE) - RHER3 BIT #13 IS SET. AS WELL AS VV IS RESET AND RHCC = DOD (DRIVE RECALIBRATED)
				:			ON IS ALSO MADE THAT NO OTHER DRIVE BUSS AFTER THE PLUG IS REPLACED. (??????)
015646	000004 012737	000001	001515	†\$T14:	SCOPE MOV	#1,STIMES	;;DO 1 ITERATION
012654 012660 012662 012666	005737 001005 005737 001002	004744		;;****	TST BNE TST BNE BNE	3#RP06 4\$ 3#RP05 4\$	TEST FOR RPO6 DRIVE IF = 1. DO THIS TEST TEST FOR MEMOREX RPO4 IF = 1. DO THIS TEST IF NEITHER FLAG IS UP. ASSUME THE
012670 012674	000137	013656		45: ;;****	JMP	TST15 ;	DRIVE IS AN ISS RPO4 AND SKIP TEST JUMP TO NEXT TEST
012674	012706 012737	001000	004604		MOV	*STACK SP *14, 2*TSTNM	RESET STACK SAVE TEST NUMBER
012706	004737	041366			JSR	PC, 3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
012712	004737	041446			JSR	PC, D#CHECKT	CHECK DVA. RDY MOL DPR DRY VV = 1
012716	104400	066402			TYPE	.CPHALT	CANNOT CONTINUE TESTING IF ANY OF
012722	000000				HALT		STOP
					;*THIS	CODE CHECKS TO	SEE IF MANUAL INTERVENTION TESTS ARE OK
012724 012730 012732 012736 012740	005737 001007 005737 001004 005737	000724			TST BNE TST BNE	3#NOPUSH 1\$ 3#42 1\$	SKIP THIS A 220 START ? SKIP THIS TEST IF SO MONITOR (ACT 11) RETURN ADDRESS ? SKIP THIS TEST FIRST PASS ?
012740	005737	001100			BNE	3#\$PASS	FIRST PASS ?

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPC	04/5/6 FL ADDRESS	UNCT. CON	IT. TST-F	PT 1	E10 MACY11 27(655)		SEG 0150
	012744	1001001				BNE BR	15	SKIP THIS TEST IF NOT CONTINUE WITH THIS TEST	
2507 2508 2509	012750 012750 012754	000137	013656		1\$: 2\$:	JMP	TST15 ;	JUMP TO NEXT TEST)	•
2611						:*SET D	PLUG IS PULLED	O ENABLE A COMMAND ACTIVE WHILE	
2614	012754	052777	000001	167336		BIS	*DMD, GRHMR	;SET UP DIAGNOSTIC MODE	
2616						: *TAKE	AN INITIAL REGIS		
2619 2619 2619	012762 012766 012770	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS	
2522 2523 2524	012772	000055				19.		NUMBER OF REGISTERS ;SAVED = 18.	
2625 2626 2627 2628 2629						*ISSUE *TO VE	A COMMAND AND THE RIFY COMMAND ABOU	HE 'GO' BIT (NOT POSITIONING COMMAND)	
2633 2633 2633 2633						:*ISSUE :*(USE	SOME CLOCKS TO C	GET THE COMMAND STARTED TETST" FLAG UP TO STOP CLOCKING ?)	
2636 2636 2637 2638	012774	104400	013002		::65\$:	TYPE BR .ASCIZ	65\$ 64\$ (15)(12)/REMOVE	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ ADDRESS PLUG ON DRIVE/	
######################################	013042 013046 013050 013054	013746 104404 104400 000415	004716 013056		;;65\$: 64\$:	MOV TYPDS TYPE BR .ASCIZ	@#UNIT,-(SP)	GET THE UNIT NO. UNDER TEST TYPE IT OUT TYPE ASCIZ STRING GET OVER THE ASCIZ SCONTINUE	
2645	013110	000000			555°S:	HALT		:WAIT FOR OPERATOR PLUG CHANGE	
2547 2548							THAT THE UNIT NO	. UNDER TEST HAS GONE OFFLINE	
2650 2651 2652 2653	013130 013115 013115 013112	017700 004737 032737 001001	167166 043300 010000	002360		MOV JSR BIT BNE	aRHDST.RO PC.amputreg mNED,amcs2 75	:ATTEMPT TO ADDRESS THE DRIVE :TAKE REGISTER SNAPSHOTS :TEST FOR NON EXISTENT DRIVE :CONTINUE IF 'NED' BIT SET (UNIT :IS OFFLINE AS IT SHOULD BE) :UNIT DID NOT GO OFFLINE WHEN ADDRESS :PLUG WAS REMOVED	
2655 2656 2657	013132	104101			7\$:	ERROR	101	UNIT DID NOT GO OFFLINE WHEN ADDRESS	

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2659 2659 2661 2662 2663						:*NOW R	EPLACE THE ADDRE	SS PLUG
2662 2663 2664 2665	013134	024000	013142		;;69\$: 69\$:	TYPE BR .ASCIZ	69\$ 68\$ (15)(12)/REPLAC	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ E ADDRESS PLUG ON DRIVE/
2665 26667 2668 2669 2670 2671 2673 2673 2673	013202 013202 013206 013210	013746 104404 104400 200416	004716 013216			MOV TYPDS TYPE BR		:GET THE UNIT UNDER TEST :TYPE IT OUT ::TYPE ASCIZ STRING ::GET OVER THE ASCIZ SS CONTINUE / <15 > <12 >
2670 2671 2672 2672	013252	000000			70\$:	.ASCIZ		;WAIT FOR OPERATOR PLUG REPLACEMENT
2574								AL UNIT HAS COME BACK ON LINE
2676 2677 2678	013254	004737 032737 001411	043300 000400 004000	002362		JSR BIT BEQ	PC. 3*PUTREG *DPR. 3*DS1 9S *DVA. 3*CS1	: TAKE NEW REGISTER SNAPSHOTS : TEST THAT 'DPR' = 1 :ERROR - DRIVE SHOULD BE PRESENT
2676 2677 2679 2679 2680 2681 2682 2683 2684 2685 2685 2687	013254 013260 013266 013276 013276 013300 013306 013310 013312	001411 032737 001405 032737 001401 000403 104102	002000	002404	9\$:	JSR BIT BEQ BIT BEQ BER BER BER BER BER BER BER BER BER BER	95 *DRY, 3*DS1 95 95 102	TAKE NEW REGISTER SNAPSHOTS TEST THAT 'DPR' = 1 ERROR - DRIVE SHOULD BE PRESENT TEST THAT DEVICE IS NOW AVAILABLE ERROR - 'DVA' SHOULD = 1 TEST THAT DRIVE READY IS = 1 ERROR - 'DRY' SHOULD = 1 A-OK: 'DPR' = 1, 'DVA' = 1, & 'DRY' = 1 UNIT NOT AVAILABLE AFTER ADDRESS PLUG WAS REPLACED JUMP TO NEXT TEST)
2685 2685	013314	000137	013656			JMP	TST15 :	JUMP TO NEXT TEST)
2688 2689 2690 2691 2691 2693	013350				9\$:	: CHANGE : *AFTER		ISTER SNAPSHOT TO EXPECTED VALUES
5693 5693 5691	013320 013324	004037 002300	042246			JSR RHCS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER
2695 2695 2696 2699 2699 2700 2700 2700 2700 2700 2700 2700 27	013326 013330 013332 013334 013340 013342 013344 013346	000004 000001 000200 000001 100000 000001 040000 000001				RDY SC TRE MCPE		H BIT/BITS TO BE CHANGED NEW VALUE OF RDY IS 1 CHANGE RDY BIT NEW VALUE OF SC IS 1 CHANGE SC BIT NEW VALUE OF TRE IS 1 CHANGE TRE BIT NEW VALUE OF MCPE IS 1 CHANGE MCPE BIT
2705 2706 2706	013350 013354	004037 002322	945540			JSR RHDS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER
2708 2709 2710 2711	013356 013360 013362 013364	000001 100000 1000001				ATA		:3 BIT/BITS TO BE CHANGED :NEW VALUE OF ATA IS 1 :CHANGE ATA BIT :NEW VALUE OF ERR IS 1

MAINDEC DZRJIA.	-11-DZRJ	71-A. RPC	04/5/6 FUNCT. COI ADDRESS PLUG CI	NT. TST-F	PT 1 ROR	G10 MACY11 27(655)	
2712 2713 2714	013366 013370 013372	040000 000000 000100			ERR 0 VV		CHANGE ERR BIT NEW VALUE OF VV IS D CHANGE VV BIT
2716	013374 013400	004037 002276	042346		JSR RHCS2	RD, 3#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHCS2 REGISTER
27777777777777777777777777777777777777	013402 013404 013406	000001 000001 010000			1 NED		:1 BIT/BITS TO BE CHANGED :NEW VALUE OF NED IS 1 :CHANGE NED BIT
2723 2724	013410	004037 002314	045546		JSR RHER3	RO, B#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHER3 REGISTER
2726 2727 2729	013416 013420 013422	0200001 020000 020000			1 ACE		:1 BIT/BITS TO BE CHANGED :NEW VALUE OF ACE IS 1 :CHANGE ACE BIT
2730 2731	013424	053737 005037	004740 £04636 004654		BIS	D#ATTENT. D#SAVE	RE+24 :SET UNIT UNDER TEST ATTENTION ;SET RHCC REGISTER IMAGE TO ALL D'S
2733 2734 2735					*TAKE *COMPA	A NEW REGISTER S RE THE REGISTER	CONTENTS WITH EXPECTED VALUES
2735 2737 2738 2739	013436	004037	042354		JSR	RD, 2#COMREG	:COMPARE SAVED REGISTERS WITH
2739 2740 2741 2742 2743 2744	013442 013444 013450 013452	004612 002354 000022 013454 013460			SAVERE MC 18. 53 65		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 19. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
2745	013454	104100		5\$:	ERROR	100	: ADDRESS PLUG CHANGE CAUSED SOME : REGISTER ERROR
2747 2748	013456	000207			RTS	PC	GO BACK AND CHECK THE NEXT REGISTER UNTIL ALL 18. HAVE BEEN DONE

SE0 0122

1110

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T14 ADDRESS PLUG CHANGE ERROR

: *NOW CLEAR OUT THE CONTROLLER AND DRIVE 013460 55: ;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER 013460 004737 041366 JSR PC. 2#CLDISK :*CHANGE THE REGISTER SNAPSHOT TO EXPECTED VALUES AFTER THE CLEAR 004037 CHANGE BITS IN SAVED REGISTER CHANGE RHCS1 REGISTER 013464 042246 RO. D#CHREG RHCS1 013472 013474 013476 013500 013502 013504 013506 3050TRE ;3 BIT/BITS TO BE CHANGED ;NEW VALUE OF SC IS 0 ;CHANGE SC BIT ;NEW VALUE OF TRE IS C 000003 000000 100000 000000 040000 000000 020000 CHANGE TRE BIT NEW VALUE OF MCPE IS D MCPE CHANGE MCPE BIT 013510 CHANGE BITS IN SAVED REGISTER CHANGE RHDS1 REGISTER RO. D#CHREG 042245 RHDS1 013516 013520 013522 013524 013526 000000 2 BIT/BITS TO BE CHANGED NEW VALUE OF ATA IS 0 100000 ATA CHANGE ATA BIT NEW VALUE OF ERR IS O CHANGE ERR BIT 040000 JSR RHCS2 CHANGE BITS IN SAVED REGISTER CHANGE RHCS2 REGISTER 013530 004037 RO, D#CHREG 045546 013536 013540 013542 000001 000000 010000 :1 BIT/BITS TO BE CHANGED NEW VALUE OF NED IS C CHANGE NED BIT NED 013544 CHANGE BITS IN SAVED REGISTER CHANGE RHER3 REGISTER 004037 RO. D#CHREG 042246 RHER3 :1 BIT/BITS TO BE CHANGED ;NEW VALUE OF ACE IS D ;CHANGE ACE BIT 013552 013554 000001 020000 013556 ACE 004037 013560 RO. D#CHREG CHANGE BITS IN SAVED REGISTER **JSR** 042246 RHMR 013566 013570 013572 000001 000001 :1 BIT/BITS TO BE CHANGED :NEW VALUE OF DMD IS C CHANGE DMD BIT

							I10		
MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO	4/5/6 FUI ADDRESS	PLUG CH	T. TST-P	T 1 OR	MACY11 27(655)	30-MAR-76 22:59 PAGE 64	
2803 2804 2805	013574	043737	004740	004636		BIC	D#ATTENT, D#SAVE	RE+24 ;UNIT UNDER TEST ATTENTION BIT	
2806 2807 2808 2809						:*TAKE :*WITH	ANOTHER REGISTER THE EXPECTED VAL	SNAPSHOT AND COMPARE RESULTS	
2811	013602	004037	042354			JSR	RO, a#COMREG	COMPARE SAVED REGISTERS WITH	
2812 2813 2814 2815 2816 2817	013606 013610 013612 013614 013616	004612 002354 000022 013620 013624				SAVERE WC 18. 10%		PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 10\$ ON ERROR RETURN TO 11\$ ON NO ERROR	
2820 2819 2818	013622	104100			10\$:	ERROR RTS	100 PC	; ADDRESS PLUG CHANGE CAUSED SOME ; INCORRECT REGISTER RESULT	
5855 5851	013624				115:				
2815 2815 2815 2815 2815 2815 2815 2815						;*(USE ;*THAT	NED METHOD TO VE ATTENTION BIT CO	RIFY MES UP IN THE PROPER LOCATION ??)	
2832 2831 2832						*SET ** *CAUSE	VV' IN RHDS1 AFTE	ER RESET FROM THE RECALIBRATE PLUG	
2833 2835	013624	013746 052716	002460			MOV	a#PKACK,-(SP) #GO,(SP)	GET READY TO MOVE COMMAND	
2837 2838 2839	013634	012677	166440			MOV	(SP)+, aRHCS1	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE GO WITH ;22 IN RHCS1 FOR PACK ACKNOWLEDGE WITH INTERRUPT DISABLED	
5845 5841 5841	013640 013642	011100 011305				MOV	aR1,R0 aR3,R5	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION	
283367 283367 283339 283	013644 013646 013650 013652 013654	104412 002322 000100 000001 000001				WAT RHDS1 VV 1.		WAIT FOR VV BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN OD AND 20 MICRO SECONDS	

SEG 0124

2851 2852 2853 2854 2855					::***** *TEST	******* 15	**************************************	**************************************
2855					;*	CHECK 1	THAT ALL ADDRESS	PLUG NUMBERS FUNCTION PROPERLY
2859 2859 2860			6		;* ;*	THIS TE	ST IS DONE FOR I	MEMOREX RPO4'S AND RPO6'S ONLY BY SW#5 AND THE DEFAULT IS NOT TO DO IT
2862 2863 2864 2865	013656 013660	000004 012737	000001	001212	†\$T15:	SCOPE MOV	#1, \$ TIMES	;;DO 1 ITERATION
23375567890123756789012375678955578951237567 28855557890123756789567775678901237567 2885555789012375678901237567 2885555789012375678901237567	013666 013672 013674 013700	005737 001005 005737 001002	004744 004746		;;****	TST BNE TST BNE	3#RP06 4\$ 3#RP05 4\$ 4\$	TEST FOR RPO6 DRIVE IF = 1. OK TO DO THIS TEST TEST FOR MEMOREX RPO4 IF = 1, OK TO DO THIS TEST NOT AN RPO6 OR MEMOREX RPO4 SO ASSUME AN ISS RPO4 AND SKIP TEST
2872 2873 2874 2875	013702 013706	000137	014664		45: ::****	JMP	TST16 ;	JUMP TO NEXT TEST)
2875 2877 2878						;*CHECK	TO SEE IF THIS	TEST HAS BEEN SELECTED WITH SWS
2879 2880 2881 2882 2883	013706 013714 013716 013722	032777 001002 000137	014664	165224	5\$:	BIT BNE JMP	#SW5, JSWR 5% TST16 ;	TEST THE SWITCH IF D. TEST HAS NOT BEEN SELECTED JUMP TO NEXT TEST TEST SELECTED, CONTINUE IT
2885						;*THIS	CODE CHECKS TO S	SEE IF MANUAL INTERVENTION TESTS ARE OK
2889 2889 2899 2899 2899 2899 2899 2899	013722 013726 013730 013734 013736 013742 013744	005737 001007 005737 001004 005737 001001 000402	004724 000042 001100			TST BNE TST BNE TST BNE BRE BR	2#NOPUSH 1\$ 2#42 1\$ 2#\$PASS 1\$	IS THIS A 220 START ? SKIP THIS TEST IF SO MONITOR (ACT 11) RETURN ADDRESS ? SKIP THIS TEST FIRST PASS ? SKIP THIS TEST IF NOT CONTINUE WITH THIS TEST
2895 2896	013746	000137	014664		1\$: 2\$:	JMP	TST16 ;	JUMP TO NEXT TEST)
2898	013752 013752 013756	012706 012737	001000 000015	004604	23.	MOV MOV	#STACK, SP #15, 2#TSTNM	RESET STACK SAVE TEST NUMBER
2901 2902 2903 2904	013764	004737	041366			JSR	PC, a#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER

							K10					
MAINDEO DZRJIA.	-11-DZRJ PII	I-A. RPC	CHECK A	INCT. CON ALL ADDRE	T. TST-F	T 1 ADDRESSE	MACY11 27(655)	30-MAR-76	22:59	PAGE 66	,	
2905	013770	004737	041446			JSR	PC, @#CHECKT	CHECK DVA	RDY MO	L DPR DE	RY VV = 1	v - 1
2907	013774	104400	056402			TYPE	, CPHALT	CHECK DVA AND THAT CANNOT CO THE FIRST	NTINUE	TESTING	IF ANY O	F
2909	014000	000000				HALT		STOP	SET UP	B115 D0)N 1 = 1	
2912	014002 014006	0045P	014010			TYPE BR .ASCIZ	65\$ 64\$ <15><12>/ALL DI	:: TYPE ASC	IZ STRI	NG CIZ	ITT LINDER	,
2915 2916 2917	014064 014064 014070	104400 000417	014072		;;65\$: 64\$:	TYPE BR	.67\$ 66\$ <15><12>/TEST M					
2905 2907 2900 2900 2911 2911 2911 2911 2911 2911	014130				66\$:	ASCIZ	(15)(12)/TEST M	UST BE POWE	RED DOW	N/(15)(1	.2>	
2922 2923 2924	014130	013737	004716	004752		MOV	TINUNI#G,TINU#G	; MAKE THE	INITIAL	UNIT NO). = "UNI"	T"

SEQ 0126

. ..

2000	925 926 927 928 929						;*CHANG	E ADDRESS PLUG O	N THE UNIT UNDER TEST
2000	930 931 932	014136 014136 014142	104400	014144		6\$: ::69\$:	TYPE BR .ASCIZ	.69\$ 68\$ <15><12>/REMOVE	;; TYPE ASCIZ STRING :: GET OVER THE ASCIZ ADDRESS PLUG ON DRIVE/
200000	33 334 335 336 337	014204 014210 014212 014212 014216	013746 104404 104400 000421	004716 014220		::69\$:	MOV TYPDS TYPE BR	2#UNIT,-(SP) 71\$ 70\$	GET THE UNIT UNDER TEST TYPE IT OUT TYPE ASCIZ STRING GET OVER THE ASCIZ
2000	39 40 41	014262 014262 014266	104400 000417	014270		;;71\$: 70\$: ;;73\$: 72\$:	TYPE BR ASCIZ	73\$ 72\$ <15><12>/PLUG -	
50	143	014326	000000			725:	HALT		
50	46						; *HOUSE	KEEPING	
500	48 49 50	014330 014334 014340	005037 005237 042737	046760 004716 177770	004716		CLR INC BIC	ampritem amunit #107,amunit	CLEAR THE PREVIOUS ERROR NUMBER ADD ONE TO THE UNIT NO. TRUNCATE TO LOW ORDER 3 BITS
20000		014346	004737	041366			JSR	PC, a#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER
50	557 558						;*ATTEM	PT TO ADDRESS THE	E NEW UNIT NUMBER
50	360 361	014352 014356 014362 014370	017700 004737 032737 001423	165726 043300 010000	002360		MOV JSR BIT BEQ	aRHDST,RO PC, a*PUTREG *NED, a*CS2 7\$	ATTEMPT TO ADDRESS THE NEW DRIVE NO. TAKE REG. SNAPSHOT IN CASE OF ERROR TEST FOR NON EXISTENT DRIVE CONTINUE IF 'NED' IS NOT SET - DRIVE SHOULD BE EXISTENT ON THE BUSS UNIT NOT AVAILABLE AFTER ADDRESS PLUG REPLACED TYPE ASCIZ STRING
50	65	014372	104102				ERROR	102	UNIT NOT AVAILABLE AFTER ADDRESS
50	67 68 69	014374	104400 000407	014402		::75\$: 74\$:	TYPE BR .ASCIZ	.75\$ 74\$ <15><12>/UNIT NU	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ
200000	362 363 364 365 366 369 371 372 374 375 377	014420 014424 014424 014426 014432	013746 104404 104400 000402	004716 014434			MOV TYPDS TYPE BR		GET THE BAD UNIT NUMBER TYPE IT OUT TYPE ASCIZ STRING GET OVER THE ASCIZ
50	76 77	014440				76\$:	.ASCIZ	(15)(15)//	

...

2978						; *CHECK	IF ALL UNIT NUM	BERS HAVE BEEN TRIED
2981	014440	023737	004716	004752	75:	CMP	a#UNIT, a#INUNIT	HAVE WE INCREMENTED BACK TO THE
2982 2983 2984 2985 2985	014446	001533				BNE	6\$	HAVE WE INCREMENTED BACK TO THE ORIGINAL UNIT NO. YET ? NODO NEXT ADDRESS PLUG YESCONTINUE WITH TESTS
2985								, 123.7001171102 147111 123.3
2987 2988						:*SET "	VV'IN RHDS1 AFTE	R RESET FROM THE RECALIBRATE
2987 2988 2989 2990 2991						*CAUSE	D BY PULLING THE	ADDRESS PLUGS OUT
2991	014450	013746	002460			MOV	2#PKACK,-(SP)	GET READY TO MOVE COMMAND
2993	014454	052716	000001			BIS	#GO, (SP)	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE
2995	014460	012677	165614			MOV	(SP)+, aRHCS1	GO WITH ;22 IN RHCS1 FOR PACK ACKNOWLEDGE
2997 2998								;WITH INTERRUPT DISABLED
3000	014464	011100				MOV	aR1,R0 aR3,R5	;SAVE RHCS1 DURING ABOVE OPERATION ;SAVE RHDS1 DURING ABOVE OPERATION
3002	014470	104412				WAT		:WAIT FOR VV BIT TO SET
3003	014472	000100				RHDS1		:WAIT FOR VV BIT IN RHDS1 REGISTER
3005	014476	000001				<u>i</u> :		; ALLOW 10 MICRO SECONDS ; VV MUST SET BETWEEN ; OD AND 20 MICRO SECONDS
3008	0.0500		0111510			TVDE	000	그렇게 보는 아이들이 되었다. 이 사람이 들어 가장 하지 않는데 하는데 되었다. 그렇게 되었다면 되었다.
3010	014502 014506	104400	014510		025.	TYPE BR	.82\$ 81\$;; TYPE ASCIZ STRING ;; GET OVER THE ASCIZ /ALL DISK DRIVES WHICH WERE POWERED UP WHEN THE PROGRAM/
2993 2993 2993 2995 2995 2995 2995 2995	014604	10000	018613		915:			
3014	014610	104400	014612			TYPE BR .ASCIZ	184\$ 83\$;;TYPE ASCIZ STRING ::GET OVER THE ASCIZ
3016	014664				::84\$: 83\$:	.H3012	12//IE//MH2 21H	RTED MUST BE POWERED UP AGAIN/(15)(12)

200	-11-DZRJ P11	TI-A. RPC	CHECK	JNCT. CON ALL ADDRE	T. TST-F	PT 1 ADDRESSI	MACY11 27(655)	30-MAR-76 22:59 PAGE 69
7890-1231520000000000000000000000000000000000					.SBTTL .SBTTL .SBTTL	**DRIVE	E COMMAND TESTS**	
107 00 10 10 T					; ***** ; *TEST ; * ; *	ALL POS IS GIVE ALL POS	NO OPERATION FU SSIBLE REGISTERS IN NO CHANGE SHOU SSIBLE REGISTERS IN NO CHANGE SHOU	ARE CLEARED THEN A"NOP"=0 ILD HAPPEN ARE FILLED WITH ONES THEN A "NOP"
5 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	014664 014666 014672	000004 012706 012737	001000	004604	†\$T16:	SCOPE MOV MOV	#STACK.SP #16,0#TSTNM	RESET STACK SAVE TEST NUMBER
	014700	004737	041366			JSR	PC, 2*CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE
1	014704	004737	041446			JSR	PC, D#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
	014710 014714	104400	066402			TYPE HALT	, CPHALT	;SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER ;CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 ;AND THAT NO STATUS BITS ARE STUCK = 1 ;CANNOT CONTINUE TESTING IF ANY OF ;THE FIRST SET OF BITS DON'T = 1 ;STOP
	014716	013777	002422	165354		MOV	a#NOPERA, aRHCS1	에 되었으면 가면요 그는 마음을 내려가 하는 것 같아 뭐 하면 하면 하게 되었다.
						; *NOW S	AVE REGISTERS FO	R COMPARISON AFTER NO OPERATION
	014724 014730 014732	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
	014734	000055				18.		NUMBER OF REGISTERS SAVED = 18.
	014736	013777	004606	165322		MOV	a*RP4VEC, aRPVEC	

MATNE	-11-0781	T-A RPC	4/5/6 FI	NCT CONT 1	TST-PT 1	B11	30-MAR-76 22:59 PAGE 70	SE0 013
DZRJIA	PII	TIS	NO OPER	NCT. CONT. 1 ATION FUNCT!	ION TEST	MHC111 27(055)	30-11HK-78 EE.33 FHGE 70	354 013
3071 3072	014744	013746 052716	100000		MOV	amnopera(SP)	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE	
3074 3075 3075 3077 3078	014754	012677	165320		MOV	(SP)+, QRHCS1	GO WITH OUT THERROPT ENABLE IN THE STATE OF	
3090 3090 3092 3093 3093 3095	014760 014762 014764 014766 014770	104412 002000 000001 000001			WAT RHCS1 RDY 1.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 10 MICRO SECONDS RDY MUST SET BETWEEN DO AND 20 MICRO SECONDS	
3097 3098					:*NOW C	OMPARE REGISTERS AFTER NO-OP COMM	BEFORE NO-OP COMMAND	
3090	014772	004037	042354		JSR	RO, 2#COMREG	COMPARE SAVED REGISTERS WITH	
3092 3093 3095 3095	014776 015000 015002 015004 015006	004612 002354 00022 015010 015014			SAVERE WC 18. 18. 25		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 15 ON ERROR RETURN TO 25 ON NO ERROR	
	015010	10401E 000207		1\$:	ERROR	PC .	GIVING A NO-OP COMMAND CAUSED AN ERROR NO REGISTERS SHOULD CHANGE GOOD DATA GIVES REGISTER CONTENTS BEFORE COMMAND RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND	

2106

3105 3107 3109					: *NOW F	REPEAT TEST BY MO	OVING IN ALL POSSIBLE ONES
3109	015014			2\$:			
3113	015014	004737	041366		JSR	PC, 2#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER ADDR. OF ADDR OF RHWC IN RO
3115	015020 015024	012700 012730	002272 177777		MOV	*RHWC.RO *177777,3(RO)+	ADDR. OF ADDR OF RHWC IN RO LOAD 177777 INTO RHWC
3118	015030	012730	177777		MOV	#177777, @(RO)+	;LOAD 177777 INTO RHBA
	015034 015040	052730 012730	043010 001400		BIS	#43010, a(RO)+ #1400, a(RO)+	:LOAD 43010 INTO RHCS2 :LOAD 1400 INTO RHCS1
3123	015044	012730	000000		MOV	#0,0(RD)+	; LOAD D INTO RHER1
3125	015050	012730	177777		MOV	#177777, a(RO)+	;LOAD 177777 INTO RHDST
3127	015054	012730	000000		MOV	#0,3(R0)+	;LOAD D INTO RHER2
3129	015060	012730	177777		MOV	#177777,3(RO)+	;LOAD 177777 INTO RHOF
3131	015064	012730	177777		MOV	#177777, a(RO)+	;LOAD 177777 INTO RHCA
3133	015070	012730	500000		MOV	#0, a(R0)+	;LOAD O INTO RHER3
3135					:*NOW S	ET BITS IN RHAS	FOR ALL DRIVES PRESENT
3135 3135 3137 3138 3139	015074 015076 015100	010046 011446 011246			MOV MOV	RO(SP) 2R4(SP) 2R2,-(SP)	:: PUSH RO ON STACK :SAVE RHERI TO REINSTATE LATER :SAVE RHCS2 TO BE REINSTATED
	015102 015106 015110 015114 015116 015120	013700 005012 012705 006000 103002 012714	004742 000010 177777	87\$:	MOV CLR MOV ROR BCC MOV	0*TOTALAT.RC 2R2 *8.,R5 RO 88\$ *-1.2R4	GET DRIVES PRESENT CLEAR RHCS2 AND CARRY CCUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT
	015124 015126 015130 015132 015136 015136	005212 005305 001371 012612 012614 012600 005720		885:	INC DEC BNE MOV MOV MOV TST	QR2 R5 87\$ (SP)+, QR2 (SP)+, QR4 (SP)+, RO (RO)+	INCREMENT RHCS2 TO NEXT UNIT COUNT BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHER1 POP STACK INTO RO GET OVER PHAS IN RO
3156	015142	012730	177776		MOV	#177776, a(RO)+	;LOAD 177776 INTO RHMR

MAINDEC	-11-DZRJ	I-A, RPO	4/5/6 FL	INCT. CON	IT. TST-P	T 1	D11 MACY11 27(655)	30-MAR-76 22:59 PAGE 72
	PII		NO OPER	ATION FU	INCTION T			
3160	015146	004737	041446			JSR	PC, D#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1
3162	015152	104400	066402			TYPE	.CPHALT	CANNOT CONTINUE TESTING IF ANY OF
	015156	000000 013777	002422	165112		HALT MOV	a#NOPERA, aRHCS1	;510P
3159						:*NOW S	AVE REGISTERS FO	R COMPARISON AFTER A NO-OP
3170 3171 3172 3173	015156 015172 015174	004037 002272 004612	041534			JSR RHWC SAVERE	RO, 3#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
3175 3176	015176	000055				19.		NUMBER OF REGISTERS ; SAVED = 18.
3178 3179 3180 3182 3183 3183	015200	013777	004606	165060		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
3185 3186 3187	015212	013746 052716	002422			MOV BIS	amnopera,-(SP)	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE GO WITH
3190	015216	012677	165056			MOV	(SP)+, aRHCS1	GO WITH O IN RHCS1 FOR NO-OPERATION WITH INTERRUPT DISABLED
	015222 015224 015226 015230 015232	104412 002300 000200 000001				WAT RHCS1 RDY 1.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 10 MICRO SECONDS RDY MUST SET BETWEEN DO AND 20 MICRO SECONDS
3505						; *CHANGE	REGISTERS TO EX	
3204 3205 3205 3207 3208	015234 015240 015242 015246 015250	005737 001406 005737 001003 042737	004750 004722 100000	004620		TST BEQ TST BNE BIC	3#RH70 5\$ 3#NUNIT 5\$ #SC, 3#SAVERE+6	RUNNING ON AN RH70 ? IF NOT, SKIP NEXT TESTING MORE THAN ONE DRIVE ? SKIP NEXT IF SO CLEAR 'SC' IN RHCS1
3510	015256				5\$:			
3513	015256	043737	004740	004636		BIC	D#ATTENT, D#SAVER	RE+24 :CLEAR APPROPIATE ATA SITS FOR WORKING DRIVE IN SAVED RHAS

SE0 0132

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO T15	4/5/6 FUNCT. CON NO OPERATION FU	IT. TST-P	T 1	E11 MACY11 27(655)	30-MAR-76 22:59 PAGE 73
3215 3215 3216 3217 3219	015254 015270 015272 015274 015276	004037 002322 000001 000000 100000	042246		JSR RHDS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHDS1 REGISTER :1 BIT/BITS TO BE CHANGED NEW VALUE OF ATA IS D CHANGE ATA BIT
33223	015276	100000			ATA **NOW C **AFTER	OMPARE REGISTERS NO-OP COMMAND	BEFORE NO-OP WITH
	015300 015304 015306 015310 015312 015314	004037 004612 002354 000022 015316 015322	042354		JSR SAVERE WC 18.	RD, 3#COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR
3235 3235 3237 3237 3239 3231 3231	015316	104016 000207		3\$:	ERROR RTS	16 PC	GIVING A NO-OP COMMAND CAUSED AN ERROR NO REGISTERS SHOULD CHANGE GOOD DATA GIVES REGISTER CONTENTS BEFORE COMMAND RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND
3242 3243 3244	015322			45:			

SE0 0133

3245 3245 3245 3249					TEST	17 ALL WRI WITH ON THEN A	DRIVE CLEAR TE BITS OF ALL F SES EXCEPT GO.CLE DRIVE CLEAR IS O	REGISTERS ARE FILLED
3250					*	THEN AL	L REGISTERS ARE	CHECKED TO HAVE APPROPIAVE VALUE
3252 3253 3254	015322 015324 015330	000004 012706 012737	001000 000017	004604	†\$T17:	SCOPE MOV MOV	*STACK_SP *17,0*TSTNM	RESET STACK SAVE TEST NUMBER
3255 3257 3258	015336	004737	041366			JSR	PC, 3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
3259	015342	004737	041446			JSR	PC, 2#CHECKT	SETUP UNIT NUMBER CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
3262	015346	104400	066402			TYPE	,CPHALT	CANNOT CONTINUE TESTING IF ANY OF
3564	015352	000000				HALT		STOP
3566						; *WRITE	ALL WRITABLE RE	GISTER BITS
3269 3269	015354 015360	012700 012730	002272 177777			MOV MOV	#RHWC.RO #177777,@(RO)+	:ADDR. OF ADDR. OF RHWC IN RO :LOAD 177777 INTO RHWC
3271	015364	012730	177776			MOV	#177776,2(RO)+	;LOAD 177776 INTO RHBA
3273 3274	015370 015374	052730 012730	043010			BIS	#43010,a(RO)+ #1400,a(RO)+	:LOAD 43010 INTO RHCS2 ;LOAD 1400 INTO RHCS1
3276	015400	012730	000000			MOV	#0,3(R0)+	;LOAD D INTO RHER1
3278	015404	012730	177777			MOV	#177777,3(RO)+	;LOAD 177777 INTO RHDST
3580	015410	012730	000000			MOV	#0, a(R0)+	;LOAD C INTO RHER2
3585	015414	012730	177777			VOM	#177777, a(RO)+	;LOAD 177777 INTO RHOF
3284	015420	012730	177777			MOV	#177777,3(RO)+	;LOAD 177777 INTO RHCA
3586	015424	012730	000000			MOV	#0,3(R0)+	;LOAD 0 INTO RHER3
3588						:*NOW SI	ET BITS IN RHAS	FOR ALL DRIVES PRESENT
3535 3530 3530	015430 015432 015434	010046 011446 011246				MOV MOV MOV	RO(SP) aR4,-(SP) aR2,-(SP)	:PUSH RO ON STACK :SAVE RHERI TO REINSTATE LATER :SAVE RHCS2 TO BE REINSTATED :AFTER ALL ATA BITS HAVE BEEN SET :GET DRIVES PRESENT :CLEAR RHCS2 AND CARRY
	015436 015442 015444 015450 015452	013700 005012 012705 006000 103002	000610		945:	MOV CLR MOV ROR BCC	a#TOTALAT,RO aR2 #8.,R5 RO 85\$	GET DRIVES PRESENT CLEAR RHCS2 AND CARRY COUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT

DEC-11-DZRJ	II-A, RPC	04/546 FL DRIVE C	INCT. CONT. TST-F	PT 1	G11 MACY11 27(655)	30-MAR-76 22:59 PAGE 75		SEQ 0135
015454 015460 015460 015466 015472 015474 015474 015510 015510 015520 015520 015520 015520	012714 005212 005305 001371 012612 012614 012600 005720		35\$:	MOV INC DEC BNE MOV MOV TST	#-1,3R4 3R2 R5 84\$ (SP)+,3R2 (SP)+,3R4 (SP)+,R0 (R0)+	MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT COUNT BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHER1 :POP STACK INTO RO GET OVER PHAS IN RO		
015476	012730	177776		MOV	#177776,Q(RO)+	;LOAD 177776 INTO RHMR		
015502 015510	017737 013777	164626 202400	004654 164550	MOV	arhcc, a*savere+	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS		
015516	013746 052716	000001	10	MOV	a*DCLEAR,-(SP)	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE		
015526	012677	164546		MOV	(SP)+, aRHCS1	;WITHOUT INTERRUPT ENABLE ;GO WITH ;10 IN RHCS1 FOR DRIVE CLEAR ;WITH INTERRUPT DISABLED	N N	
015532 015534 015536 015540 015542	104412 002300 000200 000001 000001			WAT RHCS1 RDY 1.		:WAIT FOR RDY BIT TO SET :WAIT FOR RHCS1 REGISTER :WAIT FOR RDY BIT IN RHCS1 REGISTER :ALLOW 10 MICRO SECONDS :RDY MUST SET BETWEEN :OD AND 20 MICRO SECONDS	24.	
				:*NOW L	OAD 'SAVERE' REGI	STER SNAPSHOT WITH EXPECTED VALUES		
015544 015550 015552 015554 015560 015562 015564 015570	004037 002272 177777 004037 002274 177776 005037	041270		JSR RHWC 177777 JSR RHBA 177776	RU, JEF ILLRE	MOV 177777 INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA MOV 177776 INTO SAVED RHBA SAVED REGISTER TO CHANGE DATA		
015570	053737	004616	004616	BIS	D#UNIT, D#SAVERE+	CLEAR LOCATION FOR RHCS2 4; PUT UNIT # BACK IN THE SAVED RHCS2		
015534 015534 015534 01554 015554 015554 015554 015554 015554 015554 015554	001021	004750		TST BNE	3#RH70 9\$:RUNNING ON AN RH70 CONTROLLER ? :IF SO SKIP NEXT RH11 CODE		1

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MAINDEC DZRJIA.	-11-DZRJ	I-A, RP0	04/5/6 FL DRIVE (UNCT. CON	NT. TST-F	PT 1	H11 MACY11 27(655)	30-MAR-76 22:59 PAGE 76
3353 3354	015604 015610	004037 002276	042246			JSR RHCS2	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER
33555789012345678901234567890123 333557890123456789012345677777890123 333563336678901234567890123 33336678901234567890123 33333333333333333333333333333333333	015612 015614 015616 015620 015622 015624 015626	000003 000001 000100 000001 000010 000001				IR IR BAI MXF		;3 BIT/BITS TO BE CHANGED ;NEW VALUE OF IR IS 1 ;CHANGE IR BIT ;NEW VALUE OF BAI IS 1 ;CHANGE BAI BIT ;NEW VALUE OF MXF IS 1 ;CHANGE MXF BIT
3364 3365	015630 015634	004037 002300	045546			JSR RHCS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER; CHANGE RHCS1 REGISTER
3368 3369 3370	015636 015640 015642 015644	000001 000001 100000 000416				1 SC BR	95	;1 BIT/BITS TO BE CHANGED ;NEW VALUE OF SC IS 1 ;CHANGE SC BIT ;SKIP NEXT RH7D CODE
3372	015646				95:			
3374 3375	015646 015652	004037 002275	045546			JSR RHCS2	RD, G#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHCS2 REGISTER
3375 3378 3379 3380 3381 3382 3383 3384	015654 015656 015660 015662 015664 015666 015672	000002 000001 000100 000001 000010 005737 001003 042737	004722	004620		IR IR I BAI TST BNE BIC	a#NUNIT 9\$ ' #SC, a#SAVERE+6	2 BIT/BITS TO BE CHANGED NEW VALUE OF IR IS 1 CHANGE IR BIT NEW VALUE OF BAI IS 1 CHANGE BAI BIT TESTING MORE THAN OHE DRIVE ? SKIP NEXT IF SO CLEAR 'SC' IF NOT
3386 3387	015702	004037	041270		95:	JSR RHER1	RO, 3#FILLRE	MOV D INTO SAVED RHER1 SAVED REGISTER TO CHANGE
3398 3389 3390	015710 015712 015716	000000 004037 002304	041270			JSR RHDST	RO, 0#FILLRE	MOV 17437 INTO SAVED RHDST SAVED REGISTER TO CHANGE
338578901234567890123456 338879999999990123456 3388799999999901234556	015702 015702 015706 015706 015710 015716 015720 015720 015730 015730 015730 015730 015730 015730 015740 015750	017437 004037 002306	041270			JSR RHER2	RO, 0#FILLRE	MOV 0 INTO SAVED RHER1 SAVED REGISTER TO CHANGE DATA MOV 17437 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA MOV 0 INTO SAVED RHER2 SAVED REGISTER TO CHANGE DATA MOV 116000 INTO SAVED RHOF SAVED REGISTER TO CHANGE DATA MOV 1777 INTO SAVED RHCA SAVED REGISTER TO CHANGE DATA MOV 0 INTO SAVED RHCA SAVED REGISTER TO CHANGE DATA MOV 0 INTO SAVED RHER3 SAVED REGISTER TO CHANGE DATA GET ALL BITS OF DRIVE & PRESENT IN RHAS CLEAR WORKING DRIVE BIT
3395 3396	015732 015736	004037 002310	041270			JSR RHOF	RO, 0#FILLRE	MOV 116000 INTO SAVED RHOF SAVED REGISTER TO CHANGE
3398 3399	015740 015742 015746	004037 002312	041270			JSR RHCA	RO, 2#FILLRE	MOV 1777 INTO SAVED RHCA SAVED REGISTER TO CHANGE
3400 3401 3402	015750 015752 015756	001777 004037 002314	041270			JSR RHER3	RO, @#FILLRE	MOV D INTO SAVED RHERS SAVED REGISTER TO CHANGE
3404	015762	013746	004742			MOV	a#TOTALAT, -(SP)	GET ALL BITS OF DRIVE & PRESENT
3406	015766	043716	004740			BIC	D#ATTENT, (SP)	CLEAR WORKING DRIVE BIT

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MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO	DRIVE C	NCT. CON LEAR	MACY11 27(655)	30-MAR-75 22:59 PAGE 77		
3407 3408 3409 3410	015772 015776 015002 016004	012637 004037 002320 000400	004636 041270			MOV JSR RHMR 400	(SP)+, D#SAVERE+ RO, D#FILLRE	24 : MOVE THIS INTO RHAS POSITION ; MOV 400 INTO SAVED RHMR ; SAVED REGISTER TO CHANGE ; DATA
	016006 016012 016014 016014	004037 002322 010700	041270		3\$:	JSR RHDS1 10700	RO, @#FILLRE	MOV 10700 INTO SAVED RHDS1 SAVED REGISTER TO CHANGE DATA
3417	016016	013737	002406	004644	45:	MOV	a#DT, a#SAVERE+3	E : MOVE DRIVE TYPE INTO RHDT
3419	016024	013737	002410	349400		MOV	a#SN, a#SAVERE+3	: MOVE DRIVE TYPE INTO RHDT ; POSITION OF SAVRE TABLE 4 : MOVE SERIAL NUMBER INTO RHSN ; POSITION OF SAVERE TABLE
3423	016032 016036 016040	004037 002330 000000	041270			JSR RHEC1	RO, 0#FILLRE	MOV D INTO SAVED RHEC1 SAVED REGISTER TO CHANGE DATA
3425 3426 3427	016042 016046 016050	004037 002332 000000	041270			JSR RHEC2 0	RO, 3#FILLRE	MOV D INTO SAVED RHEC2 SAVED REGISTER TO CHANGE DATA
3429	016058 016056	004037 002300	042246			JSR RHCS1	RO, @#CHREG	CHANGE BITS IN SAVED REGISTER ; CHANGE RHCS1 REGISTER
3432 3433 3434	016060 230310 430310	000001 000001				1 PAR		:1 BIT/BITS TO BE CHANGED :NEW VALUE OF PAR IS 1 :CHANGE PAR BIT
3436 3437 3438 3439						*NOW TO	HAT SAVERE TABLE TED VALUES, THE P SAVERE TABLE	HAS BEEN LOADED WITH REGISTERS WILL BE COMPARED
3440 3441	016066	004037	042354			JSR	RO, D#COMREG	COMPARE SAVED REGISTERS WITH
3443 3445 3446 3446	016072 016074 016076 016100 016102	004612 002354 000022 016104 016110				SAVERE WC 18. 5%		PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
34455 34455 34455 34455 3455 3455 3455	016104 016106	104017 000207			5\$:	ERROR	17 PC	DRIVE CLEAR COMMAND GAVE AN ERROR GOOD DATA HAS WHAT SHOULD BE IN REGISTER AFTER A DRIVE CLEAR RECEIVED DATA HAS WHAT THE REGISTER ACTUALLY CONTAINED
3457 3458	016110				6 \$:			

JI-A. RPC T17	04/5/6 FUI DRIVE CL	NCT. CON LEAR	HT. TST-F	γT 1	MACY11	J11 27(655)	30-MAR-76	22:59	PAGE	78		
			****** *TEST * * * * * * *	IF THE THEN THEN THEN THEN THEN THEN THEN	PROGRAM IS TEST CT-11 MOST IS PE	N-PRESET DRESS 220 WORKS UP IS NOT F ONITOR IS	IS USED TO SPRESENT TO ONLY ON THE HIS TEST IS	MONITOR HEN	WILL I			ED .
			*****	FIRST T RESET V THEN AL	HE DRIVE V-BIT #6 L WRITE ES EXCER	IS POWE IN RHDS BITS OF PT GO.CLE	PRESET COM: RED DOWN AI ALL REGISTI RIE PAT MCI	ND UP IN ERS ARE F PE.UPE	ORDER	то		
			* * * * * *	THEN AL	L REGIST	TERS ARE	COMMAND = 20 TESTED THE REGIST OF SHOULD H = 0, RHDST OULD BE UNCH	TER CONTE	NTS	/V = 1		_
000004 012706 012737	001000	004604	†stžo:*	******* SCOPE MOV MOV	******* #STACK, #20,0#1	SP	RESET STA	ACK	*****	*****	***	1

015110	000004			†\$***** †\$**20:	*******	********	*********
016115	012706	000020	004604	15120:	MOV	#STACK, SP #20, 2#TSTNM	RESET STACK SAVE TEST NUMBER
016124	004737	041365			JSR	PC, @#CLDISK	SET RI-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
		,			;*THIS	CODE CHECKS TO	SEE IF MANUAL INTERVENTION TESTS ARE OK
016130	005737	004724			TST	a#NOPUSH	:IS THIS A 220 START ? :SKIP THIS TEST IF SO
016136	005737	000042			BNE TST BNE	3#42 1\$	MONITOR (ACT 11) RETURN ADDRESS ? SKIP THIS TEST FIRST PASS ? SKIP THIS TEST IF NOT
016142 016144 016150	005737	001100			BNE	2#SPASS	FIRST PASS ?
016152	204000				BNE BR	1\$ 2\$	CONTINUE WITH THIS TEST
016154	000137	016654		1\$:	JMP	TST21 ;	JUMP TO NEXT TEST)
016160	104400	015155		2\$:	TYPE	.65\$:: TYPE ASCIZ STRING
016164	000407			;;65\$:	BR .ASCIZ	,65% 64% <15><12>/STOP	::GET OVER THE ASCIZ
				,,			

MAINDEO DZRJIA.	-11-DZRJ	I-A. RPO	04/5/6 FUNCT. CON READ-IN-PRESET	IT. TST-F	т 1	K11 MACY11 27(655)	30-MAR-76 22:59 PAGE 79
3513	015204			645:			
3515	015204	013746	004716		MOV TYPDS	a#UNIT,-(SP)	GET UNIT UNDER TEST
3517 3518	016212 016212 016213	104400	010000	3\$:	TYPE	SCRLF MOL, DR3	
3519 3520		001375			BIT	3\$	MOL WILL BE HIGH TILL STOF IS HIT WAIT TILL STOP IS HIT
3521 3522	016230	104400	016535		TYPE	65% 66% START DRIVE	::TYPE ASCIZ STRING ;;GET OVER THE ASCIZ
3523 3524	016246			::67\$: 66\$:	.ASCIZ	/START DRIVE/	
3526 3526	016246 016252 016254	013746	004716		MOV TYPDS	a#UNIT,-(SP)	GET UNIT UNDER TEST
3528	016254	104400	001553		TYPE	,SCRLF	; IIIFE II
3755110012237547890122375478901223 35551122222222222222333333333333333	016260 016264	032713 001775	010000	4\$:	BIT	#MOL, DR3 4\$; MOL WILL BE LOW TILL FILE READY ; WAIT TILL FILE READY
3533	016566	004737	041366		JSR	PC, a#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER ;CHECK THAT DVA, RDY, MOL, DPR, DRY = 1 ;AND THAT NO STATUS BITS ARE STUCK = 1 ;CANNOT CONTINUE TESTS IF THEY AREN'T
3535 3536							GIVE RH-11 INITIALIZE
3537 3538	015272	004737	041424		JSR	PC, a#CHECK	CHECK THAT DVA, RDY, MOL, DPR, DRY = 1
3539 3540	016276	104400	066405		TYPE	, CPHALT	13105
3541 3542	016304	012700	002272		VOM	#RHWC,RD	ADDR. OF ADDR. OF RHWC IN RO
3544					;*NOW I	NITIALIZE ALL TH	E REGISTERS
3545 3546	016310	012730	177777		MOV	#177777, @(RO)+	;LOAD 177777 INTO RHWC
3548	016314	012730	177777		MOV	#177777, a(RO)+	;LOAD 177777 INTO RHBA
3549 3549 3555 3555 3555 3555 3555 3555	016320	052730 012730	043010 001400		BIS	#43010, a(RO)+ #1400, a(RO)+	LOAD 43010 INTO RHCS2 LOAD 1400 INTO RHCS1
3553	016330	012730	000000		MOV	#0,@(R0)+	;LOAD D INTO RHER1
3555	016334	012730	177777		MOV	#177777, @(RO)+	;LOAD 177777 INTO RHDST
3557 3558	016340	012730	000000		MOV	#0, a(R0)+	;LOAD D INTO RHER2
3559	016344	012730	177777		MOV	#177777, @(RO)+	;LOAD 177777 INTO RHOF
3561 3562	016350	012730	177777		MOV	#177777, a(RO)+	;LOAD 177777 INTO RHCA
3563 3564	016354	012730	000000		MOV	#0, a(R0)+	;LOAD D INTO RHER3
3565 3566					;*NOW SI	ET BITS IN RHAS I	FOR ALL DRIVES PRESENT

MAINDEC DZRJIA.	-11-DZRJ Pli	11-A. RPC 120	04/5/6 FU READ-IN	INCT. CON	IT. TST-F	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 80	SEG 0140
3567 3568 3569	016360 016362 016364	0110046				MOV MOV MOV	RO,-(SP) aR4,-(SP) aR2,-(SP)	; PUSH RD ON STACK ; SAVE RHER1 TO REINSTATE LATER ; SAVE RHCS2 TO BE REINSTATED ; AFTER ALL ATA BITS HAVE BEEN SET ; GET DRIVES PRESENT ; CLEAR RHCS2 AND CARRY ; COUNTER ; GET BIT INTO CORRY	
3571 3572 3573 3574 3575 3576	016366 016372 016374 016400 016402 016404	013700 005012 012705 006000 103002 012714	004742 000010 177777		88\$:	MOV CLR MOV ROR BCC MOV	3#TOTALAT,RO 3R2 #8.,R5 RO 89\$ #-1,3R4	GET DRIVES PRESENT CLEAR RHCS2 AND CARRY COUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT	
3568 35689 35689 3573 3573 3574 3575 3578 3578 3578 35887 35887 35889 35889 35889 35889 35889 3589 3589	016410 016412 016414 016416 016420 016422 016424	005212 005305 001371 012612 012614 012600 005720			89\$:	INC DEC BNE MOV MOV TST	aR2 R5 88\$ (SP)+, aR2 (SP)+, aR4 (SP)+, R0 (R0)+	INCREMENT RHCS2 TO NEXT UNIT COUNT BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHERI POP STACK INTO RO GET OVER PHAS IN RO	
3586 3587 3588	016426	012730	177776			MOV	#177776,@(RO)+	;LOAD 177776 INTO RHMR	
3589 3590 3591 3592 3593	016432 016440	013777 013777	004740 002462	163655 163632		MOV	a#ATTENT, ARHAS a#READIN, ARHCS1	CLEAR WORKING DRIVE 'ATA' GET READY FOR READIN READ IN WITH 20 IN RHCS1	
3595						; *NOW S	AVE REGISTERS FO	R COMPARISON AFTER READ-IN COMMAND	
3597	016446 016452 016454	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE	
3602 3602	016456	000055				19.		RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.	
3598 3599 3600 3601 3602 3603 3603 3605 3607 3608 3609 3610 3613 3614 3615 3617 3616 3617 3618 3619 3619	016460	013777	004606	163600		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
3611	016466 016472	005737 001411	004750			TST BEQ	a#RH70 7\$	RUNNING ON AN RH70 CONTROLLER ?	
3614 3615	016474 016500	013746 052716	000001			MOV	a#READIN,-(SP) #GO,(SP)	GET READY TO MOVE COMMAND	
3617 3618 3619 3620	016504	012677	163570			MOV	(SP)+, aRHCS1	WITHOUT INTERRUPT ENABLE GO WITH :20 IN RHCS1 FOR READ IN ;WITH INTERRUPT DISABLED .	

			READ-IN-PRESET			MACY11 27(655)		SEG 0141
623	016510 016512 016514	011100 011305 000406			MOV MOV BR	aR1,R0 aR3,R5 9\$	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION SKIP NEXT FOR RH11	
625	016516			7\$:				
627 628	016516	013746	000101		MOV	a*READIN,-(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND	
630 631 632	016526	012677	163546		MOV	(SP)+, @RHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :20 IN RHCS1 FOR READ IN WITH INTERRUPT ENABLED	
34	016532			8\$:				
	016532 016534 016536 016540 016542	104412 002322 000100 000001 000001			WAT RHDS1 VV 1.		WAIT FOR VV BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN OO AND 20 MICRO SECONDS	
43					;*NOW C	HANGE SAVED REGI	STERS TO EXPECTED VALUE	
45	016550	004037 002312 000000	041270		JSR RHCA	RO, D#FILLRE	MOV D INTO SAVED RHCA SAVED REGISTER TO CHANGE	
18 19 50	016544 016550 016552 016554 016560	004037 002304 000000	041270		JSR RHDST D	RO, @#FILLRE	DATA MOV D INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA	
5	016564 016570	004037 002310	042246		JSR RHOF	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER; CHANGE RHOF REGISTER	
156789010	016572 016574 016576 016600 016602 016604 016606	000003 000000 010000 000000 004000 000000			3 0 FMT22 0 ECI O HCI		3 BIT/BITS TO BE CHANGED NEW VALUE OF FMT22 IS 0 CHANGE FMT22 BIT NEW VALUE OF ECI IS 0 CHANGE ECI BIT NEW VALUE OF HCI IS 0 CHANGE HCI BIT	
3	016610 016614	004037 002322	042246		JSR RHDS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHDS1 REGISTER	
66 67 68	016620 016620	000001 000001 000100			1 1 VV		:1 BIT/BITS TO BE CHANGED :NEW VALUE OF VV IS 1 ;CHANGE VV BIT	
6553456557890123456678901234 6655666666678901234					;*NOW T ;*THE E ;*COMPA	HAT SAVERE TABLE XPECTED VALUE AFT RISONS ARE MADE	WITH SAVED REGISTERS HAVE TER A READ-IN COMMAND	

MAINDEO DZRJIA.	-11-DZRJ Pli	I-A. RPO	04/5/6 FU READ-IN	NCT. CON	IT. TST-P	т 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 82		SE0 0142
3675 3676 3677 3679 3679 3680 3681	016524 016630 016632 016634 016636 016640	004037 004612 002354 000022 016642 016646	042354			JSR SAVERE WC 18. 5\$	RO, a*COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR		
3575 3677 3677 3679 3687 3688 36887 3689 3689 3699 3699 3697 3697 3697 3697 3697 369	016642	104020 000207	177777	046760	5\$: 6\$:	ERROR	20 PC #-1,@#PRITEM	READ IN COMMAND GAVE AN ERROR GOOD DATA HAS WHAT SHOULD BE IN REGISTER AFTER A READ-IN COMMAND RECEIVED DATA HAS WHAT THE REGISTER ACTUALLY CONTAINED THE FOLLOWING SHOULD BE THE REGISTER CONTENTS RHCA=D, RHDST = D RHOF SHOULD HAVE FMT22 = D, HCI = D, ECI = D, RHDS1 SHOULD HAVE VV = 1 ALL OTHER BITS SHOULD BE UNCHANGED CLEAR PREVIOUS ITEM NUMBER	· 18	1,

TEST 21 READ-IN-PRESET READ-IN-PRESET REST INTEGER REST INTE	3599				:				
## THIS TEST IS MERE BECAUSE IF ACT-11 MONITOR IS PRESENT THEN THE PREVIOUS FIR MILL NOT BE PERFORMED THEN THE PREVIOUS THE READ-IN-PRESET COMMAND THEN A READ-IN-PRESET COMMAND = 0 IS GIVEN THEN A READ-IN-PRESET COMMAND = 0 IS GIVEN THEN ALL REGISTER SET TESTED THEN ALL REGISTER CONTENTS THE PAIL OF THE PREVIOUS TEST IS MADE = 0 THEN A READ-IN-PRESET COMMAND = 0 IS GIVEN THEN ALL REGISTER SHOULD BE THE REGISTER CONTENTS THE PAIL OF THE PREVIOUS TEST IS MADE = 0 THEN A READ-IN-PRESET COMMAND = 0 IS GIVEN THEN ALL REGISTER SHOULD BE THE REGISTER CONTENTS THE PAIL OF THE PREVIOUS TEST IS MADE = 0 THEN A READ-IN-PRESET COMMAND = 0 IS GIVEN THEN ALL REGISTER SHOULD BE THE REGISTER CONTENTS THE PAIL OF THE	3702					*TEST	51	READ-IN-PRESET	********
THIS TEST IS MERE BECAUSE IF ACT-11 MONITOR IS PRESENT	3704 3705					:*	THIS TE	T DOES NOT TEST	AS THE PREVIOUS TEST EXCEPT
## THEN A READ-IN-PRESET COMMAND = 20 IS GIVEN ## THEN ALL REGISTERS ARE TESTED ## THEN ALL REGISTERS ARE TESTED ## THEN ALL REGISTERS ARE TESTED ## THEN ALL REGISTERS ARE TESTED ## THEN ALL REGISTERS ARE TESTED ## THEN ALL REGISTERS SHOULD BY ## THEN ALL REGISTERS ## THEN ALL REGISTERS ## THEN ALL REGISTERS ## THEN ALL REGISTERS ## THEN ALL REGIST	3708 3709 3710 3711 3712					* * * * * * * * * * * * * * * * * * * *	THIS TE THEN THE THIS TE ALL WR! WITH OF ATA FOR	EST IS HERE BECAL HE PREVIOUS TEST ESTS THE READ-IN- ITE BITS OF ALL F NES EXCEPT GO, CLE R DRIVE UNDER TES	USE IF ACT-11 MONITOR IS PRESENT WILL NOT BE PERFORMED -PRESET COMMAND REGISTERS ARE FILLED R. IE.PAT.MCPE.UPE ST IS MADE = 0
3720 3721 3722 3723 3724 3723 3725 3726 3727 3728 3727 3728 3727 3728 3727 3728 3729 3730 016670 004737 041366 016737 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004604 004606 016670 01670 01670 016670 01670 01670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670 016670	3715					* * *	THEN AL	READ-IN-PRESET CL L REGISTERS ARE	COMMAND = 20 IS GIVEN TESTED THE REGISTER CONTENTS
3723 016556 012706 001000 004004 MOV #STACK SP RESET STACK SAVE TEST NUMBER 3725 016660 012737 000021 004604 MOV #21.3#15TNM SAVE TEST NUMBER 3726 016670 004737 041366 JSR PC.3#CLDISK SET RI-AHCS1, R2-RHCS2 R3-RHOS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER 3729 STACK SETUP UNIT NUMBER 3730 016674 004737 041424 JSR PC.3#CHECK CHAIT DVA RDY, MOL DPR DRY = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTS IF THEY AREN'T STOP 016706 012700 002272 MOV #RHWC,R0 RODR. OF RHWC IN R0 3737 3738 3738 3739 016704 012700 002272 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHWC 3741 016716 012730 177777 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHWC 3742 016726 012730 043010 D1400 MOV #1400,3(RO)+ ;LOAD 43010 INTO RHCS2 3743 016726 012730 001400 MOV #1400,3(RO)+ ;LOAD 1400 INTO RHCS2 3744 016726 012730 001400	3719					*	FMT22 :	ER REGISTERS SHO	= 0. RHDS1 SHOULD HAVE VV = 1 OULD BE UNCHANGED
3723 016556 012706 001000 004004 MOV #STACK SP RESET STACK SAVE TEST NUMBER 3725 016660 012737 000021 004604 MOV #21.3#15TNM SAVE TEST NUMBER 3726 016670 004737 041366 JSR PC.3#CLDISK SET RI-AHCS1, R2-RHCS2 R3-RHOS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER 3729 STACK SETUP UNIT NUMBER 3730 016674 004737 041424 JSR PC.3#CHECK CHAIT DVA RDY, MOL DPR DRY = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTS IF THEY AREN'T STOP 016706 012700 002272 MOV #RHWC,R0 RODR. OF RHWC IN R0 3737 3738 3738 3739 016704 012700 002272 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHWC 3741 016716 012730 177777 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHWC 3742 016726 012730 043010 D1400 MOV #1400,3(RO)+ ;LOAD 43010 INTO RHCS2 3743 016726 012730 001400 MOV #1400,3(RO)+ ;LOAD 1400 INTO RHCS2 3744 016726 012730 001400	3721	016654	000004			†\$721:	**************************************	************	***********
STEP STUP INITIALIZE SETUP UNIT NUMBER	3723	015556	012706	000021	004604		MOV	#STACK.SP #21.3#TSTNM	RESET STACK SAVE TEST NUMBER
3730 016674 004737 041424	3725 3725 3727 3728	016670	004737	041366			JSR	PC, 2*CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE
3735 3736 3737 3738 3738 3739 3739 3739 3739 3740 3740 3741 3740 3742 3743 3742 3743 3744 3745 3744 3745 3745 3746 3747 3748 3748 3748 3748 3748 3748 3748	3730	016674	004737	041424			JSR	PC, B#CHECK	CHECK THAT DVA. RDY, MOL. DPR. DRY = 1
3735 3736 3737 3738 3738 3739 3739 3739 3739 3740 3740 3741 3740 3742 3743 3742 3743 3744 3745 3744 3745 3745 3746 3747 3748 3748 3748 3748 3748 3748 3748	3732	016700	104400	066402				,CPHALT	CANNOT CONTINUE TESTS IF THEY AREN'T
3739 016712 012730 177777 MOV #177777, a(RO)+ ;LOAD 177777 INTO RHWC 3740 3741 016716 012730 177777 MOV #177777, a(RO)+ ;LOAD 177777 INTO RHBA 3742 3743 016722 052730 043010 BIS #43010, a(RO)+ ;LOAD 43010 INTO RHCS2 3744 016726 012730 001400 MOV #1400, a(RO)+ ;LOAD 1400 INTO RHCS1	3734 3735	016706	012700	002272				*RHWC,RO	ADDR. OF ADDR. OF RHWC IN RO
3741 D16716 D1273D 177777 MOV #177777, 3(RD)+ ;LOAD 177777 INTO RHBA 3742 3743 D16722 D5273D D43C1D BIS #43D1D, 3(RD)+ ;LOAD 43D1D INTO RHCS2 3744 D16726 D1273D D0140D MOV #140D, 3(RD)+ ;LOAD 140D INTO RHCS1	3736 3737						;*INITI	ALIZE ALL THE RE	GISTERS
3741 D16716 D1273D 177777 MOV #177777, 3(RD)+ ;LOAD 177777 INTO RHBA 3742 3743 D16722 D5273D D43C1D BIS #43D1D, 3(RD)+ ;LOAD 43D1D INTO RHCS2 3744 D16726 D1273D D0140D MOV #140D, 3(RD)+ ;LOAD 140D INTO RHCS1	3739	016712	012730	177777			MOV	#177777, a(RO)+	;LOAD 177777 INTO RHWC
3743 D16722 D52730 D43010 BIS #43010, D(RO)+ :LOAD 43010 INTO RHCS2 3744 D16726 D12730 D01400 MOV #1400, D(RO)+ :LOAD 1400 INTO RHCS2 3745 D16732 D12730 D00000 MOV #0, D(RO)+ :LOAD 0 INTO RHER1 3747 B16736 D12730 177777 MOV #177777, D(RO)+ :LOAD 177777 INTO RHDST 3749 D16742 D12730 D00000 MOV #0, D(RO)+ :LOAD 0 INTO RHER2 3751 D16746 D12730 177777 MOV #177777, D(RO)+ :LOAD 0 INTO RHOF	3741	016716	012730	177777			MOV	#177777, a(RO)+	;LOAD 177777 INTO RHBA
3745 016732 012730 000000 MOV #0,3(R0)+ :LOAD 0 INTO RHER1 3747 016736 012730 177777 MOV #177777,3(R0)+ :LOAD 177777 INTO RHDST 3750 016742 012730 000000 MOV #0,3(R0)+ :LOAD 0 INTO RHER2 3751 016746 012730 177777 MOV #177777,3(R0)+ :LOAD 177777 INTO RHOF	3743 3744	016722 016726	052730 012730	043610 001400			BIS	#43010,3(RO)+ #1400,3(RO)+	:LOAD 43010 INTO RHCS2 :LOAD 1400 INTO RHCS1
3748 016736 012730 177777 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHDST 3749 016742 012730 000000 MOV #0,3(RO)+ ;LOAD 0 INTO RHER2 3751 016746 012730 177777 MOV #177777,3(RO)+ ;LOAD 177777 INTO RHOF	3746	016732	012730	000000	•		MOV	#0,2(R0)+	;LOAD D INTO RHER1
3750 D16742 D12730 DD0000 MOV #0.3(RD)+ :LOAD D INTO RHER2 3751 3752 D16746 D12730 177777 MOV #177777.3(RD)+ :LOAD 177777 INTO RHOF	3748	016736	012730	177777			MOV	#177777, a(RO)+	:LOAD 177777 INTO RHDST
3752 016746 012730 177777 MOV #177777, Q(RO)+ ;LOAD 177777 INTO RHOF	3750	016742	012730	000000			MOV	#0,0(R0)+	;LOAD D INTO RHER2
	3752	015746	012730	177777			MôV	#177777, a(RO)+	:LOAD 177777 INTO RHOF

MAINDE DZRJIA	C-11-DZRJ	I-A RPO	04/5/6 FL READ-II	UNCT. CON N-PRESET	T. TST-	PT 1	C12	30-MAR-76 22:59 PAGE 84	SEG 0144
	016752	012730	177777			MOV	#177777,3(RO)+	:LOAD 177777 INTO RHCA	
3755 3756	016756	012730	000000			MOV	#0.3(RD)+	:LOAD D INTO RHER3	
3757 3759 3759 3760	015762 015766	012730 012730	177777 177776			MOV	#-1.a(RO)+ #177776,a(RO)+	CLEAR ALL BITS OF RHAS LOAD 177776 INTO RHMR	
3761 3762 3763 3764 3765	015772 017000	013777 013777	004740	163316 163272		MOV	D#ATTENT DRHAS D#READIN, DRHCS1	CLEAR WORKING DRIVE 'ATA' GET READY FOR READIN READ IN WITH 20 IN RHCS1	
3767						:*NOW S	SAVE REGISTERS FO	R COMPARISON AFTER READ-IN COMMAND	
3769 3770 3771	017006 017012 017014	004037 002272 004612	041534			JSR RHWC SAVERE	RO, 2*SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.	
3773	017016	000055				19.		: THE REGISTERS HRE SAVED :NUMBER OF REGISTERS :SAVED = 18	
37555578901234567890122345678000000000000000000000000000000000000	017020	013777	004606	163240		MOV	a*RP4VEC, aRPVEC		
3783 3784	017026 017032	005737 001411	004750			TST	3#RH70 9\$:RUNNING ON AN RH70 CONTROLLER ? :SKIP NEXT IF NOT	
3786 3786 3787	017034 017040	013746 052716	002462			MOV	3#READIN,-(SP) #GO,(SP)	GET READY TO MOVE COMMAND	
3789 3790 3791	017044	012677	163230			MOV	(SP)+, DRHCS1	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE GO WITH :20 IN RHCS1 FOR READ IN WITH INTERRUPT DISABLED	
3793 3794 3795	017050 017052 017054	011100 011305 000406				MOV MOV BR	2R1.R0 2R3,R5 10\$	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION SKIP NEXT RH11 CODE	
3797	017056				95:				
3799 3800	017056 017062	013746 052716	.000101			MOV BIS	2#READIN(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 20 IN RHCS1 FOR READ IN UITH INTERRUPT ENABLED	
3805	017066	012677	163206			MOV	(SP)+, aRHCS1	GO WITH	Q-
3805 3805 3806	017072				105:			; WITH INTERRUPT ENABLED	

MAINDEC DZRJIA.	-11-DZRJ	II-A. RPC	04/5/6 FUNC READ-IN-F	T. CONT.	TST-PT 1	MACY11 27(655		22:59 PAGE	85
3907 3909 3910 3911 3912 3913	017072 017074 017076 017100 017102	104412 002300 000200 000001 000001			WAT RHCS1 RDY		WAIT FOR R WAIT FOR R WAIT FOR R ALLOW 10 M RDY MUST S ;00 AND 20	DY BIT TO SE HCS1 REGISTED DY BIT IN RHI ICRO SECONDS ET BETWEEN MICRO SECOND	T R CS1 REGISTE
3815					:*NOW	CHANGE SAVED RE	GISTERS TO EXP	ECTED VALUE	
3815 3817 3818 3819	017104 017110 017112 017114 017120 017122	004037 002312 000000 004037 002304 000000	041270		JSR RHCA O	RO.3#FILLRE	:DATA	SAVED RHCA STER TO CHAN	
3855 3855 3851	017114	004037 002304 000000	041270		JSR RHDST D	RO, 3#FILLRE	MOV D INTO SAVED REGI DATA	SAVED RHDST STER TO CHANG	GE
3824	017124 017130	004037 002310	045546		JSR RHOF	RO, D#CHREG	CHANGE BIT	S IN SAVED REF	EGISTER
7.89C)12:3+15.67.89C12:3+15.67.89C)12:3+15.67.89C12:3+15.67.89C12:3+15.67.89C15.57.89C	017132 017134 017136 017140 017142 017144 017146	000003 000000 010000 004000 004000 000000			ECI HCI		3 BIT/BITS NEW VALUE CHANGE FMT NEW VALUE CHANGE ECI NEW VALUE CHANGE HCI	TO BE CHANGE OF FMT22 IS 0 22 BIT OF ECI IS 0 BIT OF HCI IS 0 BIT	ED 2
3835	017150 017154	004037 002322	042246		JSR RHDS1	RD, D#CHREG		S IN SAVED RE	
3838 3839 3840	017156 017160 017162	000001 000001 000100		•	i V		:1 BIT/BITS :NEH VALUE (:CHANGE VV	TO BE CHANGE OF VV IS 1 BIT	ED .
3843					*NOW *THE *COMP	THAT SAVERE TABL EXPECTED VALUE A ARISONS ARE MADE	E WITH SAVED F FTER A READ-IN	REGISTERS HAV	Æ
3845	017164	004037	042354		JSR	RD. 3#COMREG	COMPARE SAY	ED REGISTERS	HTIW
3950	017170 017172 017174 017176 017200	004612 002354 000022 017202 017206			SAVERE WC 18. 5% 6%		GOOD DATA S TEST DATA S 18. REGISTE RETURN TO S	VED REGISTERS LUE SAVED IN 'SAV STARTING FROM ERS TO BE COM SON ERROR SON OF ERROR	ERE' ! 'RHWC' !PARED
3377-1437-547-89-0-10-37-55-55-55-55-55-55-55-55-55-55-55-55-55	017202 017204	104020		51	ERROR RTS	20 PC	:READ-IN COM	MAND GAVE AND STER AFTER A MAND ATA HAS WHAT	

E12 MACY11 27(655) 30-MAR-76 22:59 PAGE 86 MAINDEC-11-DZRJI-A, RPC4-5-6 FUNCT, CONT. TST-PT 1 DZRJIA.P11 TZI READ-IN-PRESET SEG 0146 THE REGISTER ACTUALLY CONTAINE
THE FOLLOWING SHOULD
BE THE REGISTER CONTENTS
RHCA = 0, RHDST = 0
RHOF SHOULD HAVE FMT22 = 0,
HCI = 0, ECI = 0,
RHDS1 SHOULD HAVE VV = 1
ALL OTHER BITS SHOULD
BE UNCHANGED 017206 61:

MAINDEC DZRJIA.	MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 87 DZRJIA.P11 T21 READ-IN-PRESET													
3871 3872 3873 3874 3875 3875	017206 017212 017214 017216 017222	005737 001401 000402 000137	004744		?\$: 9\$:	******** TST BEQ BR JMP	*********** 3*RPO6 7\$ 9\$ 9\$ 3*DOG	:TEST FOR RPO6 DRIVE :IF = 0. TREAT DRIVE AS AN RPO4 :TREAT AS RPO6 - DO NEXT "MAKECL" :DO SECOND FOLLOWING "MAKECL"						
77777547890123454789012345478 777777777898888888899999999999999999	017222 017224 017230	000004	001000		;;***** ;*TEST ;*TEST †\$T22:	******* 22 ******* SCOPE MOV	MAKE CURRENT CY	**************************************						
3898 3899 3891 3892 3892 3893	387 017230 012737 000 388 389 017236 004737 041 390 017242 012777 000 391 017250 004037 041		000022 041366 000001 041036	163050		JSR MOV JSR	#23-1, å#TSTNM PC, a#CLDISK #DMD, aRHMR RD, a#MAKECYL	:INIT DRIVE :SET DIAGNOSTIC MODE :SUBROUTINE TO GIVE A SEEK :COMMAND FOLLOWED BY A INIT :THIS SHOULD CHANGE RHCC TO 777						
3894 3895 3896 3897 3898	017254	000777	017316			777 JMP	a#FISH	;DON'T DO NEXT "MAKECL"						
3899 3900 3901 3902 3903	017262				DOG:	******	MAKE CURRENT CYL	: ************************************						
3904 3905 3906 3907 3908	017262 017264 017270	000004 012706 012737	001000	004604	†\$723:*	SCOPE MOV MOV	#STACK.SP #24-1, 2#TSTNM	RESET STACK THIS SAVES TEST NUMBER						
3606	017276 017302 017310	004737 012777 004037	041036 000001 041366	163010		JSR MOV JSR	PC. D#CLDISK #DMD, DRHMR RD, D#MAKECYL	INIT DRIVE SET DIAGNOSTIC MODE SUBROUTINE TO GIVE A SEEK COMMAND FOLLOWED BY A INIT THIS SHOULD CHANGE RHCC TO 377						
00000000000000000000000000000000000000	017314	000377		:		377		; THIS SHOULD CHANGE RHCC TO 377						

SE0 0147

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MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T23 MAKE CURRENT CYLINDER = 377

