

DEPRX

SENSE SWITCH INTERROGATION AND DIAGNOSTIC PRINT SUBROUTINE

A. PURPOSE OF THIS SUBROUTINE

This subroutine under control of the SENSE SWITCHES will:

1. Print out the status of the machine at the time of error. The printout will provide information which is useful when running diagnostic programs.
2. Check for a TAPE REDUNDANCY on all CHANNELS.
3. Provide for looping in any section of the main program.

B. METHOD OF TEST

This subroutine may be used only with programs which have provided the basic linkage to the subroutine.

1. Insert a BCD word of SHARE MNEMONICS OPERATION CODE at the beginning of each section of a program to indicate what operation is being tested.

Immediately following this BCD word will be the first instruction of the section being tested. This instruction is in location X referred to in the entries.

Example:

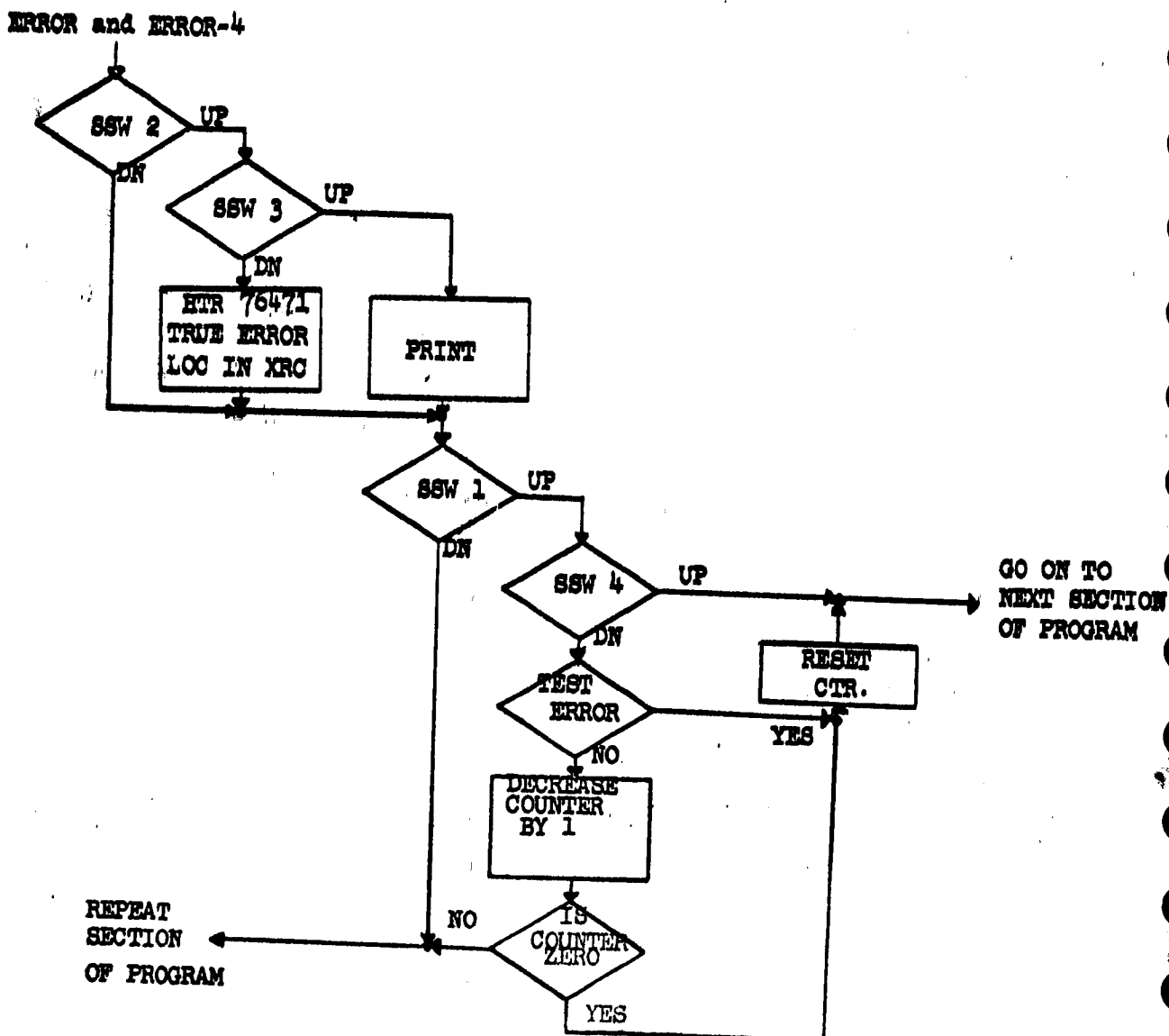
	BCD	1CLA
X	CLA	AAA