3916								
3918 3920 3921	017315				FISH:	24	RECALIBRATE CO	**************************************
3923					:*	ALL POS	SIBLE REGISTERS RECALIBRATE = 6	ARE FILLED WITH ONES COMMAND IS GIVEN
3925					;*	NO REGI	ISTERS SHOULD CHE	ANGE EXCEPT RHCC = 0
3928	017316	000004			†\$****** †\$****	******	**********	*********
3929 3930 3931 3932	017316 017320 017324	000004 012706 012737	001000	004604	15124:	SCOPE MOV MOV	#STACK.SP #24, D#TSTNM	RESET STACK SAVE TEST NUMBER
3935 3935 3935 3935 3937 3939 3939 3939	017332	004737	041366			JSR	PC, @#CLDISK	SET RI-RHCSI, R2-RHCS2 R3-RHDSI, R4-RHERI GIVE RH-11 INITIALIZE
3935	017336	004737	041446			JSR	PC, G#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
3938	017342	104400	066402			TYPE	.CPHALT	SETUP UNIT NUMBER CHECK DVA, RDY, MOL. DPR. DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1
3942	017346 017350 017354	000000 012700 012730	002272			HALT MOV MOV	#RHWC.RD #177777,a(RD)+	STOP ADDR. OF ADDR. OF RHWC IN RO LOAD 177777 INTO RHWC
3945 3946	017360	012730	177776			MOV	#177776, 2(RO)+	;LOAD 177776 INTO RHBA
3947 3948	017364 017370	052730 012730	000010			BIS	#010,3(R0)+ #1400,3(R0)+	:LOAD 010 INTO RHCS2 :LOAD 1400 INTO RHCS1
3950	017374	012730	000000			MOV	#0,0(R0)+	; LOAD C INTO RHER1
3952	017400	012730	177777			MOV	#177777.a(RO)+	;LOAD 177777 INTO RHDST
3954	017404	012730	000000			MOV	#0,0(R0)+	; LOAD O INTO RHER2
3956	017410	012730	177777			MOV	#177777, a(RO)+	;LOAD 177777 INTO RHOF
3958	017414	012730	177777			MOV	#177777, a(RO)+	;LOAD 177777 INTO RHCA
3960	017420	012730	000000			MOV	#0,3(R0)+	; LOAD O INTO RHER3
3962						; *NOW S	ET BITS IN RHAS	FOR ALL DRIVES PRESENT
7-89-01-123+5-67-89-01-123-5-67-89-0	017424 017426 017430	010046 011446 011246				MOV MOV MOV	RO,-(SP) 2R4,-(SP) 2R2,-(SP)	::PUSH RO ON STACK :SAVE RHER! TO REINSTATE LATER :SAVE RHCS2 TO BE REINSTATED :AFTER ALL ATA BITS HAVE BEEN SET :GET DRIVES PRESENT :CLEAR RHCS2 AND CARRY
3968	017432 017436	013700 005012	004742			MOV	a#TOTALAT,RD	GET DRIVES PRESENT CLEAR RHCS2 AND CARRY

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO T24	14/5/6 FU RECALIE	UNCT. CON	IT. TST-I	PT 1	H12	30-MAR-76 22:59 PAGE 89		SEQ 0149
3970 3971 3972 3973	017440 017444 017446 017450	012705 006000 103002 012714	000010 177777		84\$:	MOV ROR BCC MOV	#8.,R5 R0 85\$ #-1,3R4	COUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT		
397-2345-67-89-12-345-67-89-99-12-345-67-89-99-99-99-99-99-99-99-99-99-99-99-99-	017454 017456 017460 017462 017464 017466 017470	005212 005305 001371 012612 012614 012500 005720			95\$:	INC DEC BNE MOV MOV TST	3R2 R5 84\$ (SP)+, 3R2 (SP)+, 3R4 (SP)+, RO (RO)+	TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT COUNT BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHER1 POP STACK INTO RO GET OVER PHAS IN RO		
3983 3984 3985	017472	012730	177776			MOV	#177776,@(RO)+	;LOAD 177776 INTO RHMR		
3985 3987 3988 3989	017476,	013777	002456	162574		VOM	3#RECALI, 2RHCS1	GET READY FOR RECALI RECALIBRATE WITH 6 IN RHCS1		
3990 3991 3992						;*NOW S		R COMPARISON AFTER RECALIBRATE	`	
3995 3995 3995 3996 3997 3999 4000	017504 017510 017512	004037 002272 004612	041534			JSR RHWC SAVERE	RO, 2#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18. SET RPO4 VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME!' IF P-CLOCK IS PRESENT		
3997	017514	000055				18.		NUMBER OF REGISTERS		
	017516	013777	004606	162542		MOV	a#RP4VEC, GRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS		
4006 4007	017524 017530	013746 052716	000101			MOV BIS	#RECALI(SP)	GET READY TO MOVE COMMAND		
4009 4010	017534	012677	162540			VCM	(SP)+, @RHCS1	GO WITH 6 IN RHCS1 FOR RECALIBRATE		
4013 4013	017540 017542	011100 011305				MOV MOV	2R1,R0 2R3,R5	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 6 IN RHCS1 FOR RECALIBRATE WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION		
	017544 017546 017550 017552 017554	104412 002322 000200 076377 056701				WAT RHDS1 DRY 31999. 24001.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 319990 MICRO SECONDS DRY MUST SET BETWEEN 79980 AND 560000 MICRO SECONDS		
4022						*COMPA		AFTER GO		

MAINDEO DZRJIA.	-11-DZRJ P11	I-A. RPC T24	04/5/6 FL RECALIE	UNCT. CON	IT. TST-	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 90	SEG 0150
######################################	017556 017566 017566 017572 017574 017600 017616 017616 017622 017622 017626	013746 052716 005737 001413 010037 042737 042716 053716 052716	002426 004301 004722 004760 177677 000100 004760 100000	004760	002.	MOV BIST BEQV MOCC BIS BIS	a#RECALI(SP) #DVA!GO!IE!RDY, a#NUNIT 89\$ RO.a#TMP4 #!CIE.a#TMP4 #IE.(SP) a#TMP4.(SP) #SC,(SP)	BRANCH IF ONLY ONE UNIT GET RHCS1 KEEP IE BIT CLEAR IE IN GOOD DATA GET IE AS IS SET SC IN RHCS1	
4035 4036	017622	011637 022600	001124		895:	MOV	(SP), J#SGDDAT (SP)+,RO	SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY	
4038 4039 4040 4041	017630 017632 017636 017642	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	88\$ RO.2#\$BDDAT R1,2#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY	
4043 4044 4045	017644 017650 017654	012746 011637 022605	030500 001124		89\$:	MOV MOV CMP	#MOL!DPR!VV!PIP (SP).@#\$GDDAT (SP)+,R5	; CONTAIN AND THE SET DURING OPERATION IN RHDS1 ; SAVE FOR PRINTOUT ; DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP	
4048 4049 4050	017656 017660 017664 017670	001405 010537 010337 104063	004600			BEQ MOV MOV ERROR	90\$ R5, D#\$BDDAT R3, D#REGADR 63	SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND DVA!GG!IE!RDY SHOULD BE SET -(SP) :SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP SHOULD BE SET	
4052 4053	017672				90\$:	.×NOU C	HONCE SOVED PECT	STERS TO EXPECTED VALUES	
4055 4056	017672	004037	041270			JSR	RO, D#FILLRE		粉
4057 4058	017676	004037 002334 000000 004037				RHCC		:MOV D INTO SAVED RHCC :SAVED REGISTER TO CHANGE :DATA	B
4059 4060 4061	017672 017676 017700 017702 017706 017710	004037 002310 116377	041270			JSR RHOF 116377	RO, D#FILLRE	MOV 116377 INTO SAVED RHOF SAVED REGISTER TO CHANGE	
4063	017712	053737	004740	004636		BIS	D#ATTENT, D#SAVE	RE+24 ;SET APPROPRIATE 'ATA' BITS :FOR WORKING DRIVE IN	
4065 4066 4067	017720 017724 017725	004037 002300 104206 004037	041270			JSR - RHCS1 104206	RO, 0#FILLRE	RE+24 ;SET APPROPRIATE 'ATA' BITS :FOR WORKING DRIVE IN :SAVED RHAS LOACTION :MOV 104206 INTO SAVED RHCS1 :SAVED REGISTER TO CHANGE :DATA :MOV 110700 INTO SAVED RHOS1	
40559 40559 40559 40553 40554 40557 40557 4077 4077 4075 4075	017720 017724 017726 017730 017734 017736	004037 002322 110700	041270			JSR RHDS1 110700	RO, 0#FILLRE	MOV 110700 INTO SAVED RHDS1 SAVED REGISTER TO CHANGE DATA	
4073 4074 4075						:*NOW C	OMPARE REGISTERS	AFTER A RECALIBRATE COMMAND	
4076	017740	004037	942354			JSR	RD, 0#COMREG	;COMPARE SAVED REGISTERS WITH	

MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO4/5/6 FUNCT. T24 RECALIBRATE	CONT. TST-P	T 1	J12 MACY11 27(655)	30-MAR-76	22:59 PAGE 91
4078 4079 4080 4081 4082 4083	017744 017746 017750 017752 017754	004612 002354 000022 017756 017762		SAVERE NC 18. 15		PRESENT VI GOOD DATA TEST DATA 18. REGIS RETURN TO RETURN TO	SAVED IN 'SAVERE' STARTING FROM 'RHWC' TERS TO BE COMPARED 1% ON ERROR
40993 40993 40993 40993 40999 40999 40999 40999	017756 017760	104064 000207	1\$:	ERROR RTS	PC PC	GOOD DATA	TE COMMAND CAUSED GIVES WHAT SHOULD DATA GIVES WHAT WAS ER COMMAND
4092	017762		2\$:				

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1009967899011000558990 10099999011000558990 11099999999999999999999999999999999	017762 017766 017770 017772	005737 001401 000402 000137	004744		;;**** 3\$:	TST BEQ BR JMP	**************************************	;TEST FOR RPO6 DRIVE ;IF = 0. TREAT DRIVE AS AN RPO4 ;TREAT AS RPO6 - DO NEXT "MAKECL" ;DO SECOND FOLLOWING "MAKECL"
4099	017776	000101	323033		45:		******	, DO SECOND POLEONING THREES.
4102 4103					,,,,,,,,,			
4105					*TEST	25	MAKE CURRENT CY	LINDER = 777
4107	017776	000004			†\$Ť25:	SCOPE	*******	·*************************************
4109 4109	020000	012706	001000	004504		MOV	#STACK, SP #26-1, 0#TSTNM	RESET STACK THIS SAVES TEST NUMBER
4111	020012 020016 020024	004737 012777 004037	091366 000001 041036	162274		JSR MOV JSR	PC. a*CLDISK *DMD, aRHMR RO, a*MAKECYL	INIT DRIVE SET DIAGNOSTIC MODE SUBROUTINE TO GIVE A SEEK COMMAND FOLLOWED BY A INIT THIS SHOULD CHANGE RHCC TO 777
4116	050030	000777				777		; Inis should change kacc to 777
4118	050035	000137	020072			JMP	a#BIRD	; DON'T DO NEXT "MAKECL"
4115 4115 4117 4110 4110 4110 4110 4110 4110 4110	020036				CAT:			
4123					: ***** : *TEST	******* 26 *******	**************************************	**************************************
4126	020036	000004 012706	001000		†\$T26:	SCOPE	#STACK.SP	:RESET STACK
4129	020044	012737	000026	004604		MOV	#STACK, SP #27-1, D#TSTNM	RESET STACK THIS SAVES TEST NUMBER
4130 4131 4132 4133 4134 4135 4136	020052 020056 020064	004737 012777 004037	041366 000001 041036	162234		JSR MOV JSR	PC. D#CLDISK #DMD, DRHMR RD, D#MAKECYL	INIT DRIVE SET DIAGNOSTIC MODE SUBROUTINE TO GIVE A SEEK COMMAND FOLLOWED BY A INIT THIS SHOULD CHANGE RHCC TO 377
4134 4135 4136	020070	000377				377		THIS SHOULD CHANGE RHCC TO 377

7890-1231547890-123155555566665678901	020072				BIRD: ::***** :*TEST	27	**************************************	
4144					;* ;*	ALL POS	SIBLE REGISTERS RECALIBRATE =6 C	ARE FILLED WITH DOMMAND IS GIVEN
4147					;*	NO REGI	STERS SHOULD CHA	NGE EXCEPT RHCC=0
4150 4150 4152	020072 020074 020100	000004 012706 012737	001000 000027	004604	†\$†27:	SCOPE MOV MOV	************** #STACK.SP #27,@#TSTNM	**************************************
4154 4155 4156 4157	90106	004737	041366			JSR	PC, @#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE :SETUP UNIT NUMBER ;CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 ;AND THAT NO STATUS BITS ARE STUCK = 1 ;CANNOT CONTINUE TESTING IF ANY OF ;THE FIRST SET OF BITS DON'T = 1
4158	020112	004737	041446			JSR	PC, @#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1
4160	020116	104400	056402			TYPE	, CPHALT	CANNOT CONTINUE TESTING IF ANY OF
4162	020122 020124	000000 012700	002272			HALT MOV	#RHWC,RD	STOP ADDR. OF ADDR OF RHWC IN RO
4165	050130	012730	000000			MOV	#0, a(R0)+	;LOAD D INTO RHWC
4167	020134	012730	000000			VCM	#0,3(R0)+	;LOAD O INTO RHBA
4169 4170	020140 020144	052730 012730	000000			BIS	#0, a(R0)+ #0, a(R0)+	:LOAD 0 INTO RHCS2 :LOAD 0 INTO RHCS1
4172	020150	012730	000000			MOV	#0, a(R0)+	;LOAD 0 INTO RHER1
4174	020154	012730	000000			MOV	#0, a(R0)+	;LOAD D INTO RHDST
4176	050160	012730	000000			MOV	#0,a(R0)+	;LOAD D INTO RHER2
4178	020164	012730	000000			MOV	#0,3(R0)+	;LOAD D INTO RHOF
4180	020170	012730	000000			MOV	#0,0(R0)+	;LOAD D INTO RHCA
4182	020174	012730	000000			MOV	#0, a(R0)+	;LOAD D INTO RHER3
4184 4185	020200 020204	012730 012730	177777 000000			MOV MOV	#-1,3(RO)+ #0,3(RO)+	CLEAR ALL BITS OF RHAS
4176 4177 4178 4189 4181 4183 4185 4185 4186 4189 4190	020210	013777	002426	162062		MOV	a#RECALI, aRHCS1	GET READY FOR RECALI RECALIBRATE WITH 6 IN RHCS1

-									
	4191						;*NOW S		R COMPARISON AFTER RECALIBRATE
	4193 4194 4195	020216 020222 020224	004037 002272 004612	041534	*		JSR RHWC SAVERE	RO, 0#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE
	4197	050556	000055				18.		NUMBER OF REGISTERS
	11199555599901234 1119955599901234 11199555599901234 11199555599901234	020230	013777	004606	162030		MOV	a#RP4VEC, aRPVEC	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18. SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
	4206 4207 4207	020236 020242	013746 052716	000101			MOV BIS	#GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT
	4209	020246	012677	162026			MOV	(SP)+, @RHCS1	•14H MITM
	4212	020252	011100 011305				MOV MOV	aR1,R0 aR3,R5	6 IN RHCS1 FOR RECALIBRATE WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
	4215 4216 4217 4219 42201 4201 4	020256 020262 020264 020264 020266	104412 002322 000200 076377 056701				WAT RHDS1 DRY 31999. 24001.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 319990 MICRO SECONDS DRY MUST SET BETWEEN 79980 AND 560000 MICRO SECONDS
	4222						;*COMPAI ;*RO ANI	RE CONTENTS OF RH D RS IMMEDIATELY	ACS1 AND RHDS1 ALREADY SAVED IN AFTER GO
	4226	020270 020274 020300 020304	013746 052716 011637 022600	002426 004301 001124			MOV BIS MOV CMP	#DVA!GO!IE!RDY.(:SAVE COMMAND (SP) :INCLUDE DVA!GO!IE!RDY :SAVE FOR PRINTOUT :DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY
	4230 4231 4232 4233	020306 020310 020314 020320	001405 010037 010137 104021	001126 004600			BEQ MOV MOV ERROR	88\$ RO, D#\$BDDAT R1, D#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY
	4235 4236 4237	020332 020326 020322	012746 011637 022605	030500 001124		88\$:	MOV MOV CMP	#MOL!DPR!VV!PIP, (SP), 3#\$GDDAT (SP)+,R5	-(SP) :SAVE BITS SET DURING OPERATION IN RHDS1 :SAVE FOR PRINTOUT :DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP
	7899010334556789010344444444444444444444444444444444444	020334 020336 020342 020346	001405 010537 010337 104063	004600			BEQ MOV MOV ERROR	90\$ R5, 0#\$BDDAT R3, 0#REGADR 63	SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND DVA!GO!IE!RDY SHOULD BE SET (SP) :SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV!PIP SHOULD BE SET
	4244	020350				90\$:			, NOC. DEN. TT. PINOUED BE SET

MAINDEC	-11-DZRJ	I-A. RPO	14/5/6 FU	INCT. CONT	r. TST-F	PT 1	MACY11 27(655)	30-MAR-7	6 22:59	PAGE 95	
DZRJIA.	PII	T27	RECALIB	RATE COMP	IAND		MACY11 27(655)				
4245						;*NOW (CHANGE SAVED REGI	STERS TO	EXPECTED	VALUES	
4247 4248 4249	020350 020354 020356	004037 002334 000000	041270			JSR RHCC 0	RO, D#FILLRE	; MOV D I ; SAVED R ; DATA	NTO SAVED EGISTER T	RHCC O CHANGE	
4251 4252 4253	020360	053737	004740	004636		BIS	D#ATTENT, D#SAVE	RE+24	;SET APPR ;FOR WORK ;SAVED RH	OPRIATE 'ATA' ING DRIVE IN AS LOACTION	BITS
4255 4256 4256	020366 020372	004037 002322	042246			JSR RHDS1	RD, @#CHREG	CHANGE; CHANGE	BITS IN S RHDS1 REG	AVED REGISTER	
######################################	020374 020376 020400	000001 000001 100000				1 ATA		:1 BIT/B :NEW VAL :CHANGE	ITS TO BE UE OF ATA ATA BIT	CHANGED IS 1	
4563	020402	004037 002300	042246			JSR RHCS1	RO, @#CHREG	; CHANGE ; CHANGE	BITS IN S RHCS1 REG	AVED REGISTER	
4265 4266 4267	020410 020412 020414	000001 000001 100000				1 SC		;1 BIT/B ;NEW VAL ;CHANGE	ITS TO BE UE OF SC SC BIT	CHANGED IS 1	
4269 4270						;*NOW C	OMPARE REGISTERS	AFTER A	RECALIBRA	TE COMMAND	
4272	020416	004037	042354			JSR	RO, 0#COMREG	COMPARE	SAVED RE	GISTERS WITH	
4274 4275 4276 4277 4278	020422 020424 020426 020430 020432	004612 002354 000022 020434 020440				SAVERE WC 18. 18.		GOOD DA	TA SAVED TA STARTII	IN 'SAVERE' NG FROM 'RHWC BE COMPARED ERROR NO ERROR	•
4276 4277 4279 4289 4281 4282 4283 4285 4285	020434	104064 000207			1\$:	ERROR RTS	PC PC	GOOD DA	TA GIVES I	AND CAUSED WHAT SHOULD BE	Ε
4284 4285 4286	020440				2\$:			RECEIVE	DATA GIV	VES WHAT WAS	

MAINDEC-11-DZRJI-A, RPD4/5 6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 96 DZRJIA.P11 T30 UNLOAD COMMAND

: *TEST 30 UNLOAD COMMAND IF STARTING ADDRESS 220 IS USED THIS TEST WILL NOT BE PERFORMED IF THE PROGRAM WORKS UNDER ACT-11 MONITOR THEN THIS TEST IS NOT PERFORMED IF NO ACT-11 MONITOR IS PRESENT THEN THIS TEST IS PERFORMED ONLY ON THE FIRST PASS ON SUBSEQUENT PASSES THIS TEST IS NOT DONE ALL POSSIBLE REGISTERS ARE FILLED WITH ONES
THEN AN UNLOAD COMMAND =2 IS GIVEN
NO REGISTERS SHOULD CHANGE EXCEPT MOL SHOULD=0
THEN THE DRIVE IS POWERED UP BY OPERATOR
AND A PACK ACKNOWLEDGE COMMAND (ALREADY TESTED)
SETS VV-IN RHDS1 TST30: SCOPE :*THIS CODE CHECKS TO SEE IF MANUAL INTERVENTION TESTS ARE OK SKIP THIS TEST IF SO MONITOR (ACT 11) RETURN ADDRESS ? 020442 020446 020450 020454 020456 005737 001007 005737 001004 005737 001001 004724 **D#NOPUSH** BNE 15 000042 BNE 15 2#SPASS 001100 15 SKIP THIS TEST IF NOT 020464 000402 CONTINUE WITH THIS TEST 020466 020466 020472 020472 020476 15: TST31 : 000137 021754 JMP JUMP TO NEXT TEST -----) 25: #STACK.SP #30, 2#TSTNM : RESET STACK : SAVE TEST NUMBER 012706 VOM 004604 MOV SET R1-RHCS1, R2-RHCS2
R3-RHDS1, R4-RHER1
GIVE RH-11 INITIALIZE
SETUP UNIT NUMBER
CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
AND THAT NO STATUS BITS ARE STUCK = 1
CANNOT CONTINUE TESTING IF ANY OF
THE FIRST SET OF BITS DON'T = 1
STOP 004737 JSR PC. D*CLDISK 020510 JSR PC. D*CHECKT 004737 041446 . CPHALT 020514 104400 TYPE 066402 000000 HALT :*THIS SETTING OF VV IS FOR LOOP ON ERROR ONLY :*WHERE UNLOAD TAKES EFFECT AND CYCLE UP BRINGS VV DOWN 020522 017746 161574 MOV DRHDS1.-(SP) : PUSH RHDS1 ONTO STACK

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO T30	4/5/6 FUNCT. CON UNLOAD COMMAND	T. TST-F	77 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 97
+11+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+	020526 020532 020536 020540 020544	042716 022726 001504 104400 000427	167677 010100 020546	::65\$:	BIC CMP BEG TYPE BR .ASCIZ	#167677.(SP) #VV!MOL,(SP)+ 65 65\$ 64\$ (15)(12)/GET DR	CLEAR EVERYTHING EXCEPT VV AND MOL ARE VV AND MOL SET? CONTINUE IF YES TYPE ASCIZ STRING GET OVER THE ASCIZ RIVE HEADS LOADED THEN HIT "CONTINUE"/
4347 4348 4349 4350	020524 020530 020630	104400	020632	;;67\$: 56\$:	TYPE BR .ASCIZ		::TYPE ASCIZ STRING ::GET OVER THE ASCIZ READY LOADED THEN HIT "CONTINUE"/
4352 4353	020702	200000		553:	HALT		; WAIT FOR CONTINUE
4355 4355 4356 4357	020704	004737	041366		JSR	PC, 3*CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CHECK THAT DVA, RDY, MOL, DPR, DRY = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTS IF THEY AREN'T
4359	020710	004737	041424		JSR	PC. D#CHECK	CHECK THAT DVA, RDY, MOL, DPR, DRY = 1
4361 4362 4362	020714 020726	104400	204990		TYPE HALT	,CPHALT	CANNOT CONTINUE TESTS IF THEY AREN'T
4364					;*SET V	V IN RHDS1 WITH	PACK ACKNOWLEDGE
4367 4368 4368	020722 020726	013746 052716	000001		MOV BIS	a*PKACK,-(SP)	GET READY TO MOVE COMMAND
4370 4371 4372 4373 4374	020732	012677	161342		MOV	(SP)+, QRHCS1	GET READY TO MOVE COMMAND GET READY TO SET GO WITHOUT INTERRUPT ENABLE GO WITH :22 IN RHCS1 FOR PACK ACKNOWLEDGE WITH INTERRUPT DISABLED
7-103+547890-103+547890-100+ 77-77-77-77-7888888889999999 39999999999999999999999	020736 020740 020742 020744 020746	104412 002322 000100 000001 000001			WAT RHDS1 VV 1. 1.		WAIT FOR VV BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN DO AND 20 MICRO SECONDS
1383 1384 1385 1386 1388 1388 1388	020750 020750 020754 020756 020760	004737 000240 000240 000240	C4144E	63:	JSR NOP NOP NOP	PC, B#CHECKT	CHECK DVA.RDY.MOL.DPR & VV = 1 CHECK THAT ALL OTHER BITS = 0 UNLIKE THE OTHER STATUS BIT TESTS. THERE IS NO HALT IF IT FAILS - IT IS USED IN THE MIDDLE OF A SINGLE TEST
4390 4391	020762	012700	002272		MOV	*RHWC,RD	; ADDR. OF ADDR OF RHMC IN RO
4392 4393 4394					;*LOAD	ALL POSSIBLE REG	ISTERS WITH ONES

SEG 0157

						D13	
MAINDEC DZRJIA.	PII-DZRJ	T30 RP0	UNLOAD COMMAND	it. TST-	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 98
4395 4396	020766	012730	177777		MOV	#177777, a(RO)+	;LOAD 177777 INTO RHWC
99999999999999999999999999999999999999	020772	012730	177777		MOV	#177777.3(RO)+	;LOAD 177777 INTO RHBA
4402 4403 4404	020776	052730	000010		BIS	#10,2(R0)+	;LOAD 10 INTO RHCS2
4405 4406 4407	051005	012730	001400		MOV	#1400,3(R0)+	;LOAD 1400 INTO RHCS1
4409 4410 4411	021006	012730	000000		MOV	#0,3(R0)+	;LOAD D INTO RHER1
744444	021012	012730	177777		MOV	#177777, @(RO)+	:LOAD 177777 INTO RHDST
4417 4418 4419 4420	91016	012730	000000		MOV	#0,3(R0)+	:LOAD O INTO RHER2
######################################	021022	012730	177777		MOV	#177777,@(RO)+	;LOAD 177777 INTO RHOF
4425 4426 4427 4428	021026	012730	177777		MOV	#177777, @(RO)+	:LOAD 177777 INTO RHCA
4429 4430 4431 4432	021032	012730	000000		MOV	#D,3(RD)+	;LOAD O INTO RHER3
4434					; *NOW S	SET BITS IN RHAS	FOR ALL DRIVES PRESENT
4436 4437 4438	021035 021036	010046 011446 011245			MOV MOV	RO(SP) 2R4,-(SP) 2R2,-(SP)	: PUSH RO ON STACK : SAVE RHER1 TO REINSTATE LATER : SAVE RHCS2 TO BE REINSTATED
######################################	021044 021050 021052 021056 021060 021062	013700 005012 012705 006000 103002 012714	004742 000010 177777	915:	MOV CLR MOV ROR BCC MOV	3#TOTALAT.RG 3R2 #8R5 RO 92\$ #-1,3R4	:PUSH RO ON STACK SAVE RHER1 TO REINSTATE LATER SAVE RHCS2 TO BE REINSTATED AFTER ALL ATA BITS HAVE BEEN SET GET DRIVES PRESENT CLEAR RHCS2 AND CARRY COUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT
4445	021066	005212		925:	INC	are R5	:TO SET ATA BIT :INCREMENT RHCS2 TO NEXT UNIT :COUNT

SEQ 0158

MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO T30	4/5/6 FU UNLOAD	NCT. CONT.	TST-PT 1	E13	30-MAR-76 22:59 PAGE 99
4449 4450 4451 4452 4453	021072 021074 021076 021100 021102	001371 012612 012614 012600 005720			BNE MOV MOV TST	91\$ (SP)+, aR2 (SP)+, aR4 (SP)+, R0 (R0)+	BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHER1 : POP STACK INTO RO GET OVER PHAS IN RO
	021104	012730	177776		MOV	#177775, a(RO)+	;LOAD 177776 INTO RHMR
1460	021110	013777	002424	161162	MOV	a#UNLOAD, aRHCS1	GET READY FOR UNLOAD UNLOAD WITH 2 IN RHCS1
4465					:*NOW S	SAVE REGISTERS FO	R COMPARISON AFTER UNLOAD
4467 4469 4469	021116	004037 002272 004612	041534		JSR RHMC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
4472	021126	000021			17.		NUMBER OF REGISTERS ;SAVED = 17.
4476 4477 4478 4479	021130	013777	004606	161130	MOV	a⊭RP4VEC, aRPVEC	SET RPD4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
4483	021136 241130	013746 052716	000001		MOV BIS	a#UNLOAD,-(SP) #GO,(SP)	GET READY TO MOVE COMMAND GET READY TO SET GO
1185 1186 1187	021146	012677	161126		MOV	(SP)+, DRHCS1	WITHOUT INTERRUPT ENABLE GO WITH 2 IN RHCS: FOR UNLOAD WITH INTERRUPT DISABLED
4489	021152 021154	011100			MOV MOV	aR1.R0 aR3,R5	SAVE RHCS1 DURING ABOVE OPERATION
	021156 021160 021162 021164 021166	104412 002300 002000 1000001			WAT RHCS1 RDY 1.		WAIT FOR BIT TO SET IN RHCS1 REGISTER 'RDY' BIT ALLOW 10 MICRO SECONDS ANOTHER 10 - 'RDY' MUST SET BETWEEN 100 AND 20 MICRO SECONDS

SEG 0159

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 100 DZRJIA.P11 T30 UNLOAD COMMAND

4499 4499 4500						:*COMPA :*DURIN	RE CONTENTS OF RE	HCS1 AND RHDS1, WHICH WERE SAVED MAND, WITH THE EXPECTED RESULTS
4503 4503 4504 4505	021170 021174 021200 021204	013746 052716 005737 001413 010037 042737 042716 053716	002424 004201 004722			MOSS TEDV BEST BEST BEST BEST BEST BEST BEST BEST	46	; PUSH COMMAND ON STACK) : INCLUDE THESE BITS SET ; IS THERE MORE THAN ONE UNIT ? ; SKIP NEXT IF ONLY ONE UNIT
#509 #509 #509	021200 021204 021206 021212 021220 021224 021230	042737 042715 053716 052716	004760 177677 000100 004760 100000	004760		BIC	#50, (5P)	SKIP NEXT IF ONLY ONE UNIT PUT SAVED RHCS1 INTO TMP4 MASK ALL BUT THE 'IE' BIT IN RHCS1 CLEAR 'IE' IN EXPECTED DATA SET 'IE' STATE FROM ACTUAL RHCS1 DATA SET 'SC' IN RHCS1 SAVED DATA
4512	021234	011637 022600	001124		95:	MOV	(SP)+,RO	SAVE EXPECTED DATA FOR PRINTOUT COMPARE EXPECTED DATA WITH SAVED
	021242 021244 021250 021254	001405 010037 010137 104021	004600			BEG MOV MOV ERROR		SAVE EXPECTED DATA FOR PRINTOUT COMPARE EXPECTED DATA WITH SAVED RHCS1 DATA AND RESET THE STACK CHECK NEXT BITS IF THESE OK RHCS1 IS BAD - PRINT IT OUT REGISTER ADDRESS DURING ABOVE OPERATION ONLY THE 'DVA'. 'GO'. 'RDY' AND COMMAND BITS SHOULD BE SET
4523 4523 4525 4525 4525	021256 021262 021266 021274 021300	012746 010537 042737 042716 053716	020400 004760 167677 010100 004760	004760	105:	MOV BIC BIS	#PIP!DPR(SP) R5.a#TMP4 #!C <mol!vv, #mol!vv.(sp)="" 2#tm="" a#tmp4,(sp)<="" td=""><td>:PUT SOME EXPECTED RHDS1 BITS ON STACK :PUT SAVED RHDS1 INTO TMP4 !P4 :MASK ALL BUT 'MOL' & 'VV' IN RHDS1 :CLEAR 'MOL' & 'VV' IN EXPECTED RHDS1 :SET EXPECTED 'MOL' & 'VV' BIT STATES :FROM THE ACTUAL DATA (DON'T CARE) :SAVE EXPECTED DATA FOR PRINTOUT :COMPARE EXPECTED DATA WITH SAVED :RHDS1 DATA AND RESET THE STACK :CONTINUE IF EXPECTED=SAVED :RHDS1 IS BAD - PRINT IT OUT :REGISTER ADDRESS :DURING THE ABOVE OPERATION, ONLY 'PIP</td></mol!vv,>	:PUT SOME EXPECTED RHDS1 BITS ON STACK :PUT SAVED RHDS1 INTO TMP4 !P4 :MASK ALL BUT 'MOL' & 'VV' IN RHDS1 :CLEAR 'MOL' & 'VV' IN EXPECTED RHDS1 :SET EXPECTED 'MOL' & 'VV' BIT STATES :FROM THE ACTUAL DATA (DON'T CARE) :SAVE EXPECTED DATA FOR PRINTOUT :COMPARE EXPECTED DATA WITH SAVED :RHDS1 DATA AND RESET THE STACK :CONTINUE IF EXPECTED=SAVED :RHDS1 IS BAD - PRINT IT OUT :REGISTER ADDRESS :DURING THE ABOVE OPERATION, ONLY 'PIP
4528 4529	021304 021310	011637 022605	001124			MOV CMP	(SP), 2#\$GDDAT (SP)+,R5	SAVE EXPECTED DATA FOR PRINTOUT
4533 4533 4533 4533 4535	021312 021320 021324	001405 010537 010337 104063	001126			BEG MOV MOV ERROR	115 R5, 0#SBDDAT R3, 0#REGADR 63	CONTINUE IF EXPECTED=SAVED RHDS1 IS SAD - PRINT IT OUT REGISTER ADDRESS DURING THE ABOVE OPERATION, ONLY 'PIP AND 'DPR' SHOULD BE SET 'MOL' & 'VV' ARE DON'T CARES
4536 4537 4539	021326				113:			; 'MOL' & 'VV' ARE DON'T CARES
4539 4540	051335	104400	021334		O.C. # .	TYPE BR	96\$ 95\$::TYPE ASCIZ STRING ::GET OVER THE ASCIZ
45557890 4555334 455534 45554 45554 45554 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564 4564	021406				95\$:	.ASCIZ		CBY NOT LIT - ERROR AFTER UNLOAD/ ;THIS PROVIDES A 1 SECOND "STALL"

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4552 4553 4554 4555 4555 4557	021406 021420 021426 021432	012746 017737 042737 042716 053716	020400 160704 167677 010100 004760	004760 004760		MOV MOV BIC BIC BIC	#PIP!DPR,-(SP) aRHDS1,a#TMP4 #†C(MOL!VV),a#T #MOL!VV,(SP) a#TMP4,(SP)	SET EXPE	ECTED FINAL RHDS1 BITS SENT ACTUAL RHDS1 CONTENTS OUT ALL BUT 'MOL' & 'V' MOL' & 'V' IN EXPECTED RHDS1 ECTED 'MOL' & 'V' STATES	
4559 4560 4561 4562	021436	042716 012637	00200			BIC	#ATA!DRY.(SP) (SP)+,3#SAVERE+	CLEAR THE	E ACTUAL (DON'T CARE COND.) HESE ADDITIONAL RHDS1 BITS E THE SAVED RHDS1 REGISTER UST THE STACK	
4564 4565	021446	004037 002300	042246	-		JSR RHCS1	RO, 0#CHREG	CHANGE E	BITS IN SAVED REGISTER RHCS1 REGISTER	
4567 4569 4569	021454 021456 021460	000001 000001 000001				i GC		:1 BIT/BI :NEW VALU :CHANGE (ITS TO BE CHANGED UE OF GO IS 1 GO BIT	
4571 4572	021462 021466	005737 001006	004722			TST BNE	a#NUNIT 7\$	IS THERE	E MORE THAN ONE UNIT ? KT IF MORE THAN ONE UNIT	
4574 4575	021470 021474	004037 002300	042246			JSR RHCS1	RO, D#CHREG	CHANGE E	BITS IN SAVED REGISTER RHCS1 REGISTER	
4577 4578 4579 4579 4580	021476 021500 021502 021504	000001 000000 100000			7\$:	D SC		:1 BIT/BI :NEW VALL ;CHANGE S	ITS TO BE CHANGED JE OF SC IS D SC BIT	
4581 4582 4583	021504	043737	004740	004636		BIC	2#ATTENT, 2#SAVER	RE+24	CLEAR APPROPIATE ATA BITS FOR WORKING DRIVE IN SAVED RH	AS
4585 4586 4587						:*NOW C :*WITH	OMPARE REGISTERS EXPECTED VALUES	AFTER THE	UNLOAD COMMAND	
4589	021512	004037	042354			JSR	RO, 3#COMREG	: COMPARE : PRESENT	SAVED REGISTERS WITH VALUE	
23754789012375478 888888899999999999999999999999999999	021516 021520 021522 021524 021526	004612 002354 000021 021530 021534				SAVERE WC 17. 35 45		GOOD DAT TEST DAT 17. REGI RETURN T RETURN T	SAVED REGISTERS WITH VALUE TA SAVED IN 'SAVERE' TA STARTING FROM 'RHWC' TO STERS TO BE COMPARED TO 35 ON ERROR TO 45 ON NO ERROR	
4597 4598	021530 021532	104023 000207			3\$:	ERROR RTS	23 FC	:UNLOAD C	OMMAND GAVE	

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MAINDEC-11-	DZRJI-A, RPI T30	04/5/6 FUNCT. CON UNLOAD COMMAND	IT. TST-P	Т 1	H13	30-MAR-76 22:59 PAGE 102		SEG 0162
4599 4600 4601 4602						GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER UNLOAD COMMAND	_	
4603 4604 0215 4606 0215 4607		021542	4\$: ::98\$:	TYPE BR .ASCIZ	985 975 <15><12>/ON DRI	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ	Ó	
4608 0219 4609 0219 4610 0219 4611 0219 4613 0219		004715 021572	975: 975: 11005:	MOV TYPDS TYPE BR	a#UNIT,-(SP)	GET UNIT UNDER TEST TYPE ASCIZ STRING GET OVER THE ASCIZ	ND LOAD HIT	CONTI
######################################	702 005037 706 000000 710 004737 714 000240 716 000240 720 000240	045760 041424		CLR HALT JSR NOP NOP NOP	D#PRITEM PC, D#CHECK	CLEAR PREVIOUS ERROR NUMBER WAIT FOR CONTINUE CHECKS THAT DVA, RDY, MOL & DPR = 1 CHECKS THAT ALL OTHER BITS = 0 THERE IS NO HALT IF IT FAILS - IT IS USED IN THE MIDDLE OF A TEST	ý	
4623 4625 4625				*SET V	V IN RHDS1 AFTER TANDBY SWITCH AND	RESET FROM ACTUATING D CYCLING UP (MOL = 1)		
4629 O21	722 013746 726 052716	002460		MOV BIS	a*PKACK, -(SP) #GO, (SP)	GET READY TO MOVE COMMAND		
4632 4631 0213	732 012677	160342		MOV	(SP)+, QRHCS1	WITHOUT INTERRUPT ENABLE GO WITH :22 IN RHCS1 FOR PACK ACKNOWLEDGE ;WITH INTERRUPT DISABLED		
4635 D211	736 011100 740 011305			MOV MOV	aR1.RC aR3.R5	SAVE RHCS1 DURING ABOVE OPERATION		
4630 4631 4633 4633 4635 4635 4636 7637 7638 7639 7639 7640 7640 7640 7640 7640 7640 7640 7640	742 104412 744 002322 746 000100 750 000001 752 000001			WAT RHDS1 VV 1.		WAIT FOR VV BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR VV BIT IN RHDS1 REGISTER ALLOW 10 MICRO SECONDS VV MUST SET BETWEEN OD AND 20 MICRO SECONDS		

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.PII T31 OFFSET AND RETURN TO CENTER OFFSET AND RETURN TO CENTER LINE COMMAND 4646 **TEST 31 OFFSET AND RETURN TO CENTER LINE COMMAND THIS TESTS TWO COMMANDS: (1) OFFSET. (2) RETURN-TO-CENTER-LINE ALL POSSIBLE REGISTERS ARE FILLED WITH ONES (EXCEPT PHOF) AND AN OFFSET IS GIVEN ALL REGISTERS ARE COMPARED, ONLY ATA SHOULD SET ALL OTHER REGISTERS SHOULD REMAIN UNCHANGED 4650 4651 * 4652 4653 4654 4655 4656 4657 : * : * THEN A RETURN-TO-CENTER-LINE IS GIVEN ALL REGISTERS ARE COMPARED ONLY ATA SHOULD SET AND RHOF SHOULD CLEAR (EXCEPT HCI, ECI, FMT22) :* * ALL OTHER REGISTERS SHOULD REMAIN UNCHANGED 4658 4659 4660 THE ABOVE PROCESS IS REPEATED FOR OFFSET REGISTER VALUES OF 1 TO 377 IE. 377 TIMES 4662 4663 tst31: 4664 4665 4666 4667 021754 021756 021764 000004 012737 012706 SCOPE #1\$,\$LPADR #STACK,SP #31,@#TSTNM 001000 ::SET SCOPE LOOP ADDRESS :RESET STACK 001105 MOV 000031 004604 MOV :SAVE TEST NUMBER 4569 4669 SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 021776 004737 041366 JSR PC. 3#CLDISK 4670 GIVE RH-11 INITIALIZE

SETUP UNIT NUMBER

PC, a**CHECK CHECK THAT DVA, RDY, MOL, DPR, DRY = 1

AND THAT NO STATUS BITS ARE STUCK = 1

CANNOT CONTINUE TESTS IF THEY AREN'T

STOP

\$1, a**OFSTVL

SET OFFSET VALUE TO 1

*34, a**OFSTVL+1; SET HCI, ECI, FMT22 4671 4672 4673 055005 004737 JSR 041424 4674 900550 \$10550 \$10550 \$20550 104400 000000 112737 112737 4675 4676 4677 TYPE 066402 MOVE 4578 000034 MOVE 4579 4680 4681 4682 4683 022030 15: 022030 004737 041356 JSR PC. D#CLDISK SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1
GIVE RH-11 INITIALIZE
SETUP UNIT NUMBER
CHECK DVA.RDY.MOL.DPR & VV = 1
CHECK THAT ALL OTHER BITS = G 4684 4685 4686 4687 022034 022040 022042 **JSR** 004737 041446 PC. D#CHECKT 000240 4688 NOP UNLIKE THE OTHER STATUS BIT TESTS, THERE IS NO HALT IF IT FAILS - IT IS NOP 4689 022044 000240 4690 NOP 4691 4692 4693 USED IN THE MIDDLE OF A SINGLE TEST 940350 012700 002272 MOV #RHWC.RD 022052 012730 MOV :LOAD 177777 INTO RHWC 177777 #177777, 2(RO)+ 4695 4696 4697 022056 012730 177777 MOV #177777.3(RO)+ :LOAD 177777 INTO RHBA

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MAINDEC DZRJIA.	-11-DZRJ P11	TI-A. RPO	94/5/6 FL OFFSET	INCT. CON AND RETU	T. TST-I	PT 1 ENTER LIN	MACY11 27(655) NE COMMAND	30-MAR-76 22:59 PAGE 104
4699 4700 4701	022062		000010			BIS		;LOAD 10 INTO RHCS2
4702 4703	055066	012730	001400			MOV	#1400, @(RO)+	;LOAD 1400 INTO RHCS1
4704 4705 4706	022072	012730	000000			MOV	#0, a(R0)+	;LOAD D INTO RHER1
4707 4708 4709	022076	012730	177777	,		MOV	#177777, @(RO)+	;LOAD 177777 INTO RHDST
4711	022102	012730	000000			MOV	#D, a(RO)+	;LOAD D INTO RHER2
4713						; *THE O	FFSET REGISTER W	ILL BE INCREMENTED FROM D TO 377
4715	022106	013730	004610			MOV	a#OFSTVL,a(RO)+	;SET OFFSET REGISTER
4717	055115	012730	177777			MOV	#177777, a(RO)+	;LOAD 177777 INTO RHCA
4719	055116	012730	000000			MOV	#0, a(R0)+	;LOAD D INTO RHER3
4721						;*NOW S		FOR ALL DRIVES PRESENT
#7001234 #7001234 #77005 #77005 #77009 #770011234 #7712234 #7712234 #77234 #77234	055158 055157 055155	945110 945110 945110				MOV MOV MOV	RO(SP) aR4(SP) aR2(SP)	; PUSH RO ON STACK SAVE RHER1 TO REINSTATE LATER SAVE RHCS2 TO BE REINSTATED AFTER ALL ATA BITS HAVE BEEN SET
4730	022130 022134 022136 022142 022144 022144	013700 005012 012705 006000 103002 012714	004742 000010 177777		82\$:	MOV CLR MOV ROR BCC MOV	a#TOTALAT,RO aR2 #8.,R5 RO 83\$ #-1,aR4	GET DRIVES PRESENT CLEAR RHCS2 AND CARRY COUNTER GET BIT INTO CARRY BRANCH IF NO UNIT ON THIS BIT MOVE INTO ERROR REGISTER TO SET ATA BIT INCREMENT RHCS2 TO NEXT UNIT
4731 4732 4733 4734 4735 4736 4737 4738 4739 4740 4741 4742 4743	022152 022154 022156 022160 022162 022164 022166	005212 005305 001371 012612 012614 012600 005720			83\$:	INC DEC BNE MOV MOV MOV TST	aR2 R5 82\$ (SP)+, aR2 (SP)+, aR4 (SP)+, R0 (R0)+	INCREMENT RHCS2 TO NEXT UNIT COUNT BRANCH IF 8 NOT DONE REINSTATE RHCS2 REINSTATE RHER1 POP STACK INTO RO GET OVER PHAS IN RO
4742	022170	012730	177776			MOV	#177776, @(RO)+	;LOAD 177776 INTO RHMR
4744 4745 4746	022174	013777	002454	160076		MOV	amofsetc, arhcs1	GET READY FOR OFSETC
4747 4748 4749						; *NOW S	AVE REGISTERS FOR	R COMPARISON AFTER OFFSET
4750 4751 4752	055510 055505 055505	004037 002272 004612	041534			JSR RHWC SAVERE	RO, @#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPC	04/5/6 FL OFFSET	INCT. CON	NT. TST-I	PT 1 ENTER LIN	K13 MACY11 27(655) NE COMMAND	
4753 4754 4755	055515	000022				18.		; THE REGISTERS ARE SAVED ; NUMBER OF REGISTERS ; SAVED = 18.
4754 4755 4755 4756 4759 4759 4763 4765 4765 4769 4770 4771 4772 4773	022214	013777	004606	160044		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS FRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
4765 4766 4766	05555P 055555	013746 052716	002454			MOV BIS	a#OFSETC,-(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT
4768 4769	022232	012677	160042			MOV	(SP)+, @RHCS1	:14 IN RHCS1 FOR OFSET
4770 4771 4772 4773	022236	011100 011305				MOV	aR1,R0 aR3,R5	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
4774 4775 4776 4777 4778 4779 4780 4781 4782	022242 022244 022246 022250 022252	104412 002322 000200 001750 000454				WAT RHDS1 DRY 1000. 300.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 10000 MICRO SECONDS DRY MUST SET BETWEEN 7000 AND 13000 MICRO SECONDS
4783						;*COMPA ;*RD AN	RE CONTENTS OF RED RES IMMEDIATELY	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO
4784 4785 4786 4787 4788 4789 4790 4791 4792 4793 4794 4795 4797 4798 4799 4800 4801 4803 4804 4805 4805	022254 022260 022264 022270 022272 022276 022304 022310 022314 022320	013746 052716 005737 001413 010037 042737 042716 053716 052716	002454 004301 004722 004760 177677 000100 004760 100000	004760	87\$:	MOV BIS TST BEQ MOV BIC BIS BIS	a#OFSETC(SP) #DVA!GO!IE!RDY, a#NUNIT 87% RD.a#TMP4 #†CIE.a#TMP4 #IE.(SP) a#TMP4.(SP) #SC,(SP)	GET RHCS1 KEEP IE BIT CLEAR IE IN GOOD DATA GET IE AS IS SET SC IN RHCS1
4795 4796 4797	022320 022324	011637 022600	001124		073.	MOV CMP	(SP), 0#\$GDDAT (SP)+,RO	; SAVE FOR PRINTOUT ; DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY
4798 4799 4800 4801	022326 022330 022334 022340	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	86\$ RO.D#\$BDDAT R1.D#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMOND AND DVALCOLIE PRY SHOULD BE SET
4803 4804 4805 4806	022342 022346 022352	012746 011637 022605	030500 001124		86\$:	MOV MOV CMP	#PIP!MOL!DPR!VV, (SP), @#\$GDDAT (SP)+,R5	SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND DVA!GO!IE!RDY SHOULD BE SET -(SP) ;SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV ;SHOULD BE SET

MAINDEO DZRJIA.	-11-DZRJ	II-A. RPS	04/5/6 FU OFFSET	INCT. CON	NT. TST-	PT 1 ENTER LII	MACY11 27(655)	
78990112375567890122375567 899011237556789012222223333333333333333333333333333333	022354 022356 022362 022366 022370	001405 010537 010337 104063	004600		88\$:	BEQ MOV MOV ERROR	88\$ R5, 0*\$BDDAT R3, 0*REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV SHOULD BE SET
4813 4814 4815						;*NOW (CHANGE SAVED REGI	ISTERS TO EXPECTED VALUES
4816 4817 4818	022370	004037 002300	042246			JSR RHCS1	RO, @#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHCS1 REGISTER
4820 4821 4822	022376 022400 022402	000001 000001 100000				1 SC		:1 BIT/BITS TO BE CHANGED NEW VALUE OF SC IS 1 CHANGE SC BIT
4824 4825	022404	004037 002322	042246			JSR RHDS1	RO, D#CHREG	CHANGE BITS IN SAVED REGISTER CHANGE RHDS1 REGISTER
4827 4828 4829	022412 022414 022416	000001 000001 100000				1 ATA		:1 BIT/BITS TO BE CHANGED :NEW VALUE OF ATA IS 1 :CHANGE ATA BIT
4831 4832 4833	022420	053737	004740	004636		BIS	@#ATTENT,@#SAVE	RE+24 SET APPROPRIATE 'ATA' BITS FOR WORKING DRIVE IN SAVED RHAS LOACTION
4835 4836						;*NOW C	OMPARE REGISTERS	AFTER AN OFSET COMMAND
78990-1237-567 783390-1237-567 78839-148-15-55-55-55-55-55-55-55-55-55-55-55-55-	022426 022432 022434 022436 022440 022440	004037 004612 002354 000022 022444 022450	042354			JSR SAVERE WC 18. 28 33	RO, D#COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 2\$ ON ERROR RETURN TO 3\$ ON NO ERROR
4846 4847 4848 4849	055446	104024			2\$:	ERROR RTS	PC PC	OFFSET COMMAND CAUSED AN ERROR GOOD DATA IS WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER AN OFFSET COMMAND
4851 4852 4853 4854 4854	022450	013777	004740	157640	3\$:	MOV -	a#ATTENT, aRHAS	; CLEAR WORKING DRIVE ATTENTION
4856 4857					;;****	:*NOW A	RETURN TO CENTE	R LINE COMMAND WILL BE GIVEN
4859 4860	022456	004737	041446			JSR NOP	PC, a#CHECKT	; CHECK DVA.RDY.MOL.DPR & VV = 1 ; CHECK THAT ALL OTHER BITS = 0

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A RPO	04/5/6 FL OFFSET	INCT. CON AND RETU	T. TST-I	PT 1 ENTER LII	MACY11 27(655)	30-MAR-76 22:59 PAGE 107
4861 4862	022464	000240				NOP NOP		UNLIKE THE OTHER STATUS BIT TESTS,
4864 4865 4866	022470	013777	002456	157602		MOV	a#RETCL, aRHCS1	UNLIKE THE OTHER STATUS BIT TESTS, THERE IS NO HALT IF IT FAILS - IT IS USED IN THE MIDDLE OF A SINGLE TEST GET READY FOR RETCL RETURN TO CENTER LINE WITH 16 IN RHCS1
4967 4968						; *NOW !	REGISTERS ARE SAV	ED FOR COMPARISON AFTER COMMAND
4870 4871 4872	022476 022502 022504	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	;SAVE REGISTERS ;RHWC IS THE FIRST REGISTER SAVED ;STARTING ADDRESS OF WHERE ;THE REGISTERS ARE SAVED ;NUMBER OF REGISTERS ;SAVED = 18.
4874 4875	022506	000055				18.		NUMBER OF REGISTERS ; SAVED = 18.
195634556789012345567890123456678990 196634566789012345667890123456678990 1966345667890123456678990 19663456678990123456678990 19663456678990123456678990	022510	013777	004606	157550		MOV	a#RP4VEC, aRPVEC	
4885 4885 4886	022516	013746 052716	002456			MOV BIS	a#RETCL(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH
4888 4889	022526	012677	157546			MOV	(SP)+, @RHCS1	: 16 IN RHUST FUR RETURN TO CENTER LINE
4891	022532 022534	011100 011305				MOV	aR1,R0 aR3,R5	:WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
4894 4895 4896 4897 4898 4899 4899	022536 022540 022542 022544 022546	104412 002322 000200 001750 001750				WAT RHDS1 DRY 1000.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 10000 MICRO SECONDS DRY MUST SET BETWEEN OO AND 20000 MICRO SECONDS
4902						*COMPA	RE CONTENTS OF RED RS IMMEDIATELY	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO
4893 4899 4899 4899 4899 4990 4990 4990 4990	022550 022554 022560 022564 022566 022572 022600 022604 022610	013746 052716 005737 001413 010037 042737 042716 053716 052716	002456 004301 004722 004760 177677 000100 004760 100000	004760	90\$:	MOV BIS TST BEQ MOV BIC BIS BIS	a#RETCL,-(SP) #DVA!GO!IE!RDY, a#NUNIT 90\$ RO,a#TMP4 #†CIE,a#TMP4 #IE.(SP) a#TMP4,(SP) #SC,(SP)	SAVE COMMAND (SP) :INCLUDE DVA!GO!IE!RDY ARE THERE MORE THAN ONE UNIT BRANCH IF ONLY ONE UNIT GET RHCS1 KEEP IE BIT CLEAR IE IN GOOD DATA GET IE AS IS SET SC IN RHCS1

							N13		
MAINDEC DZRJIA.	-11-DZRJ PII	I-A. RPO	4/5/6 FL OFFSET	JNCT. COI	NT. TST-F URN TO CE	T 1 NTER LIN	NE COMMAND	30-MAR-76 22:59 PAGE 108	
4915 4916 4917	055250	011637	001124		•	MOV	(SP), 0#\$GDDAT (SP)+,RO	;SAVE FOR PRINTOUT ;DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY	
191012315678901231567890123156789012315678901231567890123156789000123156789000123156789000123156789000000000000000000000000000000000000	022622 022624 022630 022634	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	89\$ RO, 0#\$BDDAT R1, 0#REGADR 21	SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND DVA!GO!IE!RDY SHOULD BE SET -(SP) :SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV SHOULD BE SET	
4923 4924 4925	022636 022642 022646	012746 011637 022605	030500 001124		89\$:	MOV MOV CMP	#PIP!MOL!DPR!VV (SP), D#\$GDDAT (SP)+,R5	;SAVE FOR PRINTOUT; DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV	
4927 4928 4929 4930	022650 022656 022656	001405 010537 010337 104063	001126			BEQ MOV MOV ERROR	91\$ R5, 0#\$BDDAT R3, 0#REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY	
4931 4932	022664				915:			PIP!MOL!DPR!VV SHOULD BE SET	
4933 4934 4935						;*NOW C		STER TO EXPECTED VALUE	
4937 4938 4938	022664 022670	004037 002300	042246			JSR RHCS1	RD, D#CHREG	; CHANGE BITS IN SAVED REGISTER ; CHANGE RHCS1 REGISTER	
4940 4941 4942	022672 022674 022676	000001 000001 100000				1 SC		; 1 BIT/BITS TO BE CHANGED ; NEW VALUE OF SC IS 1 ; CHANGE SC BIT	
4944	022700 022704	004037 002322	042246			JSR RHDS1	RO, @#CHREG	; CHANGE BITS IN SAVED REGISTER ; CHANGE RHDS1 REGISTER	
	022706 022710 022712	000001 000001 100000				I ATA		;1 BIT/BITS TO BE CHANGED ;NEW VALUE OF ATA IS 1 ;CHANGE ATA BIT	
4951	022714	053737	004740	004636		BIS	D#ATTENT, D#SAVER	RE+24 ;SET APPROPRIATE 'ATA' BITS FOR WORKING DRIVE IN	
4954 4955 4956 4957	022722 022726 022730	004037 002310 116000	041270			JSR RHOF BIT15!H	RO, @#FILLRE CI!ECI!FMT22	RE+24 ;SET APPROPRIATE 'ATA' BITS FOR WORKING DRIVE IN SAVED RHAS LOACTION MOV BITIS!HCI!ECI!FMT22 INTO SAVED RHOF ;SAVED REGISTER TO CHANGE ;DATA	
4958						; *NOW C		AFTER RETURN-TO-CENTER-LINE	
4960	022732	004037	042354			JSR	RD, D#COMREG	COMPARE SAVED REGISTERS WITH	
4949 4949 4955 4955 4955 4955 4955 4955	022736 022740 022742 022744 022746	004612 002354 000022 022750 022754			ц т.	SAVERE WC 18.	25	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 48 ON ERROR RETURN TO 58 ON NO ERROR RETURN TO CENTER-LINE COMMAND CAUSED AN ERROR	
4968	022750	104025			45:	ERROR	PC PC	COMMAND CAUSED AN ERROR	

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							B14	
MAINDEC DZRJIA.	-11-DZRJ Pli	I-A RPO	OFFSET	NCT. CON AND RETU	T. IST-F	T 1 ENTER LIN	MACY11 27(655) E COMMAND	30-MAR-76 22:59 PAGE 109
1950 1971 1972 1973								GOOD DATA HAS WHAT SHOULD BE THERE RECEIVED DATA HAS WHAT WAS THERE AFTER COMMAND
4974	022754				5\$:			
4975 4975 4975 4977 4979	022754	004737	041366			JSR	PC. 3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE
70 70 70 70 70 70 70 70 70 70 70 70 70 7	022750 022764 022772 022774 023002	105237 132737 001403 062737 105737	004510 000100 000100 004510	004610	7 \$:	INCB SITB BEQ ADD TSTB	2#0FSTVL #100,2#0FSTVL 7\$ #100,2#0FSTVL 2#0FSTVL	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER GET NEXT OFFSET VALUE SEE IF UNUSED BIT 6 IS ON NO SO DO SOME MORE YES SO BY-PASS IT IF ZERO ALL COMBINATIONS ARE
4986 4986 4987 4988 4989	023012 023012	001001 000402 000137	022030		6\$:	BNE BR JMP	5\$ TST32 : 3*1\$	COMPLETE BRANCH IF 377 NOT DONE BRANCH TO NEXT TEST JUMP BECAUSE 377 NOT DONE

חדשיון	HIFTI	132	UFFSET	COMMIND				
499					::***** ;*TEST	32	OFFSET COMMAND	*********
499					;*	THIS TE	ST WILL ONLY GIV	E REPEATED OFFSETS
499	5				†:***** †\$T32:	******	***********	***********
199	023020	000004	000764	004756	15132:	SCOPE	# 500.,3#TMP1	COUNTER
499 500	023016 023020 023026 023026 023026	012706 012737	000035	004604		MOV	*STACK.SP *32,0*TSTNM	RESET STACK SAVE TEST NUMBER
500 500 500	023040	004737	041366			JSR	PC, a#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP OFSET
500	023044	004737	041446			JSR	PC, 2#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
500	023050	104400	066402			TYPE	.CPHALT	CANNOT CONTINUE TESTING IF ANY OF
	023054 023056 023062	000000 004037 000260	041352			HALT JSR 260	RO, 3#OFSET	STOP OFSET 260 IN OFSET REGISTER OFSET -1200 MICRO INCHES
501 501	023064	013746 052716	002454			MOV BIS	@#OFSETC(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 114 IN RHCS1 FOR OFSET
502 502	023074	012677	157200			MOV	(SP)+, JRHCS1	WITH INTERRUPT ENHALED
	023100 023104 023106 023106	104412 002322 000200 000536 000536				WAT RHDS1 DRY 350.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 3500 MICRO SECONDS DRY MUST SET BETWEEN OD AND 7000 MICRO SECONDS IS ERR SET?
5030 5030 5030 5030	023112 023120 023122 023124	032777 001417 104026 000004	040000	157202		BIT BEQ ERROR SCOPE	#ERR, JRHDS1 25 26	OD AND 7000 MICRO SECONDS IS ERR SET? NO REPEATED OFFSETS CAUSED AN ERROR
5033	053156	004737	041366			JSR	PC, 3*CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
5039	023132	013746	000101			MCV BIS	#GO!IE.(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT
504 504 504	023142	012677	157132			MOV	(SP)+, QRHCS1	ENABLE INTERRUPT GO WITH 6 IN RHCS1 FOR RECALIBRATE

							D14	
MAINDEC DZRJIA.	-11-DZRJ: P11	1-A. RPC	OFFSET COMMAND	T. TST-P	1 1	MACY11	27(655)	30-MAR-76 22:59 PAGE 111
5044								;WITH INTERRUPT ENABLED
55555555555555555555555555555555555555	023146 023150 023152 023154 023156	060620 060620 0003355 104415			WAT RHDS1 DRY 25000. 25000.			WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER HAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 250000 MICRO SECONDS DRY MUST SET BETWEEN OO AND 500000 MICRO SECONDS
5052 5053 5054 5055	023160 023166 023166	005337 001401 000717	004756	23:	DEC BEQ BR	-0#TMP1 -TST33 -1\$;	COUNT DOWN BRANCH IF DONE ;GO BACK AND DO IT AGIEN

SEQ 0171

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 112 DZRJIA.P11 READ WRITE TESTS USING MEDIA

5056 5057 5058					.SBTTL	the same and the same and the	RITE TESTS USING	MEDIA ************************************
5050 5051 5052 5063					*	WRITE H	EADER AND DATA	CYLINDER O. FORMAT 16 BITS PER WORD S=0, NUMBER OF WORDS 256 WORDS
5063 5065 5065 5065 5065 5065					* * * * * *	OF O THEN RE WRITE F 10000, O THE WRI THE GO THEN GO	AD HEADER AND DEFORM BUFFER AND 10,0,0,0 AND 256 OF THE COMMAND IS TO BIT, AND ALL THE IS GIVEN FOR WE	ATA FOR ABOVE. READ INTO BUFFER ARE FILLED WITH F D HEN LOADED INTO THE REGISTERS EXCEPT E REGISTERS ARE SAVED RITE HEADER AND DATA
5070 5071 5072					* *			COMPARED TO CHECK FOR IMPROPER CHANGED IS CHECKED TO SEE THAT NOTHING CHANGED
5073 5074 5075 5076 5077					* * * *	NOW FOR WITH AL GO BIT GO IS G	THE READ COMMAND L ONES, COMMAND AND ALL REGISTER LIVEN FOR THE REA	ND READ INTO BUFFER IS FILLED IS LOADED INTO REGISTERS EXCEPT RS ARE SAVED AD COMMAND
5079 5080					* *	ALL REG	ISTERS ARE CHECK	KED FOR IMPROPER CHANGE COMPARED.
5082	022170	000004			†:***** †\$T33:	******** SCOPE	**********	**********
5084 5085	023170 023172 023176	000004 012706 012737	001000 000033	004604	13133.	MOV	#STACK, SP #33, 2#TSTNM	RESET STACK SAVE TEST NUMBER
5087 5088 5089 5090 5091	023204	004737	041366			JSR	PC.@#CLDISK	:SET R1-RHCS1, R2-RHCS2 :R3-RHDS1, R4-RHER1 :GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER
5093						;*FILL	WRITE FROM BUFFE	ER WITH HEADER
	D23210 D23214 D23216 D23220 D23222 D23224 D23224	004037 002470 000004 010000 000000 000000	041212			JSR WRFROM 10000 0	RO. 3#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD
5103						;*FILL	WRITE FROM BUFFE	
55057 551007 551009	023230 023234 023236 023240	004037 002500 000400 000000	041236			JSR WRFROM+ 256. 0	RO, D#CLAREA	:CLEAR 256. WORDS, FROM WRFROM+10 :STARTING FROM WRFROM+10 :256. WORDS :FILL WITH 0

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 113 DZRJIA.P11 T33 WRITE/READ HEADER AND DATA (0'S)

51111375					**NON R **AS WR **CAN B **CHANG	EAD INTO BUFFER ITE FROM BUFFER E MADE TO MAKE E WRITE FROM BU	WILL BE FILLED WITH SAME DATA SO THAT AFTER A WRITE COMPARISONS SURE THAT WRITE DID NOT FFER
	023242 023250 023252 023254 023254 023256 023262 023262 023270	004037 003534 000004 010000 000000 000000 004037 003544 000400	041212		JSR REINTO 10000 0 0 JSR REINTO+ 255.		SAVE HEADER DATA IN REINTO LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD CLEAR 256. WORDS, FROM REINTO+10 STARTING FROM REINTO+10 SECOND REINTO+10 STARTING FROM REINTO+10 SECOND REINTO+10
5130 5131					;*NOW T		AND DATA COMMAND WILL BE FILLED
5133 5133 5135 5135 5137	023274 023300 023302 023303 023304	004037 000000 000 000 177374	043340	.BYTE	JSR 0 0 -2564	RO, 2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D WORD COUNT (DATA) = 256. + HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = WRFROM CO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE GET READY TO DO A WRIFOR HEADER AND DATA WITH 62 IN RHCS1
5138 5139 5140	023306	002470			WRFROM		; 4 HEADER WORDS ; BUS ADDRESS : STARTING ADDRESS OF DATA
5141 5142 5143 5144	023310	000000			O FMT22		BUFFER = WRFROM CO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION
5147	023314	002444			WRIFOR	;WRITE	GET READY TO DO A WRIFOR HEADER AND DATA WITH 62 IN RHCS1
5150					; *NOW S	AVE REGISTERS FO	OR COMPARISON AFTER WRITE HEADER AND DATA
5153	023316 023322 023324	004037 002272 004612	041534		JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 17.
515E 5157	023326	000021			17.		NUMBER OF REGISTERS SAVED = 17.
5159	053330	004737	041446		JSR	PC. D#CHECKT	
5161	023334	104400	066402		TYPE	, CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
5163	023340	000000			HALT		STOP

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TSI-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 114 DZRJIA.P11 T33 WRITE/READ HEADER AND DATA (0'S)

	154 155 155 157 158 170	023342	013777	004606	156716		MOV	3#RP4VEC, @RPVEC	SET RPD4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
	173 173 174 175 176	023350 023354 023360	013746 052716 012677	002444 000101 156714	A		MOV BIS MOV	(SP)+, JRHC51	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 162 IN RHCS1 FOR WRITE HEADER AND DATA WITH INTERRUPT ENABLED
	179 180 181	023366	011100				MOV	aR1.RO aR3,R5	:WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION :SAVE RHDS1 DURING ABOVE OPERATION
2000	182 183 184						;*ONE		MICRO SEC, ONE SECTOR = 760 MICRO SEC
		023376 023374 023376 023376 023400	104412 002300 000200 001614 001507				WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS
	192						*COMP	ARE CONTENTS OF RH	AFTER GO
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	195 196 197 198	023402 023412 023416	013746 052716 011637 022600	002444 004101 001124			MOV BIS MOV CMP	a#WRIFOR,-(SP) #IE!GO!DVA.(SP) (SP),a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA AND COMMAND SHOULD BE SET
	203 203 200 200	023420 023426 023432	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	645 RO, J#SBDDAT R1, J#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY
	205 206 207	023434	012746 011637 022605	010500	64		MOV MOV CMP	#MOL!DPR!VV,-(SP (SP), 3#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV
	200345	023446 023450 023454 023460	001405 010537 010337 104063	001126			BEQ MOV MOV ERROR	66\$ R5.3#\$BDDAT R3.3#REGADR 63	AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE!GO!DVA SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET
	214 215 216 217	023462			66	5\$:	;*NOW (TERS TO EXPECTED VALUES

-	1 1	4	1	1	
	H	1	٠	t	

	MAINDEC DZRJIA.	-11-DZRJ	I-A. RPO	4/5/6 FUNCT. CON WRITE/READ HEAD	T. TST-P	T 1 OATA (D'S	MACY11 27(655)	30-MAR-76 22:59	PAGE 115	SE
-			004037 002272 000000	041270		JSR RHWC	RO, @#FILLRE	MOV D INTO SAVED SAVED REGISTER TO DATA	RHWC CHANGE	
-	5222	023462 023466 023470 023472 023476 023500 023502 023502	004037 002274 003500 004037	041270		JSR RHBA	RO, 0#FILLRE	MOV WRFROM+<260.	*2> INTO SAVED RHBA CHANGE RHDST CHANGE	, 5
-	5224 5225 5226	023502 023506 023510	004037 002304 000001	041270		JSR RHDST 1	(260.*2) RO,@#FILLRE	MOV 1 INTO SAVED SAVED REGISTER TO DATA	RHDST CHANGE	21
	55555555555555555555555555555555555555					:*NOW CO ;*WITH F	OMPARE REGISTERS REGISTERS AFTER (BEFORE WRITE HEADE	ER AND DATA	
	5232	023512	004037	042354		JSR	RO, a#COMREG	COMPARE SAVED REC	SISTERS WITH	
	5234 5235 5236 5237 5238	023516 023520 023522 023524 023526	004612 002354 000021 023530 023534			SAVERE WC 17. 15 25		GOOD DATA SAVED TEST DATA STARTIN 17. REGISTERS TO RETURN TO 1% ON ERETURN TO 2% ON ERETURN	IN 'SAVERE' NG FROM 'RHWC' BE COMPARED ERROR NO ERROR	
The same of the sa		023530	104027		15:	ERROR RTS	27 PC	:WRITE HEADER AND :CAUSED IMPROPER F :CHANGE :GOOD DATA GIVES W :BE THERE :RECEIVED DATA GIV :WAS THERE AFTER O	HAT SHOULD 'ES WHAT	Re VIII
-	5248					*NOW WE	RITE FROM BUFFER	WILL BE CHECKED TO	SEE THAT	
-		023534			25:					
NAME AND POST OF PERSONS ASSESSED.	50000000000000000000000000000000000000	023534 023540 023542 023544 023546 023550	004037 003534 002470 000404 023552 023556	043404		JSR REINTO WRFROM 260. 3\$	RD, 3#COMPAR	COMPARE TWO BLOCK GOOD DATA STARTS TEST DATA STARTS 260. WORDS TO BE RETURN TO 35 ON E RETURN TO 45 ON N	FROM REINTO FROM WRFROM COMPARED RROR O ERROR	
-	5262 5261 5261	023552 023554	104030		3\$:	ERROR RTS	30 PC	:WRITE HEADER AND ;CHANGED WRITE FRO	DATA M BUFFER	
	5265					:*NOW A ;*READ I	READ HEADER AND NTO BUFFER IS FI	DATA COMMAND WILL LLED WITH ONES	BE GIVEN	
	5267 5267	023556			45:					
	5259 5270 5271	023556	004737	041366		JSR	PC, a#CLDISK	SET RI-RHOSI, R2- R3-RHDSI, R4-RHER GIVE RH-11 INITIA	RHCS2 ·	
-										

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MATNDEC-11-DZRTI-0	PPOU E E FINCT	CONT	TCT-PT 1	(0'S) MACY11 27(655)	30-MAR-76	22.59	PAGE 116
IMTHREC TT DEWAT L	A NEUTY STO FUNCT	. COITI.	131 []	11HC111 E((000))	30-11HV-10	EE. 37	FAGE 110
DZRITA PII T	NRITE READ	HEADER	AND DATA	(0.5)			
PP110 71111 77	ALLY IF LIFTING	116110611	mile billin	10 01			

5272 5273 5274 5275 5276 5277	023562 023566 023570 023572	004037 003534 000404 177777	041236			JSR REINTO 260.	RO, D#CLAREA	;SETUP UNIT NUMBER ;CLEAR 260. WORDS, FROM REINTO ;STARTING FROM REINTO ;260. WORDS ;FILL WITH -1
5279 5280						;*NOW F	ILL COMMAND	
5281 5282 5283 5284 5285 5286	023574 023600 023602 023603 023604	004037 000000 000 000 177374	043340	£	.BYTE .BYTE	JSR 0 0 0 -2564	RO, 2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D WORD COUNT (DATA) = 256. + HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = REINTO DO NOT INHIBIT BUS ADDRESS INCREMENT
5288 5289	023606	003534				REINTO		BUS ADDRESS STARTING ADDRESS OF DATA
5290 5291 5292 5293	023610	000000				O ECI!FMT	22	BUFFER = REINTO ;DO NOT INHIBIT BUS ADDRESS INCREMENT ;16 BITS PER WORD FORMAT ;INHIBIT ECC CORRECTION ;DO NOT INHIBIT HEADER COMPARE ;GET READY TO DO A REFOR ;READ HEADER AND DATA WITH 72 IN RHCS1
5294 5295 5296 5297	023614	002450				REFOR		DO NOT INHIBIT HEADER COMPARE GET READY TO DO A REFOR READ HEADER AND DATA WITH 72 IN RHCS1
5299 5299						; *NOW S	AVE REGISTERS FOR	R COMPARISON AFTER READ HEADER AND DATA
5301 5303 5303	023626 023622 023624	004037 002272 004612	041534			JSR RHWC SAVERE	RO, a #SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
5305 5306	053656	000055				18.		NUMBER OF REGISTERS ;SAVED = 18.
5308	053630	004737	041446			JSR	PC, @#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
5310	053634	104400	066402			TYPE	, CPHALT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
5312	053640	000000				HALT		STOP
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	023642	013777	004606	156416		MOV _	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
5323 5323	023650	013746 052716	002450			MOV BIS	<pre>a#REFOR(SP) #GO!IE,(SP)</pre>	GET READY TO MOVE COMMAND
5325	053660	012677	156414			MOV	(SP)+,@RHCS1	ENABLE INTERRUPT

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MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPC T33	04/5/6 FUNCT. CO WRITE/READ HEA	NT. TST-F DER AND D	PT 1 PATA (D'S	J14 MACY11 27(655)		9
5326 5327 5329 5329 5330	023664 023666	011100			MOV	3R1.R0 3R3,R5	:72 IN RHCS1 FOR READ DATA ;WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION ;SAVE RHDS1 DURING ABOVE OPERATION	y.
#*************************************	023670 023672 023674 023676 023700	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	× 10
5338 5339 5340					:*COMPA ;*RO AN	RE CONTENTS OF R	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
5342 5343 5344 5345	023702 023706 023712 023716	013746 052716 011637 022600	002450 004101 001124		MOV BIS MOV CMP	a#REFOR(SP) #IE!GO!DVA.(SP) (SP).a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA	
5347 5348 5349 5350	023720 023722 023726 023732	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	67\$ RD, D#\$BDDAT R1, D#REGADR 21	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE!GO!DVA SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA	
5352 5353 5354	023734 023740 023744	012746 011637 022605	010500 001124	67\$:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).a#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHDS SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV	51
5355 5356 5357 5358 5359	023746 023750 023754 023760	001405 010537 010337 104063	001126 004600		BEQ MOV MOV ERROR	69\$ R5,3#\$BDDAT R3,3#REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	
5361 5362 5363	023762			69\$:	· *CHANG	F SAVED REGISTERS	TO EXPECTED VALUES	
5364 5365	023762	004037	041270		JSR RHWC			
5359 5359 5359 5359 5359 5359 5359 5369 5377 5377 5377 5377 5377 5377 5377 537	023765 023766 023770 023772 023776 024000 024002	004037 002272 000000 004037 002274 004544 004037	041270		O JSR RHBA	RO, 0#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA MOV REINTO+<260.*2> INTO SAVED RHBA SAVED REGISTER TO CHANGE DATA MOV 1 INTO SAVED RHDST	
5371 5372 5373	024002 024006 024010	004037 002304 000001	041270		JSR RHDST 1	RO, a#FILLRE	MOV 1 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA	
5375 5376 5377					**COMPAI **WITH	RE REGISTER BEFOR REGISTERS AFTER C	RE READ HEADER AND DATA	
5378	024012	004037	042354		JSR	RD, a #COMREG	; COMPARE SAVED REGISTERS WITH	

ZRJIA.	PII	133	WRITE/R	EAD HEAD	DER AND D	DATA (0'S	5)		
5380 5381 5382 5383 5384 5385	024016 024020 024022 024024 024026	004612 002354 00022 024030 024034				SAVERE WC 18. 5%			PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
5387 5388 5389	024030 024032	104031 000207			5\$:	ERROR RTS	31 PC		READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD
5390 5391 5392									READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
5394 5395 5396						*NOW R	EAD IN	TO BUFFER I	WILL BE CHECKED TO SEE
5397	024034			-	<b>6\$</b> :				
55555555555555555555555555555555555555	024034 024040 024042 024044 024046 024050	004037 002470 003534 000404 024052 024056	043404			JSR WRFROM REINTO 260. 7\$ 10\$	RO, 3#	COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 260. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
5406 5407 5408 5409	024052	104032 000207			7\$:	ERROR RTS	32 PC		WRITE HEADER AND DATA FOLLOWED BY A READ HEADER AND DATA GAVE A READ ERROR ERROR MAY BE IN READ OR WRITE
5410	חסשחבנ				100.				; ERROR MAY BE IN READ OR WRITE

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 119 DZRJIA.P11 T33 WRITE/READ HEADER AND DATA (0'S)

	5413								*******		
	5415					*TÊŜT		READ DATA (0'S)			
	5417 5418					*	THIS TE	ST READS DATA WE	RITTEN BY THE PREVIOUS TEST IS FILLED WITH ALL DS THEN ALL REGISTERS SAVED IS GIVEN PRED FOR PROPER VALUES ITO' BUFFER IS CHECKED		
	5419					*	THE CON	MAND IS FILLED.	THEN ALL REGISTERS SAVED		
	5422					*	READ DA	TA INTO READ IN	ITO' BUFFER IS CHECKED		
	5424	024056	000004			†\$***** †\$*34:	******** SCOPE	**********	*********		
•	5424 5425 5426 5427 5428	024026 024060 024064	012706	001000	004604		MOV	#STACK SP #34, 2#TSTNM	RESET STACK SAVE TEST NUMBER		
	5429 5430	024072	004737	041366			JSR	PC, @#CLDISK	SET R1-RHCS1, R2-RHCS2		
	5431 5432								;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER		
	5433						;*FILL	WRITE FROM BUFFE	R WITH EXPECTED DATA		
	5436 5437 5438	024076	004037 002470 000400	041236			JSR WRFROM	RO, 0#CLAREA	CLEAR 256. WORDS, FROM WRFROM STARTING FROM WRFROM 256. WORDS		
	5439	024104 024104 024106	000400				256.		;256. WORDS ;FILL WITH O		
	5440						· ¥NOU T	HE READ DATA COM	MAND WILL BE FILLED		
	442 5443 5444						, 1104	THE KEAD DATA COIL			
	5445 5446 5447	024110	004037	043340		DUTE	JSR D	RO, @#RUN	;SETUP TO RUN FOR DATA COMMAND ;CYLINDER D		
	5448 5449	024116 024117 024120	000 000 177400			.BYTE	0		SECTOR D TRACK D WORD COUNT = 256.		
	450	024122	003534				REINTO		BUS ADDRESS STARTING ADDRESS OF DATA		
	5452 5453	024124	000000				0		DIFFED - DETATO		
	5455	024126	014000				ECI!FMT	22	: INHIBIT ECC CORRECTION		
	5457 5458	024130	002446				READAT	:READ	;DO NOT INHIBIT BUS ADDRESS INCREMENT ;16 BITS PER WORD FORMAT ;16 BITS PER WORD FORMAT ;INHIBIT ECC CORRECTION ;DO NOT INHIBIT HEADER COMPARE ;GET READY TO DO A READAT DATA WITH 70 IN RHCS1		
	5459 5460										
	5462	021122	0011022	0115011					R COMPARISON AFTER READ DATA COMMAND	3	
	3453 3453 3455 3455 3455 3455 3455 3455	024132 024136 024140	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED		
	5466								THE REGISTERS ARE SAVED		

MAINDEC	-11-DZRJ	II-A, RPC	14/5/6 FL	UNCT. CONT. TS	T-PT 1	M14 MACY11 27(655)		SE0 0180
	P11 024142	000022	READ DA	TA (0'5)	18.		; NUMBER OF REGISTERS ; SAVED = 18.	
5469 5470 5471	024144	004737	041446		JSR	PC, D#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1	
5473 5474	024150	104400	066402		TYPE	, CPHALT	THE FIRST SET OF BITS DON'T = 1	
7890-123+567890-123+567890-123+567 55555555555555555555555555555555555	024156	013777	004606	156102	MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
5483 5484 5485	024164	013746 052716	002446		MOV BIS	#GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH TO IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED	
5487 5488	024174	012677	156100		MOV	(SP)+, DRHCS1	GO WITH  ;70 IN RHCS1 FOR READ DATA	
5490 5491 5492	024200	011100 011305			MOV	aR1,R0 aR3,R5	: WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION :SAVE RHDS1 DURING ABOVE OPERATION	
5493 5494 5495 5496 5497 5498 5499	024204 024206 024210 024212 024214	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
5501 5502 5503					:*COMPA :*RO AN	RE CONTENTS OF RID RS IMMEDIATELY	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
5504 5505 5506 5507	024216 024222 024226 024232	013746 052716 011637 022600	002446 004101 001124		MOV BIS MOV CMP	a#READAT,-(SP) #IE!GO!DVA,(SP) (SP),a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA	
5499 55001 55003 55500 55500 55500 55500 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 55510 5	024234 024236 024242 024246	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	64\$ RO, a*\$BDDAT R1, a*REGADR 21	SAVE COMMAND INCLUDE IE:GO:DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE:GO:DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE:GO:DVA SHOULD BE SET :SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1	
5514 5515 5516	024520 054524 054560	012746 011637 022605	010500 001124	64\$:	MOV MOV CMP	#MOL!DPR!VV(SP (SP), 0#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV	
5518 5519 5520	024262 024264 024270	001405 010537 010337	001126		BEQ MOV MOV	66\$ R5,0#\$BDDAT R3,0#REGADR	BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1	

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T34 READ DATA (D'S)

552 552 552	1 024274 2 024276	104063		66\$:	ERROR	63	; DURING ABOVE OPERATION ONLY ; MOL! DPR! VV SHOULD BE SET
552 552	5				;*NOW (	CHANGE SAVED REGI	STERS TO EXPECTED VALUES
552 552	7 024276 8 024302	004037	041270		JSR RHWC	RO, @#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE
553 553	0 024306	004037	041270		JSR RHBA	RO, D#FILLRE	MOV REINTO+(256. *2) INTO SAVED RHBA SAVED REGISTER TO CHANGE
55555555555555555555555555555555555555	7 024276 8 024302 9 024304 0 024306 1 024312 2 024314 3 024316 4 024324	004037 002272 000000 004037 002274 004534 004037 002304 000001	041270		JSR RHDST 1	<256.*2> RO, 0#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA MOV REINTO+(256.*2) INTO SAVED RHBA SAVED REGISTER TO CHANGE DATA MOV 1 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA
553 553 553	7		•		*NOW C	OMPARE REGISTERS COMMAND	BEFORE READ DATA WITH
554	024326	004037	042354		JSR	RO, 0#COMREG	COMPARE SAVED REGISTERS WITH
5555 5555 5555 5555 5555 5555	3 024332 4 024334 5 024336 6 024340 7 024342	004612 002354 000022 024344 024350			SAVERE WC 18. 18.		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 1\$ ON ERROR RETURN TO 2\$ ON NO ERROR
554 555	0 024344	104033		1\$:	ERROR RTS	33 PC	READ DATA CAUSED IMPROPER REGISTER
555 555 555 555	233				*NOW R	EAD INTO BUFFER I	GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND WILL BE CHECKED TO SEE THAT READ
555 555	024350			2\$:			
5558 5559 55561 5563 5564 5565 5565 5568 5569	024350 9 024354 0 024356 1 024360 2 024362 3 024364	004037 002470 003534 000400 024366 024372	043404		JSR WRFROM REINTO 256. 3\$	RD, a#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 256. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR
556 556	6 024366 7 024370	104034 000207		3\$:	ERROR RTS	34 PC	READ DATA COMMAND READ INCORRECTLY
556	9 024372			45:			

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MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T34 READ DATA (D'S)

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WRITE/READ DATA (1'S & 125252)
                                                                                                       THIS TEST GIVES A WRITE DATA COMMAND FRO CYLINDER OF TRACK D. SECTOR D. KEYS D. 200 WORDS OF ALL ONES THIS SECTOR IS FORMATED BY PREVIOUS TEST THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN SAME CYLINDER. TRACK, SECTOR, KEYS WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH 200 ONES AND 56 125252
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATA
                                                                                                        THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE
                                                                                                        THEN READ INTO BUFFER IS FILLED WITH 200 OF ZEROS AND 56 OF 377, WRITE FROM BUFFER IS FILLED WITH 200 ONES AND 56 OF 377.
THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED
                                                                                                        GO IS GIVEN
                                                                                                        ALL REGISTERS ARE CHECKED READ DATA IS CHECKED
                                                                                      024372
024374
024400
                                                                                                                         #STACK.SP
#35,0#TSTNM
                                                                                                        VCM
                                                                                                                                                              :RESET STACK
:SAVE TEST NUMBER
                                                                                                       MOV
                                                                   004604
                               004737
              024406
                                                                                                                                                               :SET RI-RHCS1. R2-RHCS2
                                                                                                                          PC. @#CLDISK
                                                                                                                                                              R3-RHDS1, R4-RHER1
GIVE RH-11 INITIALIZE
SETUP UNIT NUMBER
                                                                                                       :*NOW FILL WRITE FROM BUFFER -200 OF 1'S AND 56 OF 125252
             024418
024416
024420
024420
224420
                               004037
002470
000310
177777
                                                                                                                                                             CLEAR 200. WORDS, FROM WRFROM
STARTING FROM WRFROM
200. WORDS
FILL WITH -1
                                                  041236
                                                                                                                          RO, D#CLAREA
                                                                                                        WRFROM
                                                                                                        200.
                                                                                                                                                             ;CLEAR 56. WORDS, FROM WRFROM+(200.*2)
:STARTING FROM WRFROM+(200.*2)
:56. WORDS
;FILL WITH 125252
             024434
054435
054434
054434
                               004037
003310
000070
125252
                                                                                                        JSR RO, D#CLAREA WRFROM+(200.*2)
                                                  041236
                                                                                                       **NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS **WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS **CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER
```

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.PII T35 WRITE/READ DATA (1'S & 125252) MACY11 27(655) 30-MAR-76 22:59 PAGE 123 054446 054445 054445 054436 004037 003534 000310 177777 :CLEAR 200. WORDS, FROM REINTO STARTING FROM REINTO 200. WORDS :FILL WITH -1 JSR REINTO 200. 041236 RO. J#CLAREA -1 024450 024454 024456 024450 ;CLEAR 56. WORDS, FROM REINTO+(200.*2);STARTING FROM REINTO+(200.*2);56. WORDS;FILL WITH 125252 004037 004354 000070 125252 JSR RO. 2#CLAREA REINTO+(200.*2) 041236 56. 125252 :*NOW WRITE DATA COMMAND WILL BE LOADED SETUP TO RUN FOR DATA COMMAND
CYLINDER 0
SECTOR 0
TRACK 0
WORD COUNT = 200.
BUS ADDRESS
STARTING ADDRESS OF DATA 024462 024466 024470 024471 024472 024474 004037 000000 000 000 177470 002470 JSR 000 043340 RO. 2#RUN -200. WRFROM BUFFER = WRFROM
DO NOT INHIBIT BUS ADDRESS INCREMENT
16 BITS PER WORD FORMAT
DO NOT INHIBIT ECC CORRECTION
DO NOT INHIBIT HEADER COMPARE
GET READY TO DO A WRIDAT
WRITE DATA WITH 60 IN RHCS1 024476 024502 WRIDAT :*NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE DATA :SAVE REGISTERS
:RHWC IS THE FIRST REGISTER SAVED
:STARTING ADDRESS OF WHERE
:THE REGISTERS ARE SAVED
:NUMBER OF REGISTERS
:SAVED = 18. 024504 024510 024512 004037 002272 004612 041534 RO. D#SAVER RHWC SAVERE 0000055 024514 CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 024516 004737 JSR 041446 PC. 3#CHECKT .CPHALT 024522 104400 066402 TYPE STOP 024525 000000 HALT amphage, arpage ; set rpo4 vector address :To 'TIME1' IF P-CLOCK IS PRESENT :OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT :TIME' WILL ONLY SAVE :CURRENT CYLINDER ADDRESS :AND LOOK AHEAD REGISTERS 024530 013777 004606 155530 MOV

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPC	04/5/6 FUNCT. CO WRITE/READ DAT	NT. TST-F	PT 1 125252)	D15	30-MAR-76 22:59 PAGE 124	SE0 0184
	024536	013746 052716	002442		MOV BIS	#GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT	
5582 5583 5584 5565	024546 024552 024554	012677 011100 011305	155526		MOV MOV	(SP)+, DRHCS1 DR1,RO DR3,R5	GO WITH ;60 IN RHCS1 FOR WRITE DATA ;WITH INTERRUPT ENABLED ;SAVE RHCS1 DURING ABOVE OPERATION ;SAVE RHDS1 DURING ABOVE OPERATION	
5695 5697 5698 5689							O MICRO SEC, ONE SECTOR=760 MICRO SEC	
5679012234556789901233455699555569990122345697899012234569990122345699901223456999012234569990122345699012234569901223456990122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900122345699001223456990012234569900000000000000000000000000000000000	024556 024560 024564 024564 024566	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
5697 5698 5698					:*COMPA :*RO AN		HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
5700 5701 5702 5703	024570 024574 024600 024604	013746 052716 011537 022600	002442 004101 001124		MOV BIS MOV CMP	a*WRIDAT,-(SP) *IE!GO!DVA.(SP) (SP).a*\$GDDAT (SP)+.RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA	
5705 5706 5707 5708	024610 024614 054614 054606	001405 010037 010137 104021	001126		BEG MOV MOV ERROR	64\$ RO. 0#\$BDDAT RI. 0#REGADR 21	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY	
5710 5711 5712 5713	024622 024625 024632	012746 011637 022605	010500 001124	64\$:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).a#\$GDDAT (SP)+,RS	SAVE BITS SET DURING OPERATION IN RHDS1	
5714 5715 5716 5716 5717	024634 024636 024642 024646	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	66\$ R5,3#\$BDDAT R3,3#REGADR 63	COMMAND AND IE!GO!DVA SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS! SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS! DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	
5719 5720	024650			65\$:	. *NOU C			2 W
5709 5710 5711 5712 5713 5714 5715 5719 5719 5721 5721 5722 5723 5724 5725 5726 5727 5728 5729 5731	024650 024654 024656 024660 024664 024666 024670 024674	004037 002272 000000 004037 002274 003310 004037 002304 000001	041270 041270 041270		JSR RHWC O JSR RHBA	RO, D#FILLRE	:MOV D INTO SAVED RHWC :SAVED REGISTER TO CHANGE :DATA :MOV WRFROM+<200.*2> INTO SAVED RHBA :SAVED REGISTER TO CHANGE :DATA :MOV I INTO SAVED RHDST :SAVED REGISTER TO CHANGE :DATA	K.

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 125 DZRJIA.P11 T35 WRITE/READ DATA (1'S & 125252)

5732 5733 5734 5735					:*NOW C :*AFTER	OMPARE REGISTERS	BEFORE WRITE DATA WITH REGISTERS
5735 5737	024700	004037	042354		JSR	RO, D#COMREG	COMPARE SAVED REGISTERS WITH
5739 5739 5740 5742 5743 5744	024704 024706 024710 024712 024714	004612 002354 000022 024716 024722			SAVERE WC 18. 18		PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 1B. REGISTERS TO BE COMPARED RETURN TO 1% ON ERROR RETURN TO 2% ON NO ERROR
5745 5746 5747 5747	024716 024720	104035 000207		13:	ERROR RTS	35 PC	WRITE DATA COMMAND CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE
5749 5750							RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
5750 5751 5752					;*NOW W	RITE FROM BUFFER	WILL BE CHECKED FOR NO CHANGE
5754	024722			25:			
5753 5755 5755 5756 5758 5758 5761 5761 5763	024722 024726 024730 024732 024734 024736	004037 003534 002470 000400 024740 024744	043404		JSR REINTO WRFROM 256. 3%	RO, 3#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM REINTO TEST DATA STARTS FROM WRFROM 255. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR
5763 5764 5765 5766 5767	024740	104036		3\$:	ERROR RTS	36 PC	:WRITE DATA COMMAND CHANGED :WRITE FROM BUFFER
5767 5767					; *NOW A	READ DATA COMMAN	ND WILL BE GIVEN
5769 5720					;*FILL	READ INTO BUFFER	WITH 200 ZEROS AND 56 OF 377
5771	024744			45:			
5773 5774 5775	024744	004737	041366		JSR	PC.@#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE
5768 5769 5770 5771 5773 5774 5776 5776 5779 5781 5783 5785	024750 024754 024756 024760	004037 003534 000310 000000	041236		JSR REINTO 200.	RO, D#CLAREA	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 200. WORDS. FROM REINTO STARTING FROM REINTO 200. WORDS FILL WITH 0
5782 5783 5784 5785	024762 024766 024770 024772	004037 004354 000070 000377	041236		JSR REINTO+ 56. 377	RO. 0#CLAREA (200. *2)	;CLEAR 56. WORDS, FROM REINTO+<200.*2> ;STARTING FROM REINTO+<200.*2> ;56. WORDS ;FILL WITH 377

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T35 WRITE/READ DATA (1'S & 125252) 5785 5787 5788 5789 5790 5791 5793 5795 5795 5798 5798 5798 5798 5800 :*FILL WRITE FROM BUFFER WITH 200 ONES AND 56 OF 377 004037 002470 000310 177777 024774 :CLEAR 200. WORDS, FROM WRFROM STARTING FROM WRFROM 200. WORDS ;FILL WITH -1 041236 RO. D#CLAREA 025000 025002 025004 WRFROM 200. -1 900500 910550 910550 ;CLEAR 56. WORDS, FROM WRFROM+<200.+2> ;STARTING FROM WRFROM+<200.*2> ;56. WORDS ;FILL WITH 377 004037 003310 000070 000377 JSR RO. D#CLAREA WRFROM+(200.*2) 041236 56. 377 :*NOW FILL COMMAND 025020 025024 025026 025027 025030 025032 004037 000000 000 000 177470 003534 ;SETUP TO RUN FOR DATA COMMAND :CYLINDER 0 :SECTOR 0 :TRACK 0 :WORD COUNT = 200. JSR 043340 RO. D#RUN 000 -200. REINTO BUS ADDRESS STARTING ADDRESS OF DATA ;STARTING HODRESS OF DATA
;BUFFER = REINTO
;DO NOT INHIBIT BUS ADDRESS INCREMENT
;15 BITS PER WORD FORMAT
;INHIBIT ECC CORRECTION
;DO NOT INHIBIT HEADER COMPARE
;GET READY TO DO A READAT
;READ DATA WITH 70 IN RHCS1 025034 000000 ECI!FMT22 025040 READAT 302446 : *NOW SAVE REGISTERS FOR COMPARISON AFTER READ DATA COMMAND :SAVE REGISTERS ;RHWC IS THE FIRST REGISTER SAVED :STARTING ADDRESS OF WHERE :THE REGISTERS ARE SAVED ;NUMBER OF REGISTERS ;SAVED = 18. 025042 025046 025050 004037 002272 004612 041534 RO. D#SAVER RHWC SAVERE 025052 000022 CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 004737 025054 JSR PC. D#CHECKT 041446 025060 104400 066402 TYPE , CPHALT 025064 STOP 000000 HALT :SET RPO4 VECTOR ADDRESS D#RP4VEC. DRPVEC 025066 013777 004606 155172 MOV TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS

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MAINDEC DZRJIA.	-11-DZRJ	I-A RPO	4/5/6 FUNCT. COI WRITE/READ DATA	NT. TST-P	T 1 125252)	G15	30-MAR-76 22:59	PAGE 127		SEQ 0187
							; AND LOOK AHEAD F	REGISTERS		
5842 5843 5844 5845 5845	025074 025100 025104	013746 052716 012677	002446 000101 155170		MOV BIS MOV	@#READAT(SP) #GO!IE,(SP) (SP)+,@RHCS1	GET READY TO MOVINGET READY TO SET PRABLE INTERRUPT GO WITH	VE COMMAND T 'GO' AND T R READ DATA ENABLED NG ABOVE OPERATION NG ABOVE OPERATION	\$	
5948 5849 5850 5851	02511C 025112	011100			MOV MOV	aR1,R0 aR3,R5	; WITH INTERRUPT E SAVE RHCS1 DURIN SAVE RHDS1 DURIN	NABLED NG ABOVE OPERATION NG ABOVE OPERATION	8	
5852 5853 5854 5855 5856 5857 5858	025114 025115 025120 025122 025124	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT WAIT FOR RHCS1 F WAIT FOR RDY BIT ALLOW 9080 MICRO RDY MUST SET BET 690 AND 17470 MI	T TO SET REGISTER IN RHCS1 REGISTER SECONDS WEEN CRO SECONDS		
5860 5861 5861					*COMPA	RE CONTENTS OF RED RS IMMEDIATELY	HCS1 AND RHDS1 ALR AFTER GO	READY SAVED IN		*
5963 5864 5865 5866	025126 025132 025136 025142	013746 052716 011637 022600	002446 004101 001124		MOV BIS MOV CMP	a*READAT,-(SP) *IE!GO!DVA,(SP) (SP),a*SGDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE GO DV SAVE FOR PRINTOU DURING ABOVE OPE	RATION ONLY IE!GO!DVA		
5868 5869 5870 5871	025144 025146 025152 025156	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	67\$ RO,3#\$BDDAT R1,3#REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPE	RHCS1 RATION ONLY		
5873 5874 5875	025160 025164 025170	012746 011637 022605	010500 001124	67\$:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).0#\$GDDAT (SP)+,R5	SAVE FOR PRINTOU DURING ABOVE OPE	S SET DURING OPERATION T RATION ONLY MOL!DPR!VV	IN RHDS1	
5877 5878 5879 5880	025172 025174 025200 025204	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	69\$ R5, a # \$BDDAT R3, a # REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPE	RHCS1 RATION ONLY 0!DVA SHOULD BE SET S SET DURING OPERATION T RATION ONLY MOL!DPR!VV  RHDS1 RATION ONLY D BE SET		
5882 5883 5884	302520			69\$:	: *CHANGE		TO EXPECTED VALUE			
0-109+5-4-++++++++++555555555555555555555555	025206 025212 025214 025216 025222 025224 025226 025232	004037 002272 000000 004037 002274 004354	041270 041270		JSR RHWC D JSR RHBA REINTO+	RO. @#FILLRE	:MOV D INTO SAVED :SAVED REGISTER TO :DATA :MOV REINTO+<200. :SAVED REGISTER TO	RHWC O CHANGE *2> INTO SAVED RHBA O CHANGE		
5893	025235	004037	041270		JSR RHDST	RO, D#FILLRE	:DATA :MOV 1 INTO SAVED ;SAVED REGISTER TO	RHDST 0 CHANGE		

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 128 DZRJIA.P11 T35 WRITE/READ DATA (1'S & 125252)

5894	025234	000001			;DATA		
5995 5996 5997 5998 5999					*COMPA *WITH	RE REGISTERS BEF REGISTERS AFTER	ORE READ DATA COMMAND
5700	025236	004037	042354		JSR	RD, 2#COMREG	COMPARE SAVED REGISTERS WITH
5902 5903 5904 5905 5905 5908 5909	025242 025244 025246 025250 025252	004612 002354 000022 025254 025260			SAVERE WC 18. 5%		;COMPARE SAVED REGISTERS WITH ;PRESENT VALUE ;GOOD DATA SAVED IN 'SAVERE' ;TEST DATA STARTING FROM 'RHWC' ;18. REGISTERS TO BE COMPARED ;RETURN TO 5% ON ERROR ;RETURN TO 6% ON NO ERROR
5909 5909 5910 5912	025254 025256	104033 000207		5\$:	ERROR RTS	33 PC	READ DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE RECEIVED DATA GIVES WHAT WAS TO AFTER COMMAND
5913 5914 5915					;*NOW R	EAD INTO BUFFER	IS CHECKED FOR GOOD READ
5916	025260			<b>6</b> \$:			
	025260 025264 025266 025270 025272 025274	004037 002470 003534 000400 025276 025302	043404		JSR WRFROM REINTO 256. 7% 10%	RO, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 256. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
5925 5926 5927	025276 025300	104034		7\$:	ERROR RTS	34 PC	:INCORRECT DATA AFTER :WRITE DATA FOLLOWED BY A ;READ DATA
5929 5930 5931 5932	025302			10\$:			, NERO DATA

MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T36 WRITE/READ DATA (125252) DZRJIA.P11 3+5-5;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123+5-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6;990-123-6; *TEST 36 WRITE/READ DATA (125252) THIS TEST GIVES A WRITE DATA COMMAND FOR CYLINDER C TRACK D. SECTOR D. KEYS D. 256 WORDS OF 125252 THIS SECTOR IS FORMATED BY PREVIOUS TEST THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN SAME CYLINDER, TRACK, SECTOR, KEYS WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH 256 OF 125252 THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATI * × THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE THEN READ INTO BUFFER IS FILLED WITH 256 OF ZEROS WRITE FROM BUFFER IS FILLED WITH 256 OF 125252 THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN ALL REGISTERS ARE CHECKED READ DATA IS CHECKED ; * 025302 025304 025310 000004 012706 012737 SCOPE #STACK.SP #36.2#TSTNM RESET STACK SAVE TEST NUMBER 004604 VOM :SET R1-RHCS1, R2-RHCS2 :R3-RHDS1, R4-RHER1 :GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER 025316 004737 **JSR** 041366 PC. DISK :*NOW FILL WRITE FROM BUFFER - 256 OF 125252 025322 025326 025330 025332 CLEAR 256. WORDS, FROM WRFROM STARTING FROM WRFROM 256. WORDS FILL WITH 125252 004037 JSR WRFROM RO. D#CLAREA 041236 000400 **NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA AS **WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS **CAN BE MADE TO DETERMINE THAT WRITE DID NOT CHANGE BUFFER CLEAR 256. WORDS, FROM REINTO STARTING FROM REINTO 256. WORDS FILL WITH 125252 025334 025340 025342 025344 004037 003534 000400 JSR REINTO 041236 RO. 2#CLAREA

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5987 5988 5989 5990 5991 : *NOW WRITE DATA COMMAND WILL BE LOADED 025346 025352 025354 025355 025356 025360 JSR 0 0 004037 SETUP TO RUN FOR DATA COMMAND CYLINDER O 043340 RO. D#RUN 5992 5993 5994 5995 5996 5997 5998 SECTOR 0 TRACK D WORD COUNT = 256. BUS ADDRESS 000 BYTE. 177400 -256. WRFROM STARTING ADDRESS OF DATA
BUFFER = WRFROM
DO NOT INHIBIT BUS ADDRESS INCREMENT 025362 000000 5000 5000 5003 5004 5005 5005 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE FMT22 GET READY TO DO A WRIDAT ; WRITE DATA WITH 60 IN RHCS1 025366 002442 WRIDAT :*NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE DATA 6008 025370 025374 025376 004037 002272 004612 SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED JSR RHWC 041534 RO. D#SAVER STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18. SAVERE 025400 000055 18. CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 025402 004737 041446 JSR PC. D#CHECKT , CPHALT CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 025406 104400 066402 TYPE 025412 HALT 000000 SET RPO4 VECTOR ADDRESS
TO 'TIME1' IF P-CLOCK IS PRESENT
OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT
'TIME' WILL ONLY SAVE
CURRENT CYLINDER ADDRESS 025414 013777 004606 154644 MOV J#RP4VEC. JRPVEC AND LOOK AHEAD REGISTERS GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT #GO!IE,(SP) 025422 013746 000101 VOM BIS GO WITH 012677 025432 154642 MOV (SP)+, DRHCS1 :60 IN RHCS1 FOR WRITE DATA :WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION ;SAVE RHDS1 DURING ABOVE OPERATION 025436 MOV MOV :*ONE REVOLUTION=16670 MICROSEC, ONE SECTOR=760 MICROSEC

10

K15

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T36 WRITE/READ DATA (125252) MACY11 27(655) 30-MAR-76 22:59 PAGE 131

645:

665:

025506 025512 025516

025534

025534 025540

025542

025550

025564

025570 025572 025574

6079

6080

6089

6090

6093 6093

013746 052716 011637

055600

001405

010137

012746

022505

001405 010537 010337

104063

004037 002272 000000

004037

002274

003470

004037

000001

004037

002354 002354 000022

002442

001124

921100

004600

010500

001124

004500

041270

041270

041270

042354

;WAIT FOR RDY BIT TO SET ;WAIT FOR RHCS1 REGISTER ;WAIT FOR RDY BIT IN RHCS1 REGISTER ;ALLOW 9080 MICRO SECONDS ;RDY MUST SET BETWEEN ;690 AND 17470 MICRO SECONDS RHCS1 RDY

: *COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN *RO AND RS IMMEDIATELY AFTER GO

a#WRIDAT,-(SP)
#IE!GO!DVA,(SP)
(SP).a#\$GDDAT
(SP)+,RO ;SAVE COMMAND ;INCLUDE IE!GO!DVA BIS SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE:GO!DVA AND COMMAND SHOULD BE SET MOV -CMP 64\$ RO, D#\$BDDAT R1, D#REGADR BEQ BRANCH IF GOOD VOM BAD DATA FAILING REGISTER RHCS1
DURING ABOVE OPERATION ONLY
COMMAND AND IE!GO!DVA SHOULD BE SET
:SAVE BITS SET DURING OPERATION IN RHDS1
SAVE FOR PRINTOUT
DURING ABOVE OPERATION ONLY MOL!DPR!VV
SHOULD BE SET
BRANCH IF GOOD MOV ERROR #MOL!DPR!VV.-(SP) (SP).a#\$GDDAT (SP)+,R5 MOV MOV CMP 66\$ R5, a#\$BDDAT R3, a#REGADR 63 BEQ MOV BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOV ERROR MOL!DPR!VV SHOULD BE SET

:*NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE

MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA JSR RHWC RO, D#FILLRE n JSR RO, D#FILLRE :MOV WRFROM+(256.*2) INTO SAVED RHBA RH3A SAVED REGISTER TO CHANGE WRFROM+<256.*2> JSR RO, 0#FILLRE :DATA MOV 1 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA RHDST

; *NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS

*AFTER COMMAND

JSR RO. D#COMREG :COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' SAVERE 18. REGISTERS TO BE COMPARED RETURN TO 1% ON ERROR

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPC	94/5/6 FUNCT. CON WRITE/READ DATA	NT. TST-H	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 132		SE0 0192
	025600	025606			28		; RETURN TO 2% ON NO ERROR		
6095 6097 6099 6099	025602	104035		1\$:	ERROR	35 PC	WRITE DATA COMMAND CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD		
6101							RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND		
6104					; *NOW !	NRITE FROM BUFFER	WILL CHECKED FOR NO CHANGE		
£106	025606			2\$:					
567899012374567890112374567890122225 5666666666666678901123745666666666666666666666666666666666666	025606 025612 025614 025616 025620 025622	004037 003534 002470 000400 025624 025630	043404		JSR REINTO WRFROM 256. 3\$ 4\$	RD, a # COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM REINTO TEST DATA STARTS FROM WRFROM 256. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR		
6115 6116 6117	025624	104036 000207		3\$:	ERROR RTS	36 PC	;WRITE DATA COMMAND CHANGED ;WRITE FROM BUFFER		
6119					**NOW F	READ DATA COMMA	ND WILL BE GIVEN		
6155	025630			45:	,			ý	
6123 6124 6125 6126	025630	004737	041366		JSR	PC, a#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE	- 13	
612289012334567890123456133344444561444561444561445614456144	025634 025640 025642 025644	004037 003534 000400 000000	041236		JSR REINTO 256.	RO, 3#CLAREA	GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 256. WORDS. FROM REINTO STARTING FROM REINTO 256. WORDS FILL WITH 0		
6133					;*FILL	WRITE FROM BUFFE	R WITH 256 OF 125252		
6136 6137 6138 6139 6140	025646 025652 025654 025656	004037 002470 000400 125252	041236		JSR WRFROM 256. 125252	RO, 3#CLAREA	CLEAR 256. WORDS, FROM WRFROM STARTING FROM WRFROM 256. WORDS FILL WITH 125252		
6141 6142 6143					;*NOW F	ILL COMMAND			
6145 6146 6147 6148	025660 025664 025666 025667	004037 000000 000 000	043340	BYTE BYTE	JSR O O	RO, D#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D		

:*COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN *RO AND RS IMMEDIATELY AFTER GO

SEQ 0193

MAINDEC DZRJIA.	-11-DZRJ	I-A, RP0	14/5/6 FUNCT. WRITE/READ	CONT. TST-P	T 1	N15		PAGE 134	į.	SEQ 0194
	025766 025772 025776 026002	013746 052716 011637 022600	002446 004101 001124		MOV BIS MOV CMP	J#READAT,-(SP) #IE!GO!DVA.(SP) (SP),J#\$GDDAT (SP)+,RO	:SAVE COMMAND :INCLUDE IE:GO!DVA :SAVE FOR PRINTOUT :DURING ABOVE OPER	RATION ONLY IE!GO!DVA		
37556?8901103756?890103756?890103 200000011103756?890100000000000000000000000000000000000	026004 026006 026012 026016	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	67\$ RD, 0#\$BDDAT R1, 0#REGADR	AND COMMAND SHOUL BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPER COMMAND AND IE: GO	RATION ONLY IE:GO:DVA  RHCS1 RATION ONLY D:DVA SHOULD BE SET SET DURING OPERATION RATION ONLY MOL!DPR:VV  RHDS1 RATION ONLY DE SET		
6214 6215 6216	056030 056054 056050	012746 011637 022605	010500 001124	67\$:	MOV MOV CMP	#MOL!DPR!VV(Si (SP).a#\$GDDAT (SP)+,R5	SAVE FOR PRINTOUT DURING ABOVE OPER	SET DURING OPERATION RATION ONLY MOL!DPR!VV	IN RHDS1	
6219 6220 6221	026032 026034 026040 026044	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	69\$ R5,2#\$BDDAT R3,2#REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPER	RHDS1 RATION ONLY		•
6223	026046			69\$:						
6226							5 TO EXPECTED VALUE			
6227	026052	004037 002272 000000	041270		JSR RHWC	RO, 0#FILLRE	MOV D INTO SAVED	RHWC CHANGE		
6230	025046 025052 026054 026056 025062	004037 002274	041270		D JSR RHBA	RO, D#FILLRE	DATA MOV REINTO+(256.*	2> INTO SAVED RHBA		
6232 6233 6234 6235	026064 026066 026072 026074	004534 004037 002304 000001	041270		REINTO+ JSR RHDST	<256.*2> RO, 0#FILLRE	:DATA :MOV 1 INTO SAVED :SAVED REGISTER TO :DATA	RHDST		
6237 6238 5239					; *COMPAI ; *WITH	RE REGISTERS BEFO REGISTERS AFTER (	ORE READ DATA COMMA	ND		
6240	026076	004037	042354		JSR	RD, @#COMREG	COMPARE SAVED REG	ISTERS WITH		
6243 6244 6245 6246 6247	026102 026104 026106 026110 026112	004612 002354 000022 026114 026120			SAVERE WC 18. 5%		COMPARE SAVED REG PRESENT VALUE GOOD DATA SAVED IN TEST DATA STARTING 18. REGISTERS TO RETURN TO 5% ON EN	N 'SAVERE' G FROM 'RHWC' BE COMPARED RROR O ERROR		
355578901237555555555555555555555555555555555555	026114	104033 000207		5\$:	ERROR RTS		READ DATA CAUSED REGISTER CHANGE GOOD DATA GIVES WE RECEIVED DATA GIVE AFTER COMMAND			
6255 6256					; *NOW R		S CHECKED FOR GOOD			

w	>>>					B16	
DZRJIA.	-11-DZRJ Pli	I-A. RPO	WRITE READ DATA	125252	)	MACY11 27(655)	30-MAR-76 22:59 PAGE 135
5257	026120			55:			
	026134 026136 026136 026136 026136	004037 002470 003534 000400 026136 026142	043404		JSR WRFROM REINTO 256. 7% 10%	RO, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFPOM TEST DATA STARTS FROM REINTO 256. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
5255 5257 5259	026140	104034		75:	ERROR RTS	34 PC	INCORRECT DATA AFTER
5270 5271	026142			105:			:READ DATA

- SE1 0195

PII	137	WRITE	READ DAT	A (052525	5)	٠			
				*TEST		WRITE READ	ATA (052525)		
				******	THEN AL	L REGISTERS A	RITE DATA COMMAN EYS D, 200 WORD ITED BY PREVIOUS IND IS GIVEN FOR SECTOR, KEYS ID READ INTO BUF OF 377 IND IS LOADED EX IVED AND THEN GO RE COMPARED TO ROM BUFFER IS C	CHECK FOR IMP	PROPER
				*********	THEN RE AND 56 WORDS O THE COM GO IS G	MAND EXCEPT G	R IS FILLED WIT TE FROM BUFFER 6 WORDS OF D O IS LOADED, AL	H 200 IF ZERO IS FILLED WIT L REGISTERS A	S TH 200 RE SAVED
					ALL REG READ DA	ISTER ARE CHE TA IS CHECKED	CKED		
025142	000004			†:***** †\$137:	SCOPE	**********	*********	********	********
025142 025144 025150	000004 012706 012737	001000 000037	004604	13137.	MOV MOV	#STACK SP #37,3#TSTNM	RESET STACE	K NUMBER	
026156	004737	041366			JSR	PC.@#CLDISK	SET R1-RHC R3-RHDS1 GIVE RH-11 SETUP UNIT	S1, R2-RHCS2 R4-RHER1 INITIALIZE NUMBER	
					;*NOW F	ILL WRITE FROM	M BUFFER-200 OF	52525 AND 56	OF 377
026162 026166 026170 026172	004037 002470 000310 052525	041236			JSR WRFROM 200. 52525	RO, D#CLAREA	:CLEAR 200. :STARTING FF :200. WORDS :FILL WITH :		WRFROM
026174 026200 026202 026204	004037 003310 000070 000377	041236	•		JSR WRFROM+ 56. 377	RD.3#CLAREA <200.*2>	CLEAR 56. I STA SE. WORDS FILL WITH	NORDS, FROM WARTING FROM W	RFROM+(200.*2) RFROM+(200.*2)
					:*NOW R :*WRITE ;*CAN B	EAD INTO BUFFE FROM BUFFER S E MADE TO DETE	ER WILL BE FILLE 50 THAT AFTER A ERMINE THAT WRIT	ED WITH SAME I WRITE COMPAR TE DID NOT CH	DATA AS ISONS ANGE BUFFER

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		- 61	-	-
	EQ	_	٠	

MAINDEC DZRJIA.	-11-DZRJ P11	71-A. RPC	04/5/6 FL WRITE/F	UNCT. CON READ DATA	T. TST-P	Ţ 1	D16 MACY11 27(655)	30-MAR-76 22:59 PAGE 137
5325 5327 5329 6329	026206 026212 026216 026216	004037 003534 000310 052525	041235			JSR REINTO 200. 52525	RO, D*CLAREA	CLEAR 200. WORDS, FROM REINTO STARTING FROM REINTO 200. WORDS FILL WITH 52525
12559 12559 12559 12559 12559	026230 026230 026230	004037 004354 000070 000377	041235			JSR REINTO- 56. 377	RO. 0#CLAREA +<200. *2>	;CLEAR 56. WORDS, FROM REINTO+(200.#2);STARTING FROM REINTO+(200.#2);56. WORDS;FILL WITH 377
6336 6337 6339						;*NOW I	NRITE DATA COMMAN	D WILL BE LOADED
	026232 026236 026240 026241 026242 026244	004037 000000 000 000 177470 002470	043340		.BYTE	JSR 0 0 -200. WRFROM	RO, 3#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 0 SECTOR 0 TRACK 0 WORD COUNT = 200. BUS ADDRESS STARTING ADDRESS OF DATA
6347 6348 6349 6350	026246	000000				D FMT22		:DO NOT INHIBIT BUS ADDRESS INCREMENT :16 BITS PER WORD FORMAT :DO NOT INHIBIT ECC CORRECTION
6351 6352 6353 6354	026252	002442				WRIDAT	;WRITE	; DO NOT INHIBIT HEADER COMPARE ;GET READY TO DO A WRIDAT DATA WITH 50 IN RHCS1
6355 6356						;*NOW S	SAVE REGISTER FOR	COMPARISON AFTER WRITE DATA
6358 6359 6360	026252 026250 026254	004037 002272 004612	041534			JSR RHWC SAVERE	RO. 3#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
£363	026264	000022				19.		NUMBER OF REGISTERS ; SAVED = 18.
6365	026266	004737	041446			JSR	PC, @#CHECKT	
6367	026272	104400	066402			TYPE	.CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1
6369	026276	000000				HALT		STOP
5789012345557890123455789 533555555555890123777777777777777777777777777777777777	026300	013777	004606	153760		MOV	⊒#RP4VEC, ⊒RPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
6378 6379	026306	013746	002442			MOV	⊒#WRIDAT,-(SP)	;GET READY TO MOVE COMMAND

						E16		
MAINDEC DZRJIA.	-11-DZRJ P11	137 RPC	04/5/6 FUNCT. CO WRITE/READ DAT	NT. TST-F A (052525	1 7(	MACY11 27(655)	30-MAR-76 22:59 PAGE 138	SE0 0198
6390 5381	026312	052716	000101		BIS	#GO!IE,(SP)	GET READY TO SET 'GO' AND	
6382 6383	025316	012677	153756		MOV	(SP)+, DRHCS1	GO WITH GO WRITE DATA	
5384 5385 6386	026322 026324	011100 011305			MOV MOV	DR1.RO DR3.R5	GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :60 IN RHCS1 FOR WRITE DATA :AITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OFFRATION SAVE RHDS1 DURING ABOVE OPERATION	
5389 5389					;*ONE F	EVOLUTION=16670	MICROSEC, ONE SECTOR=750 MICROSEC	
	026326 026330 026332 026334 026336	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
5398 5399					;*COMPA ;*RO AN	RE CONTENTS OF R	HCS1 AND RHDS1 ALREADY SAVED IN	
6403 6403 6403 6401	025340 026344 026350 025354	013746 052716 011537 022600	002442 004101 001124		MOV BIS MOV CMP	a#WRIDAT,-(SP) #IE!GO!DVA.(SP) (SP).a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE!GO!DVA SHOULD BE SET PSAVE BITS SET DURING OPERATION IN RHDS1	
6406 6407 6408 6409 6410	026356 025360 025364 026370	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	64\$ RO, 3#\$BDDAT RI, 3#REGADR 21	BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY  COMMOND AND IF GO DVA SHOULD BE SET	
5411 5412 5413	026372 026376 026402	012746 011637 022605	010500 001124	645:	MOV MOV CMP	#MOL!DPR!VV(S (SP).3#\$GDDAT (SP)+,R5	P) :SAVE BITS SET DURING OPERATION IN RHDS1 :SAVE FOR PRINTOUT :DURING ABOVE OPERATION ONLY MOL!DPR!VV	
	026404 026415 026416	001405 010537 010337 104063	004600		BEQ MOV MOV ERROR	66\$ R5,3#\$BDDAT R3,3#REGADR 63	SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	
6420	026450			66\$:				
6423	חשניים	004027	041270				STERS TO EXPECTED VALUE	
6425	026424	002272	041270		JSR RHWC	RO, 3#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA	
6427	026430	004037	041270		JSR RHBA	RO, D#FILLRE	MOV WRFROM+<200.*2> INTO SAVED RHBA SAVED REGISTER TO CHANGE	
6430 6431 6432 6433	026420 026426 026430 026436 026436 026446 026446	004037 002272 000000 004037 002274 003310 004037 002304 000001	041270		JSR RHDST I	(200.*2) RO,@#FILLRE	MOV WRFROM+<200.*2> INTO SAVED RHBA ;SAVED REGISTER TO CHANGE ;DATA :MOV 1 INTO SAVED RHDST ;SAVED REGISTER TO CHANGE ;DATA	

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 139 DZRJIA.P11 T37 WRITE/READ DATA (052525)

5435 5435 5437 5437 5439					:*NOW C :*AFTER	OMPARE REGISTERS COMMAND	BEFORE WRITE DATA WITH REGISTERS
6437 6438	026450	004037	042354		JSR	RO, D#COMREG	COMPARE SAVED REGISTERS WITH
139 1011 1111 1111 1111 1111 1111 1111 1	026454 026456 026460 026462 026464	004612 002354 000022 026466 026472			SAVERE WC 18. 18.		PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 1% ON ERROR RETURN TO 2% ON NO ERROR
6447	026466 026470	104035		15:	ERROR RTS	35 PC	;WRITE DATA COMMAND CAUSED :IMPROPER REGISTER CHANGE :GOOD DATA GIVES WHAT SHOULD :BE
6450 6451							RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
6453					W WON*;	RITE FROM BUFFER	WILL BE CHECKED FOR NO CHANGE
6455	026472			25:			
######################################	026472 026476 026500 026502 026504 026506	004037 003534 002470 000400 026510 026514	043404		JSR REINTO WRFROM 256. 3\$	RO,2#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM REINTO TEST DATA STARTS FROM WRFROM 256. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR
6463							
5466	026510	104036		3\$:	ERROR	36 PC	:WRITE DATA COMMAND CHANGED ;WRITE FROM BUFFER
5467 5468 5469					; *NOW A	READ DATA COMMAN	ND WILL BE GIVEN
6470					;*FILL	READ INTO BUFFER	WITH 200 ZEROS AND 56 OF ALL ONES
6472	026514			45:			
6474 6475 6476	026514	004737	041366		JSR	PC.3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE
6478 6479 6480 6481	026520 026524 026526 026530	004037 003534 000310 000000	041236		JSR REINTO 200.	RD, D#CLAREA	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 200. WORDS, FROM REINTO STARTING FROM REINTO 200. WORDS FILL WITH 0
6470 64712 64773 64775 64777 64778 64778 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 64789 6	026532 026536 026540 026542	004037 004354 000070 000377	041236		JSR REINTO+ 56. 377	RO. 0#CLAREA (200. *2)	:CLEAR 56. WORDS. FROM REINTO+(200.*2) :STARTING FROM REINTO+(200.*2) :56. WORDS :FILL WITH 377

DENJIH.		131	MUTITA	בחט טחוח	(335353	,		
6488 6489 6490								WITH 200 OF 52525 AND 56 OF 0
6491 6492 6493 6494	026544 026550 026552 026554	004037 002470 000310 052525	041236			JSR WRFROM 200. 52525	RO, 2#CLAREA	CLEAR 200. WORDS, FROM WRFROM STARTING FROM WRFROM 200. WORDS FILL WITH 52525
6496 6497 6498 6499	026556 026562 026564 026566	004037 003310 000070 000377	041236	•		JSR WRFROM+ 56. 377	RO.@#CLAREA <200.*2>	;CLEAR 56. WORDS, FROM WRFROM+<200.*2> :STARTING FROM WRFROM+<200.*2> :56. WORDS :FILL WITH 377
6502 6503						;*NOW F	ILL COMMAND	
890-123+5-57-890-123+5-67-123+5-67-123-133-133-133-133-133-133-133-133-133	026570 026574 026576 026577 026606 026602	004037 000000 000 000 177470 003534	043340		.BYTE	JSR 0 0 0 -200. REINTO	RO, 2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D WORD COUNT = 200. BUS ADDRESS STARTING ADDRESS OF DATA
6513 6514 6515	026604	000000				ECI!FMT	22	STARTING ADDRESS OF DATA BUFFER = REINTO DO NOT INHIBIT BUS ADDRESS INCREMENT :16 BITS PER WORD FORMAT :INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE
6517 6518 6519 6520	026610	002446				READAT	;READ D	ATA WITH 70 IN RHCS1
6522						; *NUM SI		COMPARISON AFTER READ DATA COMMAND
6523 6524 6525	059950 059919 059915	004037 002272 004612	041534			JSR RHWC SAVERE	RO, 0#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
6527 6528	056655	000055				18.		NUMBER OF REGISTERS SAVED = 18.
6530	026624	004737	041446			JSR	PC. D#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
6535	026630	104400	066402			TYPE	,CPHALT	AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF
6534	026634	000000				HALT		THE FIRST SET OF BITS DON'T = 1
51225789C1223455555555555555555555555555555555555	026636	013777	004606	153422		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS

MAINDE DZRJIA	C-11-DZRJ .Pli	I-A. RPO T37	4/5/6 FUNCT. COM WRITE/READ DATA	NT. TST-P	7 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 141
55555555555555555555555555555555555555	025644 026650	013746 052716 012677	002446 000101 153420		MOV BIS MOV	J#READAT - (SP) #GO!IE, (SP) (SP)+, DRHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH TO IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
6550 6551 6552	026660	011100 011305			MOV MOV	aR1,R0 aR3,R5	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
6555 6555 6555 6557 6559 6559	026664 026666 026670 026672 026674	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS
6561 6562 6563		٠,			;*COMPA ;*RO AN	D R5 IMMEDIATELY	
6564 6565 6566 6567	026676 026702 026706 026712	013746 052716 011637 022600	002446 004101 001124		MOV BIS MOV CMP	a#READAT,-(SP) #IE!GO!DVA.(SP) (SP),a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA
6569 6570 6571 6572	025714 026716 026722 026726	001405 010037 010137 104021	004600		BEQ MOV MOV ERROR	67\$ RO, 3#\$BDDAT R1, 3#REGADR 21	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY
6574 6575 6576 6577	026730 026734 026740	012746 011637 022605	010500 001124	67\$:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).J#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV
6578 6579 6580 6581 6582	026742 026744 026750 026754	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	69\$ R5,3#\$BDDAT R3,3#REGADR 63	COMMAND AND IE:GO!DVA SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET
6583 6584 6585	026756			69\$:	:*CHANG		TO EXPECTED VALUES
6586 6587 6588 6589	026756 026762 026764 026766 026772 026772	004037 002272 000000	041270		JSR RHWC	RO, D#FILLRE	: MOV D INTO SAVED RHWC : SAVED REGISTER TO CHANGE : DATA
6573 65776 6577678901 655778901 65578834 655888901 6559345 6559345 6559345	026766 026772 026774 026776 027002 027004	004037 002272 000000 004037 002274 004354 004037 002304 000001	041270		JSR RHBA REINTO+ JSR RHDST I	RO, D#FILLRE <200. *2> RO, D#FILLRE	MOV REINTO+<200.*2> INTO SAVED RHBA ;SAVED REGISTER TO CHANGE ;DATA :MOV 1 INTO SAVED RHDST ;SAVED REGISTER TO CHANGE ;DATA

SE0 0201

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T37 WRITE/READ DATA (052525)

6596 6597 6598 6599					:*COMPA ;*WITH	RE REGISTERS BEI REGISTERS AFTER	FORE READ DATA COMMAND
6601 6601	027006	004037	042354		JSR	RO, D#COMREG	COMPARE SAVED REGISTERS WITH
557890 557990 555990 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55500 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 55000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 50000 500	027012 027014 027016 027020 027022	004612 002354 000022 027024 027030			SAVERE WC 19. 5%		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
6609 6610 6612 6613	027024 027026	104033 000207		5\$:	ERROR RTS	33 PC	READ DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
6615					; *NOW R	EAD INTO BUFFER	IS CHECKED FOR GOOD READ
6617	027036			5\$:			
	027030 027034 027036 027040 027042 027044	004037 002470 003534 000400 027046 027052	043404		JSR WRFROM REINTO 256. 7\$ 10\$	RO, 3#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 255. WORDS TO BE COMPARED RETURN TO 7\$ ON ERROR RETURN TO 10\$ ON NO ERROR

75:

027052 105:

; INCORRECT DATA AFTER : WRITE DATA FOLLOWED BY A ; READ DATA ERROR RTS

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 143 DZRJIA.P11 T40 WRITE/READ DATA USING UNIBUS B

*TEST 40 WRITE/READ DATA USING UNIBUS B THIS TEST USES UNIBUS B IF CONNECTED TO THE RH
IF UNIBUS B IS NOT CONNECTED THEN THIS TEST IS NOT PERFORMED
THIS TEST GIVES A WRITE DATA COMMAND FOR CYLINDER C
TRACK D. SECTOR D. KEYS D. 200 WORDS OF 052525
THIS SECTOR IS FORMATED BY PREVIOUS TEST
THEN READ DATA COMMAND IS GIVEN FOR 256 WORDS IN
SAME CYLINDER. TRACK, SECTOR, KEYS
THESE COMMANDS USE UNIBUS B FOR DATA
WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH
200 OF 052525 AND 56 OF 377
THE WRITE DATA COMMAND IS LOADED EXCEPT GO AND IE
ALL REGISTERS ARE SAVED AND THEN GO IS GIVEN TO WRITE DATA : * : * 6651 6652 6654 6654 6655 THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE, THEN WRITE FROM BUFFER IS CHECKED FOR NO CHANGE * THEN READ INTO BUFFER IS FILLED WITH 200 IF ZEROS 6656 6657 6658 6659 AND 56 ALL ONES, WRITE FROM BUFFER IS FILLED WITH 200 WORDS OF 52525 AND 56 WORDS OF D THE COMMAND EXCEPT GO IS LOADED, ALL REGISTERS ARE SAVED GO IS GIVEN 6661 6663 6664 ALL REGISTER ARE CHECKED READ DATA IS CHECKED * 027052 027054 027062 027066 000004 012737 012706 012737 t\$T40: 55657 55657 55657 55677 55677 55677 55677 55677 55683 55683 55683 55683 55683 55683 55683 55683 55683 55683 55683 55683 55683 SCOPE #1, STIMES ;;DO 1 ITERATION ;RESET STACK ;SAVE TEST NUMBER MOV 000001 001212 #STACK, SP 001000 MOV 004604 VOM #40. Q#TSTNM ;SET R1-RHCS1, R2-RHCS2 :R3-RHDS1, R4-RHER1 :GIVE RH-11 INITIALIZE :SETUP UNIT NUMBER 027074 004737 041366 JSR PC. D#CLDISK :*CHECK TO SEE IF THE PROGRAM IS RUNNING WITH AN RH70 027100 027104 027106 005737 001402 000137 ; TEST FOR RH7D CONTROLLER ; IF FLAG = 1, THIS TEST IS SKIPPED JUMP TO NEXT TEST -----TST BEQ JMP 004750 3#RH70 30\$ TST41 030555 : IF FLAG = 1, DO THIS TEST 305: 027112 005037 004732 CLR **a**#UBUSB :CLEAR UNIBUS INDICATOR :*NOW FILL WRITE FROM BUFFER-200 OF 52525 AND 56 OF 377 6687 6688 004037 JSR WRFROM :CLEAR 200. WORDS, FROM WRFROM :STARTING FROM WRFROM 041236 RO. J#CLAREA



MAINDEC DZRJIA.	-11-DZRJ P11	II-A. RPO	04/5/6 FL WRITE/F	JNCT. CON READ DATA	NT. TST-	PT 1 UNIBUS B	MACY11 27(655)	
6689 6690	027124 027126	000310 052525				200. 52525		;200. WORDS ;FILL WITH 52525
6691 6691 6693 6693 6693 6693 6693 6693	027130 027134 027136 027140	004037 003310 000070 000377	041236			JSR WRFROM 56. 377	RO. 0#CLAREA +<200. *2>	;CLEAR 56. WORDS, FROM WRFROM+<200.*2> ;STARTING FROM WRFROM+<200.*2> ;56. WORDS ;FILL WITH 377
6698 6699 6700						*NOW   *WRITE *CAN	READ INTO BUFFER E FROM BUFFER SO BE MADE TO DETER	WILL BE FILLED WITH SAME DATA AS THAT AFTER A WRITE COMPARISONS MINE THAT WRITE DID NOT CHANGE BUFFER
6702 6703 6704 6705	027142 027146 027150 027152	004037 003534 000310 052525	041236			JSR REINTO 200. 52525	RO, D#CLAREA	CLEAR 200. WORDS, FROM REINTO STARTING FROM REINTO 200. WORDS FILL WITH 52525
6707 6708 6709 6710 6711	027154 027160 027162 027164	004037 004354 000070 000377	041236			JSR REINTO- 56. 377	RO. 0#CLAREA +<200. *2>	;CLEAR 56. WORDS, FROM REINTO+<200.*2> ;STARTING FROM REINTO+<200.*2> ;56. WORDS ;FILL WITH 377
6712 6713 6714						;*NOW !	NRITE DATA COMMA	ND WILL BE LOADED
	027166 027172 027174 027175 027176 027200	004037 000000 000 000 177470 002470	043340		.BYTE	JSR 0 0 0 -200. WRFROM	RO, 2#RUN	;SETUP TO RUN FOR DATA COMMAND ;CYLINDER O ;SECTOR O ;TRACK O ;WORD COUNT = 200. ;BUS ADDRESS ;STARTING ADDRESS OF DATA
6721 6721 6723 6723 6725 6725 6726 6727 6728 6731 6731 6733 6735 6736 6737 6739 6739 6739	027202 027204	000000				O FMT22		WORD COUNT = 200.  BUS ADDRESS  STARTING ADDRESS OF DATA  BUFFER = WRFROM  DO NOT INHIBIT BUS ADDRESS INCREMENT  16 BITS PER WORD FORMAT  DO NOT INHIBIT ECC CORRECTION  DO NOT INHIBIT HEADER COMPARE  GET READY TO DO A WRIDAT  DATA WITH 60 IN RHCS1
6727 6728 6729	027206	002442				WRIDAT	;WRITE	:DO NOT INHIBIT HEADER COMPARE :GET READY TO DO A WRIDAT DATA WITH 60 IN RHCS1
6731 6732	027210	052777	002000	153062		BIS	#PSEL, @RHCS1	SET PORT B THAT IS UNIBUS B
6734						;*NOW S	SAVE REGISTER FOR	R COMPARISON AFTER WRITE DATA
6736 6737 6738	027216 027222 027224	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
6740 6741 6742	027226	000022				18.		NUMBER OF REGISTERS SAVED = 18.

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO T40	14/5/6 FL WRITE/R	NCT. CONT. TST- EAD DATA USING	PT 1 UNIBUS B	MACY11 27(655)		0205
6743 6744 6745 6746 6747	027230 027234 027240	004737 104400 000000	041446		JSR TYPE HALT	PC, D#CHECKT , CPHALT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP	
6745 6747 6747 6747 6755 6755 6755 6755	027242	013777	004606	153016	MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
6756 6757	027250 027254	013746 052716	002101		MOV BIS	a#WRIDAT(SP) #GO!IE!PSEL,(SP		
6759 6760	027260	012677	153014		MOV	(SP)+, aRHCS1	;GO WITH ;60 IN RHCS1 FOR WRITE DATA	
6761 6762 6763	027264	011100 011305			MOV	aR1,R0 aR3,R5	SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION	
6764 6765 6766					;*ONE R	EVOLUTION=16670	MICROSEC, ONE SECTOR=760 MICROSEC	
6771 6772 6773	027270 027272 027274 027276 027300	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
6774 6775 6776 6777					;*COMPA ;*RO AN	RE CONTENTS OF RED RES IMMEDIATELY	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
5778 5779	027302 027306 027312 027316	013746 052716 011637 022600	002442 006101 001124		MOV BIS MOV CMP	a#WRIDAT,-(SP) #IE!GO!DVA!PSEL, (SP),a#\$GDDAT (SP)+,RO	SAVE COMMAND (SP) :INCLUDE IE!GO!DVA!PSEL ;SAVE FOR PRINTOUT ;DURING ABOVE OPERATION ONLY IE!GO!DVA!PSEL	
6783 6784 6785 6786	027320 027322 027326 027332	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	64\$ RO, 0#\$BDDAT R1, 0#REGADR 21	BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY	
6788 6789 6790	027334 027340 027344	012746 011637 022605	010500 001124	645:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).3#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV	
6780 6781 6782 6783 6784 6785 6786 6787 6789 6790 6791 6793 6795 6795	027346 027350 027354 027360	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	66\$ R5, 0#\$BDDAT R3, 0#REGADR 63	SAVE COMMAND (SP) :INCLUDE IE!GO!DVA!PSEL SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA!PSEL AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE!GO!DVA!PSEL SHOULD BE SET :SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T40 WRITE/READ DATA USING UNIBUS B

6797 6798 6799 6800 6801 027362 565: **CHECK IF NEM NON EXISTANT MEMORY IS SET **IF SET IT MEANS UNIBUS B IS NOT CONNECTED **SO THIS TEST IS NOT PERFORMED 6802 6803 6804 6805 6806 6807 #NEM, DRHCS2

11\$

#RANCH IF UNIBUS B THERE

#-1.D*UBUSB

UNIBUS B NOT THERE

FYS

CIS><12>/THE RH DOES NOT HAVE UNIBUS B CONNECTED/ 027362 027370 027372 027372 027400 027404 032777 001441 012737 104400 BIT BEQ MOV 152706 004000 004732 177777 027406 TYPE 6808 6809 6810 000425 BR ::68\$: 67\$: . ASCIZ 027460 027460 027464 027470 027474 .SCRLF SCRLF 0#10S 6811 6812 6813 6814 6815 030555 001553 001553 TYPE TYPE 104400 104400 000137 : JUMP TO NEXT TEST - NO UNIBUS B JMP 115: .70\$ :: TYPE ASCIZ STRING
69\$ :: GET OVER THE ASCIZ
(15)<12>/THE RH DOES HAVE UNI BUS B CONNECTED/ TYPE 027474 104400 027502 6816 6817 027500 000424 BR ::70\$: 69\$: . ASCIZ 027552 027552 027556 6818 6819 6820 6821 6822 6823 6824 6825 6826 ,SCRLF 104400 001223 TYPE TYPE :*NOW CHANGE SAVED REGISTERS TO EXPECTED VALUE MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA 004037 002272 000000 027562 027566 041270 RO. D#FILLRE RHWC 027570 MOV WRFROM+(200.*2) INTO SAVED RHBA SAVED REGISTER TO CHANGE ; DATA JSR RO. D#FILLRE 027572 004037 041270 027576 027600 027602 027606 027610 6828 002274 RHBA 5829 6830 6831 6832 6833 6834 6835 6836 6837 003310 WRFROM+(200. *2) MOV 1 INTO SAVED RHDST 004037 002304 000001 RO, D#FILLRE JSR 041270 SAVED REGISTER TO CHANGE RHDST :*NOW COMPARE REGISTERS BEFORE WRITE DATA WITH REGISTERS *AFTER COMMAND COMPARE SAVED REGISTERS WITH 6838 027612 004037 JSR RO. D#COMREG 042354 6839 6840 6841 6842 6843 027616 027620 027622 027624 004612 002354 000022 027630 GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' SAVERE WC 18. 18. REGISTERS TO BE COMPARED RETURN TO 15 ON ERROR RETURN TO 25 ON NO ERROR 6844 6845 6846 027626 027634 :WHILE USING UNIBUS B :WRITE DATA COMMAND CAUSED **ERROR** 027630 104074 15: 6847 IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD 6848 6849 027632 RTS 000207 6850

## B01

MAINCEC-11-028/11-A. RP04 5 & FUNCT. CONT. TST-PT 1 MACV11 27(655) 30-MAR-76 22:59 PAGE 147

RECEIVED DATA GIVES WHAT WAS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS TOPOS : *NOW WRITE FROM BUFFER WILL BE CHECKED FOR NO CHANGE 004037 003534 000400 000400 000400 000400 :COMPARE TWO BLOCKS OF MEMORY :GOOD DATA STARTS FROM REINTO :TEST DATA STARTS FROM WRFROM :256. WORDS TO BE COMPARED :RETURN TO 35 ON ERROR ;RETURN TO 45 ON NO ERROR RO. D#COMPAR 256. 38 48 :WHILE USING UNIBUS B :WRITE DATA COMMAND CHANGED :WRITE FROM BUFFER ERROR 35: RTS :*NOW A READ DATA COMMAND WILL BE GIVEN :*FILL READ INTO BUFFER WITH 200 ZEROS AND 56 OF ALL ONES SET RI-RHCS1. R2-RHCS2 R3-RHDS1. R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 200. WORDS. FROM REINTO STARTING FROM REINTO 200. WORDS FILL WITH 0 PC. 3#CLDISK 004037 003534 000310 000000 JSR REINTO 200. RO. D*CLAREA 041236 :CLEAR 56. WORDS. FROM REINTO+(200.*2) :STARTING FROM REINTO+(200.*2) :56. WORDS :FILL WITH 377 027674 027700 027702 027704 004037 004354 000070 000377 JSR RO. 3*CLAREA REINTO+(200.*2) 56. 377 041236 :*FILL WRITE FROM BUFFER WITH 200 OF 52525 AND 56 OF D :CLEAR 200. WORDS, FROM WRFROM :STARTING FROM WRFROM :200. WORDS :FILL WITH 52525 027706 027712 027714 027716 JSR WRFROM RO. 3 CLAREA 041236 200. 52525 027720 027724 027726 027730 ;CLEAR 56. WORDS, FROM WRFROM+(200.*2) ;STARTING FROM WRFROM+(200.*2) :56. WORDS ;FILL WITH 377 004037 003310 000070 000377 JSR RO. D#CLAREA WRFROM+ (200. *2) 041236 56. 377 : *NOW FILL COMMAND

MAINDEC-11-DZRJI-A, RPD4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 148 DZRJIA.PII T40 WRITE/READ DATA USING UNIBUS B

	•••		M. 7 . C . IV	Ene Smin	032.14			
59999999999999999999999999999999999999	027732 027735 027740 027741 027742 027744	004037 000000 000 000 177470 003534	043340		SYTE SYTE	JSR 0 0 -200. REINTO	RD, @#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D WORD COUNT = 200. BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = REINTO DO NOT INHIBIT BUS ADDRESS INCREMENT
55 55 55 55 55 55 55 55 55 55 55 55 55	027746 027750 027752	000000				ECI!FMT READAT	.55	DO NOT INHIBIT BUS ADDRESS INCREMENT: 16 BITS PER WORD FORMAT :INHIBIT ECC CORRECTION :DO NOT INHIBIT HEADER COMPARE :GET READY TO DO A READAT DATA WITH 70 IN RHCS1
5919	02.132	002 1.0					; READ	DATA WITH 70 IN RHCS1
5921 5922	027754	052777	002000	152316		BIS	*PSEL, GRHCS1	SET PORT B THAT IS UNIBUS B
5924						: *NOW S	AVE REGISTERS FO	R COMPARISON AFTER READ DATA COMMAND
5925 5925 5925 5925 5925	027762 027766 027770	004037 002272 004512	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
£930	027772	000055				19.		NUMBER OF REGISTERS SAVED = 18.
6933	027774	004737	041446			JSR	PC. D#CHECKT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1
6935	030000	104400	066402			TYPE	.CPHALT	CANNOT CONTINUE TESTING IF ANY OF
5935 5937	030004	000000				HALT		CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
	030006	013777	204606	152252		MOV	2#RP4VEC, 2RPVEC	SET RPOH VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME?' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
6946 6947	030014 030020	013746 052716	002446			MOV BIS	a*READAT - (SP) *GO!IE!PSEL, (SP)	GET READY TO MOVE COMMAND GET READY TO SET "GO" AND
6949 6951	030024	012677	152250			MOV	(SP)+, QRHCS1	GET READY TO MOVE COMMAND  GET READY TO SET 'GO' AND  ENABLE INTERRUPT  GO WITH  TO IN RHCS1 FOR READ DATA  WITH INTERRUPT ENABLED  SAVE RHCS1 DURING ABOVE OPERATION  SAVE RHDS1 DURING ABOVE OPERATION
\$ 255	030030	D11100 D11305				MOV MOV	DR1.RD DR3,R5	SAVE RHOSI DURING ABOVE OPERATION SAVE RHOSI DURING ABOVE OPERATION
5755 5755 5755 5755 5755 5755 5755	030034 030036 030040	002000				WAT RHCS1 RDY		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPC	N4/5/6 FUNCT. C WRITE/READ DA	CONT. TST-F	T 1 INIBUS B	DO1	30-MAR-75 22:59 PAGE 149
5959 5950 5961	030042	001507			908. 839.		ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS
5953					:*COMPA	ARE CONTENTS OF R	RHCS1 AND RHDS1 ALREADY SAVED IN
5957 5959 5959	030046 030052 030056 030062	013746 052716 011637 022600	002446 006101 001124		MOV BIS MOV CMP	a*READAT,-(SP) #IE!GO!DVA!PSEL (SP).a*SGDDAT (SP)+,RO	SAVE COMMAND  (SP) :INCLUDE IE!GO!DVA!PSEL  ;SAVE FOR PRINTOUT  ;DURING ABOVE OPERATION ONLY IE!GO!DVA!PSEL
5971 5972 5973 5974	030064 030066 030072 030076	001405 010037 010137 104021	004600		BEG MOV MOV ERROR	71\$ RO,3#\$BDDAT R1,3#REGADR 21	SAVE COMMAND  (SP) :INCLUDE IE!GO!DVA!PSEL  SAVE FOR PRINTOUT  DURING ABOVE OPERATION ONLY IE!GO!DVA!PSEL  AND COMMAND SHOULD BE SET  BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY  COMMAND AND IE!GO!DVA!PSEL SHOULD BE SET  SAVE BITS SET DURING OPERATION IN RHDS1  SAVE FOR PRINTOUT  DURING ABOVE OPERATION ONLY MOL!DPR!VV  SHOULD BE SET  BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHDS1  DURING ABOVE OPERATION ONLY  MOL!DPR!VV SHOULD BE SET
6976 6977 6978	030100 030104 030110	012746 011637 022605	010500 001124	715:	MOV MOV CMP	#MOL!DPR!VV(S (SP),2#\$GDDAT (SP)+.R5	SAVE BITS SET DURING OPERATION IN RHDS: SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV
5983 5983 5983	030112 030114 030120 030124	001405 010537 010337 104063	004600		BEQ MOV MOV ERROR	73\$ R5.3*\$BDDAT R3.3*REGADR 63	BRANCH IF GOOD  BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY
£985 £98£	030126			73\$:			
5989	020126	004027	041270				S TO EXPECTED VALUES
£990 £991	030136	004037	041270		JSR RHWC	RO, 3#FILLRE	:MOV D INTO SAVED RHWC :SAVED REGISTER TO CHANGE :DATA
6993 6993	030136	004037	041270		JSR RHBA	RO, 3#FILLRE	:MOV REINTO+(200.*2) INTO SAVED RHBA
5995 5995 5997	030132 030134 030136 030142 030144 030146 030152	002272 000000 004037 002274 004354 004037 002304 000001	041270		REINTO+ JSR RHDST 1	<200.*2> RO,3#FILLRE	:DATA :MOV 1 INTO SAVED RHDST :SAVED REGISTER TO CHANGE :DATA
5999 7000 7001					:*COMPA ;*WITH	RE REGISTERS BEF	ORE READ DATA COMMAND
7003	030156	004037	042354		JSR	RO, D#COMREG	COMPARE SAVED REGISTERS WITH
\$5555555555577777777755789888888999999999	030162 030164 030166 030170 030172	004612 002354 000022 030174 030200			SAVERE WC 18. 5%		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
7010 7011 7012	030174	104072		5\$:	ERROR	72	:WHILE USING UNIBUS B :READ DATA CAUSED IMPROPER

SEG 0209

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MAINDE DZRJIA	0-11-DZRJ .P11	I-A RPO	4/5/6 FUNCT. WRITE/READ	CONT. TST-F	T 1 INIBUS B	EO1 MACY11 27(655)	30-MAR-76 22:59 PAGE 150
7013 7014 7015 7016	030176	000207			RíS	PC	REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
7019					: *NON R	EAD INTO BUFFER	IS CHECKED FOR GOOD READ
7020	030200			63:			
777777777777777777777777777777777777777	030200 030204 030206 030210 030212 030214	004037 002470 003534 000400 030216 030222	043404		JSR WRFROM REINTO 256. 78 103	RD, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 256. WORDS TO BE COMPARED RETURN TO 7\$ ON ERROR RETURN TO 10\$ ON NO ERROR
7029 7030	030216	104073		75:	ERROR	73	: WHILE USING UNIBUS B
7031	030550	000207			RTS	PC	:WHILE USING UNIBUS B :INCORRECT DATA AFTER :WRITE DATA FOLLOWED BY A
7034 7035 7035	030555			105:			READ DATA

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FO1

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 151 DZRJIA.P11 T40 WRITE/READ DATA USING UNIBUS B

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*TEST 41
                                                                                                             IMPLIED SEARCH
                                                                                             ONLY NEW ADDITION IN THIS TEST IS AN IMPLIED SEARCH A WRITE HEADER AND DATA IS GIVEN FOR MORE THAN ONE SECTOR
                                                                             *
                                                                                             OF WORDS
                                                                                            WRITE HEADER AND DATA CYLINDER O, FORMAT 16 BITS PER WORD TRACK O, SECTOR O, KEYS=O, NUMBER OF WORDS 266 (4 HEADER 256 DATA=0 4 HEADER 2 DATA=1 THEN READ HEADER AND DATA FOR ABOVE SECTOR 1 ONLY WRITE FROM SUFFER AND READ INTO BUFFER ARE FILLED WITH 10000,0,0,0 AND 256 OF O, 10000,1,0,0, AND 2 OF 1 THE WRITE COMMAND IS THEN LOADED INTO THE REGISTERS EXCEPT THE GO BIT, AND ALL THE REGISTERS ARE SAVED THEN GO IS GIVEN FOR WRITE HEADER AND DATA
                                                                                             THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE THEN WRITE FROM BUFFER IS CHECKED TO SEE THAT NOTHING CHANGED
                                                                                            NOW FOR THE READ COMMAND READ INTO BUFFER IS FILLED WITH 377, WRITE FROM BUFFER IS FILLED WITH 10000.1.0.0.1.1 AND 254 OF ZEROS COMMAND IS LOADED INTO REGISTERS EXCEPT GO AND IE THEN ALL REGISTERS ARE SAVED GO IS GIVEN FOR THE READ COMMAND, 256 WORDS
                                                                                             ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE THEN THE READ DATA IS COMPARED
                                                                               000004
012706
012737
            030222
030224
030230
                                                                            T$T41:
                                                                                            SCOPE
                                                                                                             #STACK.SP
#41.0#TSTNM
                                                                                                                                             :RESET STACK
:SAVE TEST NUMBER
                                                            004604
                                                                                             VOM
                                                                                                                                             ;SET R1-RHCS1, R2-RHCS2
:R3-RHDS1, R4-RHER1
:GIVE RH-11 INITIALIZE
;SETUP UNIT NUMBER
            030236
                           004737
                                                                                             JSR
                                            041366
                                                                                                             PC. D#CLDISK
                                                                                             :*FILL WRITE FROM BUFFER WITH HEADER
           030242
030246
030250
030252
030254
030256
                           004037
002470
000004
                                                                                             JSR
WRFROM
                                                                                                                                              SAVE HEADER DATA IN WRFROM
                                            041212
                                                                                                             RO. D#FLHEAD
                                                                                                                                             LOCATION WHERE SAVED NUMBER OF WORDS SAVED
                                                                                                                                             FIRST DATA WORD
SECOND DATA WORD
THIRD DATA WORD
                            010000
                                                                                             10000
                            000000
            030260
                            000000
                                                                                                                                             FOURTH DATA WORD
                                                                                             *FILL WRITE FROM BUFFER WITH DATA
JSR RO, D*CLAREA ; CLEAR 256.
                                                                                                                                             ;CLEAR 256. WORDS, FROM WRFROM+10
:STARTING FROM WRFROM+10
                                                                                             WRFROM+10
                                                                                                                                             :256. WORDS
                                                                                             256.
```