2. The basic linkage to the subroutine will depend on what type of printout or checking is desired.
3. 6 Entries are available to this subroutine, Purpose and Linkage to each entry are described on subsequent pages of this write-up.

a. TSX ERROR, 4
TSX OK, 4
TRA X

This ENTRY causes a FOUR LINE MAIN FRAME printout as shown on page 1.008. Return is made to 2 instructions following TRA X. If SENSE SWITCH 1 is DOWN, return is made to TRA X which will cause a repeat of the section being tested. Entry to TSX OK, 4 will allow for checking SENSE SWITCHES to determine whether to repeat the section of program or continue with the next section.

If SENSE SWITCH 4 is DOWN, the tested section will be repeated the number of times stored in KONST+2. Initially this is 40 DECIMAL but can be changed by storing the desired constant in KONST+1 & KONST+2.



b. TSX ERROR-1,4
TRA X

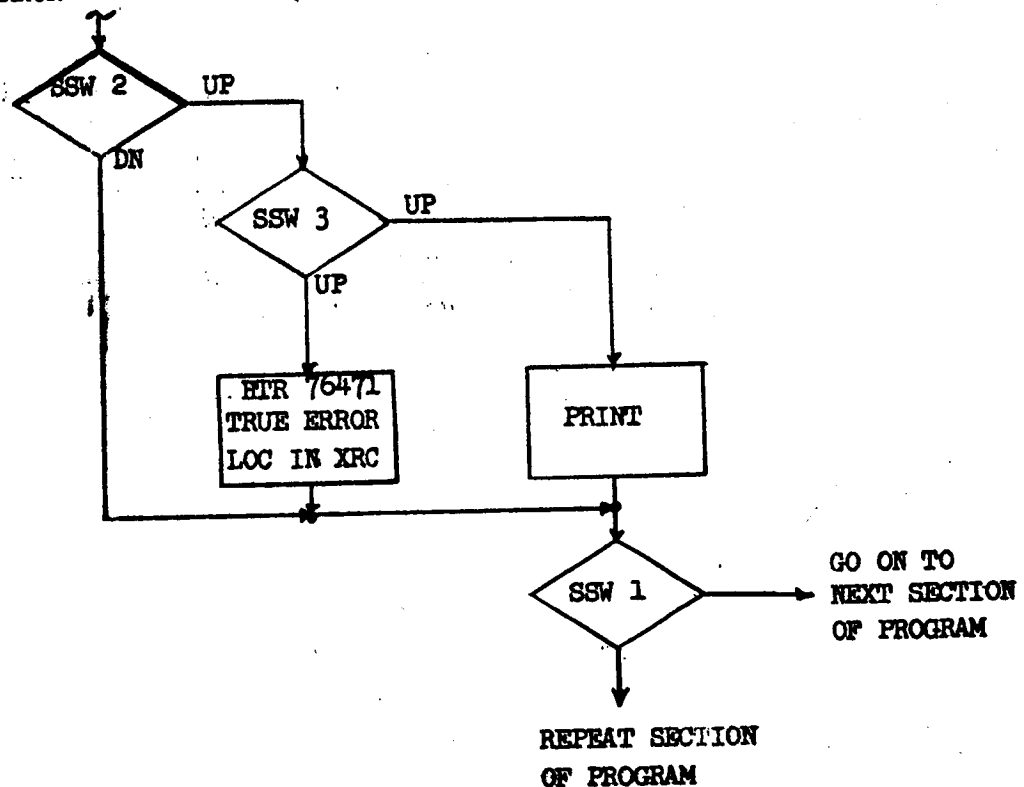
This ENTRY causes a FOUR LINE MAIN FRAME printout as shown on page 1.008.