MAINDEC	-11-DZRJ	I-A: RPO	14/5/6 FUNCT. CONT. T IMPLIED SEARCH	ST-PT 1	GO1 MACY11 27(655)	30-MAR-76	22:59	PAGE 152			
	030272		INFLIED SERRCH	0		;FILL WITH					
5678901234567890123456789012345678901234567890123;55678901234567890123;55678901234567890123;55678901234567890123;55678901234567890123;55678901234567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;5567890123;567890123;567890123;567890123;567890123;567890123;567890123;5678900123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;567890123;5678900123;567890123;567890123;567890123;567890123;567890123;56789012					WRITE FROM BUFFE						
	030274 030300 030302 030304 030306 030310 030312	004037 003500 000004 010000 000001 000000	041515	10000	RO. D#FLHEAD <260. *2>	NUMBER OF FIRST DATE SECOND DATE THIRD DATE FOURTH DA	OCATION WORDS A WORD TA WORD A WORD TA WORD TA WORD	IN WRFROM+<260.*2> WHERE SAVED SAVED			
	030314 030320 030322 030324	004037 003510 000002 000001	041236	JSR WRFROM+	WRITE FROM BUFFE RO, D#CLAREA <264.*2>	R WITH NEXT ;CLEAR 2 W ;S ;S WORDS ;FILL WITH	SECTOR ORDS. F! TARTING	DATA ROM WRFROM+<264.*2> FROM WRFROM+<264.*2>			
				**NOW READ INTO BUFFER WILL BE FILLED WITH SAME DATA **AS WRITE FROM BUFFER SO THAT AFTER A WRITE COMPARISONS **CAN BE MADE TO MAKE SURE THAT WRITE DID NOT **CHANGE WRITE FROM BUFFER.							
	030326 030332 030334 030336 030340 030342	004037 003534 000004 010000 000000 000000 000000	041212	JSR REINTO 10000	RO, 3#FLHEAD	SAVE HEADE LOCATION D NUMBER OF FIRST DATA SECOND DATA THIRD DATA FOURTH DATA	ER DATA WHERE SA WORDS SA WORD TA WORD TA WORD TA WORD TA WORD	IN REINTO			
7128 7129 7130 7131 7132	030340 030342 030344 030346 030352 030354 030356	004037 003544 000400 000000	041235	JSR REINTO+1 256. 0	RO, 0*CLAREA	CLEAR 256.	HKITNG	FROM REINTO+10 FROM REINTO+10			
7134 7135 7136 7137 7138 7139 7140	030360 030364 030366 030370 030372 030374 030376 030400	004037 004544 000004 010000 000001 000000 000000	041212	JSR REINTO+< 10000	RO. 0#FLHEAD 260. *2>	SAVE HEADE NUMBER OF FIRST DATA SECOND DATA THIRD DATA	R DATA CATION WORDS S WORD A WORD A WORD A WORD	IN REINTO+<250.*2> WHERE SAVED SAVED  OM REINTO+<254.*2> EDOM REINTO+<254.*2>			
7141 7142 7143 7145	030400 030404 030406 030410	004037 004554 000002 000001	041236	JSR REINTO+	RO. 0#CLAREA 264. *2>	CLEAR 2 WO ST ST WORDS FILL WITH	LILL TILLS	OM REINTO+<264.*2> FROM REINTO+<264.*2>			
7147 7148				;*NOW TH	HE WRITE HEADER A	AND DATA COM	IMAND WI	LL BE FILLED			

SEQ 0212

MATUREA	5351		W.F. & FU	INOT CON			MAAVIII	HO1	20 400 7	22.50	BOOF	150
DZRJIA.	P11	1-H RPU	IMPLIED	NCT. CON	1. 151-	1 1	MHCYII	27(655)	30-MAR-76	22:59	PAGE	153
7149 7150 7151 7152 7153 7154	030412 030416 030420 030421	004037 000000 000 000 177366	043340		.BYTE	JSR 0 0 0 -2624	RO, Ə#RU	JN	SETUP TO CYLINDER SECTOR D TRACK D WORD COUN	NT (DATA		
7156	030424	002470				WRFROM			BUS ADDRE	ADDRESS	OF DA	TA
7158 7159 7160 7161	030426	000000				D FMT22			BUFFER = DO NOT IN 16 BITS F	WRFROM HIBIT B ER WORD HIBIT E	FORMA	TA RESS INCREMENT T RECTION COMPARE
7162 7163 7164 7165	030432	002444				WRIFOR		;WRITE	A GE I NERD I	1 10 00 1	ADER COMPARE WRIFOR 'H 62 IN RHCS1	ON .
7165 7167 7168 7169 7170	030434 030440 030442	004037 002272 004612	041534			:*NOW S JSR RHWC SAVERE	AVE REGI RO, 2#SA	ISTERS FO	CR COMPARISO SAVE REGI RHWC IS T STARTING	N AFTER STERS HE FIRS ADDRESS	WRITE T REGI	HEADER AND DATI STER SAVED ERE D
7172 7173	030444	000022				18.			NUMBER OF SAVED = 1	REGIST	RS	
7174	030446	004737	041446			JSR	PC, a#CH	ECKT				DRY, VV = 1 S ARE STUCK = 1 G IF ANY OF
7177	030452	104400	066402			TYPE	, CPHALT		CANNOT CO THE FIRST STOP	NTINUE SET OF	ESTÎNI BITS	G IF ANY OF DON'T = 1
7179 7180	030456	000000				HALT						
711533+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+5678900123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+567890123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900123+5678900120000000000000000000000000000000000	030460	013777	004606	151600		MOV	⊇#RP4VE	C, GRPVEC	SET RPO4 TO 'TIME1 OR TO 'TI 'TIME' WI CURRENT C AND LOOK	VECTOR F ' IF P-O ME2' IF LL ONLY YLINDER AHEAD RE	DDRESS LOCK P-CLOC SAVE ADDRES GISTER	S PRESENT CK IS NOT PRESENT GS
7189 7189 7190	03046£ 030472	013746	000101			MOV BIS	a#WRIFO	R(SP)	GET READY	TO MOVE	COMME	ONE
7191	030476	012677	151576			MOV	(SP)+,2		GO WITH	TERRUPT CS1 FOR	WRITE	HEADER AND DATA
7194 7195 7196 7197	030502 030504	011100 011305				MOV	aR1,R0 aR3,R5		SAVE RHCS	RRUPT EN 1 DURING 1 DURING	ABOVE ABOVE	HEADER AND DATA OPERATION OPERATION
7198 7199						;*ONE RI	EVOLUTIO	N = 1667	O MICRO SEC	, ONE SE	CTOR =	760 MICRO SEC
7200 7201 7202	030506 030510	104412				WAT RHCS1			WAIT FOR	RDY BIT RHCS1 RE	TO SET	

SEQ 0213

ERROR

27

:WRITE HEADER AND DATA

15:

030646

104027

SEQ 0214

MAINDEC	-11-DZRJ	I-A, RPO	14/5/6 FUNCT. CON	IT. TST-F	т 1	JO1 MACY11 27(655)	30-MAR-76 22:59 PAGE 155	SEQ 0215
DZRJIA.	P11 030550	T41 000207	IMPLIED SEARCH		RſS	PC	CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMANT	
7263 7264 7265 7266 7267	030652			2\$:	*NOW W *NOTHI	RITE FROM BUFFER NG GOT CHANGED	WILL BE CHECKED TO SEE THAT	
7268 7269 7270 7271 7272 7273 7274 7275	030652 030656 030660 030662 030664 030666	004037 003534 002470 000412 030670 030674	043404		JSR REINTO WRFROM 266. 3\$	RO, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM REINTO TEST DATA STARTS FROM WRFROM 266. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR	
7276 7277 7278 7279	030570 030672	104030		3\$:	ERROR RTS	30 PC	; WRITE HEADER AND DATA ; CHANGED WRITE FROM BUFFER	
7280 7281 7282 7283	030674			4\$:	*NOW A *FOR S *READ	READ HEADER AND ECTOR 1, 256 WORL INTO BUFFER IS F	DATA COMMAND WILL BE GIVEN DS ILLED WITH ONES	
7284 7285 7286 7287	030674	004737	041366		JSR	PC, a#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE	
7289 7290 7291 7292 7293	030700 030704 030706 030710	004037 003534 000404 000377	041236		JSR REINTO 260. 377	RO, D#CLAREA	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 260. WORDS, FROM REINTO STARTING FROM REINTO 260. WORDS FILL WITH 377	
7294 7295 7296					;*WRITE		FILLED WITH EXPECTED DATA	
725901234567890123456789012345678901234567890123456777777777777777777777777777777777777	030712 030716 030720 030722 030724 030726 030730 030732 030734 030736 030744 030746	004037 002470 000006 010000 000001 000000 000001 000001 004037	041212		JSR WRFROM 6 10000	RO, 3#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD FIFTH DATA WORD SIXTH DATA WORD CLEAR 254 WORDS. FROM WRFROM+(6.32)	
7307 7308 7309 7310	030736 030742 030744 030746	004037 002504 000254 000000	041236		JSR WRFROM+ 254 0	RO, D#CLAREA	;FIFTH DATA WORD SIXTH DATA WORD ;CLEAR 254 WORDS, FROM WRFROM+<6.*2> :STARTING FROM WRFROM+<6.*2> :254 WORDS ;FILL WITH D	

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 156 DZRJIA.P11 T41 IMPLIED SEARCH

	7311 7312 7313 7314						;*NOW F	ILL COMMAND	
	77777777777777777777777777777777777777	030750 030754 030756 030757 030760	004037 000000 001 000 177374	043340		.BYTE .BYTE	JSR 0 1 0 -2564	RO, 2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR 1 TRACK D WORD COUNT (DATA) = 256. +
	7322	030752	003534				REINTO		WORD COUNT (DATA) = 256. + 4 HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = REINTO
	7325 7326 7327	030764	000000				O ECI!FMT	22	;DO NOT INHIBIT BUS ADDRESS INCREMENT ;16 BITS PER WORD FORMAT ;INHIBIT ECC CORRECTION ;DO NOT INHIBIT HEADER COMPARE ;GET READY TO DO A REFOR ;READ HEADER AND DATA WITH 72 IN RHCS1
	7328 7329 7330 7331	030770	002450				REFOR		GET READY TO DO A REFOR READ HEADER AND DATA WITH 72 IN RHCS1
	7332						;*NOW S	AVE REGISTERS FO	R COMPARISON AFTER READ HEADER AND DATA
	7335 7336 7337	030772 030776 031000	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
	7339	031002	000055				18.		NUMBER OF REGISTERS ;SAVED = 18.
	7342	031004	004737	041446			JSR	PC, a#CHECKT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1
	7344	031010	104400	056402			TYPE	,CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP
	7346 7347	031014	000000				HALT		
	7348 7349 7350 7351 7352 7353 7354 7355 7356 7357 7358 7359 7361 7363 7364	031016	013777	004606	151242		VOM	a#RP4VEC, aRPVEC	SET RPD4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
•	7355 7356 7357	031024 031030	013746 052716	002450			MOV BIS	#REFOR, -(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH
	7358 7359 7360	031034	012677	151240			MOV	(SP)+, aRHCS1	:/2 IN RHCSI FOR REHD DHIM
	7361 7362 7363 7364	031040	011100 011305				MOV	aR1,R0 aR3,R5	SAVE RHOSI DURING ABOVE OPERATION SAVE RHOSI DURING ABOVE OPERATION

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T41 IMPLIED SEARCH

:*ONE REVOLUTION = 16670 MICRO SEC. ONE SECTOR 760 MICRO SECONDS 7365 7366 7366 7369 7370 7371 7372 7373 7374 7375 7376 7377 7378 7381 7382 7383 7384 7385 7387 7388 7389 WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER 031044 104412 031046 031050 031052 031054 000500 RHCS1 RDY ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS 001614 908. :*COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN :*RO AND RS IMMEDIATELY AFTER GO 031056 a#REFOR.-(SP)
#IE!GO!DVA.(SP)
(SP).a#\$GDDAT
(SP)+,RO 013746 002450 ;SAVE COMMAND ;INCLUDE IE:GO:DVA BIS INCLUDE IE:GO!DVA
SAVE FOR PRINTOUT
DURING ABOVE OPERATION ONLY IE:GO!DVA
AND COMMAND SHOULD BE SET
BRANCH IF GOOD
BAD DATA
FAILING REGISTER RHCS1
DURING ABOVE OPERATION ONLY
COMMAND AND IE:GO!DVA SHOULD BE SET
:SAVE BITS SET DURING OPERATION IN RHDS1
DURING ABOVE OPERATION ONLY MOL!DPR!VV
SHOULD BE SET
BRANCH IF GOOD
BAD DATA 031066 011637 001124 MOV 031074 031076 031102 031106 001405 010037 010137 104021 67\$
RO, D#\$BDDAT
R1, D#REGADR BEQ 001126 004600 MOV ERROR #MOL!DPR!VV,-(SP) (SP), a#\$GDDAT ;( (SP)+,R5 ;[ 012746 011637 022605 MOV 031110 010500 673: MOV 7390 7391 7392 7393 7394 7395 69\$ R5, a#\$BDDAT R3, a#REGADR 63 031122 031124 031130 001405 010537 010337 BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOV 001126 004600 MOV 031134 104063 ERROR 7396 7397 7398 7399 7400 7401 :MOL!DPR!VV SHOULD BE SET 031136 695: :*CHANGE SAVED REGISTERS TO EXPECTED VALUES 031136 031142 031144 004037 MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE 041270 RO. D#FILLRE 7402 RHWC 7403 000000 DATA n 7404 7405 7406 031146 031152 031154 004037 002274 MOV REINTO+(260.*2) INTO SAVED RHBA 041270 RO. D#FILLRE RHBA :DATA
:DATA
:MOV 2 INTO SAVED RHDST
:SAVED REGISTER TO CHANGE
;DATA 004544 REINTO+<260.*2> 7407 7408 7409 031156 004037 041270 RO. D#FILLRE 000002 7410 7411 :*COMPARE REGISTERS BEFORE READ HEADER AND DATA :*WITH REGISTERS AFTER COMMAND 7412 7413 7414 COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 031166 004037 RO, D#COMREG 7416 SAVERE 031174 002354

						MOI	
MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO	MYS/6 FUNCT. CON IMPLIED SEARCH	T. TST-P	T 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 158
7419 7420 7421 7422	031176 031200 031202	000022 031204 031210			18. 58 68		RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
7420123345267890123345267890123345267890123345267890123345233556789012334533567890123345335678901233453356789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012334556789012333455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233455678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901234567890123456789012345678901233456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901200000000000000000000000000000000000	031204	104031 000207		5\$:	ERROR RTS	31 PC	READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
7431 7432 7433 7434	031510			6 <b>\$</b> :	*NOW R *THAT	READ INTO BUFFER READ WAS GOOD	WILL BE CHECKED TO SEE
7435 7436 7437 7438 7439 7440 7442 7442	031210 031214 031216 031220 031222 031224	004037 002470 003534 000404 031226 031232	043404		JSP: WRFROM REINTO 260. 7\$ 10\$	.RO, a#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 260. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
7444 7445 7446 7447 7448 7449	031226 031230	104032 000207		7\$: 10\$:	ERROR RTS	32 PC	WRITE HEADER AND DATA FOLLOWED BY A READ HEADER AND DATA GAVE A READ ERROR ERROR MAY BE IN READ OR WRITE

SEQ 0218

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MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T41 IMPLIED SEARCH

7450 7451 : *TEST 42 IMPLIED SEEK TO CYL 001 .SBTTL SEEK TESTS ONLY NEW ADDITION IN THIS TEST IS AN IMPLIED SEEK FROM CYLINDER OF TO CYLINDER 1, A WRITE HEADER AND DATA IS GIVEN FOR MORE THAN ONE SECTOR OF WORDS WRITE HEADER AND DATA CYLINDER O. FORMAT 16 BITS PER WORD TRACK 18. SECTOR 21, KEYS=0, NUMBER OF WORDS 266 WORDS (4 HEADER, 256 DATA=1125, 4 HEADER 2 DATA = 2000 THEN READ HEADER AND DATA FOR ABOVE, TRACK O. SECTOR O. CYL=1 WRITE FROM BUFFER AND READ INTO BUFFER ARE FILLED WITH 10000,0.0,0 AND 256 OF 1125, 10001,0.0,0 AND 2 OF 2000 THE WRITE COMMAND IS THEN LOADED INTO THE REGISTERS EXCEPT THE GO BIT, AND ALL THE REGISTERS ARE SAVED THEN GO IS GIVEN FOR WRITE HEADER AND DATA * * × 7464 7465 7466 7467 7468 7469 7470 7471 7472 7473 7474 THEN ALL REGISTERS ARE COMPARED TO CHECK FOR IMPROPER CHANGE THEN WRITE FROM BUFFER IS CHECKED TO SEE THAT NOTHING CHANGED NOW FOR READ COMMAND READ INTO BUFFER IS FILLED WITH ALL ONES, WRITE FROM BUFFER IS LCADED WITH 15001.0.0.0 AND 2 OF 2000.254 OF ZEROS COMMAND IS LOADED INTO REGISTERS EXCEPT GO AND IE ALL REGISTERS ARE SAVED GO IS GIVEN FOR THE READ COMMAND 7478 7479 7490 7481 7482 ALL REGISTERS ARE CHECKED FOR IMPROPER CHANGE THEN THE READ DATA IS COMPARED. 7483 7484 TST42: SCOPE #STACK, SP : RESET STACK 7485 7486 000004 001000 #42, 0#TSTNM 7487 031240 SAVE TEST NUMBER 000042 004604 MOV 7488 7489 7490 7491 7492 7493 7494 7495 7496 SET RI-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER 031246 041366 JSR PC, @#CLDISK 004737 :*FILL WRITE FROM BUFFER WITH HEADER ;SAVE HEADER DATA IN WRFROM ;LOCATION WHERE SAVED ;NUMBER OF WORDS SAVED ;FIRST DATA WORD 031252 004037 JSR RO, D#FLHEAD 041212 031256 031260 031262 031264 031266 031270 002470 WRFROM 7498 7499 7500 7501 7502 7503 010000 10000 011025 000000 000000 : SECOND DATA WORD (18. *400)!(21.) FOURTH DATA WORD

7504 7505 031272 004037 7506 031276 002500 7507 031300 000400 7508 031302 001125	041236	;*FILL WRITE FROM BUFFE JSR RO.3*CLAREA WRFROM+10 256. (18.*40)!21.	:CLEAR 256. WORDS, FROM WRFROM+10 :STARTING FROM WRFROM+10 :256. WORDS :FILL WITH <19.*40>!21.
7510 7511 7512	•	:*FILL WRITE FROM BUFFE	R WITH NEXT TRACK HEADER
7513 031304 004037	041212	JSR RO. 3#FLHEAD WRFROM+<260. *2> 10001 0	;SAVE HEADER DATA IN WRFROM+(260.*2);LOCATION WHERE SAVED;NUMBER OF WORDS SAVED;FIRST DATA WORD;SECOND DATA WORD;THIRD DATA WORD;FOURTH DATA WORD
7514 031310 003500 7515 031312 000004 7516 031314 010001 7517 031316 000000 7519 031320 000000 7520 7521 7522 031324 004037 7523 031330 003510 7524 031332 000002 7525 031334 002000 7526 7527 7528 7530 7531 7532 7533	041236	:*FILL WRITE FROM BUFFE JSR RO. D*CLAREA WRFROM+<264.*2> 2000	R WITH NEXT TRACK DATA ;CLEAR 2 WORDS, FROM WRFROM+<264.*2> ;STARTING FROM WRFROM+<264.*2> ;2 WORDS ;FILL WITH 2000
7527 7528 7529 7530 7531 7532		*NOW READ INTO SUFFER *AS WRITE FROM SUFFER *CAN SE MADE TO MAKE S *CHANGE WRITE FROM SUF	WILL BE FILLED WITH SAME DATA SO THAT AFTER A WRITE COMPARISONS SURE THAT WRITE DID NOT FER.
7534 031336 004037 7535 031342 003534 7536 031344 000004 7537 031346 010000	041212	JSR RO, 3#FLHEAD REINTO 10000 (18.*400)!(21.)	:SAVE HEADER DATA IN REINTO :LOCATION WHERE SAVED :NUMBER OF WORDS SAVED :FIRST DATA WORD :SECOND DATA WORD :THIRD DATA WORD
7539 031352 000000 7540 031354 000000 7541 031356 004037 7542 031362 003544 7543 031364 000400 7544 031366 001125 7545	041236	JSR RO. 0#CLAREA REINTO+10 256. (18.*40)!21.	:THIRD DATA WORD :FOURTH DATA WORD ;CLEAR 256. WORDS, FROM REINTO+10 :STARTING FROM REINTO+10 :256. WORDS :FILL WITH <18.*40>!21.
7541 031356 004037 7542 031362 003544 7543 031364 000400 7544 031366 001125 7545 7546 7547 031370 004037 7548 031374 004544 7549 031376 000004 7550 031400 010001 7551 031402 000000 7552 031404 000000 7553 031404 000000 7554 031410 004037 7555 031414 004554 7556 031416 000002 7557 031416 000002	041212	JSR RO. 3#FLHEAD REINTO+<260.*2> 10001 0	:SAVE HEADER DATA IN REINTO+(260.*2) :LOCATION WHERE SAVED :NUMBER OF WORDS SAVED :FIRST DATA WORD :SECOND DATA WORD :THIRD DATA WORD :FOURTH DATA WORD :CLEAR 2 WORDS. FROM REINTO+(264.*2) :STARTING FROM REINTO+(264.*2)
7553 031406 000000 7554 031410 004037 7555 031414 004554 7556 031416 000002 7557 031420 002000	041236	JSR RO. D*CLAREA REINTO+(264.*2) 2000	CLEAR 2 WORDS, FROM REINTO+(264.*2)  STARTING FROM REINTO+(264.*2)  WORDS  FILL WITH 2000

MAINDEC-11-DZRJI-A, RP04/5 6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 161 DZRJIA.P11 SEEK TESTS

7558								
7550 7551						:*NOW T	HE WRITE HEADER	AND DATA COMMAND WILL BE FILLED
7563 7563 7565 7565 7565	031422 031426 031430 031431 031432	004037 000000 025 022 177365	043340		.BYTE	JSR 21. 18. -2624	RO, 2*RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 0 SECTOR 21. TRACK 18. WORD COUNT (DATA) = 252. + 4 HEADER WORDS
7558 7569 7570	031434	002470				WRFROM		:BUS ADDRESS :STARTING ADDRESS OF DATA
7572 7573 7574	031436 031436	010000				D FMT22		BUFFER = WRFROM DO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE
7575 7576 7577 7577	031445	002444				WRIFOR	;WRITE	DO NOT INHIBIT HEADER COMPARE GET READY TO DO A WRIFOR HEADER AND DATA WITH 62 IN RHCS1
7579 7580						:*NOW S	AVE REGISTERS FO	R COMPARISON AFTER WRITE HEADER AND DATAL
7581 7582 7583 7584	031444 031450 031452	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
7596 7597 7597	031454	000022				19.		: NUMBER OF REGISTERS ; SAVED = 18.
7589	031456	004737	041446			JSR	PC. D#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
7591	031462	104400	066402			TYPE	,CPHALT	:CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 :AND THAT NO STATUS BITS ARE STUCK = 1 :CANNOT CONTINUE TESTING IF ANY OF
7593	031466	000000				HALT		THE FIRST SET OF BITS DON'T = 1
\$5012345.67.890-12345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.89012345.67.77.77.77.77.77.77.77.77.77.77.77.77.	031470	013777	004606	150570		MOV	3#RP4VEC, GRPVEC	
7503 7504	031476	013746 052716	000101			MOV	a#WRIFOR(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND
7605 7607	031506	012677	150566			MOV	(SP)+, aRHCS1	GO WITH
7508 7509 7510 7511	031512	011100 011305				MOV	DRI.RO DR3.RS	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :62 IN RHCS1 FOR WRITE HEADER AND DATA WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION

D05

:*ONE REVOLUTION = 16670 MICRO1 SEC. ONE SECTOR = 760 MICRO1 SEC WAIT FOR RDY BIT TO SET
HAIT FOR RHCS1 REGISTER
WAIT FOR RDY BIT IN RHCS1 REGISTER
ALLOW 16950 MICRO SECONDS
RDY MUST SET BETWEEN
8500 AND 25400 MICRO SECONDS 031516 031520 031522 031524 031526 104412 002300 000200 003237 001515 WAT RHCS1 RDY **COMPARE CONTENTS OF RHCS1 AND RHDS1 ALREADY SAVED IN **RD AND RS IMMEDIATELY AFTER GO a*WRIFOR,-(SP)
*IE!GO!DVA,(SP)
(SP).a*\$GDDAT
(SP)+,RO

BURING ABOVE OPERATION ONLY IE!GO!DVA
AND COMMAND SHOULD BE SET
BRANCH IF GOOD
BAD DATA
FAILING REGISTER RHCS1
DURING ABOVE OPERATION ONLY
COMMAND AND IE!GO!DVA SHOULD BE SET

*MOL!DPR!VV,-(SP)
(SP).a*\$GDDAT
(SP)+,RS

SAVE FOR PRINTOUT
DURING ABOVE OPERATION ONLY
COMMAND AND IE!GO!DVA SHOULD BE SET
SAVE FOR PRINTOUT
DURING ABOVE OPERATION ONLY MOL!DPR!VV
SHOULD BE SET
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
BRANCH IF GOOD
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BRANCH IF GOOD 031530 031534 031540 031544 013746 052716 011637 022600 002444 101400 101100 MOV MOV 031546 031550 031554 031560 001405 010037 010137 104021 BEQ 001126 MOV ERROR 031562 031566 031572 012746 011637 022605 MOV 643: 031574 031576 031602 031606 001405 010537 010337 BEG ERROR 031610 555: : *NOW CHANGE SAVED REGISTERS TO EXPECTED VALUES 031610 031616 031616 031620 031636 031636 031636 031644 031644 :MOV D INTO SAVED RHWC :SAVED REGISTER TO CHANGE :DATA 004037 002272 000000 004037 002274 003514 041270 RO. D#FILLRE MCV WRFROM+(266.*2) INTO SAVED RHBA JS3 RO. 2#FILLRE 041270 :DATA
:DATA
:MOV 1 INTO SAVED RHCA
:SAVED REGISTER TO CHANGE
:DATA RHBA WRFROM+(266.*2)
JSR RO, 3#FILLRE 004037 002312 002001 004037 041270 RHCA RO, D#FILLRE MOV 1 INTO SAVED RHCC SAVED REGISTER TO CHANGE 041270 002334 RHCC 031646 031650 031654 031656 DATA 004037 002304 000001 RO. 3#FILLRE MOV 1 INTO SAVED RHDST SAVED REGISTER TO CHANGE RHDST :*NOW COMARE REGISTERS BEFORE WRITE HEADER AND DATA :*WITH REGISTERS AFTER COMMAND

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPC SEEK TE	94/5/6 FUNCT.	. CONT. TST-F	PT 1	MACY11: 27(655)	2 30-MAR-76 22:59 PAGE 163
57.5990123455789012345578901234 7555577777777777777777777777777777777	031660 031664 031666 031670 031672 031674	004037 004612 002354 000022 031676 031702	042354		JSR SAVERE NC 19.	RO, 3#COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 1% ON ERROR RETURN TO 2% ON NO ERROR
7675 7676 7677 7678 7679 7680 7681 7682	031676 031700	104027		15:	ERROR	PC PC	WRITE HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMANT
7594 7685					W WON*:	RITE FROM BUFFE	ER WILL BE CHECKED TO SEE THAT
7585 7587 7599	031702			25:			
7599 7590 7591 7592 7593 7594 7595	031702 031705 031710 031712 031714 031716	004037 003534 002470 000412 031720 031724	043404		JSR REINTO WRFROM 256. 35	RO.2#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM REINTO TEST DATA STARTS FROM WAFROM 265. WORDS TO BE COMPARED RETURN TO 3% ON ERROR RETURN TO 4% ON NO ERROR
7696 7697 7698	031720	104030		3\$:	ERROR RTS	30 PC	:WRITE HEADER AND DATA :CHANGED WRITE FROM BUFFER
7699 7700 7701					:*NOW A	READ HEADER AN	D DATA COMMAND WILL BE GIVEN
7702 7703	031724			45:			
7705 7705 7706 7707	031724	004737	041366		JSR	PC. a*CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE
7695 7696 7697 7699 77003 77003 77005 77005 77005 77005 77007 77107 77113 77119 77119	031730 031734 031736 031740	004037 003534 000404 177777	041236		JSR REINTO 250.	RD, 2#CLAREA	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 260. WORDS, FROM REINTO STARTING FROM REINTO 260. WORDS FILL WITH -1
7714					:*WRITE	FROM BUFFER IS	FILLED WITH 10001.0.0.0,2000.2000. AND 254 OF 0
7717 7718 7719	031742 031746 031750	004037 002470 000006	041212		JSR WRFROM 6	RO, 3#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED

SEG 0223

								F02					
MAINDEC DZRJIA.	PII	I-A. RPO SEEK TE	4/5/6 FU STS	INCT. CON	T. TST-P	T 1	MACY11	27(655)	30-MAR-76	22:59	PAGE 1	164	
77212345 7722345 7772237777225 777225 777225 777233 777335 777337 77733 77735 77744 77745 77745 77745 7775 777	031752 031754 031756 031760 031762 031764 031766 031772 031774 031776	010001 000000 000000 000000 002000 002000 004037 002504 000376	041236			10001 0 0 2000 2000 JSR WRFROM+ 254.	RD. 0#CL (6*2)	.AREA	FIRST DAT SECOND DA THIRD DAT FOURTH DAT FIFTH DAT SIXTH DAT CLEAR 254 :S 254. WORD	A WORD WORDS TARTING	FROM L	WRFROM+< WRFROM+<	6*2> *2>
7732						:*NOW F	ILL COMM	IAND					
7733 7734 7735 7736 7737 7738	032000 032004 032006 032007 032010	004037 000001 000 000 177374	043340		BYTE BYTE	JSR 0 0 -2564	RO, 3#RU	IN	SETUP TO CYLINDER SECTOR D TRACK D WORD COUN HEADER BUS ADDRE STARTING BUFFER = DO NOT IN	RUN FOR 1 T (DATA	DATA 0	COMMAND	
7740	035015	003534				REINTO			BUS ADDRE	SS	OF DAT	A	
7742 7743 7744 7745 7746	032014	000000				O ECI!FMT	22		BUFFER = ,DO NOT IN ;INHIBIT E DO NOT IN GET READY READ HEAD	REINTO HIBIT BO 6 BITS O CC CORRO HIBIT HO	US ADDR PER WOR ECTION EADER C	ESS INCR D FORMAT	EMENT
7747 7748 7749 7750 7751	032020	002450				REFOR	AVE REGI	STERS FOR	GET READY READ HEAD				
7753 7754 7755 7755	035030 035056 035055	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SA	VER	SAVE REGISTANTING THE REGISTANTING	STERS HE FIRST ADDRESS TERS ARE	REGIS OF WHE	TER SAVE	
7757 7758	035035	000022				18.			NUMBER OF SAVED = 1	REGISTE	RS		
7759 7760	032034	004737	041446			JSR	PC, D#CH	ECKT	CHECK DVA	RDY MOL	DPR D	RY VV = 3	
7762	032040	104400	066402			TYPE	, CPHALT		CHECK DVA	NTINUE 1	ESTING	IF ANY	F I
7754	032044	000000				HALT			STOP	SET OF	B113 D	014 1 - 1	
7752 7753 7753 7755 7755 7757 7759 7761 7762 7764 7765 7766 7767 7767 7767 7772 7773	032046	013777	004606	150212		MOV	3#RP4VE	C, GRPVEC	SET RPO4 ( TO TIME! OR TO TIE TIME WILL CURRENT CO	VECTOR F IF P-0 ME2' IF LL ONLY YLINDER RHEAD RE	DDRESS LOCK I P-CLOCK SAVE ADDRESS GISTERS	S PRESENT K IS NOT S	PRESENT

SE0 0224

MAINDEC	-11-DZRJ	I-A. RPC	04/5/6 FUNCT.	CONT.	TST-P	T 1	GO2	30-MAR-76 22:59 PAGE 165	SEQ 0225
	032054 032060	SEEK TE 013746 052716 012677	002450 000101 150210			MOV BIS MOV	@#REFOR,-(SP) #GO!IE,(SP) (SP)+,@RHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :72 IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION	
7779 7780 7781 7782	032070 032072	011100			•	MOV MOV	aR1.R0 aR3.R5	SAVE RHOSI DURING ABOVE OPERATION SAVE RHOSI DURING ABOVE OPERATION	
7775 7775 7775 7776 7777 7778 7778 7780 7781 7783 7785 7785 7787 7789 7789 7791 7792 7793 7795 7799 7799 7799 7799 7799 7799	032074 032076 032100 032102 032104	104412 002300 000200 001614 001507				WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
7791 7792 7793						*COMPAN	RE CONTENTS OF RED RS IMMEDIATELY	ACS1 AND RHDS1 ALREADY SAVED IN AFTER GO	
7794 7795 7795 7796 7797	032106 032112 032116 032122	013746 052716 011637 022500	002450 004101 001124			MOV BIS MOV CMP	a*REFOR(SP) #IE!GO!DVA.(SP) (SP).a*SGDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!GO!DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!GO!DVA	
7799 7800 7801 7802 7803	032124 032126 032132 032136	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	67\$ RO, 0#\$BDDAT RI, 0#REGADR 21	BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY	
7804 7805 7806 7806	032140 032144 032150	012746 011637 022605	010500 001124	679	<b>S</b> :	MOV MOV CMP	#MOL!DPR!VV(SF (SP).3#\$GDDAT (SP)+,R5	SAVE BITS SET DURING OPERATION IN RHOST SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV	
7808 7809 7810 7811 7812	032152 032154 032160 032164	001405 010537 010337 104063	004600			BEQ MOV MOV ERROR	69\$ R5.3*\$BDDAT R3,3*REGADR 63	SAVE COMMAND INCLUDE IE:GO:DVA SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE:GO:DVA AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE:GO:DVA SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET  TO EXPECTED VALUES MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE	
7813 7814 7815	032166			699	<b>3</b> :	:*CHANGE	SAVED REGISTERS	TO EXPECTED VALUES	
7805 7806 7807 7809 7809 7810 7812 7813 7814 7815 7816 7817 7818 7819 7820 7821 7823 7824 7825 7827	032166 032172 032174 032176 032202 032204 032206 032212	004037 002272 000000 004037 002274 004544	041270			JSR RHBA REINTO+<	RO, 3#FILLRE	TO EXPECTED VALUES :MOV D INTO SAVED RHWC ;SAVED REGISTER TO CHANGE :DATA :MOV REINTO+<260.*2> INTO SAVED RHBA ;SAVED REGISTER TO CHANGE :DATA :MOV 1 INTO SAVED RHDST	
7823 7824 7825 7826	032212	004037 002304 000001	041270			JSR RHDST 1 :*COMPAR	RO, @#FILLRE	; DATA	
7827						:*WITH F	REGISTERS AFTER C	RE READ HEADER AND DATA	

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPO SEĚK TE	4/5/6 FUNCT. COI	NT. TST-P	Т 1	HO2	30-MAR-76 22:59 PAGE 166
79290 79290 79290 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293 79293	032216 032222 032224 032226 032230 032232	004037 004612 002354 000022 032234 032240	042354		JSR SAVERE WC 18. 5%	RO, 0#COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
7837 7838 7839 7840 7841 7842 7843	032234 032236	104031		5\$:	ERROR	31 PC	READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
7845 7846					*NOW R	EAD INTO BUFFER READ WAS GOOD	WILL BE CHECKED TO SEE
7848	032240			69:			1 1
7850 7851 7852 7853 7854 7855 7855	032240 032244 032246 032250 032252 032254	004037 002470 003534 000404 032256 032262	043404		JSR WRFROM REINTO 260. 7% 10%	RD, 3#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 260. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
7857 7858	000000				F5505	22	HETTE HEADER AND DATA
7860 7861	035520	104032		75:	ERROR RTS	32 PC	:WRITE HEADER AND DATA :FOLLOWED BY A READ HEADER :AND DATA GAVE A READ ERROR :ERROR MAY BE IN READ OR WRITE
7859 7860 7861 7862 7863 7864	035565			10\$:			ERROR MAY BE IN READ OR WRITE

SEQ 0226

6510 EH.						1			
7855 7856 7856 7857 7857 7877 7877 7877					**************************************	THIS TO SEEK BOTHER THAT IS THE HEADS THE HEADS THEN A AND DATE	SEEK & WRT TEST EST GETS THE HEAD JT BY TEN IMPLIED EST STARTS WITH A CYLINDER ZERO. ACK #18 IT WRITES AD TO CYLINDER 1 TROS TO CYLINDER 2 TO CYLINDER 2 TO CYLINDER 10 TO CYLINDER 10 SEEK COMMAND IS TA ALREADY WRITTE	SOUT TO CYLINDER 10 NOT BY ONE SEEKS ONE CYLINDER AT A TIME  (ALREADY TESTED) RECALIBRATE THEN ON CYLINDER 0 SECTOR SEEKS WORDS THERE BY GETTING THEN IT WRITES 266 WORDS ON RACK #18 THERE BY GETTING  ES GETTING THE GIVEN TO CYLINDER 0 IN IS CHECKED	
7883 7884 7885 7886 7887	032262 032264 032270	000004 012706 012737	001000 000043	004604	†\$ <b>*</b> ****	SCOPE MOV MOV	#STACK.SP #43,0#TSTNM	; RESET STACK ; SAVE TEST NUMBER	
7888 7889 7890 7891 7892	032276	004737	041365			JSR	PC, @#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER	
7893 7894 7895 7896 7897						*CYLIN	IDER 0	RE TO INITIALIZE TEST FROM HANGED DURING TEST TO ENABLE R	
7898 7899 7900 7901 7902 7903 7904 7905 7906 7909	032302 032310 032316 032324 032332 032340 032354 032354 032362 032370	012737 012737 012737 012737 012737 012737 012737 012737 012737	010000 001125 010001 002000 000000 000001 000001 010001 002000 000001	032460 032500 032512 032532 032540 032750 032760 033042 033062 033102		MOV MOV MOV MOV MOV MOV MOV MOV	#10000, 2#ST1+10 #<<18.*40>!21.> #10001, 2#ST3+10 #2000, 2#ST4+10 #0, 2#ST5+4 #1, 2#ST6+6 #1, 2#ST6+16 #10001, 2#ST9+10 #2000, 2#ST10+10 #1, 2#ST11+4		
7909						;*THIS	IS TO GET THE HE	ADS TO CYLINDER O	
7910 79112 7912 7913 7915 7915 7917	032376	013777	004606	147662		MOV	a*RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
7918	032404	013746	002426			MOV	a#RECALI,-(SP)	GET READY TO MOVE COMMAND	



	444						J02		
DZRJIA.	-11-DZRJ P11	11-A. RPO 143	SEEK &	UNCT. CON WRT TEST	(CYL =	0-10)	MACY11 27(655)	30-MAR-76 22:59 PAGE 168 SEG 023	28
7919 7920	032410	052716	000101			BIS	#GO!IE,(SP)	GET READY TO SET 'GO' AND SENABLE INTERRUPT	
7921	032414	012677	147660			MOV	(SP)+, aRHCS1	GO WITH 6 IN RHCS1 FOR RECALIBRATE	
7923 7924 7925 7926	032420	01110C 011305				MOV	aR1,R0 aR3,R5	GO WITH 6 IN RHCS1 FOR RECALIBRATE WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OFERATION SAVE RHDS1 DURING ABOVE OPERATION	
7921 7922 7923 7924 7925 7926 7926 7927 7929 7930 7931 7932 7935 7935 7937 7939 7939 7941 7942	032424 032426 032430 032432 032434	104412 002322 000200 076377 056701				WAT RHDS1 DRY 31999. 24001.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 319990 MICRO SECONDS DRY MUST SET BETWEEN 79980 AND 560000 MICRO SECONDS	
7933	032436	012737	000012	001200		MOV	#10.,2#\$TMP1	TEN COUNT TO GET TO CYLINDER 10	
7935 7936 7937 7939 7939	032444	004737	041366			JSR	PC, @#CLDISK	SET RI-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER	
7940 7941 7941	032450				ST1:	;*FILL	WRITE FROM BUFFE	ER WITH HEADER	
7943 7944 7945 7946 7947 7948 7949	032450 032454 032456 032460 032462 032464 032464	004037 002470 000004 010000 011025 000000	041212			JSR WRFROM 10000 <18.*40	RO, J#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD	
7950 7951 7952	022470				ST2:	;*FILL	WRITE FROM BUFFER	ER WITH DATA	
7953 7954 7955	032470 032470 032474 032476 032500	004037 002500 000400	041236		SIE:	JSR WRFROM+ 256.	RO, D#CLAREA	;CLEAR 256. WORDS, FROM WRFROM+10 :STARTING FROM WRFROM+10 ;256. WORDS	
7956 7957	032500	001125				⟨0.*200	0>!<18.*40>!21.	;FILL WITH (0.*2000)!(18.*40)!21.	
7958 7959 7960 7961	032502				ST3:	;*FILL		ER WITH NEXT TRACK HEADER	
7951 7952 7953 7954 7955 7956 7956 7959 7960 7961 7962 7963 7964 7965 7966 7967 7968 7969 7971	032502 032506 032510 032512 032514 032516 032520	004037 003500 000004 010001 000000 000000	041212			JSR WRFROM+ 10001 0 0	RO. 0#FLHEAD <260. *2>	;SAVE HEADER DATA IN WRFROM+<260.*2> ;LOCATION WHERE SAVED ;NUMBER OF WORDS SAVED ;FIRST DATA WORD ;SECOND DATA WORD ;THIRD DATA WORD ;FOURTH DATA WORD	
7970 7971	032522				ST4:			ER WITH NEXT TRACK DATA	
7972	032522	004037	041236			JSR	RO, 3#CLAREA	;CLEAR 2 WORDS, FROM WRFROM+<264.*2>	

MAINDE	C-11-DZRJ	I-A, RPO	4/5/6 FL	NCTCON	T. TST-F	T 1	MACY11 27(655)	30-MAR-76	22:59	PAGE	169
			SEEK &	WRT TEST	(CYL =						
7973 7974 7975 7976	032526 032530 032532	005000 000005 003210				WRFROM+ 2 1.*2000	(264.*2)	;2 WORDS ;FILL WITH	1.*200	FROM	WRFROM+<264.*2>
7977 7978 7979	032534				ST5:	;*THE W	RITE HEADER AND	DATA COMMAN	D WILL	BE FIL	LED
7974 7975 7976 7976 7977 7978 7980 7981 7981 7984 7988 7988 7989 7990 7991 7991 7993 7994 7998 7998	032534 032540 032542 032543 032544	004037 000000 025 022 177366	043340		BYTE BYTE	JSR 0 21. 18. -2624	RO, 3#RUN	SETUP TO CYLINDER SECTOR 21 TRACK 18. WORD COUN	HIHU	DATA ) = 26	COMMAND
7987 7988 7988	032546	002470				WRFROM		4 HEADER BUS ADDRE STARTING	SS ADDRESS	OF DA	TA
7990 7991 7992	032550 032552	000000				O FMT22		DO NOT IN	WRFROM HIBIT BU ER WORD HIBIT E	FORMA CC COR	RESS INCREMENT T RECTION
7993 7994 7995 7996	032554	002444				WRIFOR	;WRITE	DO NOT IN DO NOT IN GET READY HEADER AND	TO DO (	A WRIF	OR IN RHCS1
7997						; *SAVE	REGISTERS FOR CO	MPARISON AF	TER WRIT	TE HEA	DER AND DATA
7999 8000 8001 8002 8003 8004	032556 032562 032564	004037 002272 004612	041534			JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTANCE IS THE REGISTANCE OF SAVED = 18	STERS HE FIRST ADDRESS	T REGI	STER SAVED
8004 8005	032566	000022				18.		NUMBER OF SAVED = 18	REGISTE	ERS	
8007	032570	004737	041446			JSR	PC, a#CHECKT	CHECK DVA	RDY MOL	DPR.	DRY, VV = 1
8009	032574	104400	065402			TYPE	, CPHALT	CANNOT CON	SET OF	BITS	DRY.VV = 1 S ARE STUCK = 1 G IF ANY OF DON'T = 1
8011	035600	000000				HALT					
8005 8006 8007 8008 8009 8010 8011 8012 8013 8014 8015 8016 8019 8019	032602	013777	004606	147456		MOV	a#RP4VEC, aRPVEC	SET RPO4 V TO 'TIME! OR TO 'TIM 'TIME' WIL CURRENT CY AND LOOK A	VECTOR A VER IF POO MEZ' IF LL ONLY VLINDER RHEAD RE	DDRESS LOCK P-CLOC SAVE ADDRESS GISTER	S PRESENT CK IS NOT PRESENT SS
8055 8055 8051	032610	013746 052716	000101			MOV BIS	a#WRIFOR(SP) #GO!IE,(SP)	GET READY	TO MOVE TO SET	COMM	AND
8021 8022 8024 8024 8025 8026	032620	012677	147454			MOV	(SP)+, aRHCS1	GO WITH :62 IN RHO ;WITH INTER	S1 FOR RRUPT EN	WRITE HABLED	AND HEADER AND DATA

004037 002274 003514

8079 8080 041270

041270

041270

ST6:

SAVED REGISTER TO CHANGE RHWC MOV WRFROM+(266.*2) INTO SAVED RHBA SAVED REGISTER TO CHANGE JSR RO. D#FILLRE RHBA :DATA WRFROM+<266. *2> **JSR** RO. D#FILLRE

SEQ 0230

MOV 1 INTO SAVED RHCC SAVED REGISTER TO CHANGE DATA RHCC MOV 1 INTO SAVED RHCA SAVED REGISTER TO CHANGE JSR RO, D#FILLRE

MO2

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO T43	14/5/6 FUNCT. CON SEEK & WRT TEST	T. TST-F	T 1 0-10)	MACY11 27(655)	30-MAR-76 22:59 PAGE 171
8081 8082 8083	032762 032766 032770	004037 002304 000001	041270		JSR RHDST 1	RO, @#FILLRE	MOV 1 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA
8085 8085 8086 8087					*COMPA ;*WITH	RE REGISTERS BEF REGISTERS AFTER	ORE WRITE HEADER AND DATA
8088 8089 8090 8091	032772	004037	042354		JSR SAVERE	RO, 0#COMREG	COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC'
8083 8083 8083 8084 8085 8086 8087 8089 8099 8099 8099 8099 8099 8102 8107 8107 8109 81109 81109 81109	033000 033004 033006 033010 033012	002354 000022 033010 033014 104027 000207		ST7:	WC 18. ST7 ST8 ERROR RTS	27 PC	RETURN TO ST7 ON ERROR RETURN TO ST8 ON NO ERROR WRITE HEADER AND DATA CAUSED
8098 8099 8100 8101							GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS BE THERE AFTER COMMAND
8103 8104					*SETUP *FILL	TO READ HEADER	AND DATA FOR NEXT TRACK WITH ALL ONES
8106	033014			ST8:			
8109 8109 8110	033014	004737	041366		JSR	PC, a#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 260. WORDS, FROM REINTO STARTING FROM REINTO
8111 8112 8113 8114 8115 8116	033020 033024 033026 033030	004037 003534 000404 177777	041236	,	JSR REINTO 260.	RO, D#CLAREA	CLEAR 260. WORDS, FROM REINTO STARTING FROM REINTO 260. WORDS FILL WITH -1
8117					;*FILL	WRITE FROM BUFFE	R WITH EXPECTED DATA
8150	033032			ST9:			
8115 8115 8116 8116 8116 8116 8116 8116	033032 033036 033042 033044 033046 033050 033052 033052 033056 033060	004037 002470 000004 010001 000000 000000	041212	ST10:	JSR WRFROM 10001 0	RO, @#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD
8130 8131 8132 8133 8134	033052 033056 033060 033062	004037 002500 000002 002000	041236	31101	JSR WRFROM+ 2 1*2000	RD. 0#CLAREA <4*2>	;CLEAR 2 WORDS, FROM WRFROM+<4*2> ;STARTING FROM WRFROM+<4*2> ;2 WORDS ;FILL WITH 1*2000

NO5 MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T43 SEEK & WRT TEST (CYL = 0-10) MACY11 27(655) 30-MAR-76 22:59 PAGE 172 ;CLEAR 254. WORDS, FROM WRFROM+(6*2) ;STARTING FROM WRFROM+(6*2) ;254. WORDS ;FILL WITH D 004037 002504 000376 000000 JSR RD, 0#CLAREA WRFROM+(6*2) 033064 041236 033072 033074 :*FILL COMMAND INTO REGISTERS 033076 ST11: SETUP TO RUN FOR DATA COMMAND CYLINDER 1 SECTOR D TRACK D 033076 033102 033104 033105 033106 004037 000001 000 000 043340 **JSR** RO. D#RUN .BYTE 000 WORD COUNT (DATA) = 256. + 4 HEADER WORDS BUS ADDRESS 177374 -256.-4 033110 003534 REINTO STARTING ADDRESS OF DATA
BUFFER = REINTO
DO NOT INHIBIT BUS ADDRESS INCREMENT
16 BITS PER WORD FORMAT
INHIBIT ECC CORRECTION
DO NOT INHIBIT HEADER COMPARE 033112 000000 ECI!FMT22 GET READY TO DO A REFOR READ HEADER AND DATA WITH 72 IN RHCS1 033116 002450 REFOR ; *SAVE REGISTERS FOR COMPARISON AFTER READ HEADER *AND DATA SAVE REGISTERS
RHWC IS THE FIRST REGISTER SAVED
STARTING ADDRESS OF WHERE
THE REGISTERS ARE SAVED
NUMBER OF REGISTERS 033124 033124 033126 004037 002272 004612 041534 RO. D#SAVER RHWC SAVERE 033130 000020 16. SAVED = 16. CHECK DVA, RDY, MOL, DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 033132 004737 JSR PC. D#CHECKT 041446 104400 TYPE . CPHALT 033136 066402 HALT 033142 000000 :SET RPO4 VECTOR ADDRESS :TO 'TIME1' IF P-CLOCK IS PRESENT ;OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 033144 013777 a#RP4VEC. aRPVEC 004606 MOV 147114 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS GET READY TO MOVE COMMAND #GO! IE, (SP) 033152 ENABLE INTERRUPT 033162 MOV (SP)+, DRHCS1 012677 147112

							B03				
MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RP0	SEEK \$	NCT. CO	NT. TST-P	0-10)	MACY11 27(655)	30-MAR-76 22:59	PAGE 173		SE0 0533
91199	033166 033170	011100 011305				MOV MOV	QR1.RO QR3.R5	:72 IN RHCS1 FO :WITH INTERRUPT E :SAVE RHCS1 DURIN :SAVE RHDS1 DURIN	R READ DATA NABLED G ABOVE OPERATION G ABOVE OPERATION		
	033172 033174 033176 033200 033202	104412 002300 000200 001514 001507				WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT WAIT FOR RHCS1 R WAIT FOR RDY BIT ALLOW 9080 MICRO RDY MUST SET BET 590 AND 17470 MI	TO SET EGISTER IN RHCS1 REGISTER SECONDS WEEN CRO SECONDS	•	
8202						:*COMPA :*RO AN	RE CONTENTS OF RED RES IMMEDIATELY	HCS1 AND RHDS1 ALR AFTER GO	EADY SAVED IN		
9205 9205 9206 9207 9209	033204 033210 033214 033220	013746 052716 011637 022600	002450 004101 001124			MOV BIS MOV CMP	ammeror(SP) mie:Go:DVA.(SP) (SP).ammeror (SP)+,RO	SAVE COMMAND INCLUDE IE:GO:DV SAVE FOR PRINTOU DURING ABOVE OPE	A T RATION ONLY IE!GO!DVA LD BE SET  RHCS1 RATION ONLY 0!DVA SHOULD BE SET S SET DURING OPERATION T RATION ONLY MOL!DPR!VV		
92112 92112 92112 92112 92112	033222 033224 033230 033234	001405 010037 010137 104021	004600			BEQ MOV MOV ERROR	64\$ RO,J*\$BDDAT R1,J*REGADR 21	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPE COMMOND AND IF!G	RHCS1 RATION ONLY		
8215 8216 8217	033236 033242 033246	012746 011637 022605	010500		54\$:	MOV MOV CMP	*MOL!DPR!VV(SF (SP).2*SGDDAT (SP)+.RS	SAVE FOR PRINTOU DURING ABOVE OPE	S SET DURING OPERATION T RATION ONLY MOL!DPR!VV	IN RHDS1	
8221	033250 033256 033256	001405 010537 010337 104063	001126			BEQ MOV MOV ERROR	665 R5.3*SBDDAT R3.3*REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPEN MOLIDPRIVE SHOULE	RHDS1 RATION ONLY		
8224 8225	033264				663:						
8225 8227	0000011	2011022	0111000					TO EXPECTED VALUE			
8558	033270	002272	041270			JSR RHWC	RO. 3#FILLRE	:MOV D INTO SAVED :SAVED REGISTER TO :DATA	CHANGE		
8232 8232	033274	004037 002272 000000 004037 002274 004544	041270			JSR RHBA	RO, D#FILLRE	MOV REINTO+ 260.	2> INTO SAVED RHBA CHANGE		
	033254 033270 033272 033274 033300 033302 033304 033310	004544 004037 002304 000001	041270			REINTO+ JSR RHDST 1	(260.*2) RO,3#FILLRE	: MOV 1 INTO SAVED : SAVED REGISTER TO ; DATA	RHDST		
8238 8239 8240						*COMPA	RE REGISTERS BEFO TERS AFTER COMMAN	DRE READ HEADER AND	DATA WITH		
8242	033314	004037	042354			JSR	RD, 3#COMREG	COMPARE SAVED REC	SISTERS WITH		

	-						-	
MAINDEO DZRJIA.	-11-DZRJ	I-A. RP0 143	04/5/6 FL SEEK S	UNCT. CON WRT TEST	NT. TST-F	O-10)	MACY11 27(655)	30-MAR-76 22:59 PAGE 174
92445 92445 92445 9244 9244 93	033320 033322 033324 033326 033330	004612 002354 000022 033332 033335				SAVERE WC 18. STI2 STI3		PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO ST12 ON ERROR RETURN TO ST13 ON NO ERROR
77547970-127755 777777775555555555555555555555555	033332 033334	104031			ST12:	ERROR	31 PC	READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
9257 9259	033336				ST13:	;*READ	INTO BUFFER IS	CHECKED FOR PROPER READ
9257 9259 9255 9255 9255 9255 9255 9255	033336 033342 033344 033346 033350	004037 002470 003534 000404 033354 033360	043404			JSR WRFROM REINTO 250. ST14 ST15	RO, 3#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 250. WORDS TO BE COMPARED RETURN TO STI4 ON ERROR RETURN TO STI5 ON NO ERROR
	033354 033356	104032 000207			ST14:	ERROR	32. PC	WRITE HEADER AND DATA WITH AN IMPLIED SEEK FOLLOWED BY A READ HEADER AND DATA ON THE NEXT TRACK GAVE A READ ERROR ERROR MAY BE READ OR WRITE
9275 9276 9277						*THE H	EADS HAVE ADVAN	CED ONE CYLINDER BY AN IMPLIED
9279 8279 8280					11	*CHANG *CYLIN *TILL	SES WILL BE MADE IDER AND THEN TH CYLINDER 10 IS	TO ENABLE GOING TO THE NEXT E ABOVE WILL BE REPEATED REACHED
	033369 033376 033376 033404 033410 033424 033424 033436 033444 033446	005237 062737 005237 005237 005237 005237 005237 005237 005237 005237 005237 005237	032460 002000 032512 002000 032540 032760 033042 002000 033102 001200	032500	ST15:	NOD HOUSE PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PARTY PA	a*ST1+10 *(1.*2000),a*S a*ST3+10 *(1.*2000),a*S a*ST5+4 a*ST5+6 a*ST5+16 a*ST9+10 *(1.*2000),a*S a*ST11+4 a*STMP1 ST16 ST17	T2+10 T4+10  T10+10  :COUNT FOR TEN TIMES :BRANCH IF 10 NOT DONE :10 COMPLETED SO CONTINUE :JUMP AS 10 NOT DONE
52.36								

MAINDEC-11-DZRJI-A, RP04/5/5 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 175
DZRJIA.P11 T43 SEEK 8 WRT TEST (CYL = 0-10)

	3297 3298 3299 3300						*THE   *ALL ! *TO C' *FILL	HEADS ARE NOW AT REGISTERS WILL BE YLINDER O REGISTERS FOR A	CYLINDER 10 SAVED AND A SEEK WILL BE GIVEN SEEK COMMAND
	305	033452				ST17:			
	303 304 3305 3305 3306	033452	004737	041366			JSR	PC.@#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	309	033456 033462	004037 000000	041336			JSR 0	RO, D#SEEKCY	SEEK FOR CYLINDER O
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		033464 033470 033472	004037 002272 004612	041534			*SAVE JSR RHWC SAVERE	REGISTERS FOR CO	MPARISON AFTER SEEK COMMAND SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
2	317	033474	000055				19.		NUMBER OF REGISTERS
	319 320 322 323 323 323 325 325 325	033476	013777	004605	146562		MOV	3≋RP4VEC, 3RPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AMEAD REGISTERS
200000	328	033504 033510	013746 052715	000101			MCV BIS	a*SEECOM(SP) #GO!IE, (SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH '4 IN RHCS1 FOR SEEK WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION
8	330 331 332	033514	012677	146560			VCM	(SP)+, DRHCS1	GO WITH
	332	033520	011100 011305				MOV	2R1,R0 2R3,R5	:WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION :SAVE RHDS1 DURING ABOVE OPERATION
2010	337						; *SEEK	FOR ONE CYLINDER	7MILI SEC., FOR TEN=70 MILI SEC
	333333444444 3333344444444 3333344444444	033524 033526 033530 033532 033534	104412 002322 000200 015530 000043				WAT RHDS1 DRY 7000.		:WAIT FOR DRY BIT TO SET :WAIT FOR RHDS1 REGISTER :WAIT FOR DRY BIT IN RHDS1 REGISTER :ALLOW 70000 MICRO SECONDS :DRY MUST SET BETWEEN :69650 AND 70350 MICRO SECONDS
	346						:*COMPA :*RO AN	RE CONTENTS OF RED RES IMMEDIATELY	AFTER GO
	349	033536 033542	013746 052716	002452			MOV	a#SEECOM(SP) #DVA!GO!IE!RDY.	:SAVE COMMAND SP) :INCLUDE DVA!GO!IE!RDY

							E03	}					
MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPC 143	14/5/6 FU SEEK \$	NCT. CON	NT. TST-F	0-10)	MACY11 27(655)		76 22:59	PAGE	176		SE0 0236
9351 9352	033546 033552	011537 022500	001154			MOV	(SP), 2#\$GDDAT (SP)+,R0	SAVE F	OR PRINTOU	RATION	ONLY DVA!	GO!IE!RDY	
9355 9355 9356 9357	033554 033556 033562 033566	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	64\$ RO, D*SBDDAT R1, D*REGADR 21	BRANCH BAD DA FAILIN DURING	IF GOOD TA G REGISTER ABOVE OPE	RHCS	SET DVA!	BE SET	
8359 8350 8361	033570 033574 033600	012746 011637 022505	030500		64\$:	MOV MOV CMP	#PIP!MOL!DPR!VV (SP).2#\$GDDAT (SP)+.R5	;SAVE F	SAVE BIT OR PRINTOU ABOVE OPE	S SET	DURING OPE	RATION IN RHDS1 MOL!DPR!VV	
\$5555557890-123+547890-123+547890-123 \$5555555554454547890-123+547890 \$55555554454547890-123+547890 \$55555554454547890-123+5478900-123 \$5555555454547890-123+5478900-123 \$55555545454547890-123+5478900-123	033602 033604 033610 033614	001405 010537 010337 104063	004600			BEQ MOV MOV ERROR	66\$ R5,3*\$BDDAT R3,3*REGADR 63	BRANCH BAD DA FAILIN DURING PIP!MO	IF GOOD TA G REGISTER ABOVE OPE L!DPR!VV S	RHDS1 RATION HOULD	I ONLY BE SET	BE SET RATION IN RHDS1 MOL!DPR!VV	
8369 8369	033616				56\$:								
8370 8371							HANGE SAVED REGI						
9372 9373 9374	033616 033622 033624	004037 002334 000000	041270			JSR RHCC D	RO, G#FILLRE	SAVED I	INTO SAVED REGISTER T	O CHAN	IGE		
8375 8375 8377 8378	033626	053737	004740	004636		BIS	D#ATTENT, D#SAVE	RE+24	SET APPR FOR WORK SAVED RH	OPRIAT ING DR AS LOA	E 'ATA' BI	TS	
9380	033534 033640	004037 002322	045546			JSR RHDS1	RO, 2#CHREG	CHANGE; CHANGE	BITS IN S RHDS1 REG	AVED R	EGISTER		
	033642 033644 033646	000001 000001 100000				1 ATA		:1 BIT/E :NEW VAL :CHANGE	BITS TO BE LUE OF ATA ATA BIT	CHANG IS 1	ED		
8387 2388	033650 033654	004037 002300	042246			JSR RHCS1	RD, D#CHREG	: CHANGE ; CHANGE	BITS IN S	AVED R	EGISTER		
8390 8391 8392	033650 033660	000001 000001 100000				i SC		NEW VAL	BITS TO BE LUE OF SC SC BIT	CHANG IS 1	ED		
8394						: *COMPA	RE REGISTERS AFT	ER A SEEK	COMMAND				
9396	033664	004037	042354			JSR	RO. 3#COMREG	COMPARE	SAVED REG	GISTER	S WITH		
9345£789C122345£789C14234 9333988999999999999999999999999999999	033670 033672 033674 033676 033700	004612 002354 000022 033702 033706				SAVERE WC 18. ST18 ST19		GOOD DA TEST DA 18. REC RETURN RETURN	TA SAVED TO START IN TO STIP OF	IN 'SA NG FRO BE CO N ERRO N NO E	VERE' M'RHWC' MPARED R RROR		
8404	033702	104037			ST18:	ERROR	37	;SEEK CO	MMAND CAUS	SED AN			

EC-11-1 A.P11	DZRJ:	I-A. RPO	4/5/6 FUNCT. CO SEEK & WRT TES	ONT. TST-	PT 1 0-10)	FO:	
6	704	000207			RIS	PC	ERROR GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER A SEEK COMMAND
3-03-03-03-03-03-03-03-03-03-03-03-03-03					*AT TH *NO ER *A REA *SECTO *FOR 1 *CLEAR	RIS POINT THE CL RROR BITS AD HEADER AND DA OR 21 TRACK 18, D WORDS R READ INTO BUFF	RRENT CYLINDER IS GOOD AND THERE ARE THE WILL BE DONE ON CYLINDER D EXPECTED DATA IS 1125 TER WITH ALL ONES
033: 0033: 0033: 0033: 033:	712	004037 003534 000404 177777	041236	ST19:	JSR REINTO 260.	RO, 3#CLAREA	CLEAR 260. WORDS, FROM REINTO STARTING FROM REINTO 260. WORDS FILL WITH -1
5					;*FILL	WRITE FROM BUFF	ER WITH EXPECTED DATA
	736 736 734 736	004037 002470 000004 010000 011025 000000 000000 004037 002500 000012 001125	041212		O O JSR WRFROM+	RO, 3#FLHEAD  O>!<21.>  RO, 3#CLAREA - (4.*2)  >!<21.>	:STARTING FROM WRFROM+(4.*2)
7 0337 8 0337 0 0337 1 0337 2 0337		001125 004037 002524 000366 177777	041236		JSR WRFROM+ 246.		;FILL WITH <18.*40>!<21.> ;CLEAR 246. WORDS, FROM WRFROM+<14.*2> :STARTING FROM WRFROM+<14.*2> :246. WORDS ;FILL WITH -1
5					;*FILL	READ HEADER AND	DATA COMMAND FOR 10 WORDS
7 0337 8 0337 0 0337 0 0337	764 770 772 773 774	004037 000000 025 022 177762	043340	BYTE BYTE	JSR 0 21. 19. -104	RO, D#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 0 SECTOR 21. TRACK 18. WORD COUNT (DATA) = 10. + 4 HEADER WORDS
3 033	776	003534			REINTO		BUS ADDRESS STARTING ADDRESS OF DATA
5 6 0340 7 0340 8	900	000000 014000			O ECI!FMT	22	BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = REINTO DO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT INHIBIT ECC CORRECTION

MAINDEC	-11-DZRJ	I-A. RPC	4/5/6 FU	NCT. CON	T. TST-P	T_1,	GO3	30-MAR-76 22:59 PAGE 178		SEG 0238
		002450	JEER 3	AN: 1231	(012 -	REFOR		DO NOT INHIBIT HEADER COMPARE GET READY TO DO A REFOR READ HEADER AND DATA WITH 72 IN RHCS1	3	
9463 9464	034006	004737	041446			JSR	PC, D#CHECKT	CHECK DVA RDY MOL DPR DRY VV = 1	1	
9466 8467	034012	104400	066402			TYPE	,CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1		
8469 8469	034015	000000				HALT		;510F		
######################################	034020	313777	004505	146240		MOV	a#RP4VEC, aRPVEC	SET RPD4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS		
8477 8478 8479	034026 034032	013746 052716	002450			MOV	@#REFOR(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND FNOR F INTERRUPT	· 4	
8481 8482 8483	034036	012677	146236			VOM	(SP)+, aRHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 72 IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED		
9779011233 9779011233 9779011233 9779011233 977911233 977911233	034042 034044 034046 034050 034052	104412 002300 000200 001614 001507				WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	•	
8493						; *CHECK	READ WORDS			(
912345 912345 1119945 912990 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 91355 9135 913	034054 034060 034062 034064 034066 034070	004037 002470 003534 000404 034072 034075	043404			JSR WRFROM REINTO 250. ST26 ST27	RD, 3#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 260. WORDS TO BE COMPARED RETURN TO ST26 ON ERROR RETURN TO ST27 ON NO ERROR		
8502 8503 8504 8505 8506	034072 034074	104032 000207			ST26:	ERROR RTS	32 PC	READ HEADER AND DATA FOLLOWING A SEEK TO CYLINDER O FROM CYLINDER 10 GAVE AN ERROR		
8507 8508 8509	034076				ST27:					

EC-11-DZRJ A.P11	71-A RPC	04/5/6 FL SEEK &	UNCT. CON WRT TEST	IT. TST-F	O-10)	HO3	
034076 034100 034104 034112				;	******	**************************************	**************************************
				* *	THIS TO	EST DEPENDS ON HE US TEST. AT THIS ER O	EADER AND DATA WRITTEN BY THE S POINT THE HEADS ARE ON
				* * * * *	ALL REG A SEEK ALL REG DATA W	GISTERS ARE SAVED IS GIVEN TO CYLI GISTERS ARE CHECK RITTEN ON CYLINDE	INDER 9 (ED FOR IMPROPER CHANGE ER 9 IS CHECKED
034076 034100 034104	000004 012706 012737	001000	004604	tst44:	SCOPE MOV MOV	#STACK,SP #44, D#TSTNM	RESET STACK SAVE TEST NUMBER
034112	004737	041366			JSR	PC.@#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
034116	013777	004606	146142		:*THIS MOV	GETS HEADS TO CY D#RP4VEC. DRPVEC	LINDER O
034124	013746 052716	002426			MOV	a#RECALI(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH
034134	012677	146140			MOV	(SP)+, @RHCS1	GO WITH  5 IN RHCS1 FOR RECALIBRATE
034140	011100 011305				MOV MOV	aR1.RD aR3.RS	SIN RHCS1 FOR RECALIBRATE WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
034144 034146 034150 034152 034154	104412 002322 000200 076377 056701				WAT RHDS1 DRY 31999. 24001.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 319990 MICRO SECONDS DRY MUST SET BETWEEN 79980 AND 560000 MICRO SECONDS
					;*FILL	REGISTERS FOR A	
D34162	004037	041336			JSR 10.	RO, @#SEEKCY	SEEK FOR CYLINDER 10.

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A, RP0	SEEK &	NCT. CONT. TST-P READ TEST (CYL =			30-MAR-76 22:59 PAGE 180
9564 9565 8566 8567 8568	034164 034170 034172	004037 002272 004612	041534		*SAVE JSR RHWC SAVERE	REGISTERS FOR CO	MPARISON AFTER SEEK COMMAND  SAVE REGISTERS  RHWC IS THE FIRST REGISTER SAVED  STARTING ADDRESS OF WHERE  THE REGISTERS ARE SAVED  NUMBER OF REGISTERS  SAVED = 18.
9569 8570	034174	000055			18.		NUMBER OF REGISTERS SAVED = 18.
\$55557890-1234557890-1234555789555555777777890-123455578990-12345567895599999999999999999999999999999999	034176	013777	004606	146062			SET RPO4 VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
8580 8581	034204	013746 052716	002452		MOV BIS	a#SEECOM, -(SP) #GO!IE, (SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH
8583 8584	034214	012677	146060		MOV	(SP)+, @RHCS1	:4 IN RHCSI FUR SEEK
8585 8586 8587 8588	034222	011100 011305			MOV MOV	aR1,R0 aR3,R5	SAVE RHOSI DURING ABOVE OPERATION SAVE RHOSI DURING ABOVE OPERATION
8589 8590						FOR ONE CYLINDER	=7 MILI SEC., FOR TEN=70 MILI SEC
8591 8592 8593 8594 8595 8596 8597	034224 034226 034230 034232 034234	104412 002322 000200 015530 000043			WAT RHDS1 DRY 7000.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 70000 MICRO SECONDS DRY MUST SET BETWEEN 69650 AND 70350 MICRO SECONDS
8598 8599					*COMPA *RO AN	RE CONTENTS OF RED RES IMMEDIATELY	HCS1 AND RHDS1 ALREADY SAVED IN AFTER GO
8603 8603 8604 8604	034236 034242 034246 034252	013746 052716 011637 022600	002452 004301 001124		MOV BIS MOV CMP	a#SEECOM(SP) #DVA!GO!IE!RDY.( (SP).2#\$GDDAT (SP)+,RO	:SAVE COMMAND (SP) :INCLUDE DVA!GO!IE!RDY ;SAVE FOR PRINTOUT ;DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY :AND COMMAND SHOULD BE SET
8598 8599 8601 8603 8603 8607 8609 8610 8611 8613 8614 8615 8617	034254 034256 034262 034266	001405 010037 010137 104021	001126 004600		BEQ MOV MOV ERROR	67\$ RO, 0#\$BDDAT R1, 0#REGADR 21	SAVE COMMAND  (SP) :INCLUDE DVA!GO!IE!RDY  SAVE FOR PRINTOUT  DURING ABOVE OPERATION ONLY DVA!GO!IE!RDY  AND COMMAND SHOULD BE SET  BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY  COMMAND AND DVA!GO!IE!RDY SHOULD BE SET  (SP) :SAVE BITS SET DURING OPERATION IN RHDS1  SAVE FOR PRINTOUT  DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV  SHOULD BE SET  BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHDS1
8611 8612 8613 8613	034270 034274 034300	012746 011637 022605	030500 001124	67\$:	MOV MOV CMP	*PIP!MOL!DPR!VV, (SP), J#\$GDDAT (SP)+,R5	-(SP) :SAVE BITS SET DURING OPERATION IN RHDS1 :SAVE FOR PRINTOUT :DURING ABOVE OPERATION ONLY PIP!MOL!DPR!VV :SHOULD BE SET
8615 8616 8617	034302 034304 034310	001405 010537 010337	001126		BEQ MOV MOV	69\$ R5, 3#\$BDDAT R3, 3#REGADR	BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1

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							J03				
MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO	SEEK &	NCT. CON READ TES	IT. TST-P	(600 1	MACY11 27(655)	30-MAR-	76 22:59	PAGE 181	
8518 8519	034314	104063				ERROR	63	; DURING : PIP! MO	ABOVE OPE	ERATION ONLY SHOULD BE SET	
8620	034316				69\$:						
8622						:*NOW (	CHANGE SAVED REGI	STERS TO	EXPECTED	VALUE	
8524 8625 8525	034316 034322 034324	004037 002334 000012	041270			JSR RHCC 10.	RO, @#FILLRE	MOV 10 SAVED DATA	. INTO SAY	VED RHCC TO CHANGE	
952223455729901234567890123 95522245522333334557890123 95522235233333333344423 9552334555233455333344443	034326	053737	004740	004636		BIS	D#ATTENT, D#SAVE	RE+24	:FOR WORK	ROPRIATE 'ATA' (ING DRIVE IN HAS LOACTION	BITS
8632 8633	034334 034340	004037 002322	045546			JSR RHDS1	RO, @#CHREG	CHANGE CHANGE	BITS IN S	SAVED REGISTER GISTER	1
8635 8636 8637 8637	034342 034344 034346	000001 000001 100000				1 ATA		: NEW VA	BITS TO BE LUE OF ATA ATA BIT	CHANGED IS 1	
8639 8640	034350 034354	004037 002300	042246			JSR RHCS1	RO, @#CHREG	CHANGE CHANGE	BITS IN S	SAVED REGISTER	
8642 8643 8644 8645	034356 034360 034362	000001 000001 100000				i SC		1 BIT/I NEW VAL CHANGE	BITS TO BE LUE OF SC SC BIT	CHANGED IS 1	
8646 8647						; *COMPA	RE REGISTERS AFTE	ER A SEE	COMMAND		
8648	034364	004037	042354			JSR	RD, 3#COMREG	PRESENT	SAVED RE	GISTERS WITH	
8650 8651 8652 8653 8653	034370 034372 034374 034376 034400	004612 002354 000022 034402 034406				SAVERE WC 18. 15		GOOD DO	ATA SAVED ATA STARTI SISTERS TO	IN 'SAVERE' ING FROM 'RHWC BE COMPARED ERROR NO ERROR	
8656 8658 8659 8659	034402	104037 000207			1\$:	ERROR RTS	37 PC	ERROR GOOD DO BE THEN RECEIVE	ED DATA GI	WHAT SHOULD VES WHAT WAS EK COMMAND	
86555555555555555555555555555555555555	034406				2\$:	*NO ER *A REA *SECTO *FOR 2	RIS POINT THE CURP RROR BITS ND HEADER AND DATA OR 21 TRACK 18, EX 20 WORDS READ INTO BUFFER	RENT CYLI	NDER IS G DONE ON DATA IS 23	COD OND THERE	ARE

SE0 0241

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RP0	94/5/6 FUNCT. SEEK & READ	CONT. TST-F	T 1 (200 :	MACY11 27(655)	30-MAR-76 22:5	9 PAGE	182	SEG 0242
	034405	004737	041366		JSR	PC, a#CLDISK	SET R1-RHCS1, R3-RHDS1, R4-R GIVE RH-11 INI	R2-RHCS2 HER1 TIALIZE	!	
8573456789012345678901234568886889699012345699012345688886999012345699901234569990123456999012345699901234569990123456999012345699901234569990123456999012345699990123456999901234569999012345699990123456999901234569999012345699990123456999901234569999012345699990123456999901234569999012345699990123456999990123456999990123456999999999999999999999999999999999999	034418 034416 034420 034422	004037 003534 000404 177777	041235		JSR REINTO 260.	RO, @#CLAREA	SET R1-RHCS1, R3-RHDS1, R4-R GIVE RH-11 INI SETUP UNIT NUM CLEAR 260. WOR STARTING FROM 260. WORDS FILL WITH -1	BER DS. FROM REINTO	1 REINTO	
8681 8682 8683					;*FILL	WRITE FROM BUFF	ER WITH EXPECTED			
8685 8686 8687 8688	034424 034430 034434 034436 034440 034440 034444 034444 034450	004037 002470 000004 010011	041212		JSR WRFROM 10011	RO, D#FLHEAD	SAVE HEADER DA LOCATION WHERE NUMBER OF WORD FIRST DATA WOR SECOND THIRD DATA WOR FOURTH DATA WOR CLEAR 20. WORD STARTI	TA IN WR SAVED S SAVED D	FROM	
8689 8690 8691 8692	034436 034440 034442	000000 000000 004037	041236		(18. *40 0 0 JSR	RO,@#CLAREA	; THIRD DATA WOR FOURTH DATA WOR CLEAR 20. WORD	DATA WO	WRFROM+<4.*2>	
8693 8694 8695	034450 034452 034454	002500 000024 023125			WRFROM+ 20. <9.*200	(4.*2) 0)!(18.*40)!(21.	;20. WORDS	NG FROM	;FILL WITH (9.	*2000>!<18.*40>!<2
8697 8698 8699 8700 8701	034426 034464 034464	004037 002550 000372 177777	041236		JSR WRFROM+ 250. -1	RD, a#CLAREA <24. *2>	;CLEAR 250. WORD ;STARTII ;250. WORDS ;FILL WITH -1	DS, FROM NG FROM	WRFROM+<24.*2> WRFROM+<24.*2>	
8702 8703 8704					;*FILL	READ HEADER AND	DATA COMMAND FOR	10 WORD	S	
8705 8706 8707 8708 8709 9710 8711 8712 8713 8714 8715 8716 8717 8718 8720 8721 8722 8723 8724 8725	034470 034474 034476 034477 034500	004037 000011 025 022 177750	043340	BYTE BYTE	JSR 9. 21. 18. -204	RO, 3#RUN	;SETUP TO RUN FO ;CYLINDER 9. ;SECTOR 21. ;TRACK 18. ;WORD COUNT (DAT ;4 HEADER WORDS ;BUS ADDRESS ;STARTING ADDRESS ;STARTING ADDRESS ;BUFFER = REINTO ;DO NOT INHIBIT ;16 BITS ;INHIBIT ECC COR ;DO NOT INHIBIT ;GET READY TO DO ;READ HEADER AND	OR DATA	COMMAND	
9710 8711 8712	034502	003534			REINTO		HEADER WORDS BUS ADDRESS STARTING ADDRESS	S OF DA	TA	
8713 8714 8715 8716	034504 034506	000000 014000			D ECI!FMT	22	; DO NOT INHIBIT ; 16 BITS ; INHIBIT ECC COR	BUS ADDI BPER WOI RRECTION	RESS INCREMENT	
8717 8718 8719 8720	034510	002450			REFOR		GET READY TO DO	HEADER (	COMPARE R ITH 72 IN RHCS1	
8721 8722 8723	034512	004737	041446		JSR	PC, a#CHECKT	CHECK DVA.RDY.M	OL DPR	DRY VV = 1	
8724 8725	034516	104400	066402		TYPE	CPHALT	CHECK DVA.RDY.N AND THAT NO STA CANNOT CONTINUE THE FIRST SET	TESTING	G IF ANY OF DON'T = 1	

. . .

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPO	4/5/6 FU SEEK &	NCT. CONT.	TST-PT 1 (CYL = 009)	MACY11 27(655)	30-MAR-76 22:59 PAGE 183	
	034522	000000			HALT		;STOP	
9722901233456789012345678901234567890123456789 972233335678901234567890123456789 97723335678901234567890123456789 97723345678901234567890123456789 97723345678901234567890123456789	034524	013777	004606	145534	MOV	3#RP4VEC, 3RPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
8735 8736 8737	034532 034536	013746 052716	002450		MOV	#REFOR, -(SP)	GET READY TO MOVE COMMAND	
9739 8739 8740 8741 8742	034542	012677	145532		MOV	(SP)+, @RHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :72 IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED	
8743 8744 8745 8746 8747 8748	034546 034550 034552 034554 034556	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS	
8751 8751					; *CHECK	READ WORDS		
8753 8754 8755 8756 8756 8757 8758 8759	034560 034564 034566 034570 034572 034574	004037 002470 003534 000404 034576 034602	043404		JSR WRFROM REINTO 250. 3\$ 4\$	RO, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 250. WORDS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR	
8760 8761 8762 8763	034576 034600	104032 000207		3	S: ERROR RTS	32 PC	READ HEADER AND DATA FOLLOWING A SEEK TO CYLINDER 9 FROM CYLINDER D GAVE AN	
8764 8765 8766 8767 8768 8769	034602			4	<b>S</b> :		ERROR	

SE0 0243

MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 184

SEQ 0244

9770 9771

.SBTTL WRITE CHECK DATA & WRITE PROTECT TESTS

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T45 WRITE CHECK HERDER AND DATA

8772 8773				٠.	;*TEST 45 WRITE CHECK HEADER AND DATA						
8775 8776					* * * * *	WRITE C	HECK HEADER AND	DATA CYLINDER 5 FORMAT 16 BITS PER WORD 0, NUMBER OF WORDS 266			
8779 8779 8780						ID MOKD	5 OF 12377 (P BI	15 FOR CYL, 5 FOR TRHCK, 5 FOR SECTOR)			
27777567890123456789901234567899012345678900123456789012345678901234567890123456789012345678901234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789000123456789000123456789000000000000000000000000000000000000						10 WORDS OF 0 10 WORDS OF 052525 10 WORDS OF 125252 16 WORDS OF LEFT ROTATING ZERO (EG 177776,177775) 16 WORDS OF LEFT ROTATING ONE (EG 1,2,4,10) 174 WORDS OF 377 4 WORDS OF HEADER 2 WORDS OF 12345					
					* * *	FIRST T	HE ABOVE DATA IS	WRITTEN BY A WRITE HEADER AND			
					* *	CHECK FOR THEN THE	OR NO ERRORS E ABOVE DATA IS OR NO ERRORS E ABOVE WRITE CH	READ BY A READ HEADER AND DATA ECK HEADER AND DATA IS GIVEN			
8796	22115 22	0000011			*****	*****	******	********			
8797 8798 8799 8800 8801 8802 8803 8804 8805	034604 034604	000004 012705 012737	001000	004604	†\$T45:	SCOPE MOV MOV	#STACK, SP #45, 3#TSTNM	; RESET STACK ; SAVE TEST NUMBER			
	034616	004737	041366			JSR	PC, a#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE ;SETUP UNIT NUMBER			
	034622	004737	041446			JSR	PC, a#CHECKT	OND THOT NO STOTUS DITE ORE STUCK - 1			
8807	034656	104400	066402			TYPE	, CPHALT	CANNOT CONTINUE TESTING IF ANY OF			
8809	034632	000000				HALT		CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1 STOP			
8810						:*GET HEADS TO CYLINDER 5					
8812 8813 8814	034634	004037 000005	041336			JSR 5	RO, @#SEEKCY	SEEK FOR CYLINDER 5			
8815 8816 8817 8818 8819 8820 8821	034642	013777	004606	145416		MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS			
8823 8824 8825	034650	013746 052716	002452			MOV	a#SEECOM, -(SP) #GO!IE, (SP)	GET READY TO MOVE COMMAND			

SEG	0246

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MAINDEO DZRJIA.	-11-DZRJ PII	I-A. RPO 145	4-5-6 FUNCT. CONT. TST-F WRITE CHECK HEADER AND	T 1 DATA	BO4	
9925 9927 9829	034650	012677	145414	MOV	(SP)+. @RHCS1	:ENABLE INTERRUPT :GO WITH :4 IN RHCS1 FOR SEEK
9929 9930 9932	034664	01:100		MOV MOV	2R1.R0 2R3,R5	: WITH INTERRUPT ENABLED SAVE RHCS1 DURING ABOVE OPERATION SAVE RHDS1 DURING ABOVE OPERATION
9933 9935 9935 9937 9939 9939	034670 034672 034674 034676 034700	104412 002322 000200 015530 000043		WAT RHDS1 DRY 7000.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 70000 MICRO SECONDS DRY MUST SET BETWEEN 69650 AND 70350 MICRO SECONDS
3942 3942 8943 8944	034702	004737	041366	JSR	PC.3#CLDISK	SET RI-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
8846				:*FILL	WRITE FROM BUFFE	R WITH HEADER
	034706 034712 034714 034716 034720 034722	004037 002470 000004 010005 003404 000000	041212	JSR WRFROM 10005 (7*400) 0	RO, 3#FLHEAD	SAVE HEADER DATA IN WRFROM LOCATION WHERE SAVED NUMBER OF WORDS SAVED FIRST DATA WORD SECOND DATA WORD THIRD DATA WORD FOURTH DATA WORD
				:*10.MO	RDS OF OF THE FO	LLOWING DATA 125252
9859 9860 9861 9862	034726 034732 034734 034736	004037 002500 000012 012344	041236	JSR WRFROM+ 10. (5*2000	RD, 0*CLAREA (4*2) >!(7*40)!4	:CLEAR 10. WORDS, FROM WRFROM+<4*2> :STARTING FROM WRFROM+<4*2> :10. WORDS :FILL WITH <5*2000>!<7*40>!4
9864 9865 9866 9867	034740 034744 034746 034750	004037 002524 006012 177777	041236	JSR WRFROM+ 10. -1	RD. D#CLAREA	:CLEAR 10. WORDS, FROM WRFROM+(14.*2) :STARTING FROM WRFROM+(14.*2) :10. WORDS :FILL WITH -1
9869 9870 9871 9872	034752 034756 034760 034762	004037 002550 000012 000000	041236	JSR WRFROM+ 10.	RD.3#CLAREA (24.*2)	:CLEAR 10. WORDS, FROM WRFROM+<24.*2> :STARTING FROM WRFROM+<24.*2> :10. WORDS :FILL WITH 0
9959 9959 9959 9959 9959 9959 9959 995	034754 034770 034772 034774	004037 002574 000012 052525	041236	JSR WRFROM+ 10. 52525	RO.3#CLAREA (34.*2)	:CLEAR 10. WORDS, FROM WRFROM+<34.*2> :STARTING FROM WRFROM+<34.*2> :10. WORDS :FILL WITH 52525
2878 8879	034776		041236	JSR	RO, G#CLAREA	:CLEAR 10. WORDS, FROM WRFROM+<44.*2

JSR RD. D#CLAREA WRFROM+<264.*2>

<5*2000>!<7*40>!5

041236

*READ INTO BUFFER WILL BE CLEARED

STARTING FROM REINTO

STARTING FROM REINTO

SES.

177400 : FILL WITH 177400

:FILL WITH (5*2000)! (7*40)!5

9934										
9935						; *THE W	RITE HEADER AND	DATA COMMAND WILL BE LOADED		
	035134 035140 035142 035143 035144	004037 000005 004 007 177356	043340		.BYTE	JSR 5 4 7 -2624	RO.2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 5 SECTOR 4 TRACK 7 WORD COUNT (DATA) = 262. +		
8943 8944 8945	035146	002470				WRFROM		:4 HEADER WORDS :BUS ADDRESS :STARTING ADDRESS OF DATA		
9945 9949 9949	035150 035152	000000				O FMT22		BUFFER = WRFROM DO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE		
9951 9952 9953	035154	002444				WRIFOR	;WRITE	GET READY TO DO A WRIFOR HEADER AND DATA WITH 62 IN RHCS1		
8955						:*NOW SAVE REGISTERS FOR COMPARISON AFTER WRITE HEADER AND DATA				
8957 8958 8959	035156 035162 035164	004037 002272 004612	041534			JSR RHWC SAVERE	RO, 2#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED		
8962 8962	035166	000055				18.		NUMBER OF REGISTERS ; SAVED = 18.		
9964	035170	004737	041446			JSR	PC. 2#CHECKT	:CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 :AND THAT NO STATUS BITS ARE STUCK = 1 :CANNOT CONTINUE TESTING IF ANY OF		
9966	035174	104400	204990			TYPE	, CPHALT	CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1		
8958	035200	000000				HALT		THE FIRST SET OF BITS DON'T = 1		
9970 9971 9972 9973 9974 9975 9976	035202	013777	004606	145056		MOV	3#RP4VEC, GRPVEC	SET RPOM VECTOR ADDRESS TO 'TIME! IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS		
9978 9979	035210	013746	000101			MCV BIS	S#WRIFOR(SP)	GET READY TO MOVE COMMAND		
99999999999999999999999999999999999999	035220	012677	145054			MOV	(SP)+, aRHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :62 IN RHCS1 FOR WRITE HEADER AND DATA WITH INTERRUPT ENABLED		
8985 898£ 8987	035226	005300				WAT RHCS1		:WAIT FOR RDY BIT TO SET :WAIT FOR RHCSI REGISTER		

E04									
MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO 145	WRITE CHECK	CONT. TST-P HEADER AND	T 1 DATA	MACY11 27(655)	30-MAR-76 22:59 PAGE 189	SEG 0249	
9989 9989 9990 9991 9992 9993	035230 035232 035234	000200 001732 001502			RDY 986. 934.		WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9860 MICRO SECONDS RDY MUST SET BETWEEN 1520 AND 18200 MICRO SECONDS		
3993 3994 3995	035236 035242 035244	004037 002272 000000 004037 002274	041270		JSR RHWC	HANGE SAVED REGIS	STERS TO EXPECTED VALUES  MOV D INTO SAVED RHAC  SAVED REGISTER TO CHANGE  DATA		
8997 8998	035246	004037	041270		JSR RHBA	RU, J#F ILLRE	· MIN MARKATA (ARE 42) [MIN SHVEN BERN		
9000 9000 9002	035236 035242 035244 035252 035254 035256 035256 035264	54 003514 56 004037 62 002304 64 003406	041270		JSR RHDST 3406	(266.*2) RO,3#FILLRE	;SAVED REGISTER TO CHANGE :DATA :MOV 3406 INTO SAVED RHDST :SAVED REGISTER TO CHANGE ;DATA		
9004 9005 9005					:*NOW C				
9008	035266	004037	042354		JSR	RD, 2#COMREG	COMPARE SAVED REGISTERS WITH		
99999990-1234552 999999900000000000000000000000000000	035272 035274 035276 035300 035302	004612 002354 000022 035304 035310			SAVERE WC 18. 35 45		GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 3\$ ON ERROR RETURN TO 4\$ ON NO ERROR		
	035304	104027 000207		35:	ERROR	27 PC	WRITE HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMANT	, <u>{</u>	
9023					:*NOW F	ILL COMMAND FOR F		,	
9026	035310			45:					
9029	035310	204737	041366		JSR	PC,3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER		
	035314 035320 035322 035323 035324	004037 009005 004 007 177356 003534	043340	:BYTE	JSR 5 7 -2624 REINTO	RO,3#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 5 SECTOR 4 TRACK 7 WORD COUNT (DATA) = 262. + 4 HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = REINTO		
							· · · · · · · · · · · · · · · · · · ·		

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MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPO 145	4/5/6 FU WRITE	NCT. CONT. HECK HEADER	TST-PT 1 AND DATA	F04 MACY11 27(655)	30-MAR-76 22:59 PAGE 190
9042 9043 9044 9045	035330 035332	000000			ECI!FMT	22	;DO NOT INHIBIT BUS ADDRESS INCREMENT ;16 BITS PER WORD FORMAT
9045	035234	002450			REFOR		;DO NOT INHIBIT BUS ADDRESS INCREMENT ;16 BITS PER WORD FORMAT ;INHIBIT ECC CORRECTION ;DO NOT INHIBIT HEADER COMPARE ;GET READY TO DO A REFOR ;READ HEADER AND DATA WITH 72 IN RHCS1
9050					; *NOW SA	AVE REGISTERS FOR	R COMPARISON AFTER READ HEADER AND DATA
9053	035336 035342 035344	004037 002272 004612	041534		JSR RHWC SAVERE	RO. 3#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS SAVED = 18.
9056 9057	035346	000055			18.		NUMBER OF REGISTERS SAVED = 18.
9059	035350	004737	041446		JSR	PC, B#CHECKT	CHECK DVA, RDY, MOL, DPR, DRY, VV = 1
9051	035354	104400	066402		TYPE	.CPHALT	CHECK DVA, RDY, MOL. DPR, DRY, VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1
9063	035360	000000			HALT		STOP
#**###################################	035362	013777	004606	144576	MOV	a#RP4VEC, aRPVEC	SET RPD4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
9073 9074 9075	035370 035374	013746 052716	002450		MOV BIS	@#REFOR(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND
9075 9075 9078 9079	035400	012677	144674		MOV	(SP)+, @RHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH 72 IN RHCS1 FOR READ DATA WITH INTERRUPT ENABLED
90778901233456789901233456789909999999999999999999999999999999999	035404 035406 035410 035412 035414	104412 002300 000200 001732 001502			WAT RHCS1 RDY 986. 834.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9860 MICRO SECONDS RDY MUST SET BETWEEN 1520 AND 18200 MICRO SECONDS
9088					: *CHANGE	SAVED REGISTERS	TO EXPECTED VALUES
9090	035416	004037 002272 000000	041270		RHWC	RO, G#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE DATA
9093 9094 9095	035416 035422 035424 035426 035432	004037 002274 004560	041270		JSR RHBA REINTO+<	RO. 3#FILLRE 266.*2>	MOV REINTO+(266.*2) INTO SAVED RHBA ;SAVED REGISTER TO CHANGE ;DATA

 0251

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MAINDEC DZRJIA.	-11-DZRJ PII	I-A. RPO 145	4/5/6 FUNCT. WRITE CHECK	CONT. TST-F	DATA		
9096 9097 9098	035436 035442 035444	004037 002304 003406	041270		JSR RHDST 3406	RO, 3#FILLRE	:MOV 3406 INTO SAVED RHDST :SAVED REGISTER TO CHANGE :DATA
9096 9099 9099 9100 9100 9100 9100 9100					:*COMPF :*WITH	RE REGISTERS BEF REGISTERS AFTER	ORE READ HEADER AND DATA
9104	035446	004037	042354		JSR	RD, D#COMREG	COMPARE SAVED REGISTERS WITH
	035452 035454 035456 035460 035462	004612 002354 000022 035464 035470			SAVERE NC 18. 55 55		COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 5% ON ERROR RETURN TO 6% ON NO ERROR
	035464 035466	104031 006207		5\$:	ERROR RTS	31 PC	READ HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
					*NOW R	READ INTO BUFFER READ WAS GOOD	WILL BE CHECKED TO SEE
9123	035470			65:			
	035470 035474 035476 035500 035502 035504	004037 002470 003534 000412 035506 035512	043404		JSR WRFROM REINTO 266. 7\$ 10\$	RO, D#COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 266. WORDS TO BE COMPARED RETURN TO 7% ON ERROR RETURN TO 10% ON NO ERROR
9135	035506 035510	104032 000207		75:	ERROR RTS	32 °	WRITE HEADER AND DATA FOLLOWED BY A READ HEADER AND DATA GAVE A READ ERROR ERROR MAY BE IN READ OR WRITE
91112					*A WRI *NOW A ;*FILL	TE READ HAS BEEN WRITE CHECK HEA THE WRITE CHECK	SUCCESSFULLY COMPLETED DER AND DATA WILL BE GIVEN HEADER AND DATA
9144	035512			105:			
9146 9147 9148 9149	035512	004737	041366		JSR	PC, 3#CLDISK	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPO 145	4/5/6 FU WRITE C	NCT. CON HECK HEA	IT. TST-P	T 1 DATA	HO4	
	035516 035522 035524 035525 035525	004037 000005 004 007 177366	043340		.BYTE	JSR 5 4 7 -2624	RO, @#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER 5 SECTOR 4 TRACK 7 WORD COUNT (DATA) = 262. + 4 HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA BUFFER = WFROM DO NOT INHIBIT BUS ADDRESS INCREMENT :16 BITS PER WORD FORMAT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE GET READY TO DO A WRCHDT CHECK HEADER AND DATA WITH 52 IN RHCS1
9156 9157 9158	035530	002470				WRFROM		H HEADER WORDS BUS ADDRESS STARTING ADDRESS OF DATA
9160	035532 035534	000000 014000				O ECI!FMT	22	DO NOT INHIBIT BUS ADDRESS INCREMENT :16 BITS PER WORD FORMAT :INHIBIT ECC CORRECTION
9163 9164 9165	035536	002440				WRCHDT	; WRITE	DO NOT INHIBIT HEADER COMPARE GET READY TO DO A WRCHDT CHECK HEADER AND DATA WITH 52 IN RHCS1
9167						:*SAVE		MPARISON AFTER WRITE CHECK
9170 9171 9172 9173	035540 035546 035544 035546	004037 002272 004512	041534		ST25:	JSR RHWC SAVERE	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS
9175 9176 9177	035550	000055				19.		: NUMBER OF REGISTERS ; SAVED = 18.
9178	035552	004737	041446			JSR	PC, a#CHECKT	; CHECK DVA.RDY.MOL.DPR.DRY.VV = 1
9180	035556	104400	066402			TYPE	, CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1
9182	035562	000000				HALT		STOP
	035564	013777	004505	144474		MOV	@#RP4VEC,@RPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
9191	035572 035576	013746 052716	002440			MOV	#GO!IE,(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT
9195	035602	012677	144472			MOV	(SP)+, @RHCS1	GO WITH  ;52 IN RHCS1 FOR WRITE CHECK HEADER AND DATA  ;WITH INTERRUPT ENABLED  ;SAVE RHCS1 DURING ABOVE OPERATION
	03560£ 035610	011100 011305				MOV	aR1.R0 aR3.R5	SAVE RHOS1 DURING ABOVE OPERATION SAVE RHOS1 DURING ABOVE OPERATION
9201 9202 9203	035612	104412				WAT RHCS1		:WAIT FOR RDY BIT TO SET :WAIT FOR RHCS1 REGISTER

SE0 0252

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MAINDEC- DZRJIA.	-11-DZRJ P11	I-A. RPC	WRITE CHECK HE	ONT. TST-P EADER AND	T 1 DATA	MACY11 27(655)	30-MAR-76 22:59 PAGE 193	SE0 0253
9204 9205 9206 9207	035516 035620 035622	000200 001732 001502			RDY 986. 834.		WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9860 MICRO SECONDS RDY MUST SET BETWEEN 1520 AND 18200 MICRO SECONDS	
9209					:*COMPA :*RD AN	RE CONTENTS OF RID RS IMMEDIATELY	RHCS1 AND RHDS1 ALREADY SAVED IN	
9213	035524 035530 035534 035540	013746 052716 011637 022500	002440 004101 001124		MOV BIS MOV CMP	a#WRCHDT(SP) #IE!DVA!GO.(SP) (SP).a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE!DVA!GO SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!DVA!GO	
9218 9219 9219 9220	035642 035644 035650 035654	001405 010037 010137 104021	001126		BEQ MOV MOV ERROR	64\$ RO,3*\$BDDAT R1,3*REGADR 21	BRANCH IF GOOD  BAD DATA  FAILING REGISTER RHCS1  DURING ABOVE OPERATION ONLY	
922	035656 035662 135666	012746 011637 022605	010500	545:	MOV MOV CMP	#MOL!DPR!VV(SF (SP).J#\$GDDAT (SP)+,R5	P) :SAVE BITS SET DURING OPERATION IN RHDS1 ;SAVE FOR PRINTOUT ;DURING ABOVE OPERATION ONLY MOL!DPR!VV	
	035670 035672 035676 035702	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	66\$ R5.2#\$BDDAT R3,2#REGADR 63	SAVE COMMAND INCLUDE IE!DVA!GO SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY IE!DVA!GO AND COMMAND SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY COMMAND AND IE!DVA!GO SHOULD BE SET SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET BRANCH IF GOOD BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	
9231	035704			66\$:			THOE TO ME TO SHOULD BE SET	
9533					; *CHANG	E SAVED REGISTERS	S TO EXPECTED VALUES	
9235 9236	035704 035710	004037	041270		JSR RHWC	RO, G#FILLRE	:MOV D INTO SAVED RHWC :SAVED REGISTER TO CHANGE	
9238	035714	004037	041270		JSR RHBA	RO, D#FILLRE	MOV WRFROM+<266.*2> INTO SAVED RHBA SAVED REGISTER TO CHANGE	
9243 9243 9241	035710 035712 035714 035720 035722 035724 035730 035732	002272 000000 004037 002274 003514 004037 002304 003406	041270		JSR RHDST 3406	<266.*2> RO,3#FILLRE	SAVED REGISTER TO CHANGE DATA MOV WRFROM+<266.*2> INTO SAVED RHBA SAVED REGISTER TO CHANGE DATA MOV 3406 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA DATA	
9245 9246 9247					:*COMPAF ;*WITH	RE REGISTERS BEFO REGISTERS AFTER O	ORE WRITE CHECK HEADER AND DATA COMMAND	
3548 3548	035734	004037	042354		JSR	RO, @#COMREG	COMPARE SAVED REGISTERS WITH	
	035740 035742 035744 035746 035750	004612 002354 000022 035752 035756			SAVERE WC 18. 85 95		COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 8\$ ON ERROR RETURN TO 9\$ ON NO ERROR	
9257	035752	104040		8\$:	ERROR	40	; WRITE CHECK CAUSED	

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1
DZRJIA.P11 T45 WRITE CHECK HEADER AND DATA

9258 035754 000207 R/S PC ;AN IMPROPER REGISTER
9259 9260
9261
9262
9264
9265 035756 93:

7 die

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 T45 WRITE CHECK HEADER AND DATA

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The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	9273 92775 922775 922775 922775 9228 9228 9228 9228 9229 9229 9229 922	035756	000004			* * * * * * * * * * * * * * * * * * *	2 MOKUS	HE ABOVE DATA IS E ABOVE WRITE CH	FILLED INTO WRITE FROM BUFFER JECK DATA IS GIVEN
١	9299	035760	012706	001000	004504		MOV	#STACK, SP #46, 3#TSTNM	; RESET STACK ; SAVE TEST NUMBER
	9292	035772	004737	041366			JSR	PC, @#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE
١	3536	035776	004737	041446			JSR	PC, a#CHECKT	CHECK DVA. RDY. MOL. DPR. DRY. VV = 1
١	9598	036005	104400	066402			TYPE	,CPHALT	GIVE RH-11 INITIALIZE  SETUP UNIT NUMBER  CHECK DVA.RDY.MOL.DPR.DRY.VV = 1  AND THAT NO STATUS BITS ARE STUCK = 1  CANNOT CONTINUE TESTING IF ANY OF  THE FIRST SET OF BITS DON'T = 1  STOP
١	9300	036006	000000				HALT		STOP
							; *GET H	EADS TO CYLINDER	
	9305 9306 9307	036010 036014	004037 000005	041336			JSR 5	RO, 0#SEEKCY	;SEEK FOR ;CYLINDER 5
	9303 9305 9305 93306 93307 93313 93316 93316 93316 93316 93316 93316 93316 93316	036016	013777	004636	144242		MOV	a*RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
-	9316	036030	013746 052716	002452			MOV	a#SEECOM(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND
-	9319	036034	012677	144240			MOV	(SP)+, DRHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH H IN RHCS1 FOR SEEK
1									

						.L04			
MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO	WRITE CHECK DAT	T. TST-P	T 1	MACY11 27(655)	30-MAR-76 22:59	PAGE 196	SE0 0256
9322							;WITH INTERRUPT E	NABLED	
22234542870123355542890123454547890122345547890122345454789012234 22224222222233333333333334424444478901223455557890122345454789012234 2222422222233333333333334444447890122345555578901223454789012234 2222422222222223333333333333333333	036040 036042 036044 036046 036050	104412 002322 000200 004704 004704			WAT RHDS1 DRY 2500. 2500.		WAIT FOR DRY BIT HAIT FOR RHDS1 R WAIT FOR DRY BIT ALLOW 25000 MICR DRY MUST SET BET CO AND 50000 MIC	TO SET REGISTER IN RHDS1 REGISTER RO SECONDS WEEN RO SECONDS	
9331 9332 9333 9334 9335	036052	004737	041366		JSR	PC, @#CLDISK	;SET R1-RHCS1, R2;R3-RHDS1, R4-RHE;GIVE RH-11 INITI		
9337 9338							4,17777,0,52525,12		
9339	036056 036062 036064 036066	004037 002470	041236		JSR WRFROM	RO, 3#CLAREA	CLEAR 10. WORDS.	FROM WRFROM FROM	
9345	036066	000012 012344			10. <5*2000	)>!<7*40>!4	; IO. WORDS ;I	FILL WITH <5*2000>!<7*40>!	4
9345 9345 9346 9347	036070 035074 036076 036100	004037 002514 000012 177777	041236		JSR WRFROM+ 10. -1	RO, 0#CLAREA (10. *2)	;CLEAR 10. WORDS. ;STARTING ;10. WORDS ;FILL WITH -1	FROM WRFROM+<10.*2> FROM WRFROM+<10.*2>	
9349 9350 9351 9352	036102 036106 036110	004037 002540 000012 000000	041236		JSR WRFROM+ 10.		FILL WITH O	FROM WRFROM+(20.*2) FROM WRFROM+(20.*2)	
9354 9355 9356 9356 9357	036114 036120 036122 036124	004037 002564 000012 052525	041236		JSR WRFROM+ 10. 52525	RO, 0#CLAREA (30. *2)	;CLEAR 10. WORDS. ;STARTING ;10. WORDS ;FILL WITH 52525	FROM WRFROM+(30.*2) FROM WRFROM+(30.*2)	
9359 9360 9361 9362 9363	036126 036132 036134 036136	004037 002610 000012 125252	041236		JSR WRFROM+ 10. 125252	RD, D#CLAREA	;CLEAR 10. WORDS, :STARTING :10. WORDS ;FILL WITH 125252	FROM WRFROM+<40.*2> FROM WRFROM+<40.*2>	
9364					;*FILL	LEFT ROTATING ZEF	ROS FROM WRFROM+<50	0.*2>	
9368 9369 9370	036140 036146 036152 036156 036156 036160 036162	010146 012700 012705 012701 000261 010021 006100 005305	177776 000020 002634		MOV MOV MOV	R1,-(SP) #177776,R0 #16R5 #WRFROM+<50.*2>,	;:PUSH R1 ON STACK ;DATA ;COUNT ;R1 ;WHERE DATA GOE		
9372 9373 9374	036160	010021 006100 005305		1\$:	SEC MOV ROL DEC	RO, (R1)+ RO R5	STORE DATA GET ZERO ONE BIT COUNT 16	LEFT :	M

SEQ 0257

MATNEEA	0701	T 0 000	W.F. & FI	INOT CONT	TCT . D.		NO4	20 800 75 22.50	BOOF 188	550 5050
DZRJIA.	-11-02RJ	1-H, RPU	WRITE C	INCT. CONT. CHECK DATA	151-21		MACY11 27(655)	30-MAR-76 22:59	PHGE 198	SEG 0258
9429 9430	036276	000000				HALT		STOP		
9432 94334 94334 94335 94335 94337 94339	035300	013777	004606	143760		MOV	a#RP4VEC, arpvec	SET RPD4 VECTOR TO 'TIME1' IF P- OR TO 'TIME2' IF 'TIME' WILL ONLY CURRENT CYLINDER AND LOOK AHEAD R	ADDRESS CLOCK IS PRESENT P-CLOCK IS NOT PRESENT SAVE R ADDRESS REGISTERS	
9439	036315 036306	013746 052716	000101			MOV BIS	#GO! IE, (SP)	GET READY TO MOV	'E COMMAND	
9442	036316	012677	143756			MOV	(SP)+, aRHCS1	GO WITH	WRITE CHECK DATA	
9445 9445 9446 9447	036324	011100 011305				MOV MOV	aR1,R0 aR3,R5	SAVE RHCS1 DURIN	E COMMAND 'GO' AND  R WRITE CHECK DATA CHABLED IG ABOVE OPERATION IG ABOVE OPERATION	
944444 94444 94444 94444 9444 9444 944	036326 036330 036332 036334 036336	104412 002300 000200 001732 001502				WAT RHCS1 RDY 986. 834.		WAIT FOR RDY BIT WAIT FOR RHCS1 R WAIT FOR RDY BIT ALLOW 9860 MICRO RDY MUST SET BET 1520 AND 18200 M	TO SET EGISTER IN RHCS1 REGISTER SECONDS WEEN ICRO SECONDS	
9456 9457 9457						**COMPAR	RE CONTENTS OF RED RS IMMEDIATELY	HCS1 AND RHDS1 ALR AFTER GO	EADY SAVED IN	
9459	036340 036344 036350 036354	013746 052716 011637 022600	002436 004101 001124			MOV BIS MOV CMP	a#WRCHEK,-(SP) #IE!DVA!GO,(SP) (SP),a#\$GDDAT (SP)+,RO	SAVE COMMAND INCLUDE IE:DVA:G SAVE FOR PRINTOU DURING ABOVE OPE	O T RATION ONLY IE!DVA!GO	
9454 9465 9466 9467	036356 036360 036364 036370	001405 010037 010137 104021	001126			BEQ MOV MOV ERROR	67\$ RO, 0*\$BDDAT R1, 0*REGADR	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPEN	RHCS1 RATION ONLY	
9469 9470 9471	036372 036376 036402	012746 011637 022605	010500 001124	6	75:	MOV MOV CMP	#MOL!DPR!VV(SP (SP), 2#\$GDDAT (SP)+,R5	SAVE FOR PRINTOUT	S SET DURING OPERATION IN RHDS1 T RATION ONLY MOL!DPR!VV	
9463 9463 9465 9465 9467 9467 9477 9477 9477 9477 9477 9477	036404 036406 036412 036416	001405 010537 010337 104063	004600			BEQ MOV MOV ERROR	69\$ R5, a#\$BDDAT R3, a#REGADR 63	BRANCH IF GOOD BAD DATA FAILING REGISTER DURING ABOVE OPER	RATION ONLY IE!DVA!GO LD BE SET  RHCS1 RATION ONLY VA!GO SHOULD BE SET S SET DURING OPERATION IN RHDS1 T RATION ONLY MOL!DPR!VV  RHDS1 RATION ONLY D BE SET	
9478	036420			6	9\$:			, III III		
9480						; *CHANGE	SAVED REGISTERS	TO EXPECTED VALUE	ES	/
9482	036420	004037	041270			JSR	RO, D#FILLRE	; MOV D INTO SAVED	RHWC	

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A, RPO	4 5 6 FUNCT. WRITE CHECK	CONT. TST-P	T 1	BO5	
######################################	035424 035426 05426 45420 45426 04446 04446	002272 000000 004037 002274 003470 004037 002304 003405	041270 041270		RHWC D JSR RHBA WRFROM+ JSR JSR JSR JSR JSR JSR JSR JSR JSR JSR	RO, 3#FILLRE <256. *2> RO, 3#FILLRE	:SAVED REGISTER TO CHANGE :DATA :MOV WRFROM+<256.*2> INTO SAVED RHBA :SAVED REGISTER TO CHANGE :DATA :MOV 3405 INTO SAVED RHDST :SAVED REGISTER TO CHANGE :DATA
7793 7493 7494 7494 7494					:*COMPA :*WITH	RE REGISTERS BEF REGISTER AFTER C	ORE WRITE CHECK HEADER AND DATA OMMAND
9496	036450	004037	042354		JSR	RD, 3#COMREG	COMPARE SAVED REGISTERS WITH
	036454 036460 036462 036464 036464 036475	004612 002354 000022 036466 036472 104040 000207		95:	SAVERE WC 18. 99 ERROR RTS	40 PC	PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 19. REGISTERS TO BE COMPARED RETURN TO 8\$ ON ERROR RETURN TO 9\$ ON NO ERROR WRITE CHECK CAUSED AN IMPROPER REGISTER CHANGE GOOD DATA GIVES WHAT
95009 95009 95009 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 95000 9000 9000 9000 90000 90000 90000 90000 9000 9000 9000 9000 9000 90	036472	*** **		9 <b>5</b> :			GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMANDS

SE0 0259

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WRITE CHECK DATA USING UNIBUS B
THIS TEST USES UNIBUS B IF CONNECTED TO THE RH
IF UNIBUS B IS NOT CONNECTED THEN THIS TEST IS NOT PERFORMED
THE DATA FOR THIS TEST IS WRITTEN ON DISK BY PREVIOUS TEST
WRITE CHECK DATA CYLINDER 5, FORMAT 16 BITS PER WORDS
TRACK 7, SECTOR 4, KEYS D, NUMBER OF WORDS 258
CONSISTING OF
10 WORDS OF 12344 (6 BITS FOR CYL, 5 FOR TRACK, 5 FOR SECTOR)
10 WORDS OF 052525
10 WORDS OF 052525
10 WORDS OF LEFT ROTATING ZERO (EG177776,177775)
16 WORDS OF LEFT ROTATING ONE (EG 1.2,4,10)
174 WORDS OF 12345
                                                                                 SATEST 47
                                                                                 : *
                                                                                                 FIRST THE ABOVE DATA IS FILLED INTO WRITE FROM BUFFER THEN THE ABOVE WRITE CHECK DATA IS GIVEN
                                                                                 : *
                                                                                                 ******************
                                                                                                SCOPE
MOV
MOV
                                                                                                                                                    RESET STACK
SAVE TEST NUMBER
                                                                                                                  #STACK.SP
#47.3#TSTNM
                                                                                                                                                    :SET R1-RHCS1, R2-RHCS2
:R3-RHDS1, R4-RHER1
:GIVE RH-11 INITIALIZE
:SETUP UNIT NUMBER
             036506
                             004737
                                              041366
                                                                                                 JSR
                                                                                                                  PC. D#CLDISK
                                                                                                 : *CHECK TO SEE IF THE PROGRAM IS RUNNING WITH AN RH70
                                                                                                                                                   036512
036516
036520
036524
036524
                             005737
001402
000137
                                                                                                                  3:RH70
30$
TST50
                                                                                                 TST
BEQ
JMP
                                              004750
                                                                                303:
                              004737
                                                                                                 JSR
                                                                                                                  PC. D#CHECKT
                                              041446
                                                                                                                  .CPHALT
             036530
                              104400
                                                                                                 TYPE
                                              066402
                                                                                                                                                    STOP
                              000000
                                                                                                 HALT
             036534
                                                                                                                                                   :IS UNIBUS B THERE
:UNIBUS B THERE SO CONTINUE
:NO UNIBUS B, GO TO NEXT TEST
            036536
036542
036544
                             005737
001402
000137
                                                                                                 TST
BEQ
JMP
                                                                                                                  3*UBUSB
                                              004732
                                                                                                                  115
                                                                                                 :*GET HEADS TO CYLINDER 5
             036550
                                                                                115:
                                                                                                 JSR
5
                                                                                                                                                    :SEEK FOR :CYLINDER 5
                                                                                                                  RO. D#SEEKCY
                              004037
```

MAINDEC DZRJIA.	-11-DZRJ Pli	I-A, RPO	4/5/6 FL WRITE	NCT. CONT. TST HECK DATA USIN	T-PT-1 NG UNIBUS B	DO5	30-MAR-76 22:59 PAGE 201
	036556	013777	004606	143502	MOV	3#RP4VEC, 2RPVEC	SET RPOW VECTOR ADDRESS TO 'TIME!' IF P-CLOCK IS PRESENT OR TO 'TIME?' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
9576 9577 9578	036564 036570	013746 052716	002452		MOV	a*SEECOM(SP) #GO!IE.(SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH
9580 9582 9583 9583	036574	012677	143500		MOV	(SP)+, 2RHCS1	GO WITH :4 IN RHCS1 FOR SEEK :WITH INTERRUPT ENABLED
9585 9585 9586 9587 9589 9589 9590	036600 906480 906480 306480 016480	104412 002322 000200 004704 004704			RHDS1 DRY 2500.		WAIT FOR DRY BIT TO SET WAIT FOR RHDS1 REGISTER WAIT FOR DRY BIT IN RHDS1 REGISTER ALLOW 25000 MICRO SECONDS DRY MUST SET BETWEEN OO AND 50000 MICRO SECONDS
9592 9593 9594 9595 9596	036612	004737	041366		JSR	PC.B#CLDISK	SET RI-RHCS1. R2-RHCS2 R3-RHDS1. R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER
9599					:*10 WO	RDS OF EACH 1234	4,17777,0,52525,125252
9500 9502 9503 9503	036516 036622 036624 036626	004037 002470 000012 012344	041236		JSR WRFROM 10. <5*2000	RO, S#CLAREA	:CLEAR 10. WORDS, FROM WRFROM :STARTING FROM WRFROM :10. WORDS :FILL WITH <5*2000>!<7*40>!4
	036530 036634 036636 036640	004037 002514 000012 177777	041236		JSR WRFROM+ 10. -1	RO. 3#CLAREA	:CLEAR 10. WORDS, FROM WRFROM+(10.*2) :STARTING FROM WRFROM+(10.*2) :10. WORDS :FILL WITH -1
9611 9611 96112 96113	036642 036646 036650 036652	004037 002540 000012 000000	041236		JSR WRFROM+ 10.	RD. 0#CLAREA (20. *2)	:CLEAR 10. WORDS, FROM WRFROM+<20.*2) :STARTING FROM WRFROM+<20.*2) :10. WORDS :FILL WITH 0
96167	036654 036650 036652 036664	004037 002564 000012 052525	041236		JSR WRFROM+ 10. 52525	RO. D#CLAREA (30. *2)	:CLEAR 10. WORDS, FROM WRFROM+(30.*2) :STARTING FROM WRFROM+(30.*2) :10. WORDS :FILL WITH 52525
9651 8650	036666 036672	004037 002610	041236		JSR WRFROM+	RG.@#CLAREA	:CLEAR ID. WORDS. FROM WRFROM+(40.*2) :STARTING FROM WRFROM+(40.*2)

WRCHEK

037012 002436

SEG 0262

-			-
-	2.4	U35	

DEC-	11-DZRJ	I-A RPO	4/5/6 FU WRITE C	INCT. CONT. IST-F	T 1 UNIBUS B	F05	30-MAR-76 22:59 PAGE 203	
75	037014	052777	002000	143256	BIS	#PSEL, @RHCS1	SET PORT B THAT IS UNIBUS B	
	037022 037026 037030	004037 002272 004512	.: 041534		:*SAVE JSR RHWC SAVERE	REGISTERS FOR CON RO, 0#SAVER	MPARISON AFTER WRITE CHECK ;SAVE REGISTERS ;RHWC IS THE FIRST REGISTER SAVED ;STARTING ADDRESS OF WHERE ;THE REGISTERS ARE SAVED ;NUMBER OF REGISTERS	
	037032	000055			18.		NUMBER OF REGISTERS SAVED = 18.	
	037034	004737	041446		JSR	PC, 3#CHECKT	CHECK DVA. RDY MOL DPR DRY VV = 1	
	037040	104400	066402		TYPE	,CPHALT	CHECK DVA.RDY.MOL.DPR.DRY.VV = 1 AND THAT NO STATUS BITS ARE STUCK = 1 CANNOT CONTINUE TESTING IF ANY OF THE FIRST SET OF BITS DON'T = 1	
	037044	000000			HALT		STOP	
	037045	013777	004606	143212	MOV	a#RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
					:*SET P	ORT SELECT		
	037054 037060	013746 052716	002101		MOV BIS	#GO! IE!PSEL, (SP)	- ENOD! E TNTEODI IDT	
	037064	012677	143210		MOV	(SP)+, @RHCS1	GO WITH	
	037070 037072	011100 011305			MOV MOV	ari.Ro ara.Rs	GO WITH :50 IN RHCS1 FOR WRITE CHECK DATA WITH INTERRUPT ENABLED :SAVE RHCS1 DURING ABOVE OPERATION :SAVE RHDS1 DURING ABOVE OPERATION	
	037074 037076 037100 037102 037104	104412 002300 000200 001732 001502			WAT RHCS1 RDY 986. 934.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9850 MICRO SECONDS RDY MUST SET BETWEEN 1520 AND 18200 MICRO SECONDS	9
					:*COMPA		ACSI AND RHDS1 ALREADY SAVED IN	
The second second	037106 037112 037116 037122	013746 052716 011637 022600	002436 001124		MOV BIS MOV CMP		:SAVE COMMAND (SP) :INCLUDE IE!DVA!PSEL!GO :SAVE FOR PRINTOUT :DURING ABOVE OPERATION ONLY IE!DVA!PSEL!GO :AND COMMAND SHOULD BE SET :BRANCH IF GOOD	
	037124	001405			BEG	67\$	BRANCH IF GOOD	

MAINDEC DZRJIA.	-11-DZRJ P11	I-A, RPO	04/5/6 FUNCT. WRITE CHECK	CONT. TST-F	T 1 UNIBUS B	GD5	30-MAR-76 22:59 PAGE 204	SE0 0264
9730 9731 9732	037126 037132 037135	010037 010137 104021	004600		MOV MOV ERROR	RO, 3*SBDDAT R1, 3*REGADR	BAD DATA FAILING REGISTER RHCS1 DURING ABOVE OPERATION ONLY	
9733 9735 9735 9735 9739 9739	037140 037144 037150	012746 011637 022605	010500	67 <b>\$</b> :	MOV MOV CMP	#MOL!DPR!VV(S (SP). D#\$GDDAT (SP)+,R5	COMMAND AND IE!DVA!PSEL!GC SHOULD BE SET P) SAVE BITS SET DURING OPERATION IN RHDS1 SAVE FOR PRINTOUT DURING ABOVE OPERATION ONLY MOL!DFR!VV SHOULD BE SET BRANCH IF GOOD	
9738 9739 9740 9741 9742	037152 037154 037160 037154	001405 010537 010337 104063	001126		BEQ MOV MOV ERROR	69\$ R5. 0#\$BDDAT R3, 0#REGADR 63	BRANCH IF GOOD  BAD DATA FAILING REGISTER RHDS1 DURING ABOVE OPERATION ONLY MOL!DPR!VV SHOULD BE SET	
9743 9744 9745 9746	037166		•	595:			, NOC. DE N. VV SHOOLD BE SET	
9745					:*CHANG	E SAVED REGISTER	S TO EXPECTED VALUES	
9747	037166	004037	041270		JSR RHWC	RO, D#FILLRE	MOV D INTO SAVED RHWC SAVED REGISTER TO CHANGE	
9749 9750 9751	037174 037176 037202	004037 002272 000000 004037 002274 003470 004037	041270		O JSR RHBA	RO, 0#FILLRE	DATA MOV WRFROM+(256.*2) INTO SAVED RHBA SAVED REGISTER TO CHANGE DATA	
9748 9749 9750 9751 9753 9753 9755 9755 9755 9759	037166 037172 037174 037176 037202 037204 037206 037212	004037 002304 0023405	041270		JSR RHDST 3405	RO, a#FILLRE	MOV 3405 INTO SAVED RHDST SAVED REGISTER TO CHANGE DATA	
9757 9758 9758					:*COMPA :*WITH	RE REGISTERS BEF REGISTER AFTER C	ORE WRITE CHECK HEADER AND DATA	
9760	037216	004037	042354		JSR	RO. 3#COMREG	COMPARE SAVED REGISTERS WITH	
9761 97634 97765 97765 97767 9777 9777 9777 9777 9	037222 037224 037226 037230 037232	004612 002354 000022 037234 037240			SAVERE NC 18. 85		COMPARE SAVED REGISTERS WITH PRESENT VALUE GOOD DATA SAVED IN 'SAVERE' TEST DATA STARTING FROM 'RHWC' 18. REGISTERS TO BE COMPARED RETURN TO 9% ON ERROR RETURN TO 9% ON NO ERROR	
9768	037234	104076		8\$:	ERROR	76	WHILE USING UNIBUS B WRITE CHECK CAUSED AN IMPROPER REGISTER	
9770	037236	000207			RTS	PC	AN IMPROPER REGISTER	
9772 9773 9774 9775							CHANGE GOOD DATA GIVES WHAT SHOULD BE THERE RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMANDS	
9777	037240			95:				
9779 9780 9781 9782							The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	

037310

004037

041236

**H05** 

:CLEAR 256. WORDS. FROM WRFROM

MAINDEC	-11-DZRJ	I-A, RPC	04/5/6_FI	UNCT. CON'	T. TST-F	T 1	MACY11 27(655)	30-MAR-76 22:59	PAGE 206	SEG 0266
		T50	WRITE P	ROTECT OF	PERATION	1				
9837 9838 9839 9840 9841 9842 9843	037314 037316 037320	002470 000400 177777				WRFROM 256.		:STARTING FROM WR :256. WORDS :FILL WITH -1	FROM	
9841						;*FILL	WRITE DATA COMMAN	ND		
77777890-1207755555555555555555555555555555555555	037322 037326 037330 037331 037332 037334	004037 000000 000 000 177400 002470	043340	···.	BYTE BYTE	JSR C O -256. WRFROM	RO, 3#RUN	SETUP TO RUN FOR CYLINDER D SECTOR D TRACK D WORD COUNT = 256 BUS ADDRESS STARTING ADDRESS		
9851 9852 9853 9854	037336 037340	000000				O FMT22		BUFFER = WRFROM	DIE ODDBESS THOSEMENT	
9856 9857 9858	037342	002442	Ho. I	Jr. 100		WRIDAT	;WRITE !	DATA WITH 60 IN RH	A WRIDAT	
9850	037344	004737	041446			JSR	PC, 2#CHECKT	CHECK DVA RDY MO	L.DPR.DRY.VV = 1	
3865	037350	104400	056402			TYPE	.CPHALT	CANNOT CONTINUE	L.DPR.DRY.VV = 1 US BITS ARE STUCK = 1 TESTING IF ANY OF BITS DON'T = 1	
9864	037354	000000				HALT				
	037356	013777	004606	142702		MOV	a#RP4VEC, aRPVEC	SET RPD4 VECTOR ( TO 'TIME!' IF P-( OR TO 'TIME2' IF 'TIME' WILL ONLY CURRENT CYLINDER AND LOOK AHEAD R	ADDRESS CLOCK IS PRESENT P-CLOCK IS NOT PRESENT SAVE ADDRESS EGISTERS	
9873 9874 9875	037364 037370	013746 052716	000101			MOV	2#WRIDAT(SP) #GO!IE,(SP)	GET READY TO MOVE	E COMMAND	
9877 9878 9879	037374	012677	142700			MOV	(SP)+, aRHCS1	GET READY TO MOVE GET READY TO SET ENABLE INTERRUPT GO WITH ;60 IN RHCS1 FOR WITH INTERRUPT EN	WRITE DATA NABLED	
9881						;*TIME	IS NOT CRITICAL			
9870 9870 9871 9873 9877 9877 9877 9887 9888 9888 9888	037400 037402 037404 037406 037410	104412 002300 000200 004704 004704				WAT RHCS1 RDY 2500. 2500.		WAIT FOR RDY BIT WAIT FOR RHCS1 RE WAIT FOR RDY BIT ALLOW 25000 MICRO RDY MUST SET BETW OD AND 50000 MICRO	TO SET EGISTER IN RHCS1 REGISTER O SECONDS WEEN RO SECONDS	
9890			• :			: *SAVE	REGISTERS FOR COM	MPARISON AFTER WRIT	TE PROTECT	
1						**				

___

*FILL WRITE FROM BUFFER WITH 377

LOC

2- 1, 44a

MOINDEC	_11_0781	T_0 PPO	U/E/E EII	NCT CON	TCT-0	T 1	KO5	30-MAR-76 22:59 PAGE 208	SEG 0268
DZRJIA.	PII	T50 NFC	WRITE P	ROTECT OF	ERATION		MHC111 27(855)	30-11HR-75 EE:33 FAGE 200	259 0568
9945 9946	037530	013737	037630	001110	45:	MOV	2#45,2#\$LPERR	;SCOPE LOOP STARTS FROM HERE	
9947 9948 9949 9950	037636	004737	041366			JSR	PC, a#CLDISK	;SET R1-RHCS1, R2-RHCS2 ;R3-RHDS1, R4-RHER1 ;GIVE RH-11 INITIALIZE	
9951 9952 9953 9954 9955 9956	037642 037646 037650 037652	004037 002470 000400 000377	041236			JSR WRFROM 256. 377	RO, 2#CLAREA	SET R1-RHCS1, R2-RHCS2 R3-RHDS1, R4-RHER1 GIVE RH-11 INITIALIZE SETUP UNIT NUMBER CLEAR 256. WORDS, FROM WRFROM STARTING FROM WRFROM 256. WORDS FILL WITH 377	
9958						;*TRY A	ONE WORD WRITE		
9947 9947 9947 9951 9951 9951 9951 9951 9951 9951 995	037654 037660 037662 037663 037664 037666	004037 000000 000 000 177777 002470	043340		.BYTE	JSR 0 0 1 -1. WRFROM	RG, 2#RUN	SETUP TO RUN FOR DATA COMMAND CYLINDER D SECTOR D TRACK D WORD COUNT = 1. BUS ADDRESS STARTING ADDRESS OF DATA	
9967 9968 9969 9970	037670 037672	C10000 C000C0				D FMT22		BUFFER = WRFROM DO NOT INHIBIT BUS ADDRESS INCREMENT 16 BITS PER WORD FORMAT DO NOT INHIBIT ECC CORRECTION DO NOT INHIBIT HEADER COMPARE GET READY TO DO A WRIDAT DATA WITH 60 IN RHCS1	
9972 9973 9974	037674	002442				WRIDAT	;WRITE	GET READY TO DO A WRIDAT DATA WITH 60 IN RHCS1	
9976 9977 9978 9979 9980	037676 037702 037704	004037 002272 004612	041534	7		SAVERE	REGISTERS RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED STARTING ADDRESS OF WHERE THE REGISTERS ARE SAVED NUMBER OF REGISTERS	
9981	037706	000022				18.		; SAVED = 18.	
9978 9979 9981 9981 9983 9985 9985 9986 9989 9990 9991 9993 9995	037710	013777	004606	142350		MOV	a*RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS	
9993	037716 037722	013746 052716	002442			MCV BIS	a#WRIDAT, -(SP) #GO!IE, (SP)	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT	
9995 9996	037726	012677	142346			MOV	(SP)+, @RHCS1	; GO WITH ; 60 IN RHCS1 FOR WRITE DATA	
9997 9998						; *TIME	IS NOT CRITICAL	; WITH INTERRUPT ENABLED	

	MAINDEC DZRJIA.	-11-DZRJ	I-A. RPO TSO	4/5/6 FU WRITE P	NCT. CON'	T. TST-P PERATION	Т 1	MACY11 27(65		MAR-76	22:59	PAGE 210		SEQ 0270
	10053 10054 10055 10056 10057 10058	040100 040102 040104 040106 040110	004612 002354 000022 040112 040116				SAVERE WC 18. 5%		GO	ESENT VA OD DATA ST DATA REGIST TURN TO TURN TO	SAVED	IN 'SAVERE' NG FROM 'RHWC' BE COMPARED ERROR NO ERROR		
	10060 10061 10063 10063	040112	104042			5\$:	ERROR RTS	42 PC	; CH	ANGE OD DATA	GIVES I	ITE WITH REGISTER WHAT SHOULD		
١	10065 10066 10067 10068								BE RE TH	THERE CEIVED D ERE AFTE	ATA GI	VES WHAT WAS	*.	$\mathcal{Q}_{i}$
	10069 10070 10071 10072						**NOW A **READS **THAT	READ WILL BE CAN BE DONE! NO DATA ON DI	DONE TO WITH WR SK GOT	O DETERMITE LOCK CHANGED,	IN THAT CED OUT BUT F	T AND IRST CLEAR ERR	OR	
ı	10073	040116				69:								
	10075 10076 10077 10078	040116	004737	041366			JSR	PC, @#CLDISK	R3 GI	T R1-RHO -RHDS1. VE RH-11 TUP UNIT	S1, R2- R4-RHEF INITION	-RHCS2 R1 PLIZE		
	10080 10081 10082 10083 10084 10085	040122 040126 040130 040132	004037 003534 000400 000000	041236			JSR REINTO 256.	READ INTO BUFF RD, D#CLAREA	FER WITH CLI ST ST FIL	H D EAR 256. ARTING F 6. WORDS LL WITH	WORDS. ROM RE	FROM REINTO		
	10086 10087 10088 10089 10090 10091 10092	040134 040140 040142 040144	004037 002470 000400 177777	041236			:*FILL JSR WRFROM 256.	WRITE FROM BUF RD, D#CLAREA	FER WITCHESTA	TH EXPECTED ARTING FOR WORDS	TED DAT WORDS, ROM WRF	FROM READ FROM WRFROM ROM		
١	10093						;*FILL	COMMAND						
	10053 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055 10055	040146 040152 040154 040155 040156 040160	004037 000000 000 000 177400 003534	043340		.BYTE	JSR 0 0 0 -255. REINTO	RD, D#RUN	SET CYL SEC TRA WOR BUS	TUP TO R LINDER D CTOR D ACK D RD COUNT ADDRES ARTING A	= 256. SDDRESS	OF DATA  S ADDRESS INCE ER WORD FORMAT		
	10103 10104 10105 10106	040164	000000				ECI!FMT	22	; INH	NOT INH	IBIT BU BITS P C CORRE	S ADDRESS INCR ER WORD FORMAT CTION	REMENT	

MAINDE DZRJIA	C-11-DZRJ	I-A. RPO T50	14/5/6 FU WRITE P	NCT. CONT. TST-P	T 1	NO5	30-MAR-76 22:59 PAGE 211
					READAT	;READ I	;DO NOT INHIBIT HEADER COMPARE :GET READY TO DO A READAT DATA WITH 70 IN RHCS1
10107 10109 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 101112 1011	040170	013777	004606	142070	MOV	a*RP4VEC, aRPVEC	SET RPO4 VECTOR ADDRESS TO 'TIME1' IF P-CLOCK IS PRESENT OR TO 'TIME2' IF P-CLOCK IS NOT PRESENT 'TIME' WILL ONLY SAVE CURRENT CYLINDER ADDRESS AND LOOK AHEAD REGISTERS
10151	040176	013746 052716	002446		MOV BIS	a#READAT -(SP) #GO!IE,(SP)	GET READY TO MOVE COMMAND
10122 10123 10124 10125 10126	902040	012677	142066		MOV	(SP)+, aRHCS1	GET READY TO MOVE COMMAND GET READY TO SET 'GO' AND ENABLE INTERRUPT GO WITH :70 IN RHCS1 FOR READ DATA ;WITH INTERRUPT ENABLED
10127 10129 10130 10131 10132 10133	040212 040214 040216 040220 040222	104412 002300 000200 001614 001507			WAT RHCS1 RDY 908. 839.		WAIT FOR RDY BIT TO SET WAIT FOR RHCS1 REGISTER WAIT FOR RDY BIT IN RHCS1 REGISTER ALLOW 9080 MICRO SECONDS RDY MUST SET BETWEEN 690 AND 17470 MICRO SECONDS
10135						RE READ DATA	
10137 10138 10139 10140 10141 10142 10143	040224 040230 040232 040234 040236	004037 002470 003534 000400 040242 040244	043404		JSR WRFROM REINTO 256. 7\$	RO, 3*COMPAR	COMPARE TWO BLOCKS OF MEMORY GOOD DATA STARTS FROM WRFROM TEST DATA STARTS FROM REINTO 256. WORDS TO BE COMPARED RETURN TO 7\$ ON ERROR RETURN TO 8\$ ON NO ERROR
10138 10140 10141 10143 10143 10143 10144 10147 10153 10153 10153 10156 10158 10159 10159	040242	104043		7\$:	ERROR	43	WRITING WITH WRITE LOCKED CHANGED DISK GOOD DATA GIVES WHAT WAS ON DISK BEFORE WRITE WITH WRITE LOCK WAS ATTEPTED
10151 10152 10153							RECEIVED DATA GIVES WHAT WAS READ BACK AFTER WRITE WITH WRITE LOCKED WAS ATTEPTED
10155					*SAVE !	REGISTERS FOR COM	PARISON AFTER WRITE LOCK HAS BEEN
10158	040244 040244 040250	004037 002272	041534	2\$:	JSR RHWC	RO, D#SAVER	SAVE REGISTERS RHWC IS THE FIRST REGISTER SAVED

							B06	)		
MAINDEC DZRJIA.	-11-DZRJ P11	I-A RPO	WRITE F	NCT. CON	T. TST-P	T 1	MACY11 27(655)	30-MAR-76 22:5	PAGE 212	SE0 0272
10161	040252	004612				SHVERE		STARTING ABORES	SS OF WHERE	
10153	040254	000055				19.		NUMBER OF REGIS	STERS	
10155 10157 10159 10159	040529 040529 040529	104400	040264		ST20: ;:65\$: 64\$:	TYPE BR .ASCIZ	65\$ 64\$ (15)(12)/ON DRI	TYPE ASCIZ ST	RING	
	040302 040305 040310 040314	013746 104404 104400 000440	04716			MOV TYPDS TYPE BR	3#UNIT,-(SP) 65%	:GET UNIT UNDER		THEN HIT CONTINUEZ (15
10175 10176 10177 10179	040416 040416	000000			;;67\$: 56\$:	.ASCIZ				THEN HIT CONTINUEZ (15
10179						;*THE 0	NLY BIT THAT SHO		L-BIT #11 IN RHDS1	
10181	040420	004037 002322	045546			JSR RHDS1	RO, @#CHREG	CHANGE BITS IN CHANGE RHDS1 RE	SAVED REGISTER EGISTER	
10184	040436 040436	000001 000000 004000				O WRL		:1 BIT/BITS TO E NEW VALUE OF WE CHANGE WAL BIT	BE CHANGED RL IS 0	
10188						:*COMPA :*WITH	RE ALL REGISTERS REGISTERS AFTER	BEFORE WRITE LOC WRITE WAS UNLOCKE	CK WAS UNLOCKED	
10192	040434	004037	042354			JSR	RO, D#COMREG	COMPARE SAVED F	REGISTERS WITH	
10194	040440 040444 040444 04046 040450	004612 002354 000022 040452 040456				SAVERE WC 19. 95 105		PRESENT VALUE GOOD DATA SAVED TEST DATA START 18. REGISTERS 1 RETURN TO 98 ON RETURN TO 108 OF	IN 'SAVERE' ING FROM 'RHWC' TO BE COMPARED REROR ON NO ERROR	
	040452 040454	104044			9\$: -	ERROR	PC PC	:UNLOCKING WRITE :LOCK BUTTON CAL :GOOD DATA GIVES :BE THERE :RECEIVED DATA G :THERE AFTER WRI :UNLOCKED :ON THIS ERROR N	S BY WRITE USED AN ERROR WHAT SHOULD  IVES WHAT WAS TES WERE  O LOOPING IS RECOMMERTED THE SECOND HE REGISTERS ARE RETENT NUMBER	MENDED
10208	040456	012737	177777	046760	10%:	MOV	-#-1, D#PRITEM	JUST A HALT ON THING AS ONLY T CLEAR PREVIOUS	ERROR WILL DO THE HE REGISTERS ARE RI ITEM NUMBER	SAME

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MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 TSO WRITE PROTECT OPERATION

10515								
					***** *TEST	51	END OF DRIVE	********************
10518					:*	THIS IS	THE END OF TEST	T FOR ONE DRIVE
10550					:*	IF THER	E ARE MORE DRIVE	STING THE NEXT DRIVE
10223					;*	END PAS	S IS REACHED ONL	Y AFTER ALL DRIVES ARE TESTED
	040464 040466 040474	000004 012737 012737	000000	001212 177776	TSTS1:	SCOPE MOV MOV	**************************************	::DO 1 ITERATION REINSTATE PS TO D
10530	040502 040505	104400	040510		;:65\$: 64\$:	TYPE BR .ASCIZ	65\$ 64\$ (15)(12)/TOTAL	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ ERRORS ON THIS PASS ON UNIT NO./
10233	040560	013746	004715		645:	MOV		GET READY TO TYPE UNIT NUMBER
10235 10236 10237 10238	040564 040566 040572	104404 004401 204000	040574		::67\$:	TYPDS TYPE BR .ASCIZ	,67\$ 66\$	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
10239	040600	013746	001112		;;67\$: 55\$:	MOV	2#SERTTL, -(SP)	GET READY TO TYPE NUMBER OF ERRORS
	040622 040616 040616 040604	104404 005037 005037 005737 001413	001112 001102 004725			TYPDS CLR CLR TST BEQ	D#SERTTL D#STSTNM D#SELECT 35	CLEAR TOTAL NUMBER OF ERRORS CLEAR TEST NUMBER STARTING FROM 200 ? CHECK NEXT DRIVE IF SO CONTINUE WITH THIS ONE IF NOT
	040524 040530 040534 040640	005237 104400 013746 104404	001100 041021 001100			INC TYPE MOV TYPDS	2#SPASS SENDMG 3#SPASS,-(SP)	: INCREASE PASS COUNT : TYPE "END PASS *"
10252	040645	104400	041016 007744			TYPE	SENULL S#TST4	; JUMP TEST 4
10255	040652	012737	177777	046760	35:	MOV	#-1.3#PRITEM 3#NOUNITS	CLEAR PREVIOUS ITEM NUMBER
10257	040664	001713	004716			DEC BEG MOV	SEOP REUNIT.RO	BRANCH IF ALL DRIVES COMPLETE
10250	040672 040676 040700 040702	013700 012701 022100 001401 000775	004676		15:	MOV CMP BEQ BR	#UNITS.RI (R1)+.RO 25 15	NO. OF UNITS PRESENT  BRANCH IF ALL DRIVES COMPLETE  UNIT UNDER TEST  TABLE POINTER  IS THIS UNIT JUST TESTED ?  BRANCH IF YES
10263	040704 040704 040710	000775	004716 007744		23:	MOV JMP	(R1) a#UNIT	BRANCH IF NO MAKE THIS NEXT UNIT TEST THE NEXT DRIVE

MAINDEC-11-DZRJI-A, RPC4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 214 DZRJIA.P11 TSI END OF DRIVE

SEG 0274

10265

10310 10312 10313 10314 10315 10315					*THIS *BY GI *'RHCC *THAT	SBTTL ROUTINE VING A WITH T THE LOAD	JAM CURRENT CYL	INDER ROUTINE  CURRENT CYLINDER REGISTER - 'RHCC' LLOWED BY AN INIT WHICH WILL LOAD  DER VALUE. THE ROUTINE THEN CHECKS  ECT.
0319 0320 C321					*CALL :	JSR XC	RO, D#MAKECYL	DESIRED VALUE OF CURRENT CYLINDER
	041036 041035 041044 041052 041054 041054 041060 041064	010546 010037 162737 012005 010577 005077 013777	041422 000004 141232 141220 002452 000001	141206 141220	MAKECYL	MOV MOUB MOUB MOV MOV MOV	RS(SP) RG.3*PCJSR *4.3*PCJSR (RO)+,RS RS,JRHCA GRHDST G*SEECOM.JRHCS1 *DMD,JRHMR	PUSH RS ON STACK PC OF JSR+4 SAVE PC OF JSR GETTING READY TO FILL DESIRED CYLINDER FILL DESIRED CYLINDER REGISTER MAKE SURE DESIRED SECTOR TRACK IS NOT ILLEGAL FILL SEEK COMMAND SET DIAGNOSTIC MODE
0333 0334 0335 0336 0337	041100 041104 041112 041114	004737 032737 001401 104103	043300 040000	902404		JSR BIT BEG ERROR	PC.3*PUTREG *ERR.3*DS1 2\$ 103	TAKE A REGISTER SNAPSHOT CHECK FOR COMPOSITE ERROR NOT = 1. A-OK REGISTER CONTENTS INCORRECT BEFORE A DIAGNOSTIC SEEK
10339 10340 10341 10342	041116 041124 041126 041130 041132	052777 000240 000240 000240 000240	000001	141154	25:	BIS NOP NOP NOP	#GO, @RHCS1	ISSUE 'GO' TO SEEK COMMAND ALLOW TIME FOR SEEK TO HANG UP ALLOW TIME FOR SEEK TO HANG UP ALLOW TIME FOR SEEK TO HANG UP ALLOW TIME FOR SEEK TO HANG UP
0345 10346 10347 10349	041134 041140 041146 041150	004737 032737 001401 104104	043300 040000	002404		JSR BIT BEQ ERROR	PC. 3*PUTREG *ERR, 2*DS1 3% 104	TAKE A 2ND REGISTER SNAPSHOT CHECK FOR ERRORS NOT = 1. A-OK REGISTER CONTENTS INCORRECT AFTER A DIAGNOSTIC SEEK
10351 10352 10353 10354 10355 10356	041152 041156 041164 041170 041172 041176 041204	004737 017737 020537 001406 010537 013737 104077	041366 141152 001126 001124 002334	004600	35:	JSR MOV CMP BEQ MOV MOV ERROR	PC.@#CLDISK @RHCC.@#\$BDDAT RS,@#\$BDDAT 1\$ RS.@#\$GDDAT @#RHCC.@#REGADR 77	GIVE INIT TO FORCE THE TRANSFER TEST DATA COMPARE CURRENT CYLINDER BRANCH IF GOOD GOOD VALUE OF RHCC FAILING REGISTER ADDRESS CURRENT CYLINDER DOES NOT MATCH DESIRED CYLINDER REGISTER AFTER A SEEK AND AN INIT
10359	04150P 04150P 902160	000200			15:	MOV RTS	(SP)+.R5	:; POP STACK INTO RS

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GD6
MAINDEC-11-DZRJI-A. RPO4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 217 DZRJIA.P11 JAM CURRENT CYLINDER ROUTINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEG 0277
    23345.67.890-12345.67.890-12345.67.890-12335.6335.67.890-123345.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12335.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890-12355.67.890
                                                                                                                                                                                                                      **THIS FILLS MEMORY WITH GIVEN DATA

*USED CHIEFLY FOR HEADER INFORMATION

**CALL IS

** JSR RO. 3#FLHEAD :FILL HEADE

** LOC :LOCATION B
                                                                                                                                                                                                                                                                                                                                                                                                  FILL HEADER
LOCATION WHERE SAVED
NUMBER OF WORDS
DATA REPEATED XN TIMES
DATA REPEATED XN TIMES
                                                                                                                                                                                                                      :*
                                                                                                                                                                                                                    ; *
                                                                                                                                                                                                                                                                   XN
                                                                                                                                                                                                                                                                  XD1
                                                                                                                                                                                                                         *
                                                                                                                                                                                                                         *
                                                                                                                                                                                                                        : *
                                                                                                                                                                                                                       :*
                                        041212
041212
041214
041216
041220
                                                                                                                                                                                                                     FLHEAD:
                                                                                                                                                                                                                                                                                                           R1,-(SP)
R2,-(SP)
(R0)+,R1
(R0)+,R2
                                                                                                                                                                                                                                                                                                                                                                                               ::PUSH R1 ON STACK
::PUSH R2 ON STACK
:R1 HAS ADDRESS OF WHERE TO SAVE
:R2 HAS NUMBER OF WORDS
                                                                                   012002
012001
010146
010146
                                                                                                                                                                                                                                                                MOV
                                                                                                                                                                                                                                                                  MOV
                                                                                                                                                                                                                                                                  YOM
                                                                                                                                                                                                                                                                  :*NOW FILL DATA
                                                                                                                                                                                                                                                                                                                                                                                                 SAVE DATA
DECREMENT COUNT
BRANCH IF INCOMPLETE
                                        041222
041224
041226
041230
041232
041234
                                                                                  012021
005302
001375
012602
012601
                                                                                                                                                                                                                                                                                                            (RO)+,(R1)+
                                                                                                                                                                                                                                                                 MOV
DEC
BNE
                                                                                                                                                                                                                      15:
                                                                                                                                                                                                                                                                                                          R2
1$
(SP)+.R2
(SP)+.R1
R0
                                                                                                                                                                                                                                                                                                                                                                                                 POP STACK INTO RE
                                                                                                                                                                                                                                                                  MOV
                                                                                                                                                                                                                                                                MOV
                                                                                                                                                                                                                    **THIS CLEARS ANY BLOCK OF MEMORY.

**FILLING IT WITH ANY DATA

**CALL IS

** JSR RO.3*CLAREA

** F :FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.1
                                                                                                                                                                                                                                                                                                                                                      NUMBER OF WORDS
DATA TO BE FILLED
                                                                                                                                                                                                                       : *
     10398
10399
10399
104001
10403
10404
10405
10405
                                                                                                                                                                                                                       : *
                                                                                                                                                                                                                     *R1 WILL HAVE STARTING ADDRESS OF BLOCK TO BE FILLED *R2 WILL HAVE NUMBER OF WORDS *R3 WILL HAVE DATA
                                        041236
041236
041242
041246
041254
041254
041256
041260
041262
                                                                                                                                                                                                                     CLAREA:
                                                                                                                                                                                                                                                                                                         R1,-(SP)
R2,-(SP)
R3,-(SP)
(R0)+,R1
(R0)+,R2
(R0)+,R3
R3,(R1)+
R2
                                                                                   010346
                                                                                                                                                                                                                                                                                                                                                                                               :: PUSH R1 ON STACK
: PUSH R2 ON STACK
: PUSH R3 ON STACK
                                                                                                                                                                                                                                                                MOV
                                                                                                                                                                                                                                                                MOV
     10409
104010
104110
104110
104113
104113
104115
                                                                                   012001
012002
012003
010321
005302
001375
012602
                                                                                                                                                                                                                                                                MOV
                                                                                                                                                                                                                                                                                                                                                                                                 :FROM
                                                                                                                                                                                                                                                                MOV
                                                                                                                                                                                                                                                                                                                                                                                                 : NUMBER
                                                                                                                                                                                                                                                               MOV
MOV
DEC
                                                                                                                                                                                                                                                                                                                                                                                                 :DATA
                                                                                                                                                                                                                                                                                                                                                                                                MOVE DATA
                                                                                                                                                                                                                     15:
                                                                                                                                                                                                                                                                                                                                                                                              COUNT
BRANCH IF NOT COMPLETE
:POP STACK INTO R3
:POP STACK INTO R2
                                                                                                                                                                                                                                                                                                           (SP)+,R3
(SP)+,R2
                                                                                                                                                                                                                                                                 MOV
```

LIOC

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPC JAM CUR	04/5/6 FUNCT. CONT REENT CYLINDER ROL	T. TST-PT 1 UTINE	HOE MACY11 27(655)	30-MAR-76 22:59 PAGE 218	SE0 0278
10416 10417 10419 10419 10420 10421	041564	000500		MOV	(SP)+,R1 RO	RETURN TO MAIN PROGRAM	A.
10425				*THIS IS A SUI *WITH GIVEN VI *CALL IS * JSR * RHXX * D	BROUTINE TO FILL ALUE RO.3#FILLRE :REGIS :DATA	SAVED REGISTER LOCATION	
	041270 041270 041274 041276 041300 041304 041310	010146 010246 012001 012002 162701 012501 012501 000200	002272 004612	FILLRE:  MOV  MOV  MOV  SUB  MOV  MOV  MOV  MOV  MOV  RTS	R1,-(SP) R2,-(SP) (R0)+,R1 (R0)+,R2 #RHWC,R1 R2,SAVERE(R1) (SP)+,R2 (SP)+,R1 R0	PUSH R1 ON STACK PUSH R2 ON STACK ADDRESS OF ADDRESS OF REGISTER DATA OFSET DATA IS MOVED IN POP STACK INTO R2 POP STACK INTO R1 RETURN TO MAIN PROGRAM	.4: 43

in Mil

1

TOC

SEG 0279

-											4
	10473 10474 10475 10475					*THIS *CALL	SUBROUT IS JSR	RO, 2#OFSET	FFSET CO		
	10479 10479 10480 10481	041352 041356 041364	052077 013777 000200	140732 002454	140714	OFSET:	BIS MOV RTS	(RO)+, aRHOF a#OFSETC, aRHCS1	:SET OF	SET REGISTER INTO RHCS1 I TO MAIN PROGRAM	
	104775 104775 1047779 1047779 1047779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779 104779	041356 041372 041376 041402	313701 013702 013703 013704	002300 002276 002322 002302		CLDISK:	MOV MOV MOV	2*RHCS1, 2*RHCS2, 2*RHDS1, 2*RHER1,	R1 R2 R3 R4	R1 WILL BE CONTROL AND STATUS1 R2 WILL BE CONTROL AND STATUS2 R3 WILL BE DISK STATUS REGISTER1 R4 WILL BE ERROR REGISTER #1	
	10488 10489 10490 10491 10492	041406 041416 041416 041420	012712 013712 005011 000207	000040 004715			MOV MOV CLR RTS	#CLR. DR2 D#UNIT, DR2 DR1 PC	;REINST	CLEAR ALL REG. ATE UNIT NO. CLEAR FUNCTION BITS	

10495 10495 10495 10495 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500 10500								ABLE (DVA) AND READY (RDY) IN RHCS1 = 1 L), DEVICE PRESENT (DPR), DEVICE READY
10502	0111122	200000					3 THAT THERE ARE	
10505	041422	000000			PCJSR:		(CD) 2"DATED	;PC OF JSR
10508 10508 10509 10510	041424 041430 041436 041440 041444	011637 162737 011346 052716 000406	000100	041422	CHECK:	MOV SUB MOV BIS BR	(SP), 0*PCJSR *4, 0*PCJSR 0R3, -(SP) *VV.(SP) CHECKC	SAVE PC OF JSR+4 GET PC OF JSR GET RHDS1 DONT CHECK VV BIT GOTO COMMON CHECK ROUTINE
10512 10513 10514	041446 041452 041460	011637 162737 011346	000004	041422	CHECKT:	MOV SUB MOV	(SP), D*PCJSR #4, D*PCJSR DR3, -(SP)	;SAVE PC OF JSR+4 ;GET PC OF JSR ;GET RHDS1 & DO VV CHECK AT 3%
10516 10517 10518	041462 041464 041470	011146 042716 022726	173577 004200		CHECKC:	MOV BIC CMP	@R1,-(SP) #173577,(SP) #DVA!RDY,(SP)+	GET CS1 CLEAR UNWANTED BITS RHCS1 SHOULD HAVE DEVICE AVAILABLE
10520 10521 10522 10523 10524	041474 041476 041502	001403 011137 104061	001122			BEQ MOV ERROR	3\$ 3R1,3#\$BDADR 61	CLEAR UNWANTED BITS RHCS1 SHOULD HAVE DEVICE AVAILABLE AND BE READY BRANCH IF IT DOES BAD DATA REGISTER (RHCS1) RHCS1 DID NOT HAVE DEVICE AVAILABLE RIGHT AT THE START ALL OTHER BITS SHOULD BE 0
10526 10527 10528 10529 10530 10531	041504 041510 041514 041516 041522	042716 022726 001404 011337 104062	102000 010700 001122		3\$:	BIC CMP BEQ MOV ERROR	#ATA!LBT (SP) #MOL!DPR!DRY!VV 7\$ aR3,a*\$BDADR 62	CLEAR UNWANTED BITS (SP)+ :RHDS1 SHOULD HAVE THESE SET BRANCH IF GOOD BAD DATA IN REGISTER (RHDS1) RHDS1 HAS SOME BITS OTHER THAN MOL. DRY. DPR.VV SET ALL OTHER BITS SHOULD BE O RETURN TO TEST AND HALT/CONTINUE DEPENDING ON WHETHER THIS IS A
10529 10531 10531 10533 10539 10539 10539 10539	041524	000207				RTS	PC	ALL OTHER BITS SHOULD BE D RETURN TO TEST AND HALT/CONTINUE DEPENDING ON WHETHER THIS IS A "FATAL" ERROR
10537 10538 10539	041526 041532	062716 000207	000006		7\$:	ADD RTS	#6,(SP) PC	ADJUST STACK TO JUMP OVER HALT IN TEST