Return is made to 1 instruction following TRA X.

If SENSE SWITCH 1 is DOWN, return is made to TRA X which will cause a repeat of the section being tested.

SENSE SWITCH 4 is not interrogated.

ERROR -1 and ERROR -2

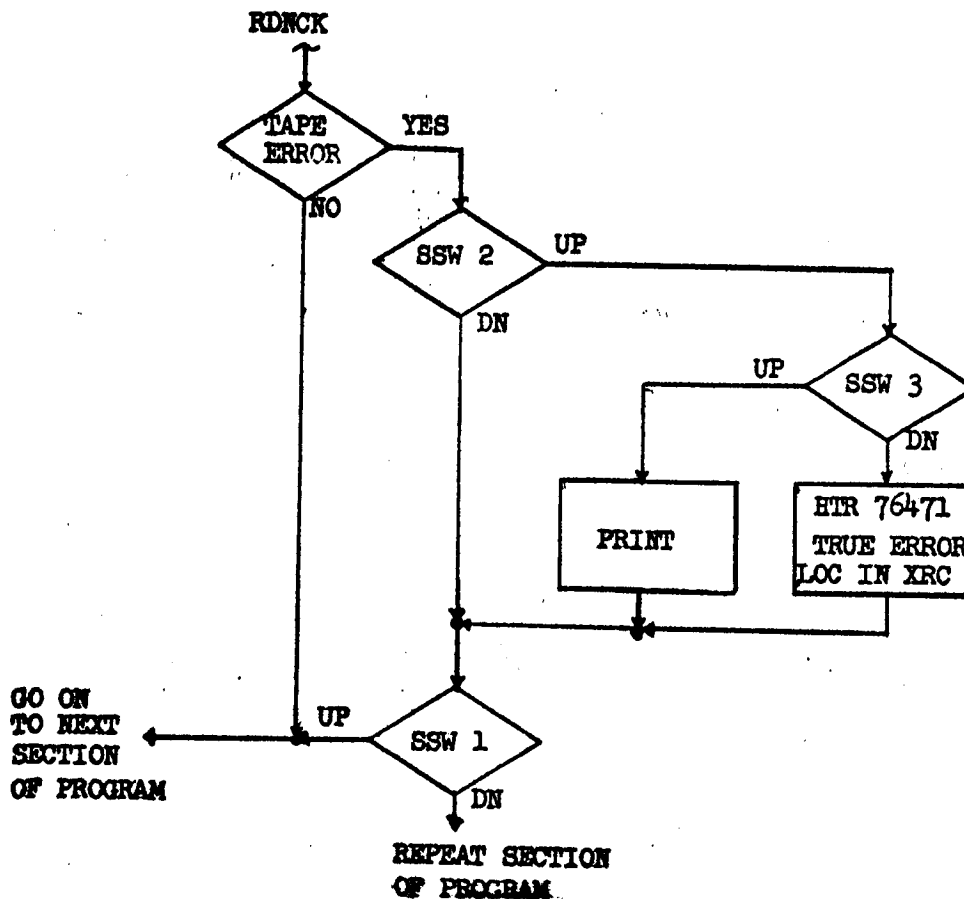


c. TSX RDNCK, 4
TRA X

This ENTRY will interrogate the TAPE INDICATORS for all CHANNELS. If any tape indicator is on, a TWO LINE printout will occur as shown on Page 1.009.

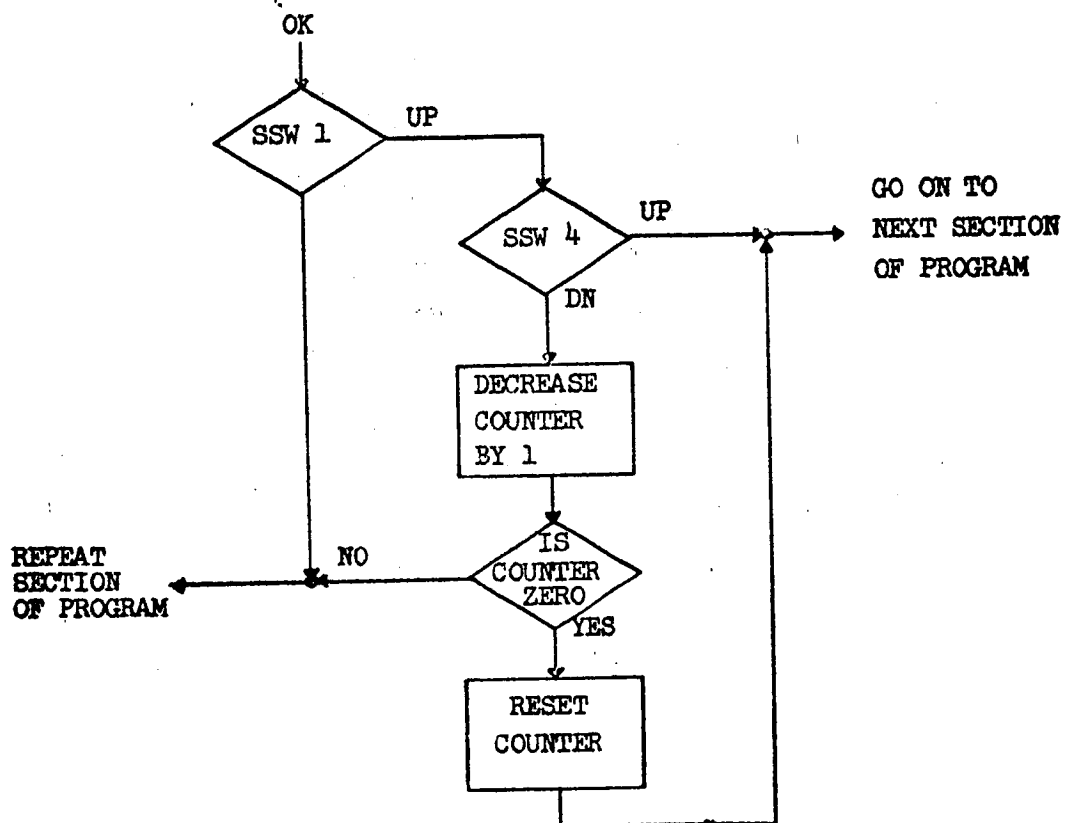
Return will be to the instruction following TRA X.

If SENSE SWITCHES 1 and 2 are DOWN no printout will occur and return will be made to TRA X, which will cause a repeat of the section being tested. With only SENSE SWITCH 1 DOWN, a printout will occur and the section will be repeated.



d. TSX OK, 4
TRA X

This entry will provide for looping in a program section any number of times. With SENSE SWITCH 1 DOWN, the section will be repeated until SENSE SWITCH 1 is RAISED. With SENSE SWITCH 1 UP and SENSE SWITCH 4 DOWN, the program section will loop the number of times specified in KONST+2. This is 40 DECIMAL times initially but can be changed by storing desired constant in KONST+1 & KONST+2. SENSE SWITCHES 1 and 4 UP, the program section will not be repeated.



e. TSX ERROR-4, 4
 TSX OK
 TRA X

This entry and it's returns are the same as TSX ERROR, 4.
The printout however is a 4 line I/O printout as shown on
Page 1.009.

f. TSX ERROR-2, 4
 TRA X

This entry and it's returns are the same as TSX ERROR-1, 4.
The printout however is a 4 line I/O printout as shown on
Page 1.009.

4. TRA X OR TXL X

In TRA X, the X denotes the starting instruction of the section
being tested.

If the TRA X is changed to TXL X only one line will be printed
when an error occurs. See Page 1.009

5. TXL X, 4

If TXL X is given a Tag of 4, the instruction will be treated as a
NOP.

6. ETI

An error track identification has been incorporated into this sub-
routine. A typical printout is shown on Page 1.009.

This routine will provide identification for tracks on which errors
have occurred. This routine is called in by using the basic I/O
linkage and inserting a 1 in the DECREMENT of the TSX instruction.

Example:

TSX ERROR-2, 4, 1
TRA X

The printout provided is useful on tape comparison errors but is
meaningless when called in on card machine comparison errors.

7. When writing an I/O test, prior to entering this subroutine:

Store the WORD COUNT of each RECORD in INDEX REGISTER A.
Store the RECORD COUNT in INDEX REGISTER B.
Store the TOTAL WORD COUNT +1 in "WDNO"
Store the TOTAL RECORD COUNT +1 in "RECNO"

8. If a section of the program uses the TRAPPING MODE, the BCD word at the start of the section should be followed by a hyphen.