UZNJIM.FII		JAN CON	MEITI OIL	INDER NO	OTTHE			
10595 10595 10596 10597 10599 10599 10500 10503 10505 10505 10505 10505 10513 10513 10513 10513 10513 10513 10513 10513 10513 10513 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523 10523					• "	ALL IS WAT A B TA TO	; ABSOLUTE REGIST ; BIT WAITED FOR ; TIME ALLOWED GO ; TOLERANCE PLUS/MI TOLERANCE PLUS/MI THAT CAN BE MEASU ST PROCESSOR	VENT IS TO BE TIMED  TER ADDRESS  IVEN IN 10 MICROSEC  VMINUS IN 10 MICROSEC  IO MICRO SECONDS INUS IN 10 MICRO SECONDS UNED IS ABOUT 12 MICRO SECONDS
10607 04: 10608 04: 10609 04: 10610 04: 10611 04: 10612 04: 10613 04: 10615 04: 10616 04:	1616 1620 1624 1626 1636 1636 1644 1652 1652 1654 1652 1676	000000 000000 000000 000000 005037	Nu1624		WAITPC: WAITRE: WAITBT: WAITTM: WAIT.P:	CLR CLR MOV MOV MOV MOV	a#WAITTM aPCLBUF;CLEAR ( #GO!BIT4, aPCLCSF RO, -(SP) R1, -(SP) R2, -(SP) R3, -(SP)	WAT PC WAIT ON REGISTER ADDRESS WAIT ON BIT WAITED TIME CLEAR WAITED TIME CLEAR WAITED TIME COUNT SET BUFFER COUNT UP, 100 KHZ, START CLOCK PUSH RO ON STACK PUSH R1 ON STACK PUSH R2 ON STACK PUSH R3 ON STACK R0 HAS ADDRESS OF NEXT LOCATION NOW WAITPC HAS WAT PC + 2 WAT PC IS IN WAITPC WAIT ON REGISTER ADDRESS WAIT ON BIT R1 HAS TIME IN 10 MSEC R2 HAS TOLERANCE IN 10 MSEC RESTORE RETURN ON STACK
10618 04: 10619 04: 10620 04: 10621 04: 10622 04: 10623 04: 10624 04:	1654 1660 1664 1672 1676 1702 1704 1706	012777 012777 010046 010146 010246 010346 016600 010037 162737 013037 012037 012001 012002 010066	000010 041616 000002 041620 041622	041616		MOV MOV MOV MOV MOV	10(SP),RO RO, 3*WAITPC #2, 3*WAITPC a(RO)+, 3*WAITRE (RO)+, 3*WAITBT (RO)+,R1 (RO)+,R2 RO, 10(SP)	RO HAS ADDRESS OF NEXT LOCATION NOW WAITPC HAS WAT PC + 2 WAT PC IS IN WAITPC WAIT ON REGISTER ADDRESS WAIT ON BIT R1 HAS TIME IN 10 MSEC R2 HAS TOLERANCE IN 10 MSEC RESTORE RETURN ON STACK
10627 10628 041 10629 041 10630 041 10631 041	1712 1716 1724 1726 1730	013703 033777 001025 005303 001372 013703 033777	041622	177674	15:	DEC	a#TIMONT,R3 a#WAITBT, aWAITRE 4\$ R3	;R3 IS A TEMPORARY COUNTER ::IS REQUIRED BIT THERE :BRANCH IF YES ;COUNT IF REQUIRED BIT NOT THERE
10634 04 10635 04 10636 04 10637 04	1736 1744 1746 1750	013703 033777 001015 005303 001372 017737 032777	041622	177654	2\$:	MOV BIT BNE DEC BNE	R3 25	; TEMPORARY COUNTER : IS REQUIRED BIT THERE : BRANCH IF YES ; COUNT IF REQUIRED BIT NOT THERE
10630 04 10631 04 10632 04 10633 04 10635 04 10635 04 10637 04 10638 04 10639 04 10640 04 10641 04 10643 04 10643 04 10644 04 10645	1724 1726 1730 1732 1736 1744 1746 1750 1760 1766 1770	104001 000427	177642 000100	001126	26.	MOV BIT BEQ ERROR BR	WAITRE, D#SBDDAT #IE, DRHCS1 3S 1	REGISTER CONTENTS FOR TYPEOUT DID ANY INTERRUPT OCCUR BRANCH IF YES RPO4 DID NOT INTERRUPT OUT
10646	1774	104002			3\$:	BR	2 7 <b>\$</b>	RPO4 INTERRUPTED BUT WAITED ON BIT DID NOT OCCUR EVEN AFTER TWO COUNT DOWNS FROM 177777 TO D

10648 10649 10650 10651 10652 10653 10654	042016 042006 042014 042016	017737 032777 001402 104003	177514 000100	001126	45:	:*NOW MOV BIT BEG ERROR	TIME AND TOLERANCE QUAITRE QUESBODAT *IE, QRHCS1 5\$	WILL BE CHECKED REGISTER CONTENTS FOR TYPEOUT DID ANY INTERRUPT OCCUR BRANCH IF YES INTERRUPT DID NOT OCCUR EVEN AFTER ONE BNE AND ONE MOV OF THE WAITED ON BIT SETTING		
10655 10656 10657 10658 10659	042020 250540 450540	000414 160201 023701	041624		5\$:	GR SUB CMP		OF THE WAITED ON BIT SETTING OUT RI NOW HAS LOWER LIMIT OF TIME FOR GOOD RESULTS, WAITTM MUST BE GREATER OR EQUAL TORI		
10991	042030 042032	103002				BHIS	65	BRANCH IF GOOD BIT DID OCCUR BUT TIME TAKEN IS BELOW LOWER LIMIT		
10664	042034	000406				BR	7\$	OUT		
10666 10667 10668	042036 042040 042042	060202 060201 020137	041624		6\$:	ADD ADD CMP	R2,R2 R2,R1 R1,D#WAITTM	DOUBLE TOLERANCE R1 NOW HAS UPPER LIMIT OF TIME FOR GOOD RESULTS. WAITTM MUST BE LESS OR EQUAL TO R1 BRANCH IF GOOD BIT DID OCCUR BUT TIME TAKEN IS ABOVE UPPER LIMIT		
10670 10671 10672	042046 042050	103001				BHIS	7 <b>S</b>	BRANCH IF GOOD BIT DID OCCUR BUT TIME TAKEN IS ABOVE UPPER LIMIT		
10648 10651 10651 10653 10653 10655 10655 10655 10665 10665 10666 10666 10667 10675 10675 10675 10675 10675 10675 10675 10675 10683 10683 10683 10683	042052 042052 042054 042056 042060 042062	000005 015901 015905 015903			7\$:	MOV MOV MOV RTI		POP STACK INTO R3 POP STACK INTO R2 POP STACK INTO R1 POP STACK INTO R0 RETURN TO MAIN TEST		
10681 10683 10683 10683 10685 10685 10685 10687 10691 10691 10693 10695 10697 10697 10697 10697	042064	177777			*NO TII *CALL *	AAT A : ABSOLUTE REGISTER ADDRESS B : BIT WAITE) FOR TA : TIME-NOT USED HERE TO : TIME-NOT USED HERE A TEMPORARY COUNTER				
10696 10697 10698 10699 10700	042066 042066 042070 042072 042076 042102	010046 010346 016600 010037 162737	000004 041616 000002	041616	WAIT.T:	MOV MOV MOV SUB	RO,-(SP) R3,-(SP) 4(SP),RO RO,0#WAITPC #2,0#WAITPC	:PUSH RD ON STACK :PUSH R3 ON STACK RO HAS ADDRESS OF NEXT LOCATION WAT PC +2 IS IN WAITPC WAT PC IS IN WAITPC		

MATNOE	`-!!-nze!	T-0 BB0	4/5/6 FII	NOT CON	T TST-P	T 1	B07	30-MAR-76	22.50	PAGE 225	
DZRJIA.	Pil	JAM CUR	RENT CYL	INDER RO	UTINE		MACY11 27(655)	30-11HK-76	22.37	THISE EES	
10702 10703 10704 10705	042110 042114 042120 042122	013037 012037 022020 010066	000004			MOV MOV CMP MOV	a(RO)+,a*WAITRE (RO)+,a*WAITBT (RO)+,(RO)+ RO,4(SP)	WAIT ON E WAIT ON E DUMP NEXT RESTORE R	EGISTER IIT TWO WOR ETURN ON	ADDRESS PDS-TA, 1 I STACK	ro
1070057 1070057 1070057 1070057 1077001 107711077 10772222222222 10772222222222	042126 042132 042140 042140	013703 033777 001025 005303 001372 013703 033777	041622	177460	15:	**THIS	HAS THE TWO COUNT D#TIMENT, R3 D#WAITBT, DWAITRE R3 IS D#TIMENT, R3 D#WAITBT, DWAITRE R3 R3 R3 R3 R3 R3	DOWNS FRO :R3 HAS TE :IS REQUI :BRANCH IF :COUNT IF	M 177777 MPORARY RED BIT YES REQUIRED	COUNT THERE	THERE
10712 10713 10714 10715 10716		001372 013703 033777 001015 005303 001372 017737 032777	041622	177440	2\$:	BNE MOV BINE DEC	15 0#TIMCNT,R3 0#WAITBT,QWAITRE 45 R3	SECOND CO :IS REQUI :BRANCH IF ;COUNT IF	UNT DOWN RED BIT YES REQUIRED	FROM 17 THERE BIT NOO	7777 T THERE
10718 10719 10720 10721	042166 042174 042202 042204	017737 032777 001402 104001	177426	001126 140075		MOV BIT BEG ERROR	SWAITRE SEBDDAT #IE. SRHCS1 35 1	:REGISTER :DID ANY I :BRANCH IF :RPO4 DID :BIT DID N	CONTENT NTERRUPT YES NOT INTE	S FOR TY OCCUR RRUPT	PEOUT
10723 10724 10725 10726 10727	012240	104002			3\$:	BR ERROR	5\$	OUT RPO4 INTE WAITED ON EVEN AFTE FROM 1777	RRUPTED BIT DID R TWO CO 77 TO D	BUT NOT OCC UNT DOWN	UR S
10728	042212	000415				BR		,			
10730 10731 10732 10733 10734 10735 10735 10736 10739	#15240 #152540 #25240 #25240	000240 032777 001405 017737 104003	000100 177366	140054	45:	*BIT NOP BIT BEG MOV ERROR	DID SET SO CHECK I #IE. DRHCS1 55 QWAITRE. D#\$BDDAT	F INTERRUP ALLOW TIM DID ANY I BRANCH IF REGISTER INTERRUPT EVEN AFTE	T OCCURE E FOR IN NTERRUPT YES CONTENT DID NOT R ONE BN	D TERRUPT OCCUR S FOR TY OCCUR E OF	PEOUT
10737	042236	000400			F. C.	BR		THE WAITE	D ON BIT	OCCURIN	G
10740 10741 10742	042236 042240 042240 042244	000005 015600 015603			5\$:	MOV MOV RTI	(SP)+.R3 (SP)+.R0	POP STACE	K INTO REMAIN TE	3 0 5 T	

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NEW : REGISTER TO BE CHANGED

NEW : NEW VALUE OF BIT MUST BE C OR1

POSITION OF BIT TO BE CHANGED

AND P WILL BE REPEATED N NUMBER OF TIMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *NEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R1.-(SP)
R2.-(SP)
(R0)+R1
(R0)+R2
R2 HAS ADDRESS OF ADDRESS OF REGISTER
(R0)+
R3 HAS OFSET OF REQUIRED REGISTER
(R0)+
R4 HAS OFSET OF REQUIRED REGISTER
(R0)+
R5 HAS BIC OR A BIS TO BE DONE
R6 HAS BIC IS REQUIRED
R6 HAS REQUIRED BIT
R7 HAS OFSET OF REQUIRED
R8 HAS OFSET OF REQUIRED REGISTER
R9 HAS OFSET OF REQUIRED REGISTER
R9 HAS OFSET OF REQUIRED REGISTER
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162701
005720
005720
0052061
005302
012602
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                                                                                                                                                                                                                                                                                                                                                          004612
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                                                                                                                                                                                                                                                                                                                                                          004612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    **THIS FILLS A BLOCK WITH INCREMENTAL DATA

**CALL IS

** JSR RD, 3#FILL

* FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               :FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF WORDS
STARTING VALUE OF
INCREMENT DATA BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R1.-(SP) ::PUSH R1 ON STACK
R2.-(SP) ::PUSH R2 ON STACK
R3,-(SP) ::PUSH R3 ON STACK
R4.-(SP) ::PUSH R4 ON STACK
(R0)+,R1 ::R1 HAS ADDRESS WHERE DATA IS TO GO
(R0)+,R2 ::R2 HAS NUMBER OF WORDS TO BE FILLED
(R0)+,R3 ::STARTING VALUE OF DATA
(R0)+,R4 ::R4 HAS INCREMENT

DATA WILL BE FILLED
R3.(R1)+ ::FILL DATA
R4,R3
10779
10780
10781
10782
10783
10784
10785
10785
10786
10798
10799
10793
10794
10795
                                                                                                 042312
042313
042314
042324
042324
042324
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042324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILL:
                                                                                                                                                                                                                           010146
010246
044610
100210
200210
200210
400210
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MOV MOV MOV MOV VOM MOV

MOV ADD DEC BNE

MOV

R4.R3 R2

(SP)+.R4 (SP)+.R3

FILL DATA

GET NEXT VALUE OF DATA

DECREMENT COUNT

BRANCH IF ALL NOT DONE

:POP STACK INTO R4

:POP STACK INTO R3

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT, CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 227 DZRJIA.P11 JAM CURRENT CYLINDER ROUTINE NOV (SP.)+.R2 ::POP STACK INTO R2 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 ::POP STACK INTO R1 :

SEG 0287

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345557890-1-12745557890-122345557890-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-122345578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-122345578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-122345578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-1223455578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-122345578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-12234578900-122
                                                                                                                                                                                                                                                                                                          **THIS IS A SUBROUTINE TO COMPARE REGISTERS

**GOOD DATA IS ALREADY SAVED IN 'SAVERE'

**TEST DATA IS IN THE REGISTERS
                                                                                                                                                                                                                                                                                                     *TEST DA:

**CALL IS

JSR

SAVERE

RHCS1
                                                                                                                                                                                                                                                                                                 * SAVERE

* RHCS1 : ADDRESS OF ADDRESS TEST DATA

* N. : RETURN FOR ERROR

* RG : RETURN FOR GOOD COMPARISON

** REGADR' HAS REGISTER ADDRESS : RESURD FOR GOOD DATA, 'SBDDAT' HAS BAD DATA
                                                  042354
042356
042356
042362
042364
042366
042370
042372
042374
                                                                                                                                                                                                                                                                                                                                                                MOV R1,-(SP) :PUSH R1 ON STACK
MOV R3,-(SP) :PUSH R2 ON STACK
MOV R3,-(SP) :PUSH R3 ON STACK
MOV R4,-(SP) :PUSH R4 ON STACK
MOV R5,-(SP) :PUSH R5 ON STACK
MOV (R0)+,R1 :R1 HAS ADDRESS OF GOOD DATA
MOV (R0)+,R2 :R2 HAS ADDRESS OF ADDRESS OF TE
MOV (R0)+,R3 :R3 HAS NUMBER OF WORDS
MOV (R0)+,R4 :R4 HAS RETURN FOR ERROR
MOV (R0),R0 :R0 HAS RETURN ON NO ERROR

**NOW SAVE REGISTERS
JSR PC. 3**PUTREG :SAVE REGISTERS
MOVB 3**SAVERE+2S, 3**AS+1:MAKE UPPER BYTE OF RHAS SAME
MOV **-2.R5 :PRESET R5 T0 -2

**NOW COMPARES WILL MADE
ADD **2.R5 :INCREMENT TO INDEX
CMP (R1)+,(R2)+ :BRANCH IF GOOD

**COMPARE REGISTER CONTENTS
BEG 25 :BRANCH IF GOOD
                                                                                                                                                                                                                                                                                                         COMREG:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : PUSH R1 ON STACK
: PUSH R2 ON STACK
: PUSH R3 ON STACK
: PUSH R4 ON STACK
: PUSH R5 ON STACK
: PUSH R5 ON STACK
: R1 HAS ADDRESS OF GOOD DATA
: R2 HAS ADDRESS OF ADDRESS OF TEST DATA
: R3 HAS NUMBER OF WORDS
: R4 HAS RETURN FOR ERROR
; R0 HAS RETURN ON NO ERROR
                                                                                                               010246
010246
010346
010346
010016
010001
010003
010004
000110
                                                  045404
045404
045400
                                                                                                                004737
113737
012705
                                                                                                                                                                             043300
004637
177776
                                                                                                                                                                                                                                           002401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INCREMENT TO INDEX
COMPARE REGISTER CONTENTS
BRANCH IF GOOD
SAVE GOOD DATA
SAVE BAD DATA
                                                  042416
042424
042424
042436
042436
042436
                                                                                                                 062705
022122
                                                                                                                                                                                2000005
                                                                                                                                                                                                                                                                                                         15:
                                                                                                                001420
014137
014237
016537
004714
                                                                                                                                                                                                                                                                                                                                                                                                                                    25
                                                                                                                                                                                                                                                                                                                                                                                                                                -(R1), a*SGDDAT
-(R2), a*SBDDAT
RHWC(R5), a*REGADR
PC, aR4
                                                                                                                                                                            001124
001126
002272
                                                                                                                                                                                                                                                                                                                                                                       MOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RETURN TO MAIN PROGRAM
TO PRINT ERROR
UNDO -(R1) AND -(R2) FOR ERRORS
                                                                                                                                                                                                                                                                                                                                                                      MCV
JSR
                                                  042450
042450
042450
042460
042464
042464
                                                                                                                022122
017746
042716
022726
001402
005303
                                                                                                                                                                                                                                                                                                                                                                     CMP
                                                                                                                                                                                                                                                                                                                                                                                                                                  (R1)+,(R2)+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GET SWITCH SETTING

KEEP ONLY SWITCH 7 AND 8

IS 7 SET AND 8 DOWN

BRANCH OUT IF YES

ARE ALL COMPARES DONE

BRANCH IF NOT COMPLETE
                                                                                                                                                                                                                                                                                                                                                                                                                                 25WR.-(SP)
#10600.(SP)
#5W07,(SP)+
                                                                                                                                                                              136464
177177
000200
                                                                                                                                                                                                                                                                                                                                                                    BLC BEC
                                                                                                                                                                                                                                                                                                                                                                                                                                  35
R3
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10848
10849
10850
10850
10853
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10858
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10858
                                                    042470
                                                    042472
042474
042474
042476
042500
042502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :POP STACK INTO RS
:POP STACK INTO R4
:POP STACK INTO R3
:POP STACK INTO R2
:POP STACK INTO R1
:RETURN TO MAIN PROGRAM
                                                                                                                 012605
012604
012603
012602
012601
                                                                                                                                                                                                                                                                                                                                                                     MOV
                                                                                                                                                                                                                                                                                                                                                                                                                                   (SP)+,R5
                                                                                                                                                                                                                                                                                                                                                                                                                                 (SP)+ R3
(SP)+ R2
(SP)+ R1
R0
                                                                                                                                                                                                                                                                                                                                                                      MOV
                                                                                                                                                                                                                                                                                                                                                                      MOV
                                                                                                                                                                                                                                                                                                                                                                      MOY
                                                                                                                                                                                                                                                                                                                                                                     MOV
```

MAINDEC-11-DZRJI-A. RPC4/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 229
DZRJIA.P11 JAM CURRENT CYLINDER ROUTINE

SEG 0289

10857 042506 000000

45: .WORD D :TEMP STORAGE

10958 10959 10960 10961									
10951 10952 10953					*HERE *ON HI *PROGR	IS A DET	FAILED EXPLAINATI N ERROR IF THE LO BACK - USUALLY B	ON OF HOW THE LOOP OF ON ERROR SWITCH	ON ERROR WORKS. IS SET, THE G OF THE TEST.
10863 10863 10864 10865 10865 10867 10867 10867 10867 10867 10867					*THE F *THE R *1. I *2. L *3. T	ROGRAM G ESTRICTI T MUST E OOP ON E HE ERROR E ERROR	GOES BACK TO CAN LONS TO THE POINT BE WITHIN THE TES EROR SWITCH MUST R MUST OCCUR WITH	WHERE THE PROGRAM ( T UNDER CONSIDERATION BE SET HIN THE TEST UNDER CONTINUE THE TEST UNDER CONTINUE THE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE TEST UNDER CONTINUE T	CAN GO ARE: - ONSIDERATION
10870 10871 10872 10873 10874 10875 10876 10877					*TEST	SWITCH I	S SET AND THIS O RAM WILL LOOP BA	PERATOR SELECTABLE SICK TO THE SELECTED FUNDER CONSIDERATION.	SCOPE LOOP IS USED
10877					*AFTER	LOOPING L OPERAT	FOR SOME TIME I	F THE LOOP SWITCH IS	S PUT DOWN THEN
10879 10880 10881	042510	900000			TESTAD:	:		:FIRST ADDRESS OF	
10880 10881 10883 10883 10884 10885 10886 10887 10889 10890 10891	042512 042516 042524 042530	005037 012737 104400 000421	177776 177777 042532	046760		CLR MOV TYPE BR .ASCIZ	PS #-1.3#PRITEM .65\$ 64\$	:MAKE PROCESSOR STA CLEAR PREVIOUS ITE ::TYPE ASCIZ STRING ::GET OVER THE ASCI OGRAM WAS IN TEST NO	TUS ZERO M NUMBER
10887 10888 10889 10890	042574 042574 042600 042602 042606	013746 104401 104400	004504		64 <b>5</b> :	MOV TYPOC TYPE	SETSTAM -(SP)	:GET READY TO TYPE :NUMBER ::TYPE ASCIZ STRING ::GET OVER THE ASCI OP BACK PC WAS	TEST
10891		000414			::67\$: 66\$:	BR .ASCIZ	(15)(12)/THE LO	OP BACK PC WAS /	Z
10894	042640	013746	001110			MOV TYPOC		GET READY TO TYPE	LOOP BACK PC
10895 10897 10898 10899	042640 042646 042646 042656	104400 104400 000430	042660		;;69\$: 68\$:	TYPE TYPE BR .ASCIZ	.\$CRLF .59\$ 58\$ <15><12>/SET SW	::TYPE ASCIZ STRING ::GET OVER THE ASCI	Z OR OR LOOP ON TEST/
10900 10901 10902 10903	042740 042740 042744	104400	042746		1:715: 705:	TYPE BR .ASCIZ	71\$ 70\$ (15)(12)/TYPE TI	::TYPE ASCIZ STRING ::GET OVER THE ASCI ME FIRST PC OF THE T	Z EST TO BE LOOPED ON
10089990123456789011 1008999001234567890011 1008999001234567890011	043026 043026	104400	043034		705: ;;735: 725:	TYPE BR .ASCIZ	73\$ 72\$ (15)(12)/ FOLLO	::TYPE ASCIZ STRING ::GET OVER THE ASCI WED BY A CARRIAGE RE	Z TURN /<15><12>
10909	043100 043102 043106	104411 062716 012637	001106 000002		725:	RDOCT ADD MOV	#2.(SP) (SP)+.@#\$LPADR	GET LPADR	

MAINDEC DZRJIA.	-11-DZRJ PII	I-A. RPO JAM CUR	4/5/5 FUNCT. CON RENT CYLINDER RO	IT. TST-P DUTINE	Т1	HO7 MACY11 27(655) 30-MAR-76 22:59 PAGE 231 SEG 02	91
10912	043112 043116	104400	043120	::75\$:	TYPE BR .ASCIZ	75\$ :TYPE ASCIZ STRING 74\$ :GET OVER THE ASCIZ (15)(12)/TYPE THE PC WHERE YOU WANT/	
10915	043156 043156	104400	043164	::75\$: 74\$:		TYPE ASCIZ STRING  SET OVER THE ASCIZ  THE PROGRAM TO LOOP BACK TO FOLLOWED BY A CARRIAGE RETURN 115	
	043264 043264 043266 043272 043276	104411 012637 013746 000002	001110 001105	1;77\$: 76\$:	RDOCT MOV MOV RTI	(SP)+ G#SLPERR :GET LPERR G#SLPADR(SP)	

---

```
10926
10927
10928
10929
                                                                                                                                   **THIS SAVES THE CONTENTS OF ALL HARDWARE REGISTERS
**IN MEMORY LOCATIONS TAGED FROM "WC" TO "EC2"
10931
10932
10933
                                                                                                                                          **THIS IS DONE SO THAT COMPARES ARE DONE WITH SAVEL LOCATIONS
**AND NOT THE REGISTERS THEMSELVES. THIS WILL MAKE
**ERROR PRINTCUTS FOR GOOD AND BAD DATA ALWAYS DIFFRENT
10934
10935
10936
10937
10938
10939
10941
10941
10943
10943
                                                                                                                  PUTREG:
                    043300
043300
                                                                                                                                                                 RO,-(SP) :: PUSH RO ON STACK
R1,-(SP) :: PUSH R1 ON STACK
R2.-(SP) :: PUSH R2 ON STACK
#RHWC.RO :STARTING ADDRESS OF REG
#WC.R1 :STARTING ADDRESS OF WERE SAVED
#RHCC-RHWC+2/2,R2 :NUMBER OF REG. INTO R2
Q(RO)+,(R1)+ ;SAVE HARDWARE REG.
                                            010046
                   043304
043306
043306
043316
043326
043326
043326
043330
043332
                                            010146
                                           010146
010246
012700
012701
012702
013021
005302
                                                                                                                                           VOM
                                                                   002272
002354
000022
                                                                                                                                           MOV
                                                                                                                                           MOV
                                                                                                                                           MOV
10945
10946
10947
                                                                                                                                           MOV
                                                                                                                  105:
                                                                                                                                                                  10$
(SP)+,R2
(SP)+,R1
(SP)+,R0
                                                                                                                                           DEC
BNE
MOV
MOV
                                            001375
                                                                                                                                                                                                                 POP STACK INTO RE POP STACK INTO RE POP STACK INTO RE
                                           015600
10948
10949
10950
                                                                                                                                           MOV
10951
10952
10953
10954
10955
10956
                    043336
                                                                                                                  *THIS IS A DATA COMMAND SETUP SUBROUTINE
*THE CALL IS
* JSR RD. D#RUN
                                                                                                                 ; *
                                                                                                                                                                 RO. 3#RUN
                                                                                                                                                                                                               CYLINDER
SECTOR
TRACK
WORD COUNT
BUS ADDRESS
BUS ADDRESS INHIBIT
FMT22=1 =16 BIT WORDS
ECI = ECC CORRECTION INHIBIT
HCI = HEADER COMPARE INHIBIT
COMMAND ADDRESS
 10958
10959
                                                                                                                  *.BYTE
10960
12961
23601
                                                                                                                  *
                                                                                                                   *
                                                                                                                                          B
 10963
                                                                                                                  ***
 10964
                                                                                                                                          FMT22!ECI!HCI
10966
                                                                                                                   *
                                                                                                                                                                                                               HCI = HEADER COMPARE INHIBIT
COMMAND ADDRESS
CYLINDER
DESIRED SECTOR/TRACK
WORD COUNT
BUS ADDRESS
GET UNIT NO
SET BUS ADDRESS INHIBIT
UNIT NO AND BAI TO RHCS2
FORMAT, ECC INHIBIT, HEADER
COMPARE, IF THERE
COMMAND IN RHCS1
RETURN TO MAIN PROGRAM
                                                                                                                                          COM
                                                                                                                                                                (RO)+, aRHCA
(RO)+, aRHDST
(RO)+, aRHWC
(RO)+, aRHBA
a*UNIT, -(SP)
(RO)+, (SP)
(SP)+, aRHCS2
(RO)+, aRHOF
10968
10969
10970
10971
10972
10973
                                          012077
012077
012077
012077
013746
052016
012677
                   043340
043344
043350
043354
                                                                  136746
136734
136716
136714
                                                                                                                                          MOV
                                                                                                                                          MOV
                                                                                                                                          MOV
                    043360
                                                                    004716
                                                                                                                                          MOV
                                                                                                                                          BIS
                    043366
043372
                                                                    136704
 10974
                                                                                                                                          MOV
10975
10976
10977
                                                                                                                                          VOM
                    043376
                                            013077
                                                                                                                                                                 a(RO)+, aRHCS1
                                                                   135676
                                                                                                                                                                  RO
                                                                                                                                                                                                                 RETURN TO MAIN PROGRAM
```

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 JAM CURRENT CYLINDER ROUTINE

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SEQ 0293

10990



DE110 1111 11	THE COMMENT OF LINE	NOO! I'IL		
10981 10982 10983		;*THIS IS	A SUBROUTINE TO COMPA	ARE TWO BLOCKS IN MEMORY
10985 10985 10987 10988 10989		*R1 HAS GO *R2 HAS TO *R5 HAS AC *R3 HAS NO *R4 HAS OF	OOD DATA BUFFER ADDRE EST DATA BUFFER ADDRE DDRESS OF RETURN ON S UMBER OF WORDS TO BE NE MORE THAN NUMBER (	ESS ESS ERROR COMPARED OF WORDS TO BE COMPARED
10991 10992 10993 10994 10995 10995 10997 10998		*CALL IS:  * JSF  * G  * T  * N  * RE  * RG	R RO, 3#COMPAR	ADDRESS OF GOOD DATA ADDRESS OF TEST DATA NUMBER OF WORDS TO BE COMPARED RETURN ON ERROR RETURN ON NO ERROR
10981 10983 10983 10985 10985 10985 10987 10989 10999 10991 10999 10995 10995 10995 10995 10995 10995 11002 11003 11004 11005 11005 11007 11008 11007 11008 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009 11009	010146 010246 010346 010546 012001 012002 012003 012005 011000 010304 005204 010437 022122 001417	COMPAR:  MOV  MOV  MOV  MOV  MOV  MOV  MOV  MO	R2,-(SP) R3,-(SP) R4,-(SP) R5,-(SP) (R0)+,R1 (R0)+,R2 (R0)+,R3 (R0)+,R5 (R0)+,R5 (R0),R0 R3,R4 R4 R4, Q*ERWORD	PUSH R1 ON STACK PUSH R2 ON STACK PUSH R3 ON STACK PUSH R4 ON STACK PUSH R5 ON STACK ADDRESS OF GOOD DATA BUFFER ADDRESS OF TEST DATA BUFFER NO OF WORDS TO BE COMPARED RETURN ON ERROR RETURN ON NO ERROR NO OF WORDS TO BE COMPARED FOR ERROR WORD NO COMPARE GOOD WITH TEST DATA
11017	001417 014137 001124 014237 001126 160337 004602 004715 022122 017746 135450 042716 177177 022726 000200 001402 005303 001353	MOV MOV SUB JSR CMP MOV BIO CMP BEG BEG BNB	-(R1), a*\$GDDAT -(R2), a*\$BDDAT R3, a*ERWORD PC, aR5 (R1)+, (R2)+ aSWR, -(SP) *†C600, (SP) *SWO7, (SP)+ 3\$	; BRANCH IF GOOD
11030 043506 11031 043510 11032 043512 11033 043514 11034 043516	012605 012604 012602 012601	3\$: MOV MOV MOV MOV	(SP)+,R4 (SP)+,R3 (SP)+,R2	POP STACK INTO RS POP STACK INTO R4 POP STACK INTO R3 POP STACK INTO R2 POP STACK INTO R1

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.PII JAM CURRENT CYLINDER ROUTINE

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SEQ 0295

11035 043520 000200

RIS

RETURN TO MAIN PROGRAM

DZRJIA.PII		JAM CUR	RENT CYLINDER R	OUTINE			
	1036 1037 1038 1039 1040				;* ;*	THIS RO	OUTINE WILL ALLOW THE CHANGE OF THE BASE S FROM 176700 TO ANY TYPED VALUE
	1041	043522 043522 043526	104400	043530	BASECH: ::65%: 64%:	TYPE BR .ASCIZ	.65\$ :: TYPE ASCIZ STRING 64\$ :: GET OVER THE ASCIZ <15><12>/PRESENT BASE ADDRESS OF REGISTERS IS /
	1046 1047 1048 1049	043602 043602 043606 043610 043614	013746 104401 104400 000425	002300 043616		MOV TYPOC TYPE BR .ASCIZ	##RHCS1,-(SP) ; GET READY TO TYPE OLD BASE  .67\$ ;; TYPE ASCIZ STRING .66\$ ;; GET OVER THE ASCIZ .15>(12>/TYPE NEW BASE ADDRESS FOLLOWED BY 'CR' /
	1051 1052 1053 1054 1055	043670 043670 043674 043676 043702	004737 104411 012700 012701	045352 002270 000024 177700	;;67\$: 66\$:	JSR_	PC, Q#STKINT ; INITIALIZE THE TTY KEYBOARD
	1056 1057 1058 1059 1060	043706 043712 043714 043716 043720 043724	012700 012701 042710 051620 005301 001373 104400 000417	043726	15:	MOV BIC BIS DEC BNE TYPE BR	#RHDB.RO GET STARTING ADDRESS OF REGISTERS #20.R1 NUMBER OF REGISTERS #1C77.(RO) CLEAR OLD BASE (SP),(RO)+ SET NEW BASE R1 COUNT IS BRANCH IF 20 NOT DONE .69\$ :TYPE ASCIZ STRING 68\$ (15><12>/PRESENT VECTOR ADDRESS IS /
	1043 1043 1043 1044 1044 1047 1051 1051 1055 1055 1055 1055 1065 1065	043764 043764 043770 043772 043776	013746 104401 104400 000437	002266	::69\$:	MOV TYPOC TYPE BR	a*RPVEC,-(SP) ;GET READY TO TYPE OLD VECTOR ADDRESS  71\$ ;;TYPE ASCIZ STRING 20\$ ::GET OVER THE ASCIZ
	1068 1069 1070 1071 1072 1073	044076 044076 044100 044104 044110	104411 012637 104400 000421	002266	::71\$:. 70\$:	RDOCT MOV TYPE BR ASCIZ	(SP)+, a*RPVEC ;SETUP VECTOR ADDRESS OR RETYPE OLD ONE FOLLOWED BY "CR" /  (SP)+, a*RPVEC ;SETUP VECTOR ADDRESS ,73\$ ;TYPE ASCIZ STRING ,72\$ ;GET OVER THE ASCIZ (15)<12) / RESTART PROGRAM FROM 200 OR 210/
	1075 1076 1077 1078	044154 044160	104400	044162	::73\$: 72\$: ::75\$: 74\$:	TYPE BR .ASCIZ	.75\$ :: TYPE ASCIZ STRING 74\$ :: GET OVER THE ASCIZ (15><12>/NEW BASE WILL REMAIN - /
	1080 1081 1082 1083	044216 044216 044222 044224 044230	013746 104401 104400 000416	002300		MOV TYPOC TYPE BR .ASCIZ	2#RHCS1,-(SP)  .77\$ ::TYPE ASCIZ STRING  76\$ ::GET OVER THE ASCIZ  (15><12>/NEW VECTOR WILL REMAIN - /
	1073 1074 1075 1075 1076 1077 1078 1080 1081 1082 1083 1084 1085 1086 1087	044266 044266 044272 044274 044300	013746 104401 104400 000402	002266	765:	MOV TYPOC TYPE BR	a#RPVEC,-(SP)  .79\$ ::TYPE ASCIZ STRING .78\$ ::GET OVER THE ASCIZ

SEQ 0297

**B08** MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT, CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 238 DZRJIA.P11 JAM CURRENT CYLINDER ROUTINE SEG 0298 RPVECT: TYPE 1555 : TYPE ASCIZ STRING :: GET OVER THE ASCIZ BR ::65\$: .ASCIZ 21440 64440 64440 64440 804440 TYPOC :TYPE FROM PC :RESTORE TRAP RPO4 VECTOR :CHANGE TO CONTINUE #RPVECT. DRPVEC 044352 135654 MOV 

							D08		
MAINDE DZRJIA	C-11-DZRJ .PII	I-A RPO	HANDLER R	NCT. CON	T. TST-P	T 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 240	
1115 1117 1117 1117 1117 1117 1117	044626 044636 044636 044636	105237 011637 011637 005037 112737 013777 013716 000002	001102 001106 001110 001100 001102 001106		\$SVLAD:	INCB MOV CLR MOVB MOV	STSTNM (SP), SLPADR (SP), SLPERR SESCAPE	::COUNT TEST NUMBERS ::SAVE SCOPE LOOP ADDRESS ::SAVE ERROR LOOP ADDRESS ::CLEAR THE ESCAPE FROM ERROR ADDRESS	
1117	044540 024440 024440 544440 544440	112737 013777 013716	0000001 001102 001106	001115	SOVER:	MOVB MOV MOV RTI	#1. \$ERMAX \$TSTNM. DDISPLAY \$LPADR. (SP)	::ONLY ALLOW ONE(I) ERROR ON NEXT TEST	
1117	044654	000004			EMXCNT:	d		MAX. NUMBER OF ITERATIONS	

SE0 0300

MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 MACY11 27(655) 30-MAR-76 22:59 PAGE 241 DZRJIA.P11 CONVERT BINARY TO DECIMAL AND TYPE ROUTINE

11177					. SBTTL	CONVERT	BINARY TO DECIM	MAL AND TYPE ROUTINE
11179 11179 11190 11191 11192 11193 11194					***** *THIS *SIGNE *NUMBE *BEFOR *REPLA	ROUTINE D DECIMA R IS POS E THE FI	IS USED TO CHANG AL (ASCII) NUMBER SITIVE OR NEGATIVE RST DIGIT OF THE SPACES.	GE A 16-BIT BINARY NUMBER TO A 5-DIGIT R AND TYPE IT. DEPENDING ON WHETHER THE VE A SPACE OR A MINUS SIGN WILL BE TYPED E NUMBER. LEADING ZEROS WILL ALWAYS BE
11195					*	MOV TYPDS	NUM, -(SP)	:: PUT THE BINARY NUMBER ON THE STACK :: GO TO THE ROUTINE
	044467040 044467040 044467040 044467040 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477124 044477	001003446 001003446 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003466 001003	020200 000020 000055 045102 000040 045072	10000	\$TYPDS: 1\$: 2\$: 3\$: 4\$:	MONOON LOUIS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS BURNESS B	RO(SP) R1(SP) R2(SP) R2(SP) R2(SP) R5(SP) R5(SP) R5(SP) R5(SP) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5(R0) R5.	PUSH RO ON STACK PUSH R1 ON STACK PUSH R2 ON STACK PUSH R3 ON STACK PUSH R5 ON STACK PUSH R5 ON STACK SET BLANK SWITCH AND SIGN GET THE INPUT NUMBER BR IF INPUT IS POS. MAKE THE BINARY NUMBER POS. MAKE THE ASCII NUMBER NEG. ZERO THE CONSTANTS INDEX SETUP THE OUTPUT POINTER SET THE FIRST CHARACTER TO A BLANK CLEAR THE BCD NUMBER GET THE CONSTANT FORM THIS BCD DIGIT BR IF DONE INCREASE THE BCD DIGIT BY 1  ADD BACK THE CONSTANT CHECK IF BCD DIGIT=0 FALL THROUGH IF 0 STILL DOING LEADING 0'S' BR IF YES MSD? BR IF NO YESSET THE SIGN MAKE THE BCD DIGIT ASCII MAKE IT A SPACE IF NOT ALREADY A DIGIT PUT THIS CHARACTER IN THE OUTPUT BUFFER JUST INCREMENTING CHECK THE TABLE INDEX GO DO THE NEXT DIGIT GO TO EXIT GOTO EXIT GOTO EXIT GOTO EXIT GOTO HE SIGN FOR TYPING SET THE TERMINATOR POP. STACK INTO RS
11215	044776 044776 045002 04500£	116663 052702 052702 110223	000001 000040 000040	177777	6\$: 7\$:	BCC MOVB BIS MOVB	6\$ 1(SP),-1(R3) *'0.R2 *' R2 R2,(R3)+	YESSET THE SIGN MAKE THE BCD DIGIT ASCII MAKE IT A SPACE IF NOT ALREADY A DIGIT PUT THIS CHARACTER IN THE OUTPUT SUFFER
11220 11221 11222 11223 11224 11225	044760 044764 044766 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 044776 04	005720 020027 002746 003002 010502 000764	000010			TST CMP BLT BGT MOV BR TSTB	1(SP) -1(R3) *'0.R2 *'0.R2 *'.R2 R2.(R3)+ (R0)+ R0,*10 2\$ R5.R2 (SP)+	JUST INCREMENTING CHECK THE TABLE INDEX GO DO THE NEXT DIGIT GO TO EXIT GET THE LSD GO CHANGE TO ASCII
11226	045036	105726	177777	177776	<b>85</b> :	TSTB BPL MOVB	(SP)+ 9\$ -1(SP),-2(R3) (R3)	:: WAS THE LSD THE FIRST NON-ZERO? :: BR IF NO :: YESSET THE SIGN FOR TYPING
11229	045040	105013	111111	1////3	9\$:	CLRB	(R3) (SP)+,R5	SET THE TERMINATOR

MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. DZRJIA.P11 TYPE ROUTINE	CONT. TST-PT 1	HO8	30-MAR-76 22:59 PAGE 244
11298 045254 001372 11299 045256 005726 11300 045260 000724 11301 045262 105777 133662 11302 045266 100375 11303 045270 116677 000002 1336 11304 045276 122766 000015 0000 11305 045304 001003 11305 045306 105037 045326 11307 045312 000406 11309 045322 001402 11310 045324 105227 11311 045326 000000 11312 045330 000207	CMPB BNE CLRB BR	STYPEC 2(SP), STPB #CR, 2(SP) 1\$ \$CHARCNT \$TYPEX #LF, 2(SP) \$TYPEX (PC)+	TAB STOP POP SPACE OFF STACK GET NEXT CHARACTER WAIT UNTIL PRINTER IS READY  LOAD CHAR TO BE TYPED INTO DATA REG. IS CHARACTER A CARRIAGE RETURN? BRANCH IF NO YESCLEAR CHARACTER COUNT EXIT IS CHARACTER A LINE FEED? BRANCH IF YES COUNT THE CHARACTER CHARACTER COUNT STORAGE

SEG 0304

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```
.SBTTL TIY INPUT ROUTINE
ENABL LSB

STKCNT: WORD

STKGIN: WORD

STKGOUT: WORD

STKGSRT: BLKB

STKGEND=.
                                       000000
000000
000000
000011
045351
045352
                                                                                                                                                                                           :: NUMBER OF ITEMS IN GUEUE
:: INPUT POINTER
:: OUTPUT POINTER
                  045332
045334
045336
045340
                                                                                                                                                                                             ::TTY KEYBOARD QUEUE
                                                                                                        .EVEN
                                                                                                        :*TK INITIALIZE ROUTINE
                                                                                                        *THIS ROUTINE WILL INITIALIZE THE TTY KEYBOARD INPUT QUEUE
*SETUP THE INTERRUPT VECTOR AND TURN ON THE KEYBOARD INTERRUPT
                                                                                                        *CALL:
                                                                                                                             JSR
RETURN
                                                                                                                                                  PC. STKINT
                                                                                                        : *
                                                                                                                                                STKCNT :: CLEAR COUNT OF ITEMS IN QUEUE

*STKQSRT.STKQIN :: MOVE THE STARTING ADDRESS OF THE

STKQIN,STKQOUT :: QUEUE INTO THE INPUT & OUTPUT POINTERS.

*STKSRV.3*TKVEC :: INITIALIZE THE KEYBOARD VECTOR

*200.3*TKVEC+2 :: "BR" LEVEL 4
                  045352
045354
045364
045372
045400
045406
045412
045420
                                       005037
012737
013737
012737
012737
005777
012777
000207
                                                             045332
045340
045334
045422
000200
133534
000100
                                                                                                       STKINT: CLR
                                                                                                                             VOM
                                                                                                                             MOV
                                                                                   000062
                                                                                                                             MOV
                                                                                                                                                                                            CLEAR DONE FLAG
ENABLE TTY KEYBOARD INTERRUPT
RETURN TO CALLER
                                                                                                                             TST
                                                                                                                                                  2STKB
                                                                                                                                                 #100, 25TKS
                                                                                   133524
                                                                                                                            VOM
                                                                                                       **TK SERVICE ROUTINE

**THIS ROUTINE WILL SERVICE THE TTY KEYBOARD INTERRUPT

**EY READING THE CHARACTER FROM THE INPUT BUFFER AND PUTTING

**IT IN THE QUEUE.

**IF THE CHARACTER IS A "CONTROL-C" (†C) $TKINT IS CALLED AND

**UPON RETURN EXIT IS MADE TO THE "CONTROL-C" RESTART ADDRESS (OPERSEL)
                                                                                                                                                                                          PICKUP THE CHARACTER
STRIP THE JUNK
IS IT A CONTROL C?
BRANCH IF NO
TYPE A CONTROL-C (1C)
INIT THE KEYBOARD
CLEAN UP STACK
CONTROL C RESTART
IS IT A CONTROL G?
BRANCH IF NO
IS SOFT-SWR SELECTED?
GO TO SWR CHANGE
                  045426
045436
045436
045440
045450
045450
045456
045464
045464
                                       117746
042716
021627
001007
                                                             133520
177600
000003
                                                                                                                                                 astkB.-(SP)
#fC177.(SP)
(SP),#3
                                                                                                                            BIC
CMP
BNE
TYPE
                                                                                                                                                  15
                                                                                                                                                 SCHTLC
PC.STKINT
(SP)+
                                        104400
                                                             046411
                                       004737
005726
000137
021627
001004
022737
                                                                                                                             JSR
TST
                                                                                                                            JMP
CMP
BNE
CMP
                                                                                                                                                 OPERSEL
(SP), #7
                                                             042512
000007
                                                                                                       15:
                                                                                                                                                 #SWREG, SWR
                                                             000176
                                                                                  001140
11350
11361
11362
11363
11364
11365
11365
11367
                                        001500
                  045474
045474
045502
045504
045510
                                                                                                                                                                                          ::IS THE QUEUE FULL?
::BRANCH IF NO
:RING THE TTY BELL
::CLEAN CHARACTER OFF OF STACK
                                        022737
                                                                                                                                                  #9.,STKCNT
                                                             000011
                                                                                  045332
                                                                                                                             BNE
                                                                                                                                                  3$
                                                                                                                                                 SBELL
(SP)+
                                       104400
005726
000451
                                                             001216
```

SEQ 0306

MOV

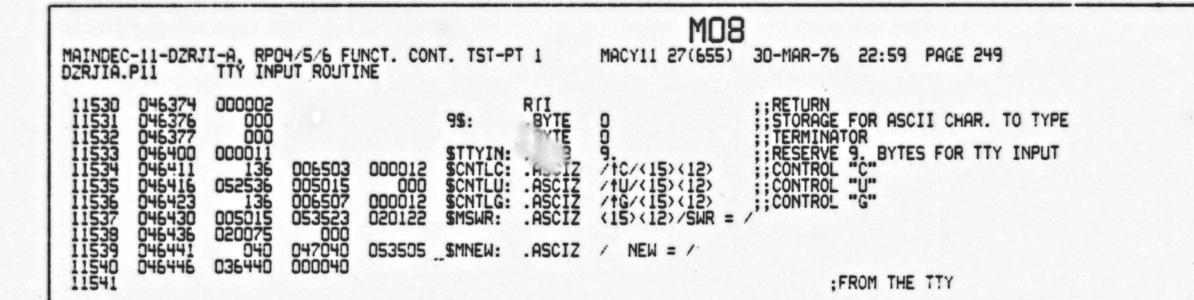
013746

SWREG. - (SP)

MOO

11422 11423 11424 11425 11425 11426	045740 045742 045746 045750 045752 045756	104401 104400 005046 005046 105777 100375	133166		19\$: 7\$:	TYPOC TYPE CLR CLR TSTB BPL	.SMNEW -(SP) -(SP) astks 7\$	; GO TYPEOCTAL ASCII(ALL DIGITS) ; PROMPT FOR NEW SWR ; CLEAR COUNTER ; THE NEW SWR ; CHAR THERE? ; IF NOT TRY AGAIN
11429	045760 045764	117746 042716	133162 177600			MOVB BIC	astkB,-(SP) #fC177,(SP)	;;PICK UP CHAR ;;MAKE IT 7-BIT ASCII
2345678901234567890123456789012345678901234 1144222333333567890123454444555555890123456678901234	045770 045774 045776 046002 046006 046014 046016 046024	021627 001015 104400 062706 123727 001003 012777 000137	000003 046411 000006 001135 000100 042512	000001	<b>8</b> \$:	CMP BNE TYPE ADD CMPB BNE MOY JMP	(SP),#3 9\$ ,\$CNTLC #6,SP \$INTAG,#1 8\$ #100,3\$TKS OPERSEL	: IS IT A CONTROL-C? : BRANCH IF NOT : YES, ECHO CONTROL-C (†C) : CLEAN UP STACK : REENABLE TTY KEYBOARD INTERRUPTS? : BRANCH IF NO : ALLOW TTY KEYBOARD INTERRUPTS : CONTROL-C RESTART
11441 11442 11443 11444 11445 11446 11447	046030 046036 046042 046046	021627 001005 104400 062706 000737	000025 046416 000006		9\$: 20\$:	CMP BNE TYPE ADD BR	(SP), #25 10\$ ,\$CNTLU #6,SP 19\$	:; IS IT A CONTROL-U? :: BRANCH IF NOT :: YES. ECHO CONTROL-U (†U) :: IGNORE PREVIOUS INPUT :: LET'S TRY IT AGAIN
11448 11449 11450 11451 11452	046050 046054 046056 046062	021627 001022 005766 001403	000015 000004		10\$:	CMP BNE TST BEQ MOV	(SP),#15 16\$ 4(SP)	;; IS IT A (CR)? ;; BRANCH IF NO ;; YES, IS IT THE FIRST CHAR? ;; BRANCH IF YES
11453 11454 11455 11456	046062 046064 046072 046076 046102	001403 015677 052706 104400 123727 001003	000002 000006 001223 001135	133046	11\$: 14\$:	MOV ADD TYPE CMPB ENE	2(SP), ashr #6.sp *CRLF \$INTAG, #1	SAVE NEW SWR CLEAR UP STACK ECHO (CR) AND (LF) RE-ENABLE TTY KBD INTERRUPTS?
11458 11459 11460 11461	046125 046125 046125	012777 000002 004737 021627	000100 045262 000060	133024	15\$: 16\$:	MOV RTI JSR CMP	#100,25TKS PC,5TYPEC (SP),#60	RE-ENABLE TTY KBD INTERRUPTS RETURN ECHO CHAR CHAR ( 0?
11464 11464 11465 11466	045134 046140 046142 046146	021627 003015 042726 005766	000067 000060 000002			BLT CMP BGT BIC TST	(SP), #67 18\$ #50, (SP)+ 2(SP)	CHAR > 7? BRANCH IF YES STRIP-OFF ASCII IS THIS THE FIRST CHAR
11468 11469 11470 11471	046100 0461100 0461100 046120 046120 046120 046130 046130 046150 046150 046150 046150 046150 046150 046150 046150 046150	012777 000002 004737 021627 002420 021627 003015 042726 005766 001403 006316 006316 006316 005266 056616 00667	000002		17\$:	BEQ ASL ASL INC	(SP) (SP) (SP) 2(SP)	HANNCH IF YES NO, SHIFT PRESENT CHAR OVER TO MAKE ROOM FOR NEW ONE. KEEP COUNT OF CHAR
11472 11473 11474 11475	046166 046172 046174 046200	056616 000667 104400 000720	001222		18\$:	BIS BR TYPE BR	-2(SP),(SP) 7\$ .\$QUES 20\$	IS IT A (CR)?  BRANCH IF NO YES, IS IT THE FIRST CHAR?  BRANCH IF YES SAVE NEW SWR CLEAR UP STACK ECHO (CR) AND (LF) RE-ENABLE TTY KBD INTERRUPTS?  BRANCH IF NOT RE-ENABLE TTY KBD INTERRUPTS RETURN ECHO CHAR CHAR ( D? BRANCH IF YES CHAR > 7? BRANCH IF YES STRIP-OFF ASCII IS THIS THE FIRST CHAR BRANCH IF YES NO, SHIFT PRESENT CHAR OVER TO MAKE ROOM FOR NEW ONE. KEEP COUNT OF CHAR SET IN NEW CHAR GET THE NEXT ONE TYPE ?(CR)(LF) SIMULATE CONTROL-U

11476					.DSABL	LSB			
11478 11479 11480 11481					*THIS	******** ROUTINE	WILL INPUT A SIN	**************************************	
11482 11483 11484 11485					* *		HERE	GET A CHARACTER FROM THE QUEUE CHARACTER IS ON THE STACK HITH PARITY BIT STRIPPED OFF	
11487 11488 11489 11490 11491 11492	202340 046212 046216 046220 046224	011646 016666 005066 005046 012746 000002	000004 000004 046226	000002	SRDCHR:	MOV MOV CLR CLR MOV RTI	(SP),-(SP) 4(SP),2(SP) 4(SP) -(SP) *64\$,-(SP)	PUSH DOWN THE PC AND THE PS GET READY FOR A CHARACTER PUT NEW PS ON STACK PUT NEW PC ON STACK POP NEW PC AND PS	
11482 11482 11483 11485 11485 11486 11486 11489 11499 11499 11499 11499 11499 11500 11500 11500 11500 11500 11500 11500	046202 046216 046216 046224 046226 046232 046232 046232 046232 046232 046232	005737 001775 005337 117766 005237 023727 001003 012737 000002	045332 045332 177072 045336 045336	000004 045351 045336	*CALL:	TST BEQ DEC MOVB INC CMP BNE MOV RTI *********	STKCNT 1\$ STKCNT 3STKQOUT, 4(SP) STKQOUT STKQOUT, #STKQENI 2\$ #STKQSRT, STKQOUT ************************************	;;WAIT ON A CHARACTER ;;DECREMENT THE COUNTER ;;GET ONE CHARACTER ;;UPDATE THE POINTER D;:DID IT GO OFF OF THE END? ;;BRANCH IF NO T;:RESET THE POINTER ;;RETURN	ACK
11508 11509 11510 11511 11512 11513 11514 11515 11516 11519 11521 11521 11522 11523 11523 11523 11523 11523 11523 11523 11523	046272 046274 046300 046304 046310 046312 046316 046324 046324 046326 046332 046332 046336 046350 046350 046356	010346 012703 022703 101405 104407 112613 122713 001003 104400 000763 111337 104400 122723 001356 105063 104400 012603 011646 016666 012766	046400 046411 000177 001222 046376 046376 000015 177777 001224 000004 046400	000002 9000004	;* \$RDLIN: 1\$: 2\$: 10\$: 4\$: 3\$:	MOV MOV CMP BLOSHR MOVB CMPB ENE BNE BNE BNE BNE BNE BNE BNE BNE BN	R3(SP) #\$TTYIN.R3 #\$TTYIN+9.R3 #\$77,(R3) \$177,(R3) 3\$ \$GUES (R3).9\$ (R3).9\$ (R3).9\$ (R3).9\$ (R3).9\$ (R3).9\$ (SP)(SP) 4(SP).2(SP) #\$TTYIN,4(SP)	; TERMINATOR WILL BE A BYTE OF ALL O'S  ; SAVE R3  GET ADDRESS  BUFFER FULL?  BR IF YES  GO READ ONE CHARACTER FROM THE TTY  GET CHARACTER  IS IT A RUBOUT  SKIP IF NOT  TYPE A '?'  CLEAR THE BUFFER AND LOOP  ECHO THE CHARACTER  CHECK FOR RETURN  LOOP IF NOT RETURN  CLEAR RETURN (THE 15)  TYPE A LINE FEED  RESTORE R3  ADJUST THE STACK AND PUT ADDRESS OF THE  FIRST ASCII CHARACTER ON IT	



·SEQ 0309

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1

DZRJIA.FI! READ AN OCTAL NUMBER FROM THE TTY

```
11542
11543
11544
                                                                                        .SBTTL READ AN OCTAL NUMBER FROM THE TTY
                                                                                       *THIS ROUTINE WILL READ AN OCTAL (ASCII) NUMBER FROM THE TTY AND *CHANGE IT TO BINARY.

*THE INPUT CHARACTERS WILL BE CHECKED TO INSURED THEY ARE LEGAL *OCTAL DIGITS. IF AN ILLEGAL CHARACTER IS READ A "?" WILL BE TYPED *FOLLOWED BY A CARRIAGE RETURN-LINE FEED. THE COMPLETE NUMBER MUST *THEN BE RETYPED. THE INPUT IS TERMINATED BY TYPING A CARRIAGE RETURN.
                                                                                       *CALL:
                                                                                                                                                              ; READ AN OCTAL NUMBER
; LOW ORDER BITS ARE ON TOP OF THE STACK
; HIGH ORDER BITS ARE IN SHIOCT
                                                                                                         RDOCT
                                                                                                        RETURN HERE
                                                                                                                                                             ; PROVIDE SPACE FOR THE
; INPUT NUMBER
; PUSH RO ON STACK
; PUSH RI ON STACK
; PUSH R2 ON STACK
; READ AN ASCIZ LINE
; CET ODDRESS OF 1ST CHO
                                                                                                                          (SP),-(SP)
4(SP),2(SP)
RO,-(SP)
R1,-(SP)
R2,-(SP)
 11556
11557
11558
11559
               046454
046454
046464
046464
046466
                                                                                       SRDOCT:
                                                                                                        MOV
                                 016666
                                                                                                         MOV
                                                   000004
                                                                    000002
                                 010146
                                                                                                         MOV
  1560
                                                                                                         MOV
11561
11562
11563
11564
11565
               046470
                                  104410
                                                                                                         RDLIN
                                                                                       15:
                                                                                                                          (SP)+,RO
RO,5$
R1
R2
               046472
046474
046500
046502
                                                                                                                                                              GET ADDRESS OF 1ST CHARACTER AND SAVE IT CLEAR DATA WORD
                                 015600
                                                                                                         MOV
                                 010037
                                                   046600
                                                                                                         MOV
                                                                                                        CLR
                                 $2002
$40211
$40211
                                                                                                                                                             : PICKUP THIS CHARACTER
: IF ZERO GET OUT
: MAKE SURE THIS CHARACTER
; IS AN OCTAL DIGIT
11566
11567
11568
               046504
                                                                                                        MOVB
BEQ
                                                                                                                           (RC)+,-(SP)
               046519
046514
046516
046522
046524
                                 122716
                                                                                                                          #'0.(SP)
                                                   000060
                                                                                                         CMPB
11569
11570
11571
11572
                                                                                                                        4$
#'7,(SP)
                                 003026
122716
002423
006301
                                                   000067
                                                                                                        BLT
ASL
ROL
ASL
ROL
BIC
                                                                                                                           45
                                                                                                                                                              ;;*2
               046526
046530
046532
046534
046536
                                 006301
 11573
 11574
                                                                                                                                                             ;; *4
11575
11576
11577
11578
                                                                                                                          R2
R1
                                 006105
                                 006301
                                                                                                                                                              ;;*8
                                 006102
042716
                                                                                                                         #1C7.(SP)
(SP)+,R1
                                                                                                                                                              STRIP THE ASCII JUNK
                                                   177770
               046544
046546
046550
046552
046556
                                 062601
000756
005726
010166
010237
012602
 11579
                                                                                                                                                             LOOP
CLEAN TERMINATOR FROM STACK
SAVE THE RESULT
 11580
11581
11582
11583
                                                                                                        BR
TST
MOV
MOV
                                                                                                                          25
(SP)+
                                                                                       35:
                                                                                                                         R1,12(SP)
R2,$HIOCT
(SP)+,R2
(SP)+,R1
(SP)+,R0
                                                   000012
                                                   046610
                                                                                                                                                             POP STACK INTO RE
  1584
               046562
   1585
                                 012601
                                                                                                         MOV
 11586
               046566
                                 015600
                                                                                                        MOV
11587
11588
11589
11590
11591
11592
11593
                                                                                                                                                             RETURN
               046570
046572
046574
                                 200000
                                                                                                        RTI
                                                                                                                                                             CLEAN PARTIAL FROM STACK
SET A TERMINATOR
TYPE UP THRU THE BAD CHAR.
                                                                                                                          (SP)+
(RO)
                                 005726
105010
                                                                                      45:
                                                                                                         TST
                                                                                                        CLRB
               046576
046600
046602
046606
                                 104400
                                                                                                        TYPE
                                                                                                                          0
                                                                                                                                                             TRY AGAIN
                                                                                                         TYPE
                                                                                                                           SQUES
                                  104400
                                                   001222
                                 000730
                                                                                       SHIOCT: . WORD
                                                                                                                          0
                                                                                                                                                              ::HIGH ORDER BITS GO HERE
```

000002

.SETTL ERROR HANDLER ROUTINE *THIS ROUTINE WILL INCREMENT THE ERROR FLAG AND THE ERROR COUNT.
*SAVE THE ERROR ITEM NUMBER AND THE ADDRESS OF THE ERROR CALL
*AND GO TO SERRIYP ON ERROR
*THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:
*SWIS=1 HALT ON ERROR
*SWIS=1 INHIBIT ERROR TYPEOUTS BELL ON ERROR : *SW10=1 : *SW09=1 : *CALL ERROR :: ERROR=EMT AND N=ERROR ITEM NUMBER CKSWR :: TEST FOR CHANGE IN SOFT-SWR MOV #-1.3#ERFLGS : SET ERROR FLAG

046613 REGSAV: 046614 012737. 177777 046626 046626 046626 046636 046636 046636 046636 046636 046636 046636 046636 046636 046636 046736 046736 046736 046736 046736 004734 REGSA1: SERFLG
7\$
DON'T LET THE FLAG GO TO ZERO
STSTNM, 2DISPLAY
BIT10, 2SWR
BELL
SERTL
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SERT 105237 001775 013777 032777 001103 BEG MOV BIT BEG TYPE 002000 001402 104400 005237 011637 162737 117737 911100 001110 001110 001110 001216 001216 INC MOV SUB MOVB BIT (SP) SERRPC #2. SERRPC @SERRPC. SITEMB #BIT13, @SWR 001116 ::STRIP AND SAVE THE ERROR ITEM CODE ::SKIP TYPEOUT IF SET ::SKIP TYPEOUTS ::GO TO USER ERROR ROUTINE 001004 004737 104400 PC SERRTYP BNE JSR TYPE

046762 TST BPL HALT 132216

HALT ON ERROR
SKIP IF CONTINUE
HALT ON ERROR!
TEST FOR CHANGE IN SOFT-SWR
LOOP ON ERROR SWITCH SET?
BR IF NO
FUDGE RETURN FOR LOOPING
CHECK FOR AN ESCAPE ADDRESS
BR IF NONE
FUDGE RETURN ADDRESS FOR ESCAPE 005777 100002 000000 104406 032777 001402 013716 005737 001402 013716 CKSUR BIT BEG MOV TST #BITO9, DSWR 001000 24 SEPERR (SP) 001110 BEQ SESCAPE. (SP) 001214

:: RETURN

MAINDEC-11-DZRJI-A. RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 ERROR HANDLER ROUTINE

```
11543
                                                                                        : *: ************************
                                                                                        .SBTTL ERROR MESSAGE TYPEOUT ROUTINE
                                                                                      *THIS ROUTINE USES THE "ITEM CONTROL BYTE" ($ITEMB) TO DETERMINE WHICH
*ERROR IS TO BE REPORTED. IT THEN OBTAINS, FROM THE "ERROR TABLE" ($ERRTB).
*AND REPORTS THE APPROPRIATE INFORMATION CONCERNING THE ERROR.
**IT IS A COPY OF THE SERRTYP SUBROUTINE FROM SYSMAC.
*WITH ONLY MINOR CHANGES
**FIRST IF SWITCH 6 IS SET AND SWITCH 8 RESET THEN
**ALL REGISTER CONTENTS WILL BE TYPED BEFOR REPORTING THE ERROR
**SECOND IF THE CURRENT ERROR HAS THE SAME ITEM NUMBER
**AS THE PREVIOUS ERROR THEN ONLY THE DATA WILL BE TYPED
**AND NOT THE ERROR MESSAGE AND HEADER.
000000
                                                                                       PRITEM: 0
                                                                                                                                                               :PREVIOUS ITEM NO. LOCATION
                046760
                                                                                                                                                              GET SWITCH SETTING

KEEP ONLY SWITCH 8 AND 6

IS 6 SET AND 8 RESET

IF NOT BRANCH

BRANCH IF SW. 6 IS SET AND 8 RESET

JUMP IF SW 8 IS SET

OR IF SW 8 IS RESET AND SW 6 IS RESET
               046762
046766
046772
046776
047000
047002
                                 017746
042716
022726
001001
000402
000137
                                                                                                                           JSWR,-(SP)
#10500,(SP)
#5W06,(SP)+
                                                   132152
177277
000100
                                                                                       SERRTYP: MOV
BIC
CMP
                                                                                                         BNE
               047005
                                                                                       25:
                                                                                                                           645
                                                                                                                                                              :: TYPE ASCIZ STRING
:: GET OVER THE ASCIZ
                                                                                                         TYPE
                                                                                                         BR
                                                                                                                           (15) (12) /RHWC = /
               047030
047030
047034
                                 013746
                                                                                                                           2#WC. - (SP)
                                                                                                                                                               :GET READY TO TYPE RHWC CONTENTS
                                                                                                         TYPOC
                                                                                                                          67$
66$
(15) (12) /RHBA =
                                                                                                                                                              TYPE ASCIZ STRING GET OVER THE ASCIZ
                                                                                                         TYPE
                                 104400
                                                                                                         BR
               047050
047050
047054
                                 013746
                                                                                                         MOV
                                                                                                                           2#8A.-(SP)
                                                                                                                                                              :GET READY TO TYPE RHEA CONTENTS
                                                                                                         TYPOC
                                                                                                                                                             :: TYPE ASCIZ STRING
:: GET OVER THE ASCIZ
                                 104400
                                                                                                         TYPE
                                                                                       ;:695:
                                                                                                         . ASCIZ
                                                                                                                           (15) (12) /RHCS2 =
               047110
047110
047114
                                 013746
                                                                                                        MOV
TYPOC
                                                                                                                           2#CS2.-(SP)
                                                                                                                                                              :GET READY TO TYPE RHCS2 CONTENTS
                                                                                                                          71$
70$
<15><12> /RHCS1 =
                                                                                                                                                             :: TYPE ASCIZ STRING
:: GET OVER THE ASCIZ
               047116
                                                                                                         BR
```

SEG	0313

MAINDEC	-11-DZRJ	I-A RPO	14/5/6 FUNCT. CO MESSAGE TYPEOUT	NT. TST-F	PT 1	MACY11 27(655)	30-MAR-76 22:59 PAGE 253
	047140 047140 047144	013746	002362	70 <b>5</b> :	MOV TYPOC	3#CS1,-(SP)	GET READY TO TYPE RHCS1 CONTENTS
11701 11702 11703	047146	104400	047154	778.	TYPE SR .ASCIZ	73\$ 72\$ (15)(12)/RHDS1	TYPE ASCIZ STRING GET OVER THE ASCIZ
11705 11705 11707	047170 047170 047174	013746	002404	::73\$: 72\$:	MOV TYPOC	3#DS1,-(SP)	GET READY TO TYPE RHDS: CONTENTS
11597 11599 11700 11701 11702 11703 11705 11705 11709 11710 11711 11712 11713 11714	047176 047202	104400	047204	75\$:	TYPE BR .ASCIZ	75\$ 74\$ <15><12>/RHER1	TYPE ASCIZ STRING GET OVER THE ASCIZ
11713 11714 11715 11716	047220 047220 047224	013746	002364	::75\$: 74\$:	MOV TYPOC	3#ER1,-(SP)	GET READY TO TYPE RHERI CONTENTS
11715 11716 11717 11718 11719 11720	047226	104400	047234	::77\$:	TYPE BR .ASCIZ	.77\$ 76\$ <15><12>/RHER2	TYPE ASCIZ STRING GET OVER THE ASCIZ
11720 11721 11722 11723 11724 11725 11726 11727 11728	047250 047250 047254	013746	002370	765:	MOV TYPOC	G#ER2,-(SP)	GET READY TO TYPE RHERE CONTENTS
11725 11726 11727 11728	047256 047262	104400	047264	::79\$: 79\$:	TYPE BR .ASCIZ	.79\$ 78\$ (15)(12)/RHER3	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11729 11730 11731 11732	047300 047300 047304	013745	002376	795:	MOV TYPOC	3#ER3,-(SP)	FGET READY TO TYPE RHER3 CONTENTS
117334 117334 117334 117335 117339 11739 11744 11745 11749	047306 047312	104400	047314	::21\$: 80\$:	TYPE BR .ASCIZ	91\$ 80\$ <15><12>/RHDST	::TYPE ASCIZ STRING ::GET OVER THE ASCIZ
11737 11738 11739 11740	047330 047330 047334	013746 104401	002366	805:	MOV TYPOC	G#DST(SP)	GET READY TO TYPE RHOST CONTENTS
11741 11742 11743 11744	047336 047342	104400	047344	::83\$:	TYPE BR .ASCIZ	.83% 82% <15><12>/RHCA =	TYPE ASCIZ STRING GET OVER THE ASCIZ
11745 11746 11747 11748	047350 047350 047364	013746	002374	823:	MOV TYPOC	3#CA,-(SP)	GET READY TO TYPE RHCA CONTENTS
11749	047366	104400	047374		TYPE	.95\$	::TYPE ASCIZ STRING

MAINDEO DZRJIA.	-11-DZRJ	I-A. RPO ERROR	04/5/6 FUNCT. COI	NT. TST-F	PT 1	E09	30-MAR-76 22:59 PAGE 254
11751	047372	000406		::95\$:	BR .ASCIZ	84\$ <15><12>/RHAS =	;;GET OVER THE ASCIZ
1175345578901234556789012345578990123451777555789901234 117755578990123455678901234556789901234 1177555789901234556789901234 1177777777777777788990123456789901234 1177777777777777777777777777777777777	047410 047410 047414	013746 104401	002400	::95\$: 94\$:	MOV TYPOC	G#AS(SP)	GET READY TO TYPE RHAS CONTENTS
11757 11758 11759 11760	047416	104400	047424	::97\$:	TYPE BR .ASCIZ	.97\$ 96\$ <15><12>/RHOF =	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11761 11762 11763 11764	047440 047440 047444	313746 104401	002372	96 <b>5</b> :	MOV TYPOC	3#0F,-(SP)	GET READY TO TYPE RHOF CONTENTS
11765 11766 11767 11768	047446	104400	047454	::89\$: 98\$:	TYPE BR .ASCIZ	.89\$ 88\$ <15><12>/RHMR =	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11769 11770 11771 11772	047470 047470 047474	013746 104401	002402	985:	MOV TYPOC	3#MR(SP)	GET READY TO TYPE RHMR CONTENTS
11773 11774 11775 11776	047476	104400	047504	::91\$: 90\$:	TYPE BR .ASCIZ	91\$ 90\$ (15)(12)/RHLA =	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11777 11778 11779 11780	047520 047520 047524	013746 104401	002420	905:	MOV TYPOC	Z#LA,-(SP)	:GET READY TO TYPE RHLA CONTENTS
11781 11782 11783 11794	047526 047532	104400	047534	::93\$: 92\$:	TYPE BR .ASCIZ	93\$ 92\$ <15><12>/RHCC =	TYPE ASCIZ STRING
11795 11796 11787 11788	047550 047550 047554	013746 104401	002416	925:	MOV TYPOC	a#CC,-(SP)	:GET READY TO TYPE RHCC CONTENTS
11799 11790 11791 11792	047556 047562	104400	047564	::95\$:	TYPE BR .ASCIZ	.95\$ 94\$ <15><12>/RHEC1 :	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11793 11794 11795 11796	047600 047600 047604	013746	002412	;;95\$: 94\$:	MOV TYPOC	3#EC1,-(SP)	GET READY TO TYPE RHEC1 CONTENTS
11797 11798 11799 11800	047606 047612	104400 000406	047614	::97\$: 95\$:	TYPE BR .ASCIZ	97\$ 96\$ (15)<12)/RHEC2:	TYPE ASCIZ STRING
11801	047630 047630 047634	013746	002414	963:	MOV TYPOC	2#EC2,-(SP)	:GET READY TO TYPE RHECE CONTENTS

UZRJIH.PII		בהחטה וו	ESSMUE TIPEUUT	HOUTTHE			
11905 11906 11907	047636 047642	104400	047644	995:	TYPE BR .ASCIZ	.99\$ 98\$ <15><12>/RHDT =	:: TYPE ASCIZ STRING :: GET OVER THE ASCIZ
11811	047660 047660 047664	013746 104401	002406	985:	MOV TYPOC	a#DT,-(SP)	GET READY TO TYPE RHOT CONTENTS
11913	047666 047672	104400	047674	1015:	TYPE BR .ASCIZ	101\$ 100\$ <15><12> /RHSN =	:: TYPE ASCIZ STRING ;;GET OVER THE ASCIZ
11817	047710 047710 047714	013746 104401	005410	1005:	MOV TYPOC	2#SN,-(SP)	GET READY TO TYPE RHSN CONTENTS
11921	047716	005037	046760	TYPERR:	CLR	@#PRITEM	; CLEAR PREVIOUS ERROR ITEM
11924	047722 047722 047726 047730 047732	104400 010046 005000 153700	001223		TYPE MOV CLR BISB	SCRLF RO,-(SP) RO Q#SITEMB.RO	"CARRIAGE RETURN" & "LINE FEED" SAVE RO PICKUP THE ITEM INDEX
11827	047736	001004			BNE	15	:IF ITEM NUMBER IS ZERO, JUST :TYPE THE PC OF THE ERROR :SAVE SERRPC FOR TYPEOUT :ERROR ADDRESS
11829	047740	013746	001116	15:	MOV	SERRPC(SP)	SAVE SERRPC FOR TYPEOUT
	047744 047746 047750 047752 047754 047756	104401 000454 005300 006300 006300			TYPOC BR DEC ASL ASL ASL	10\$ RO RO RO	GO TYPEOCTAL ASCII(ALL DIGITS) GET OUT ADJUST THE INDEX SO THAT IT WILL WORK FOR THE ERROR TABLE
11837 11838 11839 11840	047760 047764 047770 047772	006300 062700 020037 001002 022020	046760		ADD CMP BNE CMP BR	#SERRTB.RO RO.D#PRITEM 13\$ (RO)+,(RO)+	FORM TABLE POINTER WAS PREVIOUS ERROR SAME BRANCH IF NOT POP RO OVER EM AND DH
11942	047776 050002 050006 050010	022020 000420 010037 012037 001404 104400 104400 012037 001404 104400 104400	046760 050012	13\$:	MOV MOV BEQ TYPE	RO. D#PRITEM (RO)+.2\$ 3\$	:SAVE NEW ERROR ITEM :PICKUP "ERROR MESSAGE" POINTER :SKIP TYPEOUT IF NO POINTER :TYPE THE "ERROR MESSAGE"
	047774 047776 050005 050005 050010 050014 050020 050024 050030 050030 050034 050040 050044 050040	000000 104400 012037 001404	050030	25: 35:	TYPE MOV	0 SCRLF (RO)+,45 5\$	"ERROR MESSAGE" POINTER GOES HERE "CARRIAGE RETURN" & "LINE FEED" PICKUP "DATA HEADER" POINTER SKIP TYPEOUT IF 0
		104400 104400 104400	001553	4\$: 5\$:	BEQ TYPE .WORD TYPE MOV	0 SCRLF R1(SP) (R0)+,R1	"TYPE THE "DATA HEADER" "DATA HEADER" POINTER GOES HERE "CARRIAGE RETURN" & "LINE FEED" "SAVE RI
11855 11855 11857 11858	050042 050044 050046 050050	010146 012001 001415 012000 105720 001003		<b>5\$</b> :	MOV BEQ MOV TSTB BNE	9\$ (RO)+.RO (RO)+	SAVE NEW ERROR ITEM PICKUP "ERROR MESSAGE" POINTER SKIP TYPEOUT IF NO POINTER TYPE THE "ERROR MESSAGE" "ERROR MESSAGE" POINTER GOES HERE "CARRIAGE RETURN" & "LINE FEED" PICKUP "DATA HEADER" POINTER SKIP TYPEOUT IF D TYPE THE "DATA HEADER" "DATA HEADER" POINTER GOES HERE "CARRIAGE RETURN" & "LINE FEED" SAVE RI PICKUP "DATA TABLE" POINTER BR IF NO DATA TO BE TYPED PICKUP "DATA FORMAT" POINTER "OCTAL" OR "DECIMAL" BR IF DECIMAL