Example:

BCD 1CLA-

C. PROGRAM CONTROL

1. Deck

001-032

Place Binary Deck just
before TRA card of assemble
program to be tested.

2. 716 Printer Control Board

Standard Diagnostic Board.

3. Sense Switch Control

SSW 1	UP	Test Sense SW4
	DOWN	Repeat test loop

SSW 2	UP	Indicate errors-test SSW 3 to Print or Halt
	DOWN	Bypass error indications-test SSW 1

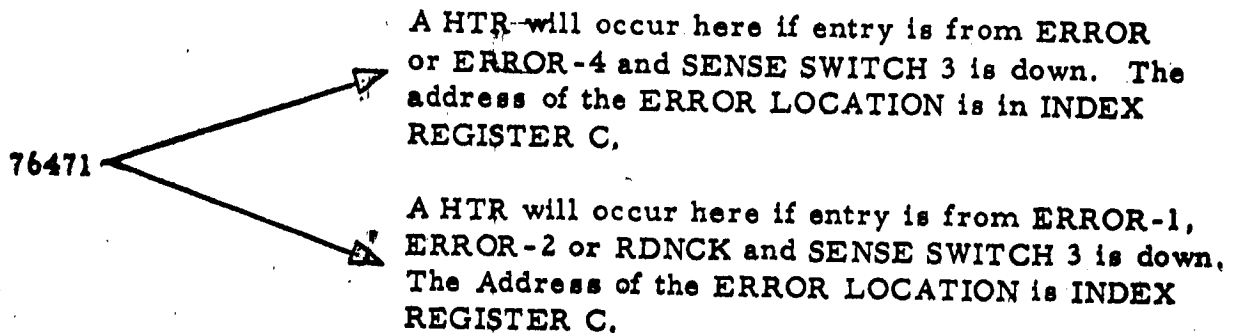
SSW 3	UP	Print on error if SSW 2 is up then test SSW 1
	DOWN	Stop on error if SSW 2 is up then test SSW 1

SSW 4	UP	Proceed to next test
	DOWN	Repeat section N times but if error occurred go to next section.

SSW 5		Not used
-------	--	----------

SSW 6	UP	End test-call in next program.
	DOWN	Repeat entire program

D. ERROR STOPS



E. STORAGE AREA USED FOR TEST

76400-77710

F. PRINTOUTS

There are four types of Print-Outs, as follows

1. MAIN FRAME PRINT - OUT

TEST LOC 00031, OPN STP, ERROR LOC 00052, 0 LOC 402000000031, SW 000000
LITE 0000, MQ 000001010101, XRA 00001, XRB 00001, XRC 07726, TRAP TGR 0
ACC &, Q 0, P 0, 300001010101, DIV CK Q, ACC OVFL 0,
INDS 000000000000, KEYS 002000000030

- | | |
|--------------------|--|
| a. Test Loc 00031 | Indicates the start of the section of the program in error. |
| b. Opn STP | Indicates the OPERATION being tested. Test instruction is STORE PREFIX. |
| c. Error Loc 00052 | Indicates the location where the error was detected. Error in program occurred at Location 00052. |
| d. PSE SW 000000, | Indicates the status of the 6 SENSE SWITCHES. A 0 indicates that the SWITCH is UP and a 1 indicates that the SWITCH is DOWN. SENSE SWITCHES and SENSE LIGHTS are read sequentially from LEFT TO RIGHT. |
| e. Lite 0000 | Refers to 4 SENSE LITES. A binary 1 indicates that a LIGHT is ON and a binary 0 indicates that a LIGHT is OFF. |

2.

I/O PRINT - OUT

TEST LOC 00202, OPN RTBA 1 , ERROR LOC 00230, 0 LOC 000000100001, SW 000000
MSE 0000, COMP ERROR, WORD GENERATED 010 000 101 100 001 001 100 111 011 011
REC 00001, WORD 00002, WORD READ. 100 000 101 000 001 001 100 010 011 001
INDS 000000000000, KEYS 000000000000 BA 8 4 1 2

- a