1							GD9		
	MAINDEC DZRJIA.	-11-DZRJ Pli	I-A. RPC ERROR 1	14/5/6 FUNCT MESSAGE TYPE	. CONT. TST-	PT I	MACY11 27(655)	30-MAR-76 22:59 PAGE 256	SE0 0316
11850 11852 11853 11853 11855 11855 11857 11877 11877 11877 11877 11877 11877 11877 11877 11877 11877 11877	050052 050054 050056	013146 104401 204000		7\$:	MOV TYPOC BR	2(R1)+,-(SP) 9\$	:SAVE Q(R1)+ FOR TYPEOUT :GO TYPEOCTAL ASCII(ALL DIGITS)		
	11853 11854 11855 11855 11856 11859	050056 00040 050060 01314 050062 10440 050064 00571 050066 00140 050070 10440 050074 00076	013145 104404 005711 001403 104400 000764	050104	8\$:	MOV TYPDS TST BEG TYPE BR	Q(R1)+(SP) (R1) 9\$ 11\$	SAVE Q(R1)+ FOR TYPEOUT GO TYPEDECIMAL ASCII WITH SIGN IS THERE ANOTHER NUMBER? BR IF NO TYPE TWO(2) SPACES LOOP	
	11970 11971 11972 11973 11975	050076 050100 050102 050104	012501 012500 000207 020040 050110	000	95: 105: 115:	MOV MOV RTS .ASCIZ .EVEN	(SP)+;R0 (SP)+;R0 PC	RESTORE R1 "CARRIAGE RETURN" & "LINE FEED" RETURN TWO(2) SPACES	

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MAINDEC-11-DZRJI-A, RPO4/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 ERROR MESSAGE TYPEOUT ROUTINE

```
11975
11977
11979
11979
11990
                                                                                                                                                    SBITL BINARY TO OCTAL (ASCII) AND TYPE
                                                                                                                                                        *THIS ROUTINE IS USED TO CHANGE A 16-BIT BINARY NUMBER TO A 6-DIGIT *OCTAL (ASCII) NUMBER AND TYPE IT.
 11991
11982
11993
11994
                                                                                                                                                    *STYPOS---ENTER HERE TO SETUP SUPPRESS ZEROS AND NUMBER OF DIGITS TO TYPE
                                                                                                                                                    : *CALL:
                                                                                                                                                                                                                                                                         ::NUMBER TO BE TYPED

::CALL FOR TYPEOUT

::N=1 TO 6 FOR NUMBER OF DIGITS TO TYPE

::M=1 OR D
                                                                                                                                                                                                               NUM. - (SP)
                                                                                                                                                    : *
                                                                                                                                                                                TYPOS
.BYTE
.BYTE
                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                        ::1=TYPE LEADING ZEROS
::0=SUPPRESS LEADING ZEROS
                                                                                                                                                    : *
                                                                                                                                                    : *
  11890
   1991
                                                                                                                                                     *STYPON----ENTER HERE TO TYPE OUT WITH THE SAME PARAMETERS AS THE LAST
 11892
11893
11894
11895
11896
11896
                                                                                                                                                     *STYPOS OR STYPOC
                                                                                                                                                    : *CALL:
                                                                                                                                                                                                                                                                          :: NUMBER TO BE TYPED
                                                                                                                                                                                                              NUM. - (SP)
                                                                                                                                                    *
                                                                                                                                                                                                                                                                          :: CALL FOR TYPEOUT
                                                                                                                                                                                TYPON
                                                                                                                                                     *STYPOC---ENTER HERE FOR TYPEOUT OF A 16 BIT NUMBER
                                                                                                                                                    *CALL:
                                                                                                                                                                                                                                                                      ::NUMBER TO BE TYPED
:;CALL FOR TYPEOUT
                                                                                                                                                                                                              NUM. - (SP)
                                                                                                                                                   : *
                                                                                                                                                                                TYPOC
11902
11903
11904
11905
11905
11908
11909
                                                       017646
116637
112637
062716
000406
112737
112737
112737
010346
010446
                                                                                                                                                                                                             a(SP),-(SP)
1(SP),SOFILL
(SP)+,SOMODE+1
#2,(SP)
                                                                                                                                                                                                                                                                         ::PICKUP THE MODE
::LOAD ZERO FILL SWITCH
::NUMBER OF DIGITS TO TYPE
::ADJUST RETURN ADDRESS
                          050110
050126
050126
050132
050134
050156
050156
050160
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05
                                                                                                                                                   TYPOS: MOV
                                                                                      000002
050335
                                                                                                                     050333
                                                                                                                                                                                MOVB
                                                                                                                                                                                MOVE
                                                                                                                                                                                ADD
                                                                                                                                                                                                               STYPON
                                                                                                                                                                                                             #1, $0FILL
#6, $0MODE+1
#5, $0CNT
R3, -($P)
R4, -($P)
R5, -($P)
$0MODE+1, R4
                                                                                                                                                                                                                                                                         SET THE ZERO FILL SWITCH
SET FOR SIX(6) DIGITS
SET THE ITERATION COUNT
SAVE R3
SAVE R4
SAVE R5
GET THE NUMBER OF DIGITS TO TYPE
                                                                                      000001
000006
000005
                                                                                                                    050333
050335
050332
                                                                                                                                                  STYPOC: MOVB
                                                                                                                                                                                MOVB
                                                                                                                                                  STYPON:
                                                                                                                                                                                MOVE
                                                                                                                                                                                MOV
 11911
11912
11913
                                                                                                                                                                                MOV
                                                         010546
                                                         113704
                                                                                       050335
                                                                                                                                                                                MOVB
                                                        005404
062704
110437
113704
 11914
                                                                                                                                                                                NEG
                                                                                                                                                                                                                                                                        SUBTRACT IT FOR MAX. ALLOWED
SAVE IT FOR USE
GET THE ZERO FILL SWITCH
PICKUP THE INPUT NUMBER
CLEAR THE OUTPUT WORD
ROTATE MSB INTO "C"
11915
11916
11917
                                                                                                                                                                                                               #6.R4
                                                                                       000006
                                                                                                                                                                                ADD
                                                                                                                                                                                                             #6,R4
R4,$0MODE
$0FILL,R4
12(SP),R5
R5
R5
R5
R5,R3
R5,R3
R5,R3
                                                                                      050334
050333
000012
                                                                                                                                                                                MOVE
                                                                                                                                                                                MOVB
 11919
                                                        016605
                                                                                                                                                                                MOV
                                                                                                                                                                                CLR
                                                        006105
006105
006105
006105
 11920
11921
11922
11923
11925
11925
11925
11929
                                                                                                                                                 15:
                                                                                                                                                                                BR
ROL
ROL
                                                                                                                                                                                                                                                                         GO DO MSB
                                                                                                                                                  25:
                                                         010503
                                                        006103
105337
100016
042703
                          050230
050232
050236
050240
                                                                                                                                                                                ROL
DECB
BPL
BIC
                                                                                                                                                                                                                                                                        ::GET LSB OF THIS DIGIT
::TYPE THIS DIGIT?
::BR IF NO
                                                                                                                                                  35:
                                                                                                                                                                                                              SOMODE
75
                                                                                       050334
                                                                                                                                                                                                              #177770.R3
                                                                                                                                                                                                                                                                          ::GET RID OF JUNK
```

	109
MAINDEC-11-DZRJI-A. PP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.PII BINARY TO OCTAL (ASCII) AND TYPE	MACY11 27(655) 30-MAR-76 22:59 PAGE 258 SEG 0318
11930	(SP)+RS (SP)+R4 (SP)+R3 RESTORE R3 2(SP)+(SP) (SP)+(SP) (SP)+(SP)  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RETURN  RET

TOC

		옷이 가지 않는 생물이 없는 것이 없는 것이 나를 가지 않는데 가게 되었다면 하는데 없는데 그렇게 되지 않는데 하는데 하는데 되었다면 모든데 되었다.	
11954		.SBTTL TRAP DECODER	
11956 11957 11959 11959 11960		*THIS ROUTINE WILL PICKUP THE LOWER BYTE OF THE "TRAP" INSTRUCTION *AND USE IT TO INDEX THROUGH THE TRAP TABLE FOR THE STARTING ADDRESS *OF THE DESIRED ROUTINE. THEN USING THE ADDRESS OBTAINED IT WILL *GO TO THAT ROUTINE.	
11962 050336 11963 050346 11964 050346 11965 050356	016500 000002 005740 111000 006300	STRAP: MOV RO(SP) ::SAVE RO MOV 2(SP).RO ::GET TRAP ADDRESS TST -(RO) ::BACKUP BY 2 MOVB (RO).RO ::GET RIGHT BYTE OF TRAP ASL RO ::POSITION FOR INDEXING MOV STRPAD(RO).RO :INDEX TO TABLE RTS RO ::GO TO ROUTINE	
11967 05035 11968 05035	016000 050360	MOV STRPAD(RO), RO :: INDEX TO TABLE RTS RO ;; GO TO ROUTINE	
11959		.SBTTL TRAP TABLE	
11972		**THIS TABLE CONTAINS THE STARTING ADDRESSES OF THE ROUTINES CALLED **BY THE "TRAP" INSTRUCTION.	
11975 11976		ROUTINE	
11954 11955 11959 11959 11960 11961 11963 11963 11964 11965 11965 11965 11965 11969 11970 11971 11972 11973 11974 11975 11976 11979 11979 11979 11981 11981 11982 11983 11984 11985 11985 11986 11989 11989 11989 11989 11991	045112 050134 050110 050150 044666	\$TRPAD:  \$TYPE ::CALL=TYPE TRAP+0(104400) TTY TYPEOUT ROUTINE  \$TYPOC ::CALL=TYPOC TRAP+1(104401) TYPE OCTAL NUMBER (NITH LEADING ZEROS)  \$TYPOS ::CALL=TYPOS TRAP+2(104402) TYPE OCTAL NUMBER (NO LEADING ZEROS)  \$TYPON ::CALL=TYPON TRAP+3(104403) TYPE OCTAL NUMBER (AS PER LAST CALL)  \$TYPOS ::CALL=TYPOS TRAP+4(104404) TYPE DECIMAL NUMBER (WITH SIGN)	1)
11984 050378	045730	SGTSWR ;; CALL=GTSWR TRAP+5(104405) GET SOFT-SWR SETTING	
11986 050374 11987 050376 11988 050400 11989 050400 11990 050404	045640 046202 046272 046452 042066	\$CKSWR :: CALL=CKSWR TRAP+6(104406) TEST FOR CHANGE IN SOFT-SWR \$RDCHR :: CALL=RDCHR TRAP+7(104407) TTY TYPEIN CHARACTER ROUTINE \$RDLIN :: CALL=RDLIN TRAP+10(104410) TTY TYPEIN STRING ROUTINE \$RDCT :: CALL=RDCT TRAP+11(104411) READ AN OCTAL NUMBER FROM TTY WAIT.T :: CALL=WAT TRAP+12(104412) DONT ADD ABOVE THIS TRAP	

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I CHEN DOMI HID	OI 110011	1123		
			POWER DOWN AND UP ROUTINES	
012737 050552 012737 000340 010046 010146 010246 010346 010446 010546 017746 130476 010637 050556 012737 050460	000024	SPWRDN:	MOV #\$ILLUP. a*PWRVEC ;: SET FOR FAST UP  MOV #340. a*PWRVEC+2 ; PRIO: 7  MOV RO, -(SP)	
000000 000776			HALT BR2 ;;HANG UP	
		: POWER U	**************************************	
012737 050552 013706 050556 005037 050556 005237 050556 001375 012677 130430 012605 012604 012603 012602	000024	SPWRUP:	MOV #\$ILLUP_@#PWRVEC; SET FOR FAST DOWN MOV \$SAVR6, SP; GET SP  CLR \$SAVR6	
24 012737 050406 00 32 012737 000340 00 40 104400 42 050560 44 012716 46 005012	000024	SPWRMG:	MOV (SP)+RO POP STACK INTO RO MOV #\$PWRDN. D*PWRVEC SET UP THE POWER DOWN VECTOR MOV #340, D*PWRVEC+2 PRIO:7 TYPE REPORT THE POWER FAILURE WORD \$POWER POWER FAIL MESSAGE POINTER MOV (PC)+, (SP) RESTART AT BEGIN WORD BEGIN RESTART ADDRESS	
000000 000776 000000 005015 005012	042527	SILLUP: SSAVR6: SPOWER:	HALT BR2 ; THE POWER UP SEQUENCE WAS STARTED ; BEFORE THE POWER DOWN WAS COMPLE ; PUT THE SP HERE .ASCIZ <15><12>"POWER"	TE
	012737 050552 012737 000340 010046 010046 010346 010546 010637 050556 012737 050556 005037 050556 005037 050556 005237 050556 005237 050556 012605 012605 012605 012605 012605 012605 012606 012737 050406 012737 050406	012737 050552 000024 010046 010146 010246 010346 010546 010546 010546 010546 010546 010546 010546 010546 010577 050556 000024 050556 005037 050556 005037 050556 005237 050556 012605 012605 012605 012605 012605 012605 012605 012605 012737 000340 000024 012737 000340 000025 000000 012736 000000 012736 000000 000776 000000 000776 000000 005015 047520 042527	012737 050552 000024 \$PWRDN: 010046 010146 010246 010346 01046 01046 01046 010546 0107746 010637 050556 012737 050556 005037 050556 005037 050556 005037 050556 005037 050556 005037 050556 001375 012607 0130430 012608 012609 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 012737 050406 000024 012600 050560 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 050406 000024 012737 0505060 000024 012737 050406 000024 012737 050406 000024 012737 0505060 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024 012737 050506 000024	SBTTL

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPC POWER D	14/5/6 FL	INCT. CON UP ROUTI	IT. TST-P	Т 1	MO9 MACY11 27(655) 30-MAR-76 22:59 PAGE 262	SE0 0322
12093 12093 12093 12095 12095 12095 12095 12095 12097 12098 12099 12103 12103 12104 12105 12105 12107 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113 12113	051166 051174 051202 051210 051216 051224 051232 051232 051254 051254 051252 051276 051376 051312 051312	020061 046101 052111 020104 042523 020131 041040 050123 042511 044507 047040 044530 026124 041101 051120 000115	047506 020114 020123 047516 020124 044122 052111 041505 020104 052123 047117 052123 051440 051117 043517	020122 047125 044504 020124 047101 051501 000123 043111 042522 051105 042440 047101 020117 020124 040522	EM7:	.ASCIZ	/SPECIFIED REGISTER NON EXISTANT, SO ABORT PROGRAM/	
12109 12110 12111 12112 12113	051322 051330 051336 051344 051352 051360	052123 020104 020105 047515 020124 042110	050117 051104 040510 020114 047111 030523	042520 053111 020123 044502 051040 051440	EM10:	.ASCIZ	/STOPPED DRIVE HAS MOL BIT IN RHDS1 SET/	
	051322 051336 051336 051352 051366 051366 051376 051404 051420 051420 051420 051420 051434 051434	052123 020104 020105 047515 020124 042110 052105 042127 050123 020105 042522 047127 031123 046125 054514 020105 047040 042116	050117 051104 040510 020114 047111 030523 000 052111 047111 047520 020104 051040 051440 051440 044040 044040 047125 027117	020110 046104 042527 047504 041510 047510 047117 053101 052111 040440 020122	EM11:		/WITH SPINDLE POWERED DOWN RHCS2 SHOULD ONLY HAVE UNIT NO. AND IR	SET/
12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125 12125	051450 051450 051454 051472 051476 051504 051504 051526 051526 051554 051550 0515604 051604 051626 051634 051634 051634	054514 020105 047040 042116 042523 043101 050123 020105 042522 020054 041501 052517 053101 036526 044527 044527 044527 044520 042105 042105	044040 047125 027117 044440 000124 042524 047516 020104 047516 020105 020056 042114 020105 026061 042114 020105 042114 020105 042114 042116 053517 052440 046101	020122 046104 042527 050125 050040 041501 044122 044123 044040 047515	EM12:		AFTER SPINDLE POWERED UP, NO PACK ACKN. RHDS1 SHOULD HAVE MOL=1, Y	
12139	051604 051612 051620 051626 051634 051642	044527 044520 050040 042105 047040 044524	044124 042116 053517 052440 020117 046101	051440 042514 051105 026120 047111 055111	Elizo.	. 43012	/WITH SPINDLE POWERED UP, NO INTIALIZE, RHCS1 SHOULD HAVE GO=0, DVF	"

DZRJ	IA.PII	POWER I	OWN AND	UP ROUT	INES		
121 121 121 121 121 121 121	45 051650 46 051656 47 051664 48 051672 49 051700 50 051706 51 051714	026105 030523 046125 042526 026060 030475 036531	051040 051440 020104 043440 042040 020054 026061	041510 047510 040510 036517 040526 042122 044440			
121	53 051726 54 051734 55 051742 56 051750 57 051756 58 051764 59 051772	026105 030523 046125 042526 026060 030475 036505 043101 050123 020105 042522 020054 051440 051440	020104 043440 042040 020054 026061 000060 042524 047111 047520 020104 044122 047510 042502	020122 046104 042527 050125 041503 046125 030075	EM14:	.ASCIZ	/AFTER SPINDLE POWERED UP, RHCC SHOULD BE=0/
121 121 121 121 121 121 121 121	61 052001 62 052006 63 052014 64 052022 65 052030 66 052036 67 052044	000 120 041501 042514 047503 020104 042105 051105	041501 047113 043504 046515 040503 040440	020113 053517 020105 047101 051525 020116 006522	EM15:		PACK ACKNOWLEDGE COMMAND CAUSED AN ERROR/(15)(12)
	45 051656 46 051656 47 051664 48 051700 50 051706 51 051726 52 051726 53 051726 53 051734 55 051750 55 051750 55 051750 56 052000 61 052000 62 052000 63 052000 64 052030 65 052030 65 052030 67 052050 67 052050	107 040504 020123 042522 040515 042522 040524 043101 047503	047517 040524 042502 041440 042116 020103 044440 042524 046515	020104 044440 047506 046517 020054 040504 020123 020122 047101		.ASCIZ	/GOOD DATA IS BEFORE COMMAND, REC DATA IS AFTER COMMAND/ /NO-OP COMMAND CAUSED AN ERROR/<15><12>
121	79 052142 90 052150 81 052156 82 052164 83 052172	047516 047503 020104 042105 051105	047455 046515 040503 040440 047522	020120 047101 051525 020116 006522	EM16:	.ASCII	/NO-OP COMMAND CAUSED AN ERROR/(15)(12)
	90 052150 81 052156 82 052164 83 052172 84 052200 85 052201 86 052206 87 052214 88 052222 89 052230 91 052236 91 052252 93 052260 94 052260 95 052270 96 052276 97 052304 98 052312	047503 020104 042105 051105 012 107 040504 020123 040515 042522 040524 043101 047503 040104 051104 046103 047503	047517 040524 042502 041440 042116 020103 044440 042524 046515	020104 044440 047506 046517 020054 020123 020123 020122 047101			/GOOD DATA IS BEFORE COMMAND, REC DATA IS AFTER COMMAND/
151	95 052270 96 052276 97 052304 98 052312	051104 046103 047503 020104	053111 040505 046515 040503	020105 020122 047101 051525	EM17:	.ASCII	/DRIVE CLEAR COMMAND CAUSED AN ERROR/(15)(12)

MAINDEC-11- DZRJIA.P11	DZRJI-A. RP	04/5/6 FL	INCT. CON UP ROUT!	NT. TST-PI		MACY11 27(655)	30-MAR-76	22:59	PAGE 264		SE0 0324
12200 052 12200 052	320 042105 326 051105 334 012 335 107 342 040504 350 053111		020115								
12206 052 12207 052 12209 052 12209 052 12210 052 12211 052	356 047510 364 042502 372 020103 406 040440 406 040440 414 041440 414 041440	047517 040524 051505 046125 020054 040504 053111 052106 046517	020104 043440 051440 020104 042522 040524 051505 040515		.ASCIZ	GOOD DATA GIVE	S SHOULD BE	. REC DI	ATA GIVES AFTE	ER COMMAND/	
12213 052 12214 052 12215 052 12216 052 12217 052	425 432 947111 940 940515 946 952501 954 954 954 951117 966 947507	042116	026504 046517 041440 020104 051122	EM20:	.ASCII	READ-IN COMMAN	D CAUSED AN	ERROR	(15) (12)		
12228 052	502 042526 510 052517 516 026105 524 042040 532 044507 540 042522 546 047117 554 052106 562 046517	042440 005015 042117 020101 020123 042114 051040 052101 042526 027107 027124 051105 040515	042040 044507 044123 041040 041505 020101 020123 041440 040440 041440 042116		.ASCIZ	GOOD DATA GIVE	S SHOULD BE	, REC DA	ATA GIVES REG.		COMMAND/
12231 052 12232 052 12233 052 12234 052 12235 052 12235 052	571 122 576 041440 604 052116 612 044522 620 046517 626 053440 634 020116	041510 047117 020123 043516 040515 051501 051105	030523 042524 052504 041440 042116 044440 047522	EM21:	.ASCIZ	/RHCS1 CONTENTS	DURING COM	MAND WAS	IN ERROR		
12230 05522 12230 0552 12230 0552	570 000 571 122 576 041440 604 052116 612 044522 620 046517 626 053440 634 020116 642 000122 644 044122 652 047503 660 051524 664 046515 702 040527 710 042440 717 020104 717 020104 732 047101 740 051525 746 020116 754 020116	051504 052116 042040 020107 047101 020123 051122	020061 047105 051125 047503 020104 047111 051117	EM22:	.ASCIZ	/RHDS1 CONTENTS	DURING COMM	MAND WAS	IN ERROR		
12249 052 12249 052 12250 052 12251 052 12252 052	717 125 724 020104 732 047101 740 051525 746 020116 754 006522	046116 047503 020104 042105 051105 C12	040517 046515 040503 040440 047522	EM23:	.ASCII	/UNLOAD COMMAND	CAUSED AN E	ERROR/<1	5> (1ấ>		

DZRJIA.PII	POWER DOWN AND UP ROUTINES	
12253 052757 12254 052764 12255 052772 12256 053000 12257 053006 12259 053014 12259 053022 12260 053030 12261 053036 12262 053044 12263 053052	107 047517 020104 040504 040524 043440 053111 051505 051440 047510 046125 020104 042502 020054 042522 020103 040504 040524 043440 053111 051505 051040 043505 020056 047503 052116 020056 047503 046515 047101	.HSCIZ /GOOD DATA GIVES SHOULD BE, REC DATA GIVES REG. CONT. AFTER COMMAND/
12265 053062 12266 053070 12267 053076 12268 053104 12269 053112	043117 051506 052105 EM24: . 041440 046517 040515 042116 041440 052501 042523 020104 047101 042440 051122 051117	ASCII /OFFSET COMMAND CAUSED AN ERROR/(15)(12)
12253	107 047517 020104 040504 040524 043440 053111 051505 051440 042502 020054 042522 020103 040504 040524 04340 053111 051505 051040 043505 020056 047503 052116 020056 047503 052116 020056 043101 042524 020122 047503 046515 047101 000104 043117 051506 052105 EM24: 042140 046517 040515 042140 051122 051117 005015 047507 042117 042040 052101 020101 044507 042526 020123 044123 052517 042114 041040 0526105 051040 041505 042040 052101 020101 044507 042526 020123 042522 027107 041440 042522 027107 041440 042516 051105 041440 046517 040515 042116 052106 051105 041440 047105 042524 020122 047105 042524 020122 047105 042524 020122	ASCIZ /GOOD DATA GIVES SHOULD BE, REC DATA GIVES REG. CONT. AFTER COMMAND/
12283 053225 12284 053232 12285 053240 12286 053246 12287 053254 12289 053262 12289 053270	046517 040515 042116 041440 052501 042523	ASCII /RETURN TO CENTER LINE COMMAND CAUSED AN ERROR/(15)(12)
12291 053304 12292 053312 12293 053320 12294 053326 12295 053334 12296 053342 12297 053350 12298 053356 12299 053364	047507 042117 042040 052101 020101 044507 042526 020123 044123 052517 042114 041040	ASCIZ /GOOD DATA GIVES SHOULD BE, REC DATA GIVES REG. CONT. AFTER COMMAND/
12298 053356 12299 053364 12300 053372 12301 053400 12302 053406 12303 053407 12304 053414 12305 053422 12306 053430	000	ASCIZ /500 OFFSET COMMANDS ONE AFTER THE OTHER CAUSED AN ERROR/

MAINDEC DZRJIA	0-11-DZRJ	I-A. RPO	04/5/6 FL	INCT. CON UP ROUT!	IT. TST-F	7 1	D10 MACY11 27(655) 30-MAR-76 22:59 PAGE 266	SE0 0326
		040440 052040 044124 052501 047101 051117	052106 042510 051105 042523 042440	051105 047440 041440 020104 051122				
	053436 053460 053466 053466 053477 053504 053536 053536 053556 053564 053564 053574	127 04040 020122 040501 051501 051511 051511 051511 051511 051511 051511 051511 051511 051511 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510	000 044522 040505 047101 040524 042523 051120 051040 042524	042524 042504 020104 041440 020104 050117 043505 020122 042507	EM27:	.ASCII	/WRITE HEADER AND DATA CAUSED IMPROPER REGISTER CHANGE/(15) (12)	
12323 12324 12325 12326 12327 12328	053556 053566 053574 053602 053616 053616 053634 053634 053650	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
12336	053634 053642 053650 053656 053664 053672 053700 053714	005015 042522 042105 020101 020123 053440 042510 042510 046517	042503 042040 044507 044127 051501 042522 051105 040515	053111 052101 042526 052101 052040 040440 041440 042116		.ASCIZ	RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND/	
12340 12341 12342 12343 12344 12345 12345 12347	053715 053722 053730 053736 053744 053752 053760 053774 053775	127 044040 020122 040504 040510 053440 052502	044522 040505 047101 040524 043516 044522 047522 043106	042524 042504 020104 041440 042105 042524 020115 051105	EM30:	.ASCIZ	/WRITE HEADER AND DATA CHANGED WRITE FROM BUFFER/	
	054016 054032 054032 054032 054046 054046	127 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04012 04	040505 042101 042116 020101 042105 047522 042522 051105 043516	020104 051105 042040 040503 044440 042520 041440 041440	EM31:			
12350	054062 054063 054070	012 107 040504	047517 040524	020104		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE (15) (12)	

Г								E10
MO	AINDEC ZRJIA.	-11-DZRJ Pli	I-A. RPC	04/5/6 FL	UP ROUTI	IT. TST-P	T 1	MACY11 27(655) 30-MAR-76 22:59 PAGE 267 SEG 0327
	12351 12352 12353 12354	054076 054104 054112 054120	053111 040510 052517 020105 006505	051505 020124 04114 041140 012	053440 044123 041040 051105			
	12366 12367 12368 12369 12370 12371 12372	054131 054136 054144 054152 054166 054174 054202	042526 040524 051505 020124	041505 020104 043440 053440 040527 051105 042524 046515	044505 040504 053111 040510 020123 020105 020122 047101		.ASCIZ	RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND/
	123645678901233456789012338889901 1236678901233777779901233888999999999999999999999999999999999	0541120 05541120 05541120 05541120 05541120 05541120 05541120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120 0554120	043101 047503 000104 051127 042510 042510 043040 042510 051040 052101 052501 052501 051122	052111 042101 052101 046117 020104 040505 042101 042523 040524	020105 051105 026101 047514 054502 051105 042040 042440 042440	EM32:	.ASCIZ	/WRITE HEADER DATA, FOLLOWED BY READ HEADER AND DATA, CAUSED DATA ERROR/
	12387 12388 12389 12390 12391 12393	054314 054326 054334 054342 054350 054356 054364	040504 052501 046511 051105	051117 040505 040524 042523 051120 051040 042524 047101	000 020104 041440 020104 050117 043505 020122 042507	EM33:	.ASCII	READ DATA CAUSED IMPROPER REGISTER CHANGE/(15)(12)
	12395 12395 12397 12398 12399	054374 054402 054410 054416 054424 054424	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
		05+37+20 05+37+20 05+37+30 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310 05+33+310	0515105 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 05151015 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051510 051	042503 042040 044507 044127 051501 042522 051105 040515	053111 052101 052101 052040 052040 040440 042116		.ASCIZ	RECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
	12411	054523 054530 054536 054544	040504 040504 041516 052103	040505 040524 051117 000	020104 044440 042522	EM34:	.ASCIZ	/READ DATA INCORRECT/

MAINDE DZRJIA	C-11-DZRJ	I-A. RPC	04/5/6 FL	JNCT. CON UP ROUT!	NT. TST-	PT 1	F10 MACY11 27(655) 30-MAR-76 22:59 PAGE 268	SEQ 0328
1	054547 054554 054562 054576 054576 054604 054604	127 042040 047503 020104 042105 047522 042522 051105 043516	044522 052101 046515 040503 044440 042520 044507	042524 020101 047101 051525 050115 020122	EM35:		/WRITE DATA COMMAND CAUSED IMPROPER REGISTER CHANGE/(15)(12)	
12424	054626 054640 054646 054654 054662 054670	040504 053111 040510 052517 020105	005505 047517 040524 051505 020124 042114 042114	040510 012 020104 043440 053440 04123 041040		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
	054654 054652 054670 054670 054701 054706 054736 054736 054736	107 040504 053111 040510 052517 020105 040505 042524 051505 047503 051524 051524 051525 040515	041410 041040 041040 041040 041040 041040 041040 041040	040504 053111 043505 020122 047105 052106 046517		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND/	
12442	054752 054760 054765 054772 055000 055006 055014 055022 055030	127 042040 047503 020104 042507 052111	042116 044522 052101 046515 044103 020104 020105 041040	000 042524 020101 047101 047101 051127 051106 043125	EM36:		WRITE DATA COMMAND CHANGED WRITE FROM BUFFER/	
	055036 055036 055056 055056 055056 055056 055106 0551140 0551140 0551156 0551156 0551156 0551156 0551156 0551156 0551156	046517 042503 042523 042523 042527 042507 050117 050117 050127 042507 042501 0520123 042501 0520123 042501 0520123 0520123 0520123	041040 000122 045505 046511 051501 051511 051511 051511 020123 051440 020104 042510	041440 042116 042523 051120 051040 042524 047101	EM37:		/SEEK COMMAND CAUSED IMPROPER REGISTER CHANGE/(15)(12)	
12456 12457 12458 12459 12461 12461	055120 055126 055134 055142 055150 055156	047507 052101 042526 052101 046125 052040 005015				.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
12463 12464 12465 12466 12467 12468	055156 055174 055202 055210 055216 055224	042522 042105 020101 020123 052123 047117	042503 042040 044507 042522 051105 042524	053111 052101 042526 044507 041440 052116		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER SEEK COMMAND	

1947   05524   091140   04515   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   04505   0450	MAINDEC-11-DZRJ	I-A. RPO POWER D	4/5/6 FL	INCT. CON UP ROUT!	IT. TST-P	Т1	G10 MACY11 27(655) 30-MAR-76 22:59 PAGE 269 SEG 0329
12500	12469 055232 12470 055240 12471 055246 12472 055254	045116 050155 050155	046517	045505			
12501   055510   05402   05402   05402   04502   055510   055510   04522   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   0	12473 12474 055257 12475 055264 12476 055272 12477 055300 12478 055306 12479 055314 12480 055322	CHILLIC	044522 042510 052501 046511 051105 051511 044103	045503 042523 051120 051040 042524	EM40:	.ASCII	/WRITE CHECK CAUSED IMPROPER REGISTER CHANGE/ (15) (12)
12501   055510   05402   05402   05402   04502   055510   055510   04522   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   0	12482 055334 12483 055342 12484 055350 12485 055356 12486 055364 12487 055372	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
12501   055510   05402   05402   05402   04502   055510   055510   04522   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   04502   0	12489 055402 12490 055410 12491 055416 12492 055424 12493 055432 12494 055440 12495 055454	020123 052123 047117	042040 044507 042522 051105 042524 043101 047503	052116		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND/
12512 055612 042526 020123 044127 12513 055620 052101 051440 047510 12514 055656 046125 020104 042502 12515 055634 052040 042510 042522 12516 055642 005015 12517 055644 042522 042503 053111 .ASCIZ /RECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITES WERE LOCKED OUT/ 12518 055652 042105 042040 052101 12519 055660 020101 044507 042526 12520 055666 020123 042522 044507		020107	045503 052517 052111 053440 046040 052502 041440 050104 050117 043505 042507 042507	020124			
12517 055644 042522 042503 053111 .ASCIZ /RECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITES WERE LOCKED OUT/ 12518 055652 042105 042040 052101 12519 055660 020101 044507 042526 12520 055666 020123 042522 044507 12521 055674 052123 051105 041440 12522 055702 047117 042524 052116	12511 055604 12512 055612 12513 055620 12511 055626 12515 055634	052101 042526 052101 046125 052040	020101 020123 051440 020104 042510				
	12517 055644 12518 055652 12519 055660 12520 055666 12521 055674 12522 055702	042522 042105 020101 020123 052123 047117	042503 042040 044507 042522 051105 042524	042526		.ASCIZ	PRECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITES WERE LOCKED OUT

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MAINDEC-11- DZRJIA.P11	-DZRJI-A. RPO POWER O	04/5/6 FL	INCT. CON UP ROUT!	NT. TST-F	т 1	H10 MACY11 27(655) 30-MAR-76 22:59 PAGE 270 SEG 0330
12523 059 12524 059 12525 059 12526 059 12527 059	710 020123 716 020122 724 051505 732 020105 740 042105 746 000 747 101 754 052120	043101 051127 053440 047514 047440	042524 052111 051105 045503 052125			
12523 055 12524 055 12525 055 12526 055 12527 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529 055 12529	710 020123 716 020122 724 051505 732 020105 740 042105 740 042524 770 042524 770 042524 776 020110 776 020110 776 020110 776 020120 776 020120 776 020120 776 020120 776 020105 776 020105 776 042522 776 042522 776 042522 776 042524 776 042524 776 042524 776 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 042524 777 04	052124 047111 053440 053440 051127 046040 040503 040503 044440 042520 041440 006505	046505 020107 044522 052111 052111 041517 052517 051525 050115 050122 052123 040510	EM42:	.ASCII	I VATTEMPTING TO WRITE WITH WRITES LOCKED OUT CAUSED IMPROPER REGISTER CHA
12542 056 12543 056 12544 056 12545 056 12546 056 12547 056	0063 107 0070 040504 0076 053111 0104 040510 0112 052517 0120 020105 0126 006505	047517 040524 051505 020124 042114 044124	020104 043440 053440 044123 041040 051105		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
12549 056 12550 056 12551 056 12552 056 12553 056 12554 056 12555 056 12557 056	152 051505 160 051511	012 041505 020104 043440 051040 042524 052116 040440 040440 052120	044505 040504 053111 043505 020122 047105 052106 052124 042105 042524		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER ATTEMPTED WRITE
12554 056 12555 056 12556 056 12557 056 12559 056 12561 056 12562 056 12563 056 12563 056 12564 056 12565 056 12569 056 12570 056 12571 056 12572 056	225 127	044522 053440 051127 046040 020104 044103 020104 042040	044524 052111 052111 041517 052517 047101 044504 052101			/WRITING WITH WRITES LOCKED OUT CHANGED DISK DATA/(15)(12)
12569 056 12570 056 12571 056 12572 056 12573 056 12574 056 12575 056	232 043516 240 020110 246 051505 254 042513 262 020124 270 042507 276 045523 267 045523 267 040504 232 053111 2330 040510 2336 020123 2344 051511 2352 047506 2360 044522	012 047517 040524 051505 020124 047117 02013 042522 042524	020104 043440 053440 040527 042040 042502 053440 024040		.ASCII	GOOD DATA GIVES WHAT WAS ON DISK BEFORE WRITE (WITH WRITE LOCKED OUT)

MAINDEC-11-DZRJI-A. RPO4/5/6 FUNCT. CONT. T DZRJIA.P11 POWER DOWN AND UP ROUTINES	ST-PT 1	I10 MACY11 27(655) 30-MAR-76 22:59 PAGE 271 SEG 0331
		/WAS ATTEMPTED/<15><12>
12577	.ASCII	RECEIVED DATA GIVES WHAT WAS READ BACK AFTER WRITE (15) (12)
12583 056432 006504 012 12584 056435 122 041505 044505 12585 056442 042526 020104 040504 12586 056450 040524 043440 053111 12587 056456 051505 053440 040510 12588 056464 020124 040527 020123 12589 056472 042522 042101 041040 12590 056500 041501 020113 043101 12591 056506 042524 020122 051127 12592 056514 052111 006505 012 12593 056521 050 044527 044124 12594 056526 053440 044522 042524 12595 056534 046040 041517 042513 12596 056542 020104 052517 024524 12597 056550 053440 051501 040440 12598 056556 052124 046505 052120	.ASCIZ	/(WITH WRITE LOCKED OUT) WAS ATTEMPTED/
12597 056550 053440 051501 040440 12598 056556 052124 046505 052120 12599 056564 042105 000 12600 056567 105 040516 046102 EM4 12601 056574 047111 020107 051127 12602 056602 052111 051505 041040	4: .ASCII	/ENABLING WRITES BY WRITE LOCK BUTTON CAUSED IMPROPER REGISTER CHANGE/<1
12607 056640 042105 044440 050115		
12608 056646 047522 042520 020122 12609 056654 042522 044507 052123 12610 056662 051105 041440 040510 12611 056670 043516 006505 012 12612 056675 107 047517 020104 12613 056702 040504 040524 043440 12614 056710 053111 051505 053440 12615 056716 040510 020124 044123 12616 056724 052517 042114 041040 12617 056732 020105 044124 051105 12618 056740 006505 012 12618 056740 006505 012 12620 056750 042526 020104 040505 12621 056756 040524 043440 053111 12622 056764 051505 051040 043505 12623 056772 051511 042524 020122 12624 057000 047503 052116 047105 12625 057006 051524 040440 052106 12626 057014 051105 053440 044522 12627 057022 042524 040440 052106 12628 057030 020113 052502 052124 12629 057036 047117 005015 12629 057036 047117 005015	.ASCII	/GOOD DATA GIVES WHAT SHOULD BE THERE/<15><12> /RECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITE LOCK BUTTON/<15><12> /ENABLED WRITES/
12612 056675 107 047517 020104 12613 056702 040504 040524 043440 12614 056710 053111 051505 053440 12615 056716 040510 020124 044123 12616 056724 052517 042114 041040 12617 056732 020105 044124 051105 12618 056740 006505 012 12619 056750 042526 020104 040504 12621 056756 040524 043440 053111 12622 056764 051505 051040 043505 12623 056772 051511 042524 020122 12624 057000 047503 052116 047105 12625 057006 051524 040440 052106 12626 057014 051105 053440 044522 12627 057022 042524 046040 041517 12628 057036 047117 005015	.ASCII	RECEIVED DATA GIVES REGISTER CONTENTS AFTER WRITE LOCK BUTTON/(15)(12)
12625 057006 051524 040440 052106 12626 057014 051105 053440 044522 12627 057022 042524 046040 041517 12628 057030 020113 052502 052124 12629 057036 047117 005015 12630 057042 047105 041101 042514	.ASCIZ	/ENABLED WRITES/

l	DZRJIA.P11 POWER	DOWN AND	UP ROUTI	NES		THE TELEVISION OF THE PERSON O	
I	12631 057050 020104 12632 057056 051505 12633 057061 124	051127	052111				
	12631 057050 020104 12632 057061 124 12633 057061 124 12634 057066 042506 12635 057074 020107 12636 057102 051501 12637 057110 041517 12638 057116 054503 12639 057124 051105 12640 057132 020054 12641 057140 051117 12642 057146 052040 12643 057154 030440 12644 057161 103 12645 057166 020104 12646 057174 050117 12647 057202 043505 12648 057210 020122 12649 057216 042507 12650 057220 043505 12652 057230 052101 12653 057244 052101 12653 057244 052101 12654 057252 046125 12655 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057260 052040 12656 057320 052123 12661 057320 052123 12662 057336 047117 12663 057342 020123 12664 057342 020122	051127 040522 040522 040522 047117 020113 040523 031040 040523 040523 040523 040523 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511 051511	051516 047111 046040 046102 020055 042116 030061 052103 026061 045503	EM45:	.ASCII	TRANSFERRING ON LAST BLOCK - CYLINDER 410, SECTOR 21, TRACK 18/(15)	<12>
	12643 057154 030440 12644 057161 103 12645 057166 020104 12646 057174 050117 12647 057202 043505 12648 057210 020122	006470 052501 046511 051105 051511 044103	012 042523 051120 051040 042524 047101			/CAUSED IMPROPER REGISTER CHANGE/(15)(12)	
	12650 057222 047507 12651 057230 052101 12652 057236 042526 12653 057244 052101 12654 057252 046125 12655 057260 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
	12644 057161 103 12645 057166 020104 12646 057174 050117 12647 057202 043505 12649 057210 020122 12649 057216 042507 12650 057222 047507 12651 057230 052101 12652 057236 042526 12653 057244 052101 12654 057252 046125 12655 057260 052040 12656 057260 052040 12656 057276 042105 12659 057304 020101 12660 057312 020123 12661 057320 052123 12662 057334 020123 12664 057342 020122 12665 057350 043123	042503 042040 044507 042522 051105 042524 043101 051124 051105	053111 052101 042526 044507 041440 052116 042524 047101			RECEIVED DATA GIVES REGISTER CONTENTS AFTER TRANSFER	
Consideration and the state of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of the spirit of	12666 057355 104 12667 057362 042522 12668 057370 047522 12669 057376 052123 12670 057404 045503 12671 057412 046131 12672 057420 020122 12673 057426 051440 12674 057434 020122 12675 057442 051124 12676 057450 034061 12677 057454 051511 12678 057450 051105 12680 057476 051105 12681 057504 042040 12682 057512 051106 12683 057520 047117 12684 057526 040524	052101 042101 042101 042101 041040 041040 047111 030464 041505 041501 041501 041501 041501 041501 041501 041501 041501 041501 041501 041501 041501	020101 043040 040514 047514 041440 042504 026060 047524 020054 020113	EM46:	.ASCII	/DATA READ FROM LAST BLOCK - CYLINDER 410, SECTOR 21, TRACK 19/(15)(1	(2)
-	12676 057450 034061 12677 057454 051511	005015			.ASCIZ	/IS IN ERROR/	
	12678 057462 051105 12679 057470 051124 12680 057476 051105 12681 057504 042040 12682 057512 051106 12683 057520 047117 12684 057526 040524	047522 047101 044522 052101 046517 054105 052116	020116 000122 043123 043516 020101 047040 051511 051440	EM47:	.ASCII	/TRANSFERRING DATA FROM NONEXISTANT SECTOR CAUSED IMPROPER /(15)<12>	

MAINDE( DZRJIA	C-11-DZRJ .PI1	II-A. RPO POWER I		JNCT. CON UP ROUT!	NT. TST-PT	1	K10 MACY11 27(655) 30-MAR-76 22:59 PAGE 273	SE0 0333
12685 12686 12687 12688 12689 12691 12692 12693 12694 12695 12696 12696 12700 12701 12702 12703 12705 12708 12709 12711 12712 12713 12714 12714 12715	057534 057542 057550 057556 057564 057600 057606 057614 057622 057630 057636	041505 040503 040503 042520 042520 042522 051105 047517 040524 040524 040524 040524 040524 051505 051505 051505 051505 051505 051505 051505 051505	047524 051525 050115 020122 044507 041440 026105 020104 043440 053440 041040 051105	020122 042105 047522 005015 052123 040510 043440 040504 053111 040510 052517 020105 006505		.ASCII	REGISTER CHANGE, GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
12699 12700 12701 12702 12703 12704 12705 12706 12707 12708 12709	057600 057614 057622 057630 057630 057636 057652 057653 057660 057660 057664 057702 057710 057716 057724 057732	012 122 042526 040524 051505 051511 047503 051524 051105 046505 052040 042506	041505 020104 043440 051040 042524 052116 040440 040440 052120 040522 040522	044505 040504 053111 043505 020122 047105 052106 052124 042105 051516		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER ATTEMPTED TRANSFER	
	057752 057760 057766 057774 060002 060010 060016 060024 060032	051124 051105 043040 047516 052123 042523 041440 020104 042440	047101 044522 047522 042516 047101 052103 052501 040504 051122			.ASCII	/TRANSFERRING FROM NONEXISTANT SECTOR CAUSED DATA ERROR/(15)(12)	
12721 12722 12723 12724 12725 12726	060042 060050 060056 060064 060072 060100	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522			/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
12716 12717 12718 12719 12720 12721 12722 12723 12724 12725 12726 12727 12728 12730 12731 12732 12732 12733 12734 12735 12737	050010 060016 060032 060032 060050 060050 060056 060072 060106 060106 060110 060116 060132 060140 060154 060154 060170 060171	042523 041440 020104 042440 005015 047507 052101 042526 052101 046125 052040 040502 040502 040502 040502 040502 040502 040502 040504 047111 042506 042524 047101 042506	020104 043440 053440 040527 041040 020122 020122 043123	040504 053111 040510 020123 043125 043101 051124 051105		.ASCIZ	/BAD DATA GIVES WHAT WAS IN BUFFER AFTER TRANSFER/	
12737	060171 060171 060176	020107	053111 046111				/GIVING ILLEGAL FUNCTION CAUSED IMPROPER REGISTER CHANGE/<15><12>	

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2739 2740	060204	040507	020114	052506	T. TST-P		
2741 2742 2743 2744 2745	050220 060234 060234	041440 020104 050117 043505	052501 046511 051105 051511 044103	042523 051120 051040 042524 047101			
2746 2747 2748 2749 2750 2751 2752	060250 060256 060270 060270 060276 060304 060312 060320 060320	020122 042507 047507 052101 042526 052101 046125 052040	052501 046511 051105 051511 044103 005015 042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
2741 2743 2743 2744 2744 2744 2744 2745 2745 2745 2745	060330 060336 060344 060352 060360 060366 060374 060402 060416 060424 060424	052101 046125 052040 005015 042522 042105 020101 020123 047117 020123 040507 041516 040507	042503 042040 044507 042522 051105 042524 043101 046111 020114 020123 000116 052111 040524 040515	053111 052101 042526 044507 041440 052116 042524 042514 052506 047117 044507		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER ILLEGAL FUNCTION IS GIVEN/
	060436 060444 060452 060460	042526 051127 040504 046517 047440 042516 047101 052103 052501 046511 051105 020056	052111 040524 040515 020116 044530 020124 051117 042523 051120 051040 044103 005015 042117 020101 020123 051440 020104 042510	020105 041440 042116 047516 052123 042523 041440 020104 050117 043505 047101	EM52:	.ASCII	/WRITE DATA COMMAND ON NONEXISTANT SECTOR CAUSED IMPROPER REG. CHANGE/<1
2778 2779 2780 2781 2782 2783	060544 060552 060560 060566 060574 060602	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
2770 2771 2772 2773 2773 2775 2775 2776 2777 2778 2778 2781 2781 2782 2783 2784 2785 2787 2789 2789 2789	060466 060502 060510 060516 060524 060532 060540 060544 060552 060560 060610 060612 060626 060626 060634 060634 060636 060634	042516 047101 052103 052501 046511 051105 020056 042507 047507 052101 046125 052040 005015 042522 042105 042522 042105 020123 047117 020123 020122	042503 042040 044507 042522 051105 042524 043101 052101	053111 052101 042526 044507 041440 052116 042524 042524		.ASCIZ	/RECEIVED DATA GIVES REGISTER CONTENTS AFTER ATTEMPTED WRITE DATA/

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MAINDEC DZRJIA.	-11-DZRJ P11			INCT. CON UP ROUTI	T. TST-PT	1	M10 MACY11 27(655) 30-MAR-75 22:59 PAGE 275 SEQ	0335
12793 12794 12795 12796 12797 12798 12799 12800 12801 12802 12803 12804	060672 060700 060706 060713 060720 060726 060734 060742 060750 060756 060764 060772 061000 061001 061006	050115 051127 040504 122 042510 042524 042524 042523 041440 020104 042440	042524 052111 040524 040505 042101 042116 020121 050122 051101 052501 040504 051122	020104 020105 020104 051105 042040 043101 020101 044103 042523 040524 051117	EM53:	.ASCIZ	READ HEADER AND DATA AFTER A SEARCH CAUSED DATA ERROR/	
12793 12794 12795 12796 12797 12799 12800 12801 12802 12803 12804 12805 12808 12808 12809 12810 12811 12813 12814 12818 12818 12818 12818 12823 12823	061022 061030 061036 061044 061052 061060 061066	000 101 052120 047503 020104 044440 042111 042522 052501 046511 051105 051511 044103 005015 047507 052101 042526 052101 046125	052124 047111 046515 044527 053116 040440 051523 042523 051120 051040 042524 047101	046505 020107 047101 044124 046101 042104 041440 020104 050117 043505 020122 042507	EM54:	.ASCII	ATTEMPTING COMMAND WITH INVALID ADDRESS CAUSED IMPROPER REGISTER CHANGE	Œ
	061102 061110 061112 061126 061126 061134 061142 061150	047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)	
12826 12827 12828 12829 12830 12831 12832 12833	061160 061166 061174 061202 061210 061216 061224 061232	042522 042105 020101 020123 052123 047117 020123 020122	042503 042040 044507 042522 051105 042524 043101 050117 042511	053111 052101 042526 044507 041440 052116 042524 051105		ASCIZ	/RECEIVED DATA GIVES REGISTER CONTENTS AFTER OPERATION/	
12824 12825 12826 12827 12828 12829 12830 12831 12833 12834 12835 12836 12837 12839 12839 12841 12843 12843 12845	061150 061156 061166 061166 061174 061202 061210 061214 061224 061232 061234 061254 061254 061276 061326 061334 061334 061334	052040 005015 042522 042105 020101 020123 052123 052123 052127 020122 052101 051127 020107 040505 053440 054105 042526 042526 042526 020127	042503 042040 044507 042522 051105 042524 043101 052111 052111 052111 042520 040440 051523 043122 051105	053111 052101 042526 044507 041440 052116 042524 051105 000116 047111 051040 043516 020110 052103 042104 047514 047522	EM55:	ASCII	/WRITING OR READING WITH EXPECTED ADDRESS OVERFLOW ERROR/(15)<12>	
12845	051337 051344	103	052501 046511	042523 051120		.ASCII	/CAUSED IMPROPER REGISTER CHANGE/<15><12>	

.ASCII /IMPROPER REGISTER CHANGE/(15)(12)

005015 050117

MAINDEC-11-DZR	JI-A. RPO POWER D	4/5/5 FU	NCT. CON	T. TST-P	7 1	B11 MACY11 27(655) 30-MAR-76 22:59 PAGE 277 SEG 0337
	051105	051040 042524 047101	043505 020122 042507			
12903 062054 12904 062062 12905 062064 12905 062072 12907 062100 12908 062106 12909 062114 12910 062122	005015 047507 052101 042526 052101 046125 052040	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522		.ASCII	GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
12903 062054 12903 062054 12903 062054 12905 062064 12905 062064 12905 062106 12907 062100 12909 062104 12910 062122 12911 062132 12912 062132 12914 062154 12915 062154 12915 062154 12916 062154 12916 062236 12920 062236 12921 062236 12922 062236 12923 062236 12923 062252 12923 062252 12923 062252 12923 062252	046125 052040 005015 042522 042105 020101 020123 047117 020123 040122 040504 040502	042503 042040 044507 042522 051105 042524 043101 042524 040524 051516	053111 052101 042526 044507 042524 052116 052504 052504 052506		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER ATTEMPTED DATA TRANSFER
15831 065305	052101 044524 020117 054506 051511 052504 05105 040440 051105 042105 042105	042524 043516 047515 051040 042524 044522 020116 052101 040503 044440 042520	050115 052040 044504 043505 020122 043516 050117 047511 051525 050115	EM60:	.ASCII	
12932 062316 12934 062324 12935 062332 12936 062340 12937 062341 12938 062346 12939 062354 12940 062362 12941 062370 12942 062376 12943 062420	012 122 042524 047101 047507 052101 042526 052101 046125 052040 005015	043505 020122 042507 042117 020101 020123 051440 020104 042510	051511 044103 020056 042040 044507 044507 047510 042502 042522		.ASCII	REGISTER CHANGE. GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
12943 062404 12944 062412 12945 062426 12946 062426 12947 062436 12948 062436 12949 062444 12950 062452 12951 062466 12952 062474 12953 062474	042522 042522 042105 020101 020123 052123 047117 020123	042503 042040 044507 042522 051105 042524 043101 050117	053111 052101 042526 044507 041440 052116 042524 051105		.ASCII	REGISTER CHANGE. GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)  RECEIVED DATA GIVES REGISTER CONTENTS AFTER OPERATION WAS ATTEMPTED/(15)

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.ASCII /GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)

MAIN DZRJ	DEC-11-DZRJ IA.PII	II-A. RPO POWER D	04/5/6 FL	UNCT. CON UP ROUT!	NT. TST-PI	1	D11 MACY11 27(655) 30-MAR-76 22:59 PAGE 279	SE0 0339
130	09 063166 10 063174 11 063202 12 063210	042526 052101 046125 052040	020123 051440 020104 042510	044127 047510 042502 042522				
100000000000000000000000000000000000000	10 063202 12 063210 13 063216 14 063220 15 063226 16 063234 17 063234 18 063250 19 063256 19 063256 20 063254 21 063272	052101 046125 052040 005015 042522 042105 020123 047117 020123 047117 020123	042503 042040 044507 042522 051105 042524 043101 047503	053111 052101 042526 044507 041440 052116 042524 046515		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER COMMAND/	
130	3 063304 54 063315	047111 050125 046111	042524	051122	EM65:	.ASCIZ	/INTERRUPT FAILING/	
	063320 063326 7 063334 8 063342 9 063350 063356 063364 063400 063406	046111 042510 040440 052101 046515 047506 042101 041505 040503 040503	042503 042507 042507 042503 042503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 043503 04	000107 051105 042040 047503 020104 042510 046105 047117 020124 042105	EM66:	.ASCII	HEADER AND DATA COMMAND FOR HEAD SELECTION TEST CAUSED/(15)(12)	
130	55 053414 95 053416 97 053424 98 053432 99 053440	051105 020055 020124	047522 044122 044507	020122 051504 042526 041501		.ASCII	VERROR - RHDST GIVES TRACK BEING WRITTEN OR READ ON CYL 0, SCTR 0/41	5><1
	063446 11 063454 12 063462 13 063470 14 063476 15 063504	020123 020113 020107 042524 051040 047117 030040	051124 042502 051127 050116 040505 041440 030040 042101 042504 042440 042440	047111 052111 051117 020104 046131				
1300	063446 063454 12 063452 13 063476 14 063512 15 063526 15 063534 16 063534 17 063556 18 063556 18 063556 18 063556 18 063556 18 063556 18 063600 18 063600 18 063600 18 063600	020107 042524 051040 051044 051124 051127 042505 042505 042505 042505 042505 042505 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 042506 04	042101 042504 020104 042440 042440 042101 041505 052040	05015 044040 020122 040504 051122 020116 051440 044524 051505			/READ HEADER AND DATA ERROR IN HEAD SELECTION TEST./(12)(15)	
130000000000000000000000000000000000000	55 053604 57 063612 58 063620 59 063626 50 063634 51 063642 52 063650	044506 047506 051117 041115 051101 020105 051105	042101 042101 041505 052040 051125 051125 051105 051105 042510	020124 053440 052516 020123 044124 042101		.ASCII	FIRST FOUR WORD NUMBERS ARE THE HEADER. / (12) (15)	

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MAINDER DZRJIA	C-11-DZRJ	I-A. RPO POWER D	14/5/6 FL	INCT. CON UP ROUT!	NT. TST-P	Т 1	F11 MACY11 27(655) 30-MAR-76 22:59 PAGE 281
13119	054316 054324 064332 064346 064354 064362	047507 052101 042526 052101 046125 052040 005015	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522			GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
	064364 064372 064400 064406 064414 064422 064430 064436	042522 042105 020101 020123 052123 047117 020123 042504 051514	042503 042040 044507 042522 051105 042524 043101 020063 020130 051505	042526 044507 041440 052116 042524 047111 052520		.ASCIZ	RECEIVED DATA GIVES REGISTER CONTENTS AFTER 3 INDEX PULSES/
13134	054452 054457 054464 054472	127 052440 052440 020123	044510 044523 044516	000 042514 043516 052502	EM72:	.ASCII	/WHILE USING UNIBUS B/(15)(12)
13139 13139 13140 13141 13142 13143	054470 0544505 054505 054505 054506 054555 054555 054555 054555 054555	020123 122 040504 052501 046511 051105 051511 044103	006502 040505 040524 042523 051120 051040 042524 047101	012 020104 041440 020104 050117 043505 020122 042507		.ASCII	/READ DATA CAUSED IMPROPER REGISTER CHANGE/(15)(12)
13146 13147 13148 13149 13150	064550 064566 064574 064602 064610 064616	047507 052101 042526 052101 046125 052040 005015	042117 020101 020123 051440 020104 042510	042040 044507 044127 047510 042502 042522			/GOOD DATA GIVES WHAT SHOULD BE THERE/(15)(12)
131450-12345567890-12345567890 1314515151515151515151515151515151515151	06420 064210 064210 064214 064234 064234 064250 064250 064250 064250	042522 042105 020101 020123 053440 042510 052106	042503 042040 044507 044127 051501 042522 051105 040515	053111 052101 042526 052101 052040 040440 041440 042116		.ASCIZ	PRECEIVED DATA GIVES WHAT WAS THERE AFTER COMMAND
13162	064706 064707 064714 064722	000 127 052440 052440	044510 044523 044516	042514 043516 052502			/WHILE USING UNIBUS B/(15)(12)
13165 13166 13167 13168	064714 064722 064730 064735 064742 064750 064756	020123 122 040504 041516 052103	006502 040505 040524 051117	020104 044440 042522		.ASCIZ	/READ DATA INCORRECT/.
13169	064756	052103	000	042514	EM74:	.ASCII	/WHILE USING UNIBUS B/<15><12>

MAINDEC-11-DZRJI-A DZRJIA.PII PO	A. RPO4/5/6 FUNCT. DWER DOWN AND UP RO	CONT. TST-PT 1 JTINES	III MACY11 27(655) 30-MAR-76 22:59 PAGE 284
13279 066130 04 13280 066136 05 13281 066144 04	12104 042522 0515 50040 052514 0201 12522 047515 0425	23 17 26	
13282 066152 00 13283 066154 04 13284 066162 05 13285 066170 04 13286 066176 04 13287 066204 04 13289 066212 05 13289 066220 02 13290 066226 04 13291 066233 13292 066246 05 13293 066246 05	17125 052111 0470 52117 040440 0405 16111 041101 0425 10440 052106 0511 10440 042104 0425 51523 050040 0525	EM102: .ASCIZ	/UNIT NOT AVAILABLE AFTER ADDRESS PLUG REPLACEDY :
13291 056233 13292 066240 04 13293 066246 05 13294 066254 04 13295 066262 04 13296 066270 04 13297 066276 02 13298 066304 04	1501 042105 0 122 043505 0515 12524 020122 0475 12116 047105 0515 14440 041516 0511 12522 052103 0410 13105 051117 0201 13105 051117 0201 13105 041504 0435	10 15 11	REGISTER CONTENTS INCORRECT BEFORE A DIAG MODE SEEK
13300 066317 13301 066324 04 13302 066332 05 13303 066340 04 13304 066346 04 13305 066354 05 13306 066362 04 13307 066370 04	2523 045505 0515 122 043505 0515 2524 020122 04750 2116 047105 0515 14440 041516 0511 12522 052103 0404 12106 051105 0404 12040 040511 0201 17515 042504 0514	7	REGISTER CONTENTS INCORRECT AFTER A DIAG MODE SEEK/

100	MAINDEC ZRJIA.	-11-DZRJ Pli	I-A. RPO POWER D	H/5/6 FU	NCT. CON UP ROUTI	IT. TST-P	т 1	MACY11	K11 27(655)	30-MAR-7	6 22:59	PAGE 2	86		SEG 0346
	13363 13364 13365 13365 13367 13369 13369 13370 13371 13373 13374 13375 13376 13376 13376 13376 13376 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381 13381	067016 067021 067021 067026 067034 067030 067050 067056 067072 067102 067102 067102 067110 067116 067124 067132 067132 067132 067132 067132 067132 067132 067132 067132 067132 067132	052116 020040 020124 052101 041040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040 020040	000 020103 052040 020040 020040 052111 051040 020040 020105	020040 051505 053440 020040 020040 043505 052040 047111	DH4:	.ASCII	/PC	TEST	WAT	BIT	REG	TIME IN/(15)	(12)	
	13372 13373 12374 13375 13376 13377 13378 13379	067100 067110 067116 067116 067124 067132 067140	020040 020040 020040 020040 054105 020040 051505	020040 047516 020040 020040 042520 042520 042523 020040 042524 020040 042524 020040	020040 020040 041520 020040 052103 051104 030061		.ASCIZ	,	NO	PC	EXPECT	ADDRESS	10 MSEC/		
	13380 13381 13382 13383 13384 13385 13386 13387	067154 067162 067170 067176 067204 067212 067220 067226	046440 041520 020040 020040 020107 047507 020040 053111	042523 020040 042524 020040 020040 042117 042522 042105	020040 020040 041520 020040 052103 051104 030061 020040 042503 020040 042503 020040 042101 020040 040524	DH5:	.ASCII	/PC	TEST	REG	GOOD	RECEIVE	D/<15><12>		
	13388 13389 13390 13391 13392 13393 13394	067264 067272		042105 020040 047516 020040 051505 040524 040504	020040 020040 042101 020123 020040 040524		.ASCIZ	,	NO	ADDRESS	DATA	DATA			
	13395 13396 13397 13398 13399	067301 067306 067314 067322 067330	120 020040 020124 043505 051040	020103 052040 020040 020040 041505	020040 051505 051040 020040 044505	DH6:	.ASCII		TEST	REG	RECEIVED	V <15> <18	2>		
	13401 13402 13403 13404	067343 067350 067356 067364	040 020040 020040 042104 042040	020040 047040 020040 042522	020040 020117 040440 051523		.ASCIZ	/	NO	ADDRESS	DATA				
	13394 13395 13396 13397 13398 13399 13400 13403 13403 13404 13405 13407 13410 13411 13411 13411 13411 13411 13411	067300 067301 067306 067314 067322 067330 067336 067350 067356 067364 067364 067406 067406 067414 067422 067430	000 120 020040 020124 043505 051040 042526 020040 020040 042104 042040 041520 020040 020040 020040 020040	020103 052040 020040 041505 006504 020040 042522 052101 020040 042524 020040 042524 020040	020040 051505 051040 020040 044505 020040 020117 040440 051523 000101 020040 052123 042522 020040 051505	DH7:	.ASCIZ	/PC	TEST	REG	ADDRESS/				
	13414 13414 13415 13416	067440 067446 067454 067462	041520 020040 020040 046111	020040 042524 020040 047111	020040 052123 040506 020107	DH10:	.ASCII	/PC	TEST	FAILING	CONTENT	CONTENT	CONTENT CONTE	NT/<15><12>	

MAINDEO DZRJIA.	-11-DZRJ Pli	I-A. RPO POWER D	4/5/6 FU	NCT. CON UP ROUTI	IT. TST-PT	1	MACY11 a	L11 27(655)	30-MAR-7	6 22:59	PAGE 2	87			SEG 0347
13417 13418 13419 13420 13421	067470 067476 067504 067512 067520 067526 067531 067536 067544	047503 020124 047105 052116 047503 006524	052116 047503 020124 047105 052116	047105 052116 047503 020124 047105											
13423 13424 13425 13425 13426 13427 13428 13429 13430	067531 067536 067536 067544 067552 067560 067566 067574 067602 067610	020040 020040 043505 051040 020040 030523 042110 051040	012 020040 047040 020040 020056 041510 051040 020040 030523 042510	020040 020117 051040 020040 030523 041510 051040 020040 030522		.ASCIZ	,	NO	REG.	RHCS1	RHCS1	RHDS1	RHER1/		
13419 13419 13419 13421 13422 13422 13422 13422 13423 13433 13433 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443 13443	067552 067560 067566 067574 067602 067610 067616 067617 067624 067632 067632 067640 067654 067654 067652 067670 0677704 067712 067720 067720	000 120 020040 020124 047117 041440 043117 020124 047117 041440 043117 020040 020040	020103 052040 020040 020124 047117 041440 043117 020124 047117 041440 043117 020040 047516 020040	020040 051505 041440 043117 020124 047117 041440 043117 020124 047117 005015 020040 020040 044122	DH26:	.ASCII	/PC	TEST	CONT OF	CONT OF	CONT OF	CONT OF	CONT OF	CONT OF/	15><12
13447	067742	051503	043117 020040 047516 020040 020061 051503 044122 020040 020061 051105 044122	005015 020040 020040 044122 020040 020062 051504 044122 020040 020062		.ASCIZ	,	NO	RHCS1	RHCS2	RHDS1	RHER1	RHER2	RHER3/	
13454 13455 13456 13457 13458 13459 13460	070014 070016 070024 070032 070040 070046 070054	000063 041520 020040 020040 042122 047507 020040	020040 042524 020040 020040 042117 040502	020040 052123 047527 020040 020040 0206504	DH30:	.ASCII	/PC	TEST	WORD	GOOD	BAD/<15	><12>			
13448 13449 13450 13451 13453 13455 13455 13455 13463 13464 13465 13465 13467 13467 13470	067750 067756 067764 067772 070000 070006 070014 070016 070024 070032 070040 070054 070052 070062 070063 070070 070076 070104 070112 070126	044122 020040 020061 051105 044122 020040 020040 020040 042122 047507 020040 020040 020040 020040 020040 020040 020040 020040 020040	020040 047040 020040 020040 052101 042040 000012	020040 020117 047040 020040 020101 052101		.ASCIZ	/	NC	NO .	DATA	DATA/<15	5><12>			
13470	070132	041520	020040	020040	DH51:	.ASCII	/PC	TEST	REG	GOOD	RECVD	ILLEGL	15><12>		

...

MAINDEO DZRJIA.	-11-DZRJ	I-A, RPO POWER D	14/5/6 FU	INCT. CON UP ROUT!	NT. TST-P	Т1	MACY11 a	M11 (655)	30-MAR-7	6 22:59	PAGE	288
13471 13472 13473 13474 13475 13475 13476 13476 13477 13481 13481 13481 13481 13481 13481 13481 13481 13481 13481 13481 13481 13481 13481 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491 13491	070140 070146 070154 070162 070170 070176 070204 070212 070226 070234 070242 070250 070250	020040 020040 020107 047507 020040 020040 020040 020040 051104 040504 020040 020040 041516	042524 020040 020040 042117 042522 020040 046107 020040 047516 020040 051505 040524 040504 040504 047124	052123 042522 020040 020040 053103 046111 005015 020040 042101 020123 020040 040524 052506		.ASCIZ	,	NO :	ADDRESS	DATA	DATA	FUNCTN/
13487 13488 13489 13490 13491 13492 13493 13494	070271 070276 070304 070312 070320 070326 070334 070342 070350 070350 070360 070366 070374 070402 070410	120 020040 020124 043505 043440 020040 042126 042117 005015 020040 020040 020040 051104 040504	020103 052040 020040 020040 047517 051040 020040 044506	020040 051505 051040 020040 020104 041505 046440 043516	DH60:	.ASCII	PC	TEST	REG	GOOD	RECVD	MODFING/(15)(12)
	070350 070352 070366 070374 070402 070410 070416	020040	020040 047516 020040 051505 040524 040504 020040	020040 020040 042101 020123 020040 040524 042522			,	NO	ADDRESS	DATA	DATA	REG/
13502 13503 13504 13505 13506 13507 13508 13509 13510 13511 13512 13513 13514 13515 13516 13516 13521 13523 13523 13523	070424 070424 070426 070434 070450 070456 070465 070465 070506 070506 070526 070534 070550 070556 070566 070566	020040 020040 020040 020040 047440 040 020040 020040 020040 020040 020124 020103 020040 020040 020040 020040 020040 020040 020040	020040 042524 020040 020106 051503	020040 052123 041520 020040 006461	DH61:	.ASCII	/PC	TEST	PC OF	RHCS1/	15><12>	
13510 13511 13512 13513	070465 070472 070500 070506 070514	040 020040 020040 051123 053440	020040 047040 020040 020040	020040 020117 045040 020040		.ASCIZ		NO	JSR	WAS/		
13515 13516 13517 13518 13519	070521 070526 070534 070542 070550	120 020040 020124 020103 051040	020040 047040 020040 020040 051501 020103 052040 020040 043117 042110	020040 051505 050040 020040 030523	DH62:	.ASCII	/PC	TEST	PC OF	RHDS1/<	15><12>	
13520 13521 13522 13523 13524	070556 070560 070566 070574 070602	020040 020040 020040 020040 020122	020040 047516 020040 020040	020040 020040 051512 020040			,	NO	JSR	WAS/		

MOTNES II D		OU /E /É EI	UNOT CO	NT TOT	DT 1	MACULI	N11	- NOD .	75 22.50	B BOOF	200		SEO 0240
DZRJIA.PII	POWER			INES		,I'MCTII	27(000)	SU-TIHK-	0 22:5	PHGE	289		SEQ 0349
13525 0706 13526 0706 13527 0706 13528 0706 13529 0706 13530 0706	04 1520 020040 020040 052116 047503	020040 042524 020040 020040	020040 052123 047503 020040 020040	DH65:	.ASCII	/PC	TEST	CONT	CONT	CONT	/<15><12>		
13532 07066 13533 07066 13534 07067 13535 07070 13536 07071 13537 07071	20040 020040 020040 020040 020040 020040 020040 020040 044122 040040	020040 020040 047516 020040 020061 051501	052116 005015 020040 020040 044122 020040 020040		.ASCIZ	,	NO	RHCS1	RHAS	RHDS1	,		
13525 0706 13528 0706 13529 0706 13529 0706 13530 0706 13531 0706 13532 0706 13533 0706 13534 0706 13535 0707 13536 0707 13538 0707 13539 0707 13540 0707 13540 0707 13541 0707 13542 0707 13543 0707 13545 0710 13549 0710 13549 0710 13550 0710 13551 0710 13552 0710 13553 0710 13554 0710 13555 0710 13556 0710 13557 0710 13559 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13560 0711 13570 0712 13570 0712 13570 0712 13570 0712 13570 0712	020040 020061 020040 020124 020124 020124 020040 020040 020040 020040 020040 020040	052040 052040 052123 042510 051040 020040 031522 041510 051040	020040 051505 051040 020040 030522 042510 051040 020040 030523		.ASCIZ	/FC	TEST	RHDST	RHER1	RHER2	RHER3 RHCS1	RHCS2/	
13551 13552 07103 13553 07104 13554 07105 13555 07105 13556 07106 13557 07107 13558 07110			020040 051505 050040 020040 020056 047517 041040	DH77:	.ASCII	/PC	TEST	PC OF	REG.	GOOD	BAD/<15><12>		
13552 07103 13553 07104 13554 07105 13555 07105 13556 07106 13557 07107 13558 07110 13550 07111 13561 07112 13562 07113 13563 07113 13564 07114 13565 07115 13566 07115	120 120 120 120 120 120 130 140 151 150 150 150 150 150 150 150 150 15	020103 052040 020040 043117 043505 043440 020040 047516 020040 020040 051104 040504 040504	020040 020040 051512 020040 020040 040524 040504		.ASCIZ	,	NO .	JSR	ADDR	DATA	DATA/		
13569	071170			.EVEN									
13571 07117 13572 07117	0 001116	004604 041620	041616	DT1:	.WORD	SERRPC,	TSTNM, WAI	TPC, WAIT	BT, WAITR	E, \$BDDAT	r,cs1,0		
13571 07117 13572 07117 13573 07120 13574 07121 13575 07121 13576 07122 13577 07123	0 001116 0 041622 04 002362 0 001116 6 041622 94 041624	004604 041620 000000 004604 041620 000000	041616	DT4:	. WORD	SERRPC,	TSTNM, WAI	TPC,WAIT	BT,WAITR	E, SBDDA1	T,WAITTM,O		
13577 07123 13578 07123	00 001116 00 001124	000000	000000	DT5:	. WORD	SERRPC,	TSTNM, REG	ADR, SGDD	AT, \$BDDA	т,0	;		

							B12
MAINDEO DZRJIA.	-11-DZRJ	POWER D	OWN AND	NCT. CON UP ROUTI	T. TST-P NES	T 1	MACY11 27(655) 30-MAR-76 22:59 PAGE 290
13579	071244	001115	000000	004600	DT6:	. WORD	SERRPC.TSTNM, REGADR, SECDAT. C
13581	071256	000000	004624	001500	D17:	. WORD	SERRPC, TSTNM, STMP1, 0
13584	071266 071274 071302	002362	000000	002404	DT10:	. WORD	SERRPC.TSTNM, SBDADR, CS1, CS2, DS1, ER1, D
13587 13588 13589	071306 071314 071322	001116	004604	002362 002364 000000	DT26:	. WORD	SERRPC.TSTNM.CS1.CS2.DS1.ER1.ER2.ER3.0
13590	071330 071336	001124	001156	000000	DT30:	. WORD	SERRPC, TSTNM, ERWORD, SGDDAT, SBDDAT, D
70-12375567890-123756789 755555555555555555555555555555555555	071344 071352 071360	001116 001124 000000	001126	004600	DT51:	. WORD	SERRPC, TSTNM, REGADR, SGDDAT, SBDDAT, ILLEGL, O
13597	071362 071370 071376	001116	001156	001155	DT60:	. WORD	SERRPC. TSTNM. REGADR. SGDDAT, SBDDAT, SBDADR. D
13500	07140G 071406	001116	000000	041422	DT61:	. WORD	SERRPC, TSTNM, PCJSR, SBDADR, O
13603	071412	001122	000000	041422	DT62:	. WORD	SERRPC. TSTNM, PCJSR, SBDADR, D
13504	071424	001115	004604	002362	DT65:	. WORD	SERRPC, TSTNM, CS1, AS, DS1, D
13605 13606 13607 13608 13609	071432 071440 071446 071454	002400 001116 002370 002360	000000	005365 005364 000000	DT66:	.WORD	SERRPC.TSTNM.ER1.ER2.ER3.CS1.CS2.D
13610	071460 071466 071474	001116 004600 000000	001124	001156	DT77:	. WORD	SERRPC.TSTNM, PCJSR, REGADR, SGDDAT, SBDDAT, D
13614	071476 071501	000 000	000	000	DF1:	.BYTE	0.0.0.0.0.0
13617	071501 071504 071505 071510 071513 071517 071521		000	000	DF4:	.BYTE	0,0,0,0,0,1,0
13620	071514	000	000	000	DF5:	.BYTE	0,0,0,0
13622	071521	500	000	000	DF6:	.BYTE	0,0,0,0
13624	071525	500	300	000	DF7:	.BYTE	0.0.0
	071530 071533 071536	000 000 000	000	000	DF10:	.BYTE	0.0.0.0.0.0
13630	071537 071542 071545	000 000 000	000 000 000	000	DF26:	.BYTE	0.0.0.0.0.0.0

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MAINDEO DZRJIA	-11-DZRJ	II-A. RPO4/ POWER DOW	5-6 FUNC N AND U	T. CON	T. TST- NES	PT 1	C12 MACY11 27(655) 30-MAR-76	22:59 PAGE 291
13533 13534 13535	071547 071552	000	000	000	DF30:	.BYTE	0,0,0,0,0	
13535	071554 071557	000	000	000	DF51:	.BYTE	0,0,0,0,0	
13640	071562	000	000	000	DF60:	.BYTE	0,0,0,0,0,0	
13642	071565 071570 071573	000	000 000 000	000	DF61:	.BYTE	0,0,0,0	
13543	071573	000	000	000	DF62:	.BYTE	0.0.0.0	
13645	071577 071600	000	000	000	DF65:	.BYTE	0.0,0.0,0	
	071574 071577 071600 071603 071605 071610	00000000000000000000000000000000000000	000 000 000 000	000	DF66:	.BYTE	0.0.0.0.0.0.0	
13552	071615 071620	000	000	000	DF77:	.BYTE	0,0,0,0,0	
13655		071624			.EVEN			
13659		000001			.END			

	C-11-DZRJI-A .PII CR	OSS REFE	RENCE	TABLE	T. TST-F	•	inc 111	27(655)	30-MAR-	75 22:5	9 PAGE	292			SE0 035
	= 020000 = 000040 = 100000	i	99: 97: 57:	2728	2795										
D. E.	= 020000 = 000040 = 100000 = 001000 = 100000 = 100000 = 00456		57* 179* 167* 167* 164*	10831*	11754 2779	13604	4260	4559	4929	4949	8385	2637	10040	10526	
	004740	14	188# 151	1976 1913* 4951	1976* 8376	2730 8628	2804	3212	3406	3590	3762	4053	4251	4582	4831
	22222		######################################	11682 3360 11041# 1513# 1514# 4140#	3391										
001203555799 0112345 E	000010		######################################	1559997.6554 15544444 14444444444444444444444444	11144	11634									
	= 000002 = 002000 = 004000	i	51# 32# 31#	11618											
1345	= 010000 = 020000 = 100000 = 100000		30*	11625 11130 4956											
וווווווווווווווווווווווווווווווווווווו	000010 000020 000040		49# 49# 47# 46#	10613											
VEC	= 000200 = 000400 = 000014		43# 59#	11746			•								

MAINDEO DZRJIA.	D-11-DZRJ	I-A. RPO4/ CRÖSS REF	5/6 FU	NCT. CON'	T. TST-F	PT 1	MACY11	E12 27(655)	30-MAR	-76 22:5	9 PAGE	293			SEQ	0353
CAT CC CHECK CHECKC CHECKT	041465 041465 050036 050036	,	4098 1402 <b>*</b> 2296 0510	4121# 11786 2401 10516#	3537	3730	4359	4618	4673	10506#						
CHECKT	04144		2591 5308 7760	2905 5470 8007 10512#	3044 5564 9171	3150 9282 9464	3260 6016 8722	3937 5170 8805	4158 6365 8964	4331 6530 9059	4384 6743 9178	4687 6533 9296	4959 7175 9425	5006 7342 9552	5159 7589 9689	
CHREG	042246		2338 3364 4937	2468 3374 4944	2692 3429 8380	2705 3652 8387	2716 3663 8632	2723 3824 9539	2763 3835 9914	2774 4255 10016	2783 4262 10028	2790 4564 10035	2797 4574 10131	3215 4817 10751#	3353 4824	
CKSWR =	041236	1	2598 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 77858 7	11610 5124 5128 5707 7541 8692 9354	8380 11633 5273 6136 6879 7554 8697 9359 10088	8387 11996# 5436 6311 6894 7709 9859 9398 10404#	5610 6316 6892 7726 9864 9393	5615 6326 6897 7953 9869 9600	5625 6331 7092 7972 8874 9605	5630 6478 7109 9112 9879 9610	5777 5483 7128 9130 9909 9615	5782 6491 7141 8135 8922 9620	5790 6496 7289 8419 8930 9648	5795 6697 7307 8434 9239 9653	5972 6692 7505 8439 9344 9836	
CLDISK	041366	1	1909 1909 2952 4327 6124 8528	10081 2061 3040 4355 6304 8672 10484*	2096 3111 4669 6474 8801	2135 3256 4683 5571 8841	2195 3492 4976 6975 9028	2243 3533 5002 7076 9146	2292 3726 5034 7285 9292	2397 3899 5087 7489 9332	2523 3908 5269 7705 9541	2542 3933 5429 7888 9593	2587 4111 5603 7935 9829	2755 4130 5773 9109 9948	2901 4154 5965 9304 10075	
COMPAR	243404		1115*	10494 <b>*</b> 10499 5399	5558	5756	5918	6108	6259	6457	5619	6858	7022	7269	7435	
COMREG	042354		1115* 5253 7689 2349 4960 7415	7850 2480 5232 7568	8260 2737 5379 7829	5756 9495 2811 5541 9089	8753 3090 5737 8242	9126 3227 5900 8396	10137 3441 6089 8648	11001# 3575 5241 9009	3847 6438 9105	4077 6601 9249	4272 6838 9496	4589 7003 9750	4938 7248 9924	
CPHALT	066402		0052 2298 4675 7177 9427 67* 68*	10192 2403 5008 7344 9554 11304 11275	10918# 2593 5161 7591 9691 11314 11314	2907 5310 7762 9862	3046 5472 8009 13311#	3162 5656 8173	3262 5831 8466	3539 6018 8724	3732 5172 8907	3939 6367 8966	4160 6532 9061	4333 5745 9190	4361 6935 9298	
CRLF =	000005		58#	11275	11314											
	002362		1388#	2673 2652	11698	13571 11690	13584 13584	13587 13587	13604 13606	13606						
E AP CO COCCODA KLLES COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F. COCCODA F.	=====		1245# 12388# 11238# 11238# 11247# 1153# 1153#	3322 273	1551											
DFF5 = DF1 DF10 DF26 DF30	000001 071476 071530 071537 071547		1157* 1153* 1153* 1153* 1153* 1153* 1153* 1153* 1153*	345 424 1050 613	35£ 1062 1062 1063	13614# 454 1074 646	13626# 1086 707	13630#	765	901	837	946	957	988	1007	

MAINDE DZRJIA	C-11-DZRJI-A. R LPII CRÒSS	PO4/5/6 FL REFERENCE	NCT. CONT.	. TST-F	PT 1	MACY11	F12	30-MAR	-76 22:5	9 PAGE	294			SEG O	35
DF4 DF5	071505 071514	13634#	13517# 464 639	476 657 971	490 569 991	504 682 999	516 594 1019	524 719 1038	531 732 13620*	541 754	550 794	561 913	594 825	605 850	
DF51 DF50 DF50 DF550 DF550 DF550 DF57 DF10 DF130 DF130	071554 071521 071552 071570 071570 071500 071605 071655 071642 057440 057440	######################################	136472# 136472# 136472# 136472# 136474# 136472# 136472# 13657# 136539#	350 430	13344*	13413#	1014	1039	13520#						
DH26 DH30	057617 070016	565 589	338 415 1043 611	1055	1067	1079	13433# 739	763	799	835	944	955	986	1005	
DH4 DH5	067021 067162	363 374	13364# 459	471 655 966	495 666 979	499 680 997	511 692 1017	522 717 1033	529 730 13381#	539 752	548 792	559 811	582	603 848	
DH51 DH60 DH61 DH65 DH65 DH77 DH77	070132 067301 070271 070426 070521 070514 070737 067400 071035	3711175 5721175 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 5729775 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 572975 57	459 459 903 13470# 13395# 13504# 13515# 13526# 13540# 13552#	366	979	997	1017	1033	13381*						
DH77 DIGB DISPRE DLT DL54 DMD DOG DPR	071035 = 000004 001142 000174 = 100000	23+3***********************************	1551* 1559	1559*	11173*	11617*				:					
DL64 ·	= 100000 = 000020 = 000001 017262 = 000400	1156#	2524	2543	2514	2802	3890	3909	4112	4131	10331				
DPR	= 000400	116C# 5710	2524 3999# 2260 5873	2457 6062	2677 6214	4043 6411	4235 6574	4522 6788 10527 4559	4553 6976	4803 7221	4923 7388	5205 7635	5352 7904	5514 8055	
DRY	= 000200	1159# 8554	8359 2262 8593	8611 2457 8836	2677 6214 9222 2691 9326	9469 4017 9587	9734 4217 10527	4559	4777	4897	5025	5048	7929	9341	
DST DSWR DS1 DT DTE	002366 = 177570 002404 002406 = 010000	8554 1390# 73# 1397# 1398# 1182#	11738 272 2677 2046*	1550 2681 3417	10334	10346	11706	13584	13587	13604					
DST DSSI DSSI DSSI DSSI DSSI DSSI DSSI D	002404 002406 = 010000 = 001000 071170 071266 071306 071330	1397# 1397# 1398# 1195# 1195# 11959 1593	344 423 1049 612	355 437 1061 628	13571# 453 1073 645	13584# 1085 706	13597 <b>*</b> 740	· 764	300	936	945	956	997	1006	

DT4 DT5	071210 071230	13590#	13574#	u7E	400	502	EIE	E22	E30	EHO	Eug	E4.0	593	604
751 750 750 755 755 775 777	071344 071244 071244 071362 071400 071412 071424 071440 071256 071460	135959999554654695 735573999955464695 135739999546469 11707477	463 639 904 13593# 13579# 13500# 13600# 13604#	475 656 970	499 667 980	503 681 998	515 693 1018	523 718 1037	530 731 13577#	540 753	549 793	560 812	593 824	604 849
		396 1028 1145* 5701 8206	13606# 13581# 13610# 2117 5864 8350	2273 6053 8602	2449 6205 9213	2679 6402 9460	4026 6565 9725	4226 6779 10518	4503 6967	4786 7212	4905 7379	5196 7626	5343 7795	5505 8046
CH CT	000100	1176# 1270# 5814 6917 8457 9410 1400#	3659 5815 7161 8458 9411	3831 5001 7326 8459 9412	4956 6154 7327 8715 9670	5144 6155 7328 8716 9671	5292 6156 7574 8717 9672	5293 6350 7244 8949 9854	5294 5514 7745 9043 9970	5454 6515 7746 9044 10105	5455 6516 7992 9045 10106	5456 6726 8154 9161 10107	5649 6915 8155 9162	5913 6916 9155 9163
	002030 002030 002030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 00500 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005030 005	*** 11000135737-1779367074434687785	######################################	1535*	1695*	1716*								

MAINDE DZRJIA	C-11-DZRJI- .Pii Ci	A. RPO4/5/6 FU ROSS REFERENCE	NCT. CON'	T. TST-F	PT 1	MACY11	H12 27(655)	30-MAR-7	76 22:5°	9 PAGE	296		SE0 0356
	05457547 05557747 05557747 05557747 05557747 05557747 05557747 0555777 0555777 0555777 0555777 0555777 0555777 0555777 055577 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 0555777 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 05557 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 05557 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055577 055	5237799015702572787785775890230997017280 565536565777773777788888888888889999999999999999	######################################										
EM73 EM74 EM75 EM76	064707 064761 065225 065330 065565	984 973 1002 1010	13162# 991 13199# 13211# 13239#	13170#									
EM70 EM70 EM71 EM73 EM75 EM775 EM775 ERR VED ERR 051240 054010 054010 0540157 054707 054707 055225 065230 0652330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 0655330 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 065530 0655	2904#32004################################	13162# 13199# 13211# 13239# 11613* 2712 1548 11014* 11714 11722 11730	2781 1549* 11020* 13584 13587 13587	5029 1550* 13590 13587 13606	10042 1687* 13606	10334 1695*	10346 1718*	11135	11136*	11139*	11141*		
EXT20 EXT4 EXT40 FEN	= 000020 = 000004 = 000000 = 000000	1228# 1226# 1229# 1250#											

MAINDEC-1 DZRJIA.P1	1-DZRJI-A. RPC I CRŌSS R	14/5/6 FU REFERENCE	NCT. CON TABLE	T. TST-P	т 1	MACY11	I12 27(655)	30-MAR-	-76 22:5	59 PAGE	297			SEG	0357
FILLRE O	00020 42312 41270	1174# 10781# 3340 3548 5369 5081 6989 7660 8624 9747	3343 3817 5371 6227 6992 7816 8994 9750	3386 3820 5527 6230 6995 7819 8997 9753	3389 4056 5530 6233 7234 7822 9000 10024	3392 4059 5533 6424 7237 8068 9090 10432*	3395 4066 5723 6427 7240 8071 9093	3398 4069 5726 6430 7401 8075 9096	3401 4247 5729 6587 7404 9078 9235	3408 4954 5886~ 6590 7407 8081 9238	3413 5218 5989 6593 7648 8228 9241	3422 5221 5892 5824 7651 8231 8231	3425 5224 5075 6827 7654 8234 9485	3645 5365 6078 6830 7657 8372 9488	
FIRST DO	04664 04662 04736 17316 41212	1458# 1457# 1485# 3896 5095	10589* 10589* 1573 3919* 5117	1510* 7093	7100	7121	7134	7298 10375#	7496	7513	7534	7547	7717	7943	
FMT22 = 01		3995 7962 12748 55352 1549 9855	5117 8122 3657 5649 6351 7326 8155 9045 9969	7083 8427 3829 5650 6514 7327 8156 9161 9970	5695 4956 5813 6515 7328 8457 9162 9971	5848 5143 5814 6516 7573 8458 9163 10105	8915 5144 5815 6725 7574 8459 9410 10106	5145 6000 6726 7575 9715 9411 10107	5292 6001 6727 7744 8716 9412	5293 6002 6915 7745 8717 9670	5294 6154 6915 7746 8948 9671	5454 6155 6917 7991 8949 9672	5455 6156 7160 7992 8950 9853	5456 6349 7161 7993 9043 9854	
	12422 12422 12422 1	1410# 174 1798 2036 2914 4541 10899 11094	1581 1802 2056 2918 4607 10903 11104	1585 1806 2070 2932 4613 10907 11672 11776	1590 1853 2074 2938 6809 10914 11680	1594 1859 2080 2942 6817 10918 11698	1598 1865 2217 2969 9902 11044 11696	1603 1937 2223 2975 9908 11050 11704 11808	1507 1941 2249 3011 10159 11062 11712 11916	1662 1979 2255 3015 10175 11068 11720 11978	1704 1985 2638 3512 10232 11074 11728 11979	1708 1991 2644 3523 10238 11078 11736 11980	1757 2024 2654 4346 10886 11084 11744 11781	1794 2030 2670 4350 10892 11090 11752 11982	
GO = DO	00001	11760 11984 1139* 4026 5040 6185 7379 8543 9705	11768 11986 2322 4207 5174 5205 7604 8581 9725	11987 2427 4226 5196 6380 7626 8602 9875	11784 11988 2835 4368 5323 6402 7775 8737 9993	11792 11989 2993 4483 5343 6545 7795 8825 10121	11800 11990 3072 4503 5485 6565 7919 8979 10339	3187 4569 5505 5757 8022 9074 10613	3323 4529 5579 6779 8046 9193	3615 4766 5701 6947 8186 9213	3628 4786 5844 6967 8206 9317	3787 4886 5864 7190 8329 9440	3800 4906 5031 7212 8350 9460	4007 5017 5053 7357 9479 9578	
GTSWR = 10	0010 04405 00200 0200	9705 1155# 1617 1177# 1269# 6727 9412	11984#						5650	5815	5002	6156	6351	6516 9163	
HCRC = DC	00400	11/HE	3661 6917 9672	3833 7162 9855	4956. 7328 9971	5145 7575 10107	5294 7746	5456 7993	5650 8156	5815 8459	5002 8717	\$156 8950	5351 9045	9153	
HT = 00 HT. = 00	00011	65# 2330# 3336 4775# 5499 6768# 7932	11273 2335 3636# 4780 5690# 6773 8035#	2437* 3641 4895* 5695 6956* 8040	2442 3808* 4900 5953* 6961 8195*	2944# 3813 5023# 5858 7201# 8200	2849 4015* 5028 6042* 7206 8339*	3002# 4020 5046# 6047 7368# 8344	3007 4215# 5051 6194# 7373 8486#	3090# 4220 5185# 6199 7615# 8491	3085 4376# 5190 6391# 7620 9552#	3195# 4381 5332# 6396 7794# 9557	3200 4639* 5337 6554* 7789 8591*	3331# 4643 5494# 6559 7927# 8596	

MAINDEC-11-DZRJI-A, R DZRJIA.P11 CRŌSS	P04/5/6 FU	NCT. CON	T. TST-P	T 1	MACY11	J12		76 22:5	9 PAGE	298			SEQ D	358
IAE = 002000 IE = 000100	8744# 9454 1180# 1140# 4766 5343 6545 7795 8825 10121 1170#	9749 9585# 2106 4786 5485 6565 7919 8979 10639	\$834# 9590 2145 4790 5505 6757 8022 9074 10651	\$839 9714# 3628 4791 5679 6779 9046 9193 10719	8986# 9719 3800 4886 5701 6947 8186 9213 10732	8991 9883# 4007 4906 5844 6967 8206 9317	9081# 9888 4026 4910 5864 7190 8329 9440	3085 10000# 4030 4911 6031 7212 8350 9460	9202# 10005 4031 5017 6053 7357 8479 9578	9207 10128# 4207 5040 6195 7379 8543 9705	9324# 10133 4226 5174 6205 7604 8581 9725	9329 4507 5196 6380 7626 8602 9875	9449# 4508 5323 6402 7775 8737 9993	
ILF = 000001 ILLEGL 002464 ILR = 000002 INUNIT 004752 IOTVEC= 000020 IR = 000100 IXE = 004000 KIPARO= 172340 KIPARI= 172342	1428# 1171# 1495# 160#	13593 2923* 1533* 2232	2981 1534* 3358	3379	10012	10013								
IR = 000100 IXE = 004000 KIPAR0= 172340 KIPAR1= 172342 KIPAR2= 172344 KIPAR3= 172346 KIPAR4= 172350 KIPAR6= 172352 KIPAR6= 172354 KIPAR7= 172356 KIPDR0= 172300 KIPDR1= 172300 KIPDR2= 172300 KIPDR3= 172306 KIPDR3= 172310 KIPDR6= 172312 KIPDR6= 172314	**************************************													
KIPDR7= 172316 LA 002420 LBT = 002000 LF = 000012 LT. = 000105	229# 230# 1403# 1162# 2330# 2336 4775# 5499 6768# 7932# 8744# 9454	11778 10526 11308 2335 3636* 4780 5690* 6773 8035*	11314 2437# 3641 4895# 56956# 8040 8834# 9590	2442 3808# 4900 5853# 6961 8195#	2844# 3813 5023# 5858 7201# 8200	2849 4015# 5028 6042# 7206 8339# 8991 9883#	3002# 4020 5046# 6047 7368# 8344 908!#	3007 4215# 5051 6194# 7373 9486#	3090* 4220 5185* 6199 7615* 8491	3085 4376# 5190 6391# 7620 8552#	3195# 4391 5332# 5396 7794# 8557 9324# 10133	3200 4638# 5337 6554# 7789 8591# 9329	3331 * 4643 * 5494 * 6559 7927 * 9596 * 9449 *	
MAKECY 041036 MCLK = 000002 MCPE = 020000 MHS = 001000 MINX = 000004 MMVEC = 000250	2525 1190# 1146# 1252#	8749 9585 <b>*</b> 2544 2271	9590 3891 2703	8839 9714# 3910 2772	9719	9883 <b>*</b> 4132	9081# 9888 10323#	9086	9202*	9207 10128#	10133	302.7		
MMVEC = 000250 MOL = 010000	212# 1164# 4555 6788 10527	2062 4556 6976	2076 4803 7221	2226 4923 7388	2258 5205 7635	2457 5352 7804	3518 5514 8055	3530 5710 8215	4043 5873 8359	4235 6062 9611	4342 6214 9222	4524 6411 9469	4525 6574 9734	

MAINDE DZRJIA	C-11-DZRJ:	I-A. RPI CRÖSS I	04/5/6 FU REFERENCE	NCT. CON	T. TST-F	T 1	MACY11	K12 27(655)	30-MAR-	-76 22;5	59 PAGE	299		•	SEG	0359
MPE MR MRD MSE MSTCK	000400 002402 000000 000000 000010		1118# 1396# 1193# 1247# 1192#	11770										•		
MSE MSTCK MMR MXF NED NEM NHS NOPERA NOPUSH NOUNIT	= 000040 = 001000 = 010000 = 004000		1194# 1119# 1122# 1121# 1253#	3362 2652 6804	2721	2788	2962									
NOPERA NOPUSH NOUNIT NUNIT	002422 004724 004720 004722		1411 1478 1474	3050 1513* 1823* 1880*	3071 1517* 1973* 1881*	3165 1520* 1880 3206	3186 2204 1947* 3382	2599 10256* 4027	2887 4504	3499 4571	4313 4787	9815 4907				
NUNIT OCYL : OF OFREV :	= 100000 002372 = 000200		1301# 1392# 1268#	11762	1001	0200	0002	.02.	.55 /							
OFREV OFSETC OFSTVL OF100 OF200	= 000400 = 000020 = 000020 = 000020 = 000000 = 001000 = 001000 = 002000 = 002422 = 004724 = 004722 = 002372 = 002372 = 002372 = 002372 = 002372 = 000000 = 000001 = 000002 = 000002		1301# 1392# 1268# 5011 1424# 1450# 1263# 1264#	18479# 4745 - 4677*	4765 4678*	4785 4715	5016 4980*	10480 4981	4983*	4984						
OPERSE OPI	= 000020 = 000002 = 000040 042512 = 020000		1265# 1262# 1266# 10881# 1183#	11356	11439											
PAR PC	= 000200 = 000010 =%000007		1117# 1173# 86#	10012 3434 1572*	1761* 2489*	1909*	2051*	2096*	2135* 2591*	2195*	2243*	2292* 2747*	2296* 2755*	2358*	2391*	
			2397* 2905* 3533* 4154* 4687* 5909* 5909* 5905* 7760* 9059* 10325* 10325* 1362* 1363*	2401* 2952* 3537* 4158* 4847* 5388*	2961* 3684* 4281* 4859* 5408*	1909* 2523* 3040* 3726* 4327* 4968* 5429*	2051* 2542* 3044* 3730* 4331* 4976*	2096* 2587* 3099* 3856* 4355* 5002* 5550* 6117*	3111* 3889* 4359* 5006*	2195* 2651* 3160* 3908* 4384* 5034* 5603* 6848* 7446* 8108* 8801* 9296*	2243* 2676* 3236* 3933* 4598* 5664* 6250* 6868* 7489* 8905* 9332* 10075* 10940*	3256* 3937* 4618* 5159*	3260* 4086* 4669* 5241* 5765*	2358* 2820* 3450* 4111* 4673* 5262* 5773* 6365* 7013* 7698* 8304*	2391* 2901* 3492* 4130* 4693* 5269* 5829* 6447* 7705* 8405* 9028* 9552*	
			5909* 6466* 7076* 7760*	5388* 5927* 6474* 7175* 7839*	2961* 3684* 4281* 4859* 5408* 5965* 6530* 7257* 7860* 9136* 9770*	5429* 6016* 6610* 7278* 7888* 8657* 9146*	5470* 6098* 6628* 7285* 7935* 8672* 9178*	6117* 6671* 7342* 8007* 8722* 9258*	6124* 6743* 7425* 8097*	6170* 6848* 7446* 8108*	6250* 6868* 7489* 8171*	5746* 6268* 6875* 7589* 8251*	6304* 6933* 7677* 8269* 8964*	6365* 7013* 7698* 8304* 9017*	6447* 7032* 7705* 8405*	
PCTSB	041422		9059* 9593* 10303 11289*	7839* 8504* 9115* 9689* 10333* 11296* 10326* 10612*	9136* 9770* 10345* 11310* 10504*	9146* 9829* 10351* 11312* 10506*	9179* 9860* 10492* 11340* 10507*	9258* 9933* 10533* 11354* 10512*	3111* 3889* 4359* 5006* 5567* 6743* 7425* 8762* 9948* 10538* 11415* 10513*	9296* 10061* 10830* 11460* 13600	9332* 10075* 10940* 11627* 13602	8841* 9425* 10201* 10951* 11872* 13610	9504* 10285* 11021* 12028	9541* 10288* 11052*	9552* 10298* 11382*	
PCLBUF PCLCSR PCLCTR	002346 002344 002350	~	1362# 1361# 1363#	10512* 10586* 10587	10513*	10300*	10307 %		10310	1000	10005	10010				
PCJSR PCLBUF PCLCSR PCLCTR PGE PIP PIRG PIRGVE	002346 002344 002350 = 002000 = 020000 = 177772 = 000240		1120# 1165# 72# 166#	4043	4235	4522	4553	4903	4923	8359	9611					

MAINDEC DZRJIA.	-11-DZRJI-	A. RPO4/5/6 F RÔSS REFERENC	UNCT. CON	IT. TST-F	ו די	MACY11	M12 27(655)		76 22:5	9 PAGE	301			SEQ	0361
RHCC	002334	1350#		2284	5586	3313	4057	4248	7659	8076	8373	8625	10352	10356	
RHCS1	005300	3189* 3189* 3967* 4745* 5495 6731* 7785 8739* 9678*	3196 4009* 4768* 5681* 6759* 7921* 8745 9707*	2324* 3325* 4067 4818 5691 6769 8024* 8827* 9715	2405* 3332 4197* 4864* 5846* 6921* 8036 8981* 9877* 10639 1955*	2429* 3365 4209* 4888* 5854 6949* 8188* 8987 9884 10651	2693 3430 4263 4938 6033* 6957 8196 9076* 9995*	2764 3591* 4370* 5019* 6043 7192* 8331* 9082 10001 10732	2837* 3617* 4461* 5042* 6187* 7202 8388 9195* 10017 10977*	2995* 3630* 4485* 5175* 6195 7359* 8481* 9203 10123* 11046	3050* 3763* 4493 5196 5382* 7359 8487 9319* 10129 11080	3074* 3789* 4565 5325* 6392 7606* 8545* 9442* 10330*	3081 3802* 4575 5333 6547* 7616 8583* 9450 10339*	3165* 3809 4631* 5487* 6555 7777* 8640 9580* 10454*	
RHCS2 RHCS3	002276 002342 002270	1332 1356	1770	1829*	1955*	2717	2784	3354	3375	6804	10011	10485	10974*		
RHDB	002304	1329# 1338# 6431 9489	5594	11054 2960 6831 10025	3390	3649 7241	3821 7408	5225 7661	5372 7823	5534 8082	5730 8235	5893 9001	6082 9097	6234	
RHDS1	005355	1345# 3836 5024	9754 2331 4016 5029	2339 4070 5047	10329* 2438 4216 7928	10453* 2469 4256 8340	10969* 2706 4340 8381	2775 4377 8553	2845 4554 8592	3003 4639 8633	3215 4776 8835	3414 4825 9325	3637 4896 9586	3564 4945 9915	
RHDT	002324	10036 1346# 2000	1830	10486 1832 2005	1836	1838	1841	1843	1861	1956	1958	1965	1967	1993	
RHEC1 RHEC2 RHER1 RHER2 RHER3	002330 002332 002302 002306 002314	2000 1348# 1349# 1337# 1339# 1342#	3426 1773 3393 2724	3387 2791	10029	10487									
RHLA RHMR RHOF	002336 002320 002310	1351* 1344* 1340*	2524*	2543* 3653	2614* 3825	2798 4060	3409 4955	3890* 10479*	3909* 10975*	4112*	4131*	10331*			
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RMR = RPTRP1 RPTRP2 RPVEC		1172# 2102 2141 1094# 4474* 6939* 8816* 11086	2116# 2155# 1567 4757* 7181*	2101 4877* 7348* 9065*	2140 5165* 7595* 9184*	2313* 5314* 7766* 9308*	2418* 5476* 7911* 9431*	3063* 5670* 8013* 9569*	3178* 5835* 8177* 9695*	3314* 6022* 8320* 9866*	3604* 6176* 8470* 9984*	3776* 6371* 8534* 10112*	3999* 6536* 8572* 11064	4199* 6749* 8728* 11071*	
RPVECT RP05 RP06 RP4VEC	044352 004746 004744 004606	1568 1492# 1491# 1445# 4877	11101# 1964* 1954*	11107 1970* 1961* 2313 5314	2505 2503 2418 5476	2576 2574 3063 5670	2869 2867 3178 5835	3872 3314 6022	4095 3604 6176	3776 6371	3999 6535	4199 6749	4474 6939	4757 7181	

MAIN DZRJ	DEC-11-DZRJI-A. ! IA.P11 CRŌSS	RP04/5/6 FU S REFERENCE	INCT. CON	T. TST-P	Т 1	MACY11	N12	30-MAR-	76 22:5	9 PAGE	302			SEQ 0362	2
RUN		7348 9065 5133 7563 10096	7595 9184 5282	7766 9308 5445 7981	7911 9431 5639 8144	8013 9569 5804 8447	8177 9695 5991 8705	9320 9866 5145 8938	9470 9984 6340 9033	8534 10112 6505 9151	8572 6716 9401	8728 6906 9661	8816 7150 9844	8970 7316 9960	
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	R2 =	::000002	10405 10552 10756* 10855* 11191 11853 79* 3148* 3978*	10555* 10759* 10940 11204* 11854* 1691* 3151* 4438	10558 10761* 10943* 11205 11859 1770* 3292	10563* 10755* 10945* 11209 11963 1771* 3295* 4447*	106:5 10782 10949* 11233* 11865 1775* 3301* 4450*	10623* 10786* 11002 11559 11970* 2113* 3304* 4725	10657* 10791* 11007* 11564* 11999 2121* 3569 4728*	10658 10798* 11015 11572* 12022* 2152* 3572* 4734*	10667* 10819 11018 11574* 2158* 3578* 4737*	10668 10824* 11022 11576* 2233 3581* 10377	10876* 10835 11034* 11579* 2236 3966 10379*	10752 10937 11055* 11582 3139 3959*	10754* 10842 11058* 11585*
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	R4 =	×500004	81* 3973* 10822	11945* 1773* 3979* 10827*	12001 1774* 4437 10840 11931	10852*	3146* 4451* 11005	3152* 4724 11012*	3291 4732* 11013* 12002	3299* 4738* 11014 12019*	3305* 10487* 11031*	3568 10795 11911	3576* 10789* 11913*	3582* 10792 11914*	3955 10795* 11915*
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\$\frac{\text{S4NER}}{\text{5301}} = \frac{\text{5206}}{\text{5301}} = \frac{\text{540}}{\text{5301}} = \frac{\text{540}}{\text{5301}} = \frac{\text{540}}{\text{5301}} = \frac{\text{540}}{\text{5301}} = \frac{\text{540}}{\text{5301}} = \frac{\text{540}}{\text{540}} = \frac{\text{540}}{\	R6 =: .000006	5413 7225 9050 9894* 9739 11010* 11922*	11021	11924*	9227 10328 11194 11925	9335* 9369* 10353 11196* 11943*	8361 9374* 10355 11198*	9364 9446* 10360* 11205*	9549* 9471 10923	8587* 9474 10932*	9613 9630* 10934*	9635* 10839	8831* 9711* 10851*	7223 8057 8889* 9735 11006 11920*
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SEEKCY 041336 8309 8561 8813 9305 9566 10470*  SELECT 004726 1480* 1514* 1516* 1519* 1658 1884 1921 10244  SELTST 007730 1788 1884*  SERCH 002434 1416* 10454  SKI = 040000 1300*  SN 002410 1399* 2045* 3419 11818  SND1 005110 1576 1610*  SP =%000006 85* 1531* 1548* 1556* 1560 1665* 1666 1667 1684* 1696 1711* 1729* 1855*  1861* 1871* 1906* 1981* 1987* 1998* 2094* 2116 2133* 2155 2192* 2231*		10151	10194	2599	2758	3208	10831							
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1	000176		11130 12004 176*	1529 11144 12017* 1558	8289* 1550* 11146	1552 11152 11359	1558* 11159 11398	1615 11359 11421	1622	1699 11453*	1753 11518	1786 11625	2979	10843 11534	11023	
1 5	= 000001 = 000001 = 000000 = 000000		######################################	1232120911201115	11653 10845	11025										
24444 2444 2444 2444 2444 2444 2444 24	= 002000 = 010000 = 020000 = 040000		103*	1622	1763	1786										
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MAINDEC ĮRJIA.	-11-DZRJI-A. P	RPO4 5 6 FU	NCT. CON TABLE	T. TST-F	T 1.	MACYII	F13	30-MAR-	76 22:5	9 PAGE	307			SEG O
ESTAD IMCNT IMEL IMEE KVEC =	000014 000040 042510 042564 041566 000050	157* 1248* 10880* 2108 10595* 1552	2147 10588# 11336*	10628	10633	10694#	10708	10713						
MPU MP1 MP4 N =	004760	1502* 1503* 1509* 1509* 1706* 1706* 1706* 1706* 1706* 1706* 1706*	4997* 4029* 4790* 1907 3489* 5000 7073* 9539	5052* 4030* 4792* 2192* 3490 5084* 7074 9826* 1781*	4032 4909* 2193 3723* 5085 7486* 9827 3141	4506* 4910* 2394* 3724 5426* 7487	4507* 4912 2395 3930* 5427 7885*	4509 2584# 3931 5600# 7856	4523* 2585 4151* 5601 8525*	4524* 2898* 4152 5962* 8526	4526 2899 4324# 5963 8798#	4554* 3037* 4325 6301* 8799	4555* 3038 4666* 6302 9289*	4557 3253# 4567 5668# 9290
PVEC = RAPVE = RK1 = RK20 = RK4 = RTVEC =	000064 040000 040000 040000 010000 100000 100000	165* 167* 167* 1235* 1235* 1235* 1235* 1235*	1537 <del>&gt;</del> 2271	1538* 2701	1566* 2770	10023								
STI		2899* 5000* 9539*	1683* 3039* 5085* 9827* 13602 1671 2191* 2386*	1730* 3254* 5427* 10888 13504 1581*	1759* 3490* 5601* 13571 13606 10304	1907* 3724* 5963* 13574 13610	2050* 3887* 6302* 13577	2093* 3906* 5669* 13579	2132* 3931* 7074* 13591	2193* 4109* 7487* 13584	2395* 4128* 7896* 13587	2521* 4152* 8525* 13590	2540* 4325* 8799* 13593	2595* 4667* 9290* 13597
	012510 012544 013556 014564 015322 005564	2510 2531 2580 2507 3252* 1727*	2538 <b>*</b> 2570 <b>*</b> 2608 2873	2686 2881	2363*	3036#								
	005312 00112250 00112250 0012250 00122514 00122510 00122510 00122510 00122510 00122510 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 0012222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 0012222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 00122 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 001222 00122 001222 001222 001222 0012222 00122 001222 001222 001222 00122 001222 001222 001222 00122	1316 1316 1316 1316 1316 1316 1316 1316	3722#											
5127 513 5130 5131 5132	020072 006640 020440 021754 023016	4150# 1735 4308# 4322 4987 5053	1757 <b>*</b> 4664 <b>*</b> 4996 <b>*</b> 5083 <b>*</b>											

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NDE	C-11-DZR.	II-A RPOM S CROSS REFE	6 FU	NCT. CON TABLE	IT. TST-F	PT 1	MACY11	27(655)		-76 22:5	9 PAGE	308			SEG O
THE COUNTY OF THE SECOND	024056 024372 025302 026142 027052 031232 031232 032262		425# 599# 961#	1903# 7072#	10253	10254									
יות מושות ליו	035756 036472 010732 037240 040464 0:1276		258# 5537# 5550 824 263	9810 <b>*</b> 10225 <b>*</b> 2091 <b>*</b> 2118	2130*										
DS :	= 104404	İ	856 172	1872	1982	2220	2252	2641	2667	2935	2972	3516	3527	4610	9905
			800 2034 2034 2034 2034 2034 2034 2034 20	1583 1804 2064 20662 3162 4367 7762 10996 11974 11974 11974	1588 1851 2058 2558 3259 4539 5532 8000 10897 11092 11518 11718 11823	1592 1857 2907 2907 3510 4505 5173 9901 11102 11102 11102 11102 11102 11102 11102 11102	1596 1993 2912 2912 3517 4611 69467 101235 111534 111847	1601 1875 2916 3521 46725 46727 10978 110279 111579 111579 111579 111579	1605 1935 1935 1935 3528 5008 6817 10353 11359 11359 11750 11852	1559 1539 1539 1539 1535 1535 1135 1135	1702 1707 1725 1725 1725 1730 1730 1730 1730 1730 1730 1730 1730	1706 1983 2988 2967 5420 10250 11479 11479 11778	1765 1983 1940 1940 1940 1940 1940 1940 1940 1940	1792 2093 3099 4333 5831 7177 9427 10294 11072 11434 11586 11790	1796 2039 2039 3013 4019 4019 4019 4019 4019 4019 4019 4019
500	= 104401	11	713 683	1862	1988	11707	10889	10895	11047	11065	11091 11747	11097 11755	11106 11763	11422	11575
ON H	= 104403 = 104402 004732 = 000020		787 981# 980# 492#	6683*	6806*	9558			11860						
TSL TSL CAD		10 1 1 1 1 1	272# 481# 482# 123# 110#	1656* 2923 10258 1817 1667* 4461	1572* 2934 10253* 1821 1672 4482	1879* 2949* 10490 1879 1886 4502	1896* 2950* 10972 1928	1915 2971 10259	1946* 2981	1949 3347	1991 3515	3526 3526	2231 4609	9904	2640 10171
		34 024302 024302 024302 025302 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025702 025	734 024056 735 024372 736 025302 737 026142 740 027052 741 027052 742 031232 743 032252 743 032252 744 034555 750 0372404 750 03724 750	34	134	134	783	134	NDEC-11-DZRJI-A, RP04-5-6 FUNCT, CONT. TST-PT 1	NDEC - 11 - DZRJI - R	NDEC-11-02RJI-A, RP04-5-6 FUNCT. CONT. TST-PT 1	NOBEC   11 - DZRJI - A, RPOM 5 6 FUNCT, CONT. TST-PT 1	NDEC-11-DZRJI-A, RP04-5-6 FUNCT, CONT. TST-PT 1	NDEC-11-DZZII-a, RPDM-5-6 FUNCT, CONT. TSI-PT 1 MACY11 27:655) 30-MAR-76 22:59 PAGE 308    194	NEC-11-OZNJ-3, RPOM-5, 6 FINCT CONT. TST-PT 1 MACV11 27(655) 30-MAR-75 22:59 PAGE 308  194 024055 55998 5248 55998 19038 10253 10264 10265 10247 10265 10264 10265 10264 10265 10264 10265 10265 10264 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265 10265

UNR = 000010	1295#						76 22:5	9 PAGE	207			SE0 0369
UMR = 000010 VUF = 000002 VU30 = 010000 VV = 000100	1255* 1158* 2264 4043 4235 5514 5710 8055 8215 10609* 10622	2332 4342 5873 8359 10629	2343 4378 6062 8611 10634	2439 4524 6214 9222 10703*	2457 4525 6411 9469	2473 4555 6574 9734	2714 4556 6788 10509 13571	2846 4640 6976 10527 13574	3004 4903 7231	3638 4923 7388	3668 5205 7635	3840 5352 7804
WAITPC 041616 WAITRE 041620 WAITTM 041624	10607* 10619: 10608* 10621: 10587* 10610:	10620*	10700* 10634 10658	10701* 10638 10668	10709 13571 10650 13574	10714 13574 10702*	10709	10714	10718	10734	13571	13574
WAIT.T 042055 WAT = 104412	10611* 10696* 11990 2330 2437 4638 4775 6554 6768 8591 8744 11990*	2844 4895 6956 8834	3002 5023 7201 8986	3080 5046 7368 9081	3195 5185 7615 9202	3331 5332 7784 9324	3636 5494 7927 9449	3808 5690 8035 9585	4015 5853 8195 9714	4215 6042 8339 9883	4375 5194 8486 10000	4492 6391 8552 10128
WC 002354	1383# 2352 4841 4963 7251 7418	2483 5235 7671 10195	2740 5382 7832 10943	2814 5544 8092 11674	3093 5740 8245	3230 5903 8399	3444 6092 8651	3678 6244 9011	3850 6441 9109	4080 6604 9252	4275 6841 9499	4592 7006 9763
WCE = 040000 WCF = 000001 WCU = 000001 WLE = 004000 WRCHDT 002440 WRCHEK 002436 WRFROM 002470	9927 1124# 1175# 1243# 1181# 10033 1418# 9164 1417# 9413 1435# 5096 5758 5791 6429 7093 7523 7569 8123 8131 8860 8865 9240 9340 9611 9616	9192 9439 5106 5796 6492 7653 8136 8870 9345 9621	9212 9459 5139 5919 5497 7691 8261 8875 9350 9631	9673 5223 5973 6620 7156 7718 8428 9880 9355 9649	9704 5255 5996 6688 7239 7727 8435 8890 9350 9654	9724 5400 6080 6693 7271 7851 8910 9370 9666	5437 6110 6721 7299 7944 8916 8916 9389 9752	5559 6137 6829 7308 7354 8686 8923 9394 9837	5611 6260 6860 7437 7963 8693 8934 9406 9949	5616 6312 6893 7497 7973 8698 8999 9487 9953	5644 6317 6898 7506 7987 8754 9127 9601 9965	5728 6345 7023 7514 8073 8849 9157 9506 10089
WRIFOR 002444	1419# 5651 9856 9874 1420# 5146	5678 9972 5173	5700 9992 5195	6003 7163	6030 7189	5052 7211	6352 7576	6379 7503	6401 7625	6728 7994	5755 9021	5778 9045
WRL = 004000 WRU = 000400 WSU = 000004 XE2 007372 SAUTOB 001134 SBDADR 001122 SBDDAT 001126	8951 8978 1163# 9919 1251# 1245# 1784 1815# 269# 1619# 264# 2228# 266# 1736# 4919* 4928# 5067* 5210# 7384* 7393# 8616* 9218# 10838* 11019#	10186 11412 2236* 2286* 5201*			10521* 4039* 5357* 6570* 7809* 9730*	10529* 4048* 5510* 6579* 9051* 9739*	13584 4231* 5519* 6784* 9060* 10352* 13593	13597 4240* 5706* 6793* 8211* 10353 13597	13600 4516* 5715* 6972* 9220* 10638* 13610	13602 4532* 5969* 6981* 9355* 10650*	4799* 5878* 7217* 9364* 10719*	4909* 5059* 7226* 9507*

	-11-DZRJI-A. RPC PII CRŌSS F	04/5/6 FU REFERENCE	NCT. CON	IT. TST-F	PT 1	MACY11	I13 27(655)	30-MAR-	-76 22:	59 PAGE	310			SEG 0370
SBELL SCHARC	04535P	298# 11280*	11365 11290* 11986 1526	11534 11297	11620 11306*	11642								
SCMTAG SCM1 = SCM2 =	001216 045326 045640 001100 000006 000006	11280* 11398* 252* 284* 284*	1526 285# 285# 284 291#	1527 286# 286#	1535 287# 287#	1541 288# 288#	1542 289# 289#	290# 290#						
SBELL SCHARC SCKSWR SCMTAG SCM1 = SCM2 = SCM3 = SCM4 = SCMTLC SCMTLC SCMTLC SCMTLC SCMTLU SCRLF	046423	290# 11353 11419	291# 11434 11536# 11535#	292# 11534#	293#	294#	295#	296#						
	046416 001223 045102 041012 045072 041002 040750	2892* 2892* 11440* 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517 1152517	1870 11628 11235 10296 11239# 10298#	3517 11542 11243# 10302#	3528 11823	5811 11947	6812 11952	6819	6820	10896	11279	11314	11455	11534
SDBLAN SDC SENDORG SENDORG SENDORG SEOP CTG SEOP CTG SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECOPTAN SECO	041016 040714	10289# 10249 10252 1714	10291 10294 1809	10306# 10305# 10257	10279#									
SERFLG SERMAX	040742 001103 001115	255#	10290 11119 1543* 1716 11622*	11148 11150 11609# 11623*	11150 11172*	11156* 11177	11177	11615*	11642					
1	045612	13590	11622* 13593 11837	11623*	11624	11645	11829 13604	13571 13606	1357 <del>4</del> 13610	13577	13579	13581	13594	13587
SERRIB SERRIY SERTIL SESCAP SFILLC SFILLS SGDADR SGDDAT	001226 046762 001112 001214 001156 001155	11627 259* 297* 280* 279* 263* 265*	11661# 10240 1542* 11283 11314	10242* 11171* 11314	11621* 11637	11642	11642							
SGDDAT	001155 001120 001124	265# 4915* 6063* 7380* 8612* 13597	1737* 4924* 6206* 7389* 9214* 13610	2285* 5197* 6215* 7627* 9223*	2449* 5206* 6403* 7636* 9461*	2458* 5344* 6412* 7796* 9470*	4035* 5353* 5565* 7805* 9726*	4044* 5506* 5575* 8047* 9735*	4227* 5515* 6780* 8056* 10355*	4236* 5702* 6789* 8207* 10837*	4512* 5711* 6968* 8216* 11019*	4528* 5865* 6977* 8351* 13577	4795* 5874* 7213* 9360* 13590	4904* 6054* 7222* 9603* 13593
SGET42 SGTSWR SHD =	040772 045730 000000	11450#	11984											
SHD = SHIOCT SICNT SILLUP SINTAG SITEMB SLPADR SLPADR SLPARR SMAIL = SMAIL = SMAIL =	046610 001104 050552 001135 001114 001224 001106 001110 *************************	11583* 256# 11996 270# 260# 257# 258# 1562 11420	11594# 11163* 12012 11417* 11624* 11534* 1545* 11539# 11537#	11164 12031# 11436 11642 11525 1905* 9945* 11169	11156* 11456 11826 11534 4665* 10894 11267	11176 11541 11595 10911* 10921* 11630	11642 10922 11154	11154* 11170*	11169* 11176	11174 11636	11176			

MAINDEC DZRJIA.	-11-DZRJ P11	I-A. RPO CROSS R	04/5/6 FUREFERENCE	NCT. CON TABLE	iT. TST-F	ו זי	MACY11	J13	30-MAR-	76 22:5	9 PAGE	311			SEQ	0371
SMXCHT SNULL SNWTST=			11167 278# 1675# 2126 3245# 4143 5933# 8514	11176# 11285 1677 2164# 3247 4287# 5935 8772# 11938* 11908*	11314 1721* 2166 3460* 4289 6272* 8774 11951* 11913	1723 2377* 3462 4645* 6274 9268*	1744# 2379 3701# 4647 6635# 9270	1746 2516# 3703 4990# 6637 9515#	1890# 2535# 3882# 4992 7042# 9517	1892 2552# 3901# 5057# 7044 9784#	2051# 2554 3920# 5059 7451# 9786	2053 2854# 3922 5714# 7453 10215#	2083# 2856 4104# 5416 7866# 10217	2085 3028# 4123# 5571# 7868	2124# 3030 4141# 5573 8512#	
SOCNT SOMODE SOVER SPASS	050332 050334 044650 001100		5933# 8514 11909* 11904* 11131 253# 1161 12029# 1539 12027#	11908*	11913	11916*	11927* 11173# 3503	11953#	0010	10340*	10050	10202*	10200*	10202	10305	
			11161	2208 11177 12034#	2603	2891	3503	4317	9819	10248*	10250	10283*	10284*	10292	10305	
SPWRAD SPWRDN SPURMG	050546		12029#	11996#	12024											
SPURUP SQUES SRDCHR	050560 050546 050406 050542 050460 001222 046202		299#	12012# 11314 11987	11474	11518	11534	11592	11595	11542						
SPOWER SPWRAD SPWRAD SPWRDN SPWRUP SCHE SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SRDCHR SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU SREGU	****** 046452 000011 001150 001162 001164 001166 001170 001172 001174 041014		1190 11510# 11556# 11556# 11558# 285# 285# 286# 2889# 10304#	11988												
SSAVRE=	***** 050556 044414		11990 11990 12005*	12013	12014*	12015*	12033#									
SSAVR6 SSCOPE SSETUP=			1533 1524 <b>*</b> 11362	1532 11363	1533 11393	1535 11541	1537 11610	1539 11633	1541 11641	1542	1544	1512	10291	11129	11357	
SSSI = SSTUP = SSVLAD SSVPC = SSWR =	000500		11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 11990 ** 119	11169# 187 12 1542 2539 4309 8798 11123 11173	44 1544 2571 4665 9289 11124 11176	45 1545 2864 4997 9538 11130 11601	46 1682 3037 5084 9811 11142 11602	47 1729 3253 5426 10227 11144 11603	48 1758 3489 5600 10276 11145 11604	1904 3723 5962 10282 11148 11605	50 2060 3886 6301 10297 11149 11518	51 2092 3905 5667 10303 11150 11625	296 7131 9930 7073 10305 11157 11630	297 2192 4108 7485 11120 11159 11534	298 2397 4127 7895 11121 11159 11542	
SSWRMK= STIMES	000000		296# 11167* 275#	52 1541*	11124 1682*	11125 1728*	11146 1758*	1904*	2571*	2864*	6667*	10227*	10292*	11157*	11154	
STKB	001146		275#	11176	11338	11349	11374	11402	11429							

MAINDEC-11-DZRJI-A, RPO DZRJIA.P11 CROSS	04/5/6 FUN REFERENCE	NCT. CON TABLE	iT. TST-F	PT 1	MACY11	K13	30-MAR-	-76 22:5	59 PAGE	312			SEQ 0372
\$TKCNT 045332 \$TKINT 045352 \$TKQEN= 045351 \$TKQIN 045334 \$TKQOU 045236 \$TKQSR 045340	11318# 1572 11322#	11333* 1761 11388	11363 2391 11499 11335	11380*	11494	11496* 11354	11415						
\$TKGIN 045334 \$TKGOU 045236 \$TKGSR 045340 \$TKS 001144 \$TKSRV 045422	11320#	1761 11388 11334* 11335* 11334 11317	11335 11497 11390 11339*	11386* 11498* 11501 11370*	11387* 11499 11372	11388 11501* 11378*	11390*	11416*	11426	11438*	11458*		
\$TKS 001144 \$TKSRV 045422 \$TMP0 001176 \$TMP1 001200 \$TMP2 001202 \$TMP3 001204 \$TMP4 001206 \$TMP5 001210 \$TMP5 001210	1572 11329# 11319# 11321# 11321# 11336# 293# 293# 293# 295# 1759	11349# 1825* 1697*	1826*	2109*	2147*	2148*	7933*	8292¥	13581	11100	11130		
\$TMP5 001210 \$TN = 000052	295# 1759 2124 2520# 2864# 3723# 4127# 4997# 6635 8798#	12 1885 2131 * 2521 2873 3882 4128 4999 6667 * 9268	1659 1890 2132 2531 2881 3886* 4141 5053 6668 9289*	1671 1904# 2153 2535 2895 3887 4151# 5057 6680 9515	1675 1906 2164 2539# 2898 3901 4287 5084# 7042 9538#	1682# 2051 2192# 2540 3028 3905# 4309# 5414 7073# 9550	1683 2060# 2212 2552 3037# 3906 4321 5426# 7451 9784	1721 2063 2377 2571# 3245 3920 4324 5571 7486# 9811#	1728# 2083 2387# 2580 3253# 3930# 4645 5600# 7866 9823	1730 2092* 2394 2584 3450 4104 4665* 5933 7885* 9826	1735 2093 2507 2607 3489* 4108* 4666 5962* 8512	1744 2114 2509 2686 3507 4109 4987 6272 8525# 10227#	1758# 2118 2515 2854 3701 4123 4990 6301#
\$TPB 001152 \$TPFLG 001157 \$TPS 001150 \$TRAP 050336 \$TRP = 000013	277# 281# 276# 1537 11970# 11991#	11303* 11261 11301 11962* 11979*	11314 11314 11314 11314	11981#	11982#	11983#	11984	11985#	11986	11987#	11988#	11989#	11990#
\$TRPAD 050360 \$TSTNM 001102 \$TTYIN 046400 \$TYPBN= ****** U	11967	11977# 10243* 11512	10281* 11529	11119	11146	11168*	11173	11177	11617	11642			
\$TSTNM 001102 \$TTYIN 046400 \$TYPBN= ******* U \$TYPE 045112 \$TYPEC 045262 \$TYPEC 045262 \$TYPEX 045330 \$TYPOC 050134 \$TYPON 050150 \$TYPON 050150 \$TYPOS 050110 \$XTSTR 044426 \$\$GET4= 000000 \$0FILL 050333 \$40CAT= ******* U	11189# 111261# 11282 11307 11907# 11906 11902#	11982 11970 11289 11309 11979 11909# 11980	11978 11296 11312# 11981	11301#	11302	11460							
\$\$CET4= 000000 \$\$GET4= 000000 \$OFILL 050333 \$40CAT= ******* U . = 071624	10297#	11907* 11627 174* 1436* 1860* 2943* 10915*	11917 182 1453# 1866# 3012# 11063# 11642 12032	11952# 183# 1472# 1942# 3016#	185# 1530 1980# 4347# 11177 11681# 13655#	187# 1544 2025# 4614# 11243#	191# 1545 2031# 6818# 11314 11753#	193# 1586# 2037# 9903# 11317 11761#	195# 1595# 2071# 9909# 11321# 11769#	244# 1599# 2075# 10170# 11322 11777#	251# 1608# 2081# 10239# 11323# 11785#	302 1795# 2224# 10305 11533# 11809#	1434# 1799# 2915# 10309 11534 11817#
	10900# 11541 11874#	10915# 11595 12008	11063# 11642 12032	1942# 3016# 11176 11673# 13569#	11177 11681# 13655#	11243#	11753#	11761#	11769#	11777#	11785#	11533#	11534

MAINDEC DZRJIA.	-11-DZRJ	I-A. RPC CROSS F	04/5/6 FI	INCT. COI	NT. TST-	PT 1	MACY11	L13		-76 22:5	59 PAGE	313			SEG	0373
ALLREG	40*	11658	11677	11685	11693	11701	11709	11717	11725	11733	11741	11749	11757	11765	11773	
CHANGR	11781 40* 3363 4823	11789 2337 3372 4830 10180	11797 2467 3428 4936	11805 2691 3651 4943	11813 2704 3662 4950	2715 3823 8375	2722 3834 8379	2762 4062 8386	2773 4250 8627	2782 4254 8631	2789 4261 8638	2796 4563 9913	3210 4573 10015	3214 4580 10027	3352 4816 10034	
CHECKY CHECKY CHKCNT	10043 40# 6016 8964 40#	2591 6170 9059 2296 4383	2905 6365 9178 2401 468?	3044 6530 9296 3537 4859	3160 6743 9425 3730	3260 6933 9552 4359	3937 7175 9689 4673	4158 7342 9860	4331 7589	5006 7760	5159 8007	5308 8171	5470 8464	5664 8722	5829 8805	
CHKCNT CKCNTV CLEARA	40# 40# 40#	4618			5436	5610	5615	5625	5630	5777	5782	5790	5795	5972	5992	
OLLINA	6128 6884 7952	5105 6136 6892 7971 8909	5124 6311 6897 8112 8922 9653 5397 8494 2479	5273 6316 7092 8129 8930 9836 5556 8752 2736	6326 7109 8135 9339 9952 5754 9124 2810	5610 6331 7128 8418 9344	5615 6478 7141 8434 9349	5625 6483 7289 8439 9354	5630 6491 7307 8676 9359	6496 7505 8692 9388	5782 6687 7522 8697 9393	5790 6692 7541 8859 9600	6702 7554 8864 9605	5972 6707 7709 8869 9610	5982 6879 7726 8874 9615	
CMPBLK	9879 9620 40#	8909 9648 5251 8258 2348	9653 5397	9836 5556	9952 5754	9344 10081 5916	10088	6257	6455	6617	6856	7020	7267	7434	7587	
CMREGI	7848 40# 5231 8088	8241	2479 5540 8395	2736 5736 8647	2810 5899 9007	10136 3089 6088 9104	3226 6240 9248	3440 6437 9495	3674 6600 9759	3846 6837 9923	4076 7002 10051	4271 7247 10191	4588 7414	4837 7667	4959 7828	
COMMEN DATACO	13 40# 7733	157 <b>*</b> 5132 7979	5281 8142	5444 8446	5638 8704	5803 8937	5990 9032	6144 9150	6339 9400	6504 9660	6715 9843	6905 9959	7149 10095	7315	7562	
DISREG DUM ENDCOM	40#	2300	2405	3050	3165	3591	3763	3987	4197	4461	4745	4864				
ERROR	22 61* 2655 4280 5350 5926 6609 7395 8222 9229 10522	167# 1698 2684 4518 5359 6060 6627 7424 8250 9257 10530	1740 2745 4534 5387 6069 6786 7445 8268 9467 10641	2112 2819 4597 5407 6097 6795 7633 8357 9476 10643	2119 2965 4801 5512 6116 6846 7642 8366 9503 10653	2156 3098 4810 5521 6212 6866 7676 8404 9732 10662	2229 3235 4846 5549 6221 6974 7697 8503 9741 10671	2237 3449 4921 5566 6249 6983 7802 8609 9768 10721	2267 3683 4930 5708 6267 7011 7811 9618 9932 10724	2277 3855 4967 5717 6409 7030 7838 8656 10060	2287 4041 5031 5745 6418 7219 7859 8761 10145	2357 4050 5203 5764 6446 7228 8053 9016 10200	2455 4085 5212 5871 6465 7256 8062 9114 10336	2464 4233 5240 5880 6572 7277 8096 9135 10348	2488 4242 5261 5908 6581 7386 8213 9220 10357	
FIHEAD		5094 8426	5116 8684	7082 8847	7099 8914	7120	7133	7297	7495	7512	7533	7546	7716	7941	7960	
FILLBL	8120 40# 40# 3817 5530 6427 7404 8228 9485	3340 3820 5533 6430 7407 8231 9488	3343 4056 5723 6587 7648 8234 9747	3386 4059 5726 6590 7651 8372 9750	3389 4066 5729 6593 7654 8624 9753	3392 4069 5886 6824 7657 8994 10024	3395 4247 5889 6827 7660 8997	3398 4954 5892 6830 7816 9000	3401 5218 6075 6989 7819 9090	3408 5221 6078 6992 7822 9093	3412 5224 6081 6995 8068 9096	3422 5365 6227 7234 9071 9235	3425 5368 6230 7237 8074 9238	3645 5371 6233 7240 8078 9241	3648 5527 6424 7401 8081 9482	
GETPRI GETSWR GOO	167* 2* 40* 4481	167 <b>*</b> 2320 4627	1612 2425 4764	2833 4884	2991 5015	3070 5038	3185 5172	3321 5321	3613 5483	3625 5677	3785 5842	3797 6029	4005 6183	4205 6379	4366 6543	

MAINDEO DZRJIA.	-11-DZRJ PII	I-A. RPC CROSS R	14/5/6 FL REFERENCE	INCT. CON	IT. TST-F	т 1	MACY11	M13 27(655)	30-MAR-	76 22:5	9 PAGE	314			SEQ	0374
LOAD	6755 8977 40# 3273 3555 3754 3984 4403 4708	5945 9072 3116 3274 3557 3755 4165 4406 4711	7188 9191 3118 3276 3559 3758 4167 4410 4717	7355 9315 3120 3278 3561 3759 4169 4414 4719	7602 9438 3121 3280 3563 3943 4170 4418	7773 9576 3123 3282 3565 3945 4172 4422 4743	7917 9703 3125 3284 3587 3947 4174 4426	8020 9873 3127 3286 3739 3948 4176 4430	8194 9991 3129 3288 3741 3950 4178 4434	2327 10119 3131 3310 3743 3952 4180 4458	8477 3133 3546 3744 3954 4182 4694	8541 3135 3548 3746 3956 4184 4697	8579 3157 3550 3748 3958 4185 4700	8735 3269 3551 3750 3960 4395 4702	8823 3271 3553 3752 3962 4399 4705	
MAKECL MANUAL MSG	40# 40# 1674# 2165 3918# 5573 8772#	2515 2201 1677 2376# 3922 5933# 8774	2534 2596 1720* 2379 4139* 5935 9267*	3881 2884 1723 2551# 4143 6272# 9270	4721 3899 3496 1743# 2554 4287# 6274 9514#	4103 4310 1746 2853# 4289 6635# 9517	4121 9812 1889* 2856 4645* 6637 9783*	1892 3027# 4647 7041# 9786	2050# 3030 4990# 7044 10215#	2053 3245* 4992 7450* 10217	2082# 3247 5057# 7453	2085 3459# 5059 7865#	2123# 3462 5413# 7868	2126 3699# 5416 8511#	2164# 3703 5570# 8514	
MULT	167# 167# 3245 5933	1675 3460 6272	1721 3701 6635	1744 3882 7042	1890 3901 7451	2051 3919 7866	2083 4104 8512	2124 4123 8772	2154 4140 9268	2377 4287 9515	2516 4645 9784	2535 4990 10215	2552 5057	2854 5414	3028 5571	
PUSH	167* 10673 167* 10514	6272 5011 3153 10739 3137 10696	3306 10764 3290 10751	3583 10795 3567 10781	3980 10850 3964 10818	4452 10948 4436 10938	4739 11029 4723 11001	8904 11230 8887 11189	9384 11584 9367 11558	9645 12017 9628 11998	10359 12018 10323 12004	10385 10375	10414 10404	10439	10561 10551	
REPORT RFORGC RHCLEA	167# 40# 40# 3491 5602 8302 40#	1908 3532 5771 8527 6675	2095 3725 5964 8670 9545	2134 3932 6122 8800	2194 4153 6303 8840	2241 4326 6472 9026	2290 4354 6670 9144	2396 4668 6873 9291	2586 4681 7075 9331	2753 4974 7283 9540	2900 5001 7488 9592	2951 5033 7703 9828	3039 5086 7887 9947	3109 5267 7934 10073	3255 5428 8106	
SAVE SAVTST	40*	11611	1730	1759	2060	2093	2132	2521	2540	3887	3906	4109	4128			
SCH SCOPE SEEKCO	40# 62# 3252 5599 40#	1681 3488 5961 8308	1727 3722 6300 8560	1757 3885 6666 8812	1903 3904 7072 9304	2059 3929 7485 9564	2091 4107 7884	2130 4126 8524	2191 4150 8797	2386 4308 9288	2519 4664 9537	2538 4996 9810	2570 5032 10226	2963 5083 10280	3036 5425	
SETTRA	40# 167# 11970#	8308 11490 11979	11980	11981	11982	11984	11996	11987	11988	11989	11990					
SKIP	167# 40# 167#	1525	1659	1671	1735	1885	5063	2114	2118	2153	4987	5053				
SEEKCO SETPRI SETTRA SETUP SKIP SLASH SPACE SREGIS	167# 167# 40# 5463 8313	2306 5657 8565 38	2411 5822 8957	2618 6009 9052	3056 6163 9170	3171 6358 9418	3597 6523 9682	3769 6736 9893	3993 6926 9977	4193 7168 10158	4467 7335	4750 7582	4870 7753	5152 8000	5301 8164	
STARS	8313 32 1675 2058 2552 3721 4141	38 1680 2083 2569 3871 4149	167# 1721 2090 2573 3877 4287	180 1726 2124 2582 3882 4307	243 1744 2129 2854 3884 4645	247 1756 2164 2862 3901 4663	3597 6523 9682 302 1835 2190 2866 3903 485?	1089 1845 2377 2875 3920 4990	1091 1890 2385 3028 3928 4995	1131 1902 2502 3035 4094 5057	1133 1953 2512 3245 4100 5082	1374 1972 2516 3251 4104 5414	1379 1999 2518 3460 4106 5424	1626 2038 2535 3487 4123 5571	1648 2051 2537 3701 4125 5598	

MAINDEC DZRJIA.	-11-DZRJ P11	I-A RPO CROSS R	14/5/6 FI	UNCT. COI	NT. TST-	PT 1	MACY11	N13	30-MAR-	-76 22:	59 PAGE	315			SEQ	0375
STARTT	5933 8796 11179 40# 5084 167#	5960 9268 11246 1906 5425	6272 9287 11316 2192 5600	6299 9515 11393 2394 5962	9536 9536 11408 2584 6301	5665 9784 11479 2898 6568	7042 9809 11503 3037 7073	7071 10213 11544 3253 7486	7451 10214 11597 3489 7885	7484 10215 11879 3723 8525	7866 10225 11956 3930 8798	7883 10273 11994 4151 9289	8512 11099 12010 4324 9538	8523 11109 4666 9826	8772 11116 4998	
SWRSU TJUMP TRMTRP	9823 11970# 40#	1546#	2507	2509	2531	2580	2607	2686	2873	2881	2895	3507	4321	6680	9550	
TSCLR2 TSCLR5 TTSTNO TYPBIN TYPDEC TYPNAM	40# 40# 5095 167# 167#	1907 5427 10292	2193 5501	2395 5963	2585 6302	2899 6669	3038 7074	3254 7487	3490 7886	3724 8526	3931 8799	4152 9290	4325 9539	4667 9827	5000	
TYPDEC TYPNAM TYPNUM TYPOCS TYPOCT TYPTXT	167* 167* 167* 167* 1804 2078 2973 10173 11076	1987 1578 1851 2215 3009 10230 11082 11758	1993 1583 1857 2221 3013 10236 11088 11766	11421 1588 1863 2247 3510 10884 11092 11774	1592 1934 2253 3521 10890 11101 11782 3178	1596 1939 2636 4344 10897 11670 11790	1601 1977 2642 4348 10901 11678	1605 1983 2662 4539 10905 11686	1660 1989 2668 4604 10912	1702 2021 2912 4611 10916 11702	1706 2027 2916 6807 11041 11710	1765 2033 2929 6814 11048 11718	1791 2064 2936 9900 11060 11726	1796 2068 2940 9906 11066 11734	1800 2072 2967 10166 11072 11742	
VECSET	5476 8177	2313 5670 8320 10112	2418 5835 8470	3063 6022 8534	3178 6176 8572	3314 6371 8728	11798 3604 6536 8816	11806 3776 6749 8970	3999 6939 9065	4199 7181 9184	4474 7348 9308	4757 7595 9431	4877 7766 9569	5165 7911 9695	5314 9013 9866	
MT	9984 40# 4894 7367	2329 5022 7614	2436 5045 7783	2843 5184 7926	3001 5331 8034	3079 5493 8194	3194 5689 8338	3330 5852 8485	3634 6041 8551	3806 6193 8590	4014 6390 8743	4214 6553 8833	4375 6767 8985	4637 6955 9080	4774 7200 9201	
WTT SSCMRE	4900 7373 9329 245#	2329 5022 7614 9448 2335 5028 7620 9454 284 290	5045 7783 9584 2442 5051 7789 9590 285 291	2843 5184 7926 9713 2849 5190 7932 9719 286 292	3001 5331 8034 9892 3007 5337 8040 9888 287 293	5493 8194 9999 3085 5499 8200 10005 288 294	10127 3200 5695 8344 10133 289 295	3336 5858 8491	3641 6047 8557	3913 5199 8596	4020 6396 8749	4220 6559 8839	4381 6773 8991	4643 6961 9086	4780 7206 9207	
SSCMRE SSCMTM SSESCA SSNEWT	245# 167# 167# 3245	1675 3460 6272	1721	1744	1890 3901 7451 11982	294 2051 3920 7866 11984	295 2083 4104 8512 11986	2124 4123 8772 11987	2164 4141 9268 11988	2377 4287 9515 11989	2516 4645 9784 11990	2535 4990 10215	2552 5057	2854 5414	3029 5571	
SSSET SSSKIP EQUAT HEADE KT11 SETUP SWRHI SWRLO SACT1 SCATC	4894 7367 93240# 4367 9073 9779 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677# 1677	11979 * 57 208 1523 40	3701 6635 11980	3882 7042 11981	11982	11984	11986	11987	11988	11989	11990	10215				
.SWRHI .SWRLO .\$ACTI .\$CATC	222 222 24 24 24	52# 178 168	53													

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MAINDEC-11-DZRJI-A, RPO4 5 6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 CROSS REFERENCE TABLE

MAINDE DZRJIA	C-11-DZRJ	II-A RPI CROSS !	04/5/6 FI	UNCT. COI	NT. TST-	PT 1	MACY11	C1L 27(655)	30-MAR	-76 22:	59 PAGE	317			SEQ	0377
ADD	4993	9293 11937 9392	9285 11905	8290 11915	10537	10666	10667	10792	10834	10910	11209	11271	11435	11445	11454	
ASLB ASLB	11579 8902 11214		9643	11468	11469	11470	11572	11574	11576	11834	11835	11836	11966			
ASLB BCC BEG		3145 1959 1959 1977 50315 5237 5237 10550	3298 1671 2003 40096 5053 6409 7639 10720 11413	3575 1735 2735 2450 5415 5415 7755 10732	3972 1783 2006 2461 4239 5209 5209 7808 9729 10758 11467	1797 2008 2678 1343 5347 6578 8050 9738 10835 11495	4731 1831 2011 2680 4505 5356 6679 80345 10846 11567	8903 1833 2013 2682 4515 5509 6783 8210 10257 11016	9383 1837 2077 2963 4531 5518 6792 10261 11026 11619	9544 1839 2118 3205 4788 5705 68054 10296 11145 11535	11215 1842 2227 3531 4798 5714 6971 8363 10335 11147 11638	1644 2235 3612 4807 5868 6980 9606 10347 11149 11844	1885 2259 3784 4708 5877 7216 8615 10354 11153 111949	1957 2261 3873 4918 6057 7225 9217 10520 11162 11855	1959 2027 4926 4926 73226 10274 1126	
BGE BGT	10297	11223	11394	11464	11569	11939										
BGE BHIS BHIC	11151 10661 1665 4555	10670 2271 4556	2804	2950 4582 11375	3208 4790	3212 4791	3384 4910	3406	4030 10012 11578	4031 10013	4341 10294	4507 10517	4508 10526	4524 10761	4525 10844	
BIS	11024 2232 3515 4365 4885 5957 6950	2271 2275 2255 2455 2450 2450 2450 2450 2570 2570 2570 2570 2570 2570 2570 25	2859 11350 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 11372 1	11375 2448 3787 4503 4913 6053 7357 9543 9705 11472	11385 12854 3809 4951 61859 61859 85824 11934	11403 2730 3947 4510 5017 6205 7604 8602 9875 11935	11430 2835 4007 4526 5040 6380 7628 9993	11465 2993 4026 4557 5174 6402 7775 9737	11578 3072 4032 4629 5196 5545 7795 8825 10044	11562 3120 4033 4700 5323 6565 7919 8979	11929 3197 4063 4766 5343 6731 9022 9074 10339	3273 4169 4786 5485 6757 9046 9193 10479	3323 4207 4792 5505 6779 8186 9213 10509	3347 4226 4793 5679 6921 8206 9317 10759	3550 4251 4831 5701 5947 8329 9440 10973	
BISB	11057 11826 1622 2879 10732 1981	1699 2962 11130 11297	1763 3518 11144	1786 3530 11152	2062 5029 11159	2075 5804 11618	2226 10334 11625	2259 10346 11634	2260	10534	10539	2652	2677 10709	2679 15714	2691 10719	
BITB BLCS BMI BNE	11513	11555	11289	11392	11462	11571	11940									
	11205 11205 11213 11213 11213 11213 11233 11233 11237 11377 11839	1553 2110 2880 3977 10385 11028 11389 11858 11227	1574 2149 2888 4314 10413 11059 113930 113930 11252	1614 2290 4316 10560 11131 11405 12016 11302	1516 2207 2892 4318 10630 11160 11433	1693 2209 2983 4449 10632 11211 11437	1700 2504 3150 4572 10635 11268 11443	1764 2506 3207 4736 10637 11276 11450	1777 2575 3303 4986 10710 11284 11457	1820 2577 3350 8293 10712 11298 11500	1977 2500 3393 8895 10715 11305 11517	1916 2602 3500 9375 10717 11352 11523	1919 2504 3502 9636 10753 11359 11626	1923 2653 3504 9816 10794 11364 11664	1932 2969 3519 9919 10949 11369 11927	
SPL SR	11377	11227	11252 1255 1793 1984 2216 2941	11302 1575 1797 1990 2222 2968	11373 1580 1801 2014 2248 2974	11401 1584 1805 2023 2254 3010	11427 1589 1952 2026 2605 3014	11631 1593 1858 2029 2637 3370	11929 1597 1964 2032 2643 3505	1602 1867 2035 2663 3511	1606 1936 2065 2669 3522	1618 1940 2683 3623	1661 1944 2073 2993 3795	1694 1960 2079 2913 3874	1703 1962 2114 2917 2097	

MAIND	EC-11-DZR. A.PII	II-A RP	04/5/6 FI	UNCT. CO	NT. TST-	PT 1	MACY11	D1 ^L 27(655)	30-MAR-	-76 22:5	59 PAGE	318			SEG	0378
	10935 10935 1175 1175 1175 1175 1175 1175 1175 11	4345 10231 10902 11139 11519 11579 12079 1517	4349 10237 10906 11142 11580 11767 12032	4540 10262 10913 11155 11593 11775	4606 10510 10917 11158 11665 11783	4512 10642 11043 11208 11571 11791	4987 10547 11049 11225 11679 11799	5054 10656 11061 11264 11687 11807	6808 10664 11067 11281 11695 11815	6816 10723 11073 11291 11703 11832	8294 10729 11077 11300 11711 11841	9821 10738 11083 11307 11719 11851	9901 10760 11089 11367 11727 11868	9907 10885 11093 11446 11735 11906	10158 10891 11103 11473 11743 11921	
STE	1514 2731 10329 11499	10491	9640 1519 3142 10586 11564 11229	1520 3295 10611 11565 11280	1529 3346 10612 11921 11306 1830	1541 3572 10882 11825	1542 3969 11157 11919 11589	1737 4441 11171 12014	1771 4615 11200	1822 4728 11203	1923 6593 11333	1913 10242 11370	1954 10243 11416	1964 10281 11424	2295 10282 11425	
SLEED CHIP		11156 1156 1156 1156 1156 1156 1156 115	1515 2005 4237 5712 7214 9513 10842 11383	11280 1696 2007 4342 5956 7223 9215 10945 11388	1930 1830 2010 4513 5875 7381 9225 11015 11398	10885 11825 11832 11832 11832 4505 6039 6039 11024 11404	11336 2116 4796 5064 7628 9471 11025 11432	1838 2117 4805 5207 7637 9727 11140 11442	1841 2155 4916 6216 7797 9736 11164 11449	1843 2233 4925 6404 7806 10260 11221 11461	1931 2273 5198 6413 8048 10353 11351 11463	1956 2450 5207 6567 8057 10518 11357 11499	1958 2459 5345 6576 8208 10527 11359 11512	1965 2981 5354 6781 9217 10658 11363	1967 4036 5507 6790 8352 10568 11368 11838	
DECB	10947	11146 1776 9894 10946 11290	11150 1819 9374 11027 11927	11273 1976 9635 11059 11938	11275 1981 10255 11496	11283 1947 10285 11833	11304 2109 10384	11308 2148 10412	11412 3149 10559	11436 3302 10631	11456 3579 10636	11516 3976 10711	11522 4448 10716	11568 4735 10762	11570 5052 10793	
DECB EMT HALT INC INCB IOT JMP	1733 1733 1733 1733 1775 1775 1789 1789	1943 3941 6369 9182 1873 8291 11168	2225 4162 6534 9300 1975 10248 11310	2257 4335 5747 9429 2949 10283 11615	2299 4352 6937 9556 3148 11013	2404 4362 7179 9693 3301 11163	2595 4617 7346 9864 3578 11207	2646 4676 7593 9910 3975 11380	2672 5010 7764 10177 4447 11397	2909 5163 8011 11096 4734 11471	2944 5312 9175 11109 9292 11499	3048 5474 8469 11263 8284 11621	3154 5559 8725 11632 8285 11933	3264 5933 9809 12007 9297 11941	3540 5020 8968 12031 9298 12015	
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NEG NOP RESET	10340 1524	4396 10341 1760	4387 10342 2390	4619 10343 10297	4620 10731	4621	4688	4689	4690	4860	4951	4962	10299	10300	10301	

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.REPT .SBTTL	40	22 57	168	178	189	208	245	303	1322	1505	1506	1507	1510.	1525	1512	

N14																
MAINDEC-11-DZRJI-A, RP04/5/6 FUNCT. CONT. TST-PT 1 DZRJIA.P11 CROSS REFERENCE TABLE						MACYII	27(655)	30-MAR-	-76 22:5	59 PAGE	328			SEQ (	0388	
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ERRORS DETECTED: 0

*DZRJIA.DZRJIA/SOL/CRF+DZRJIA RUN-TIMĖ: 151 154 19 SECONDS CORE USED: 29K

B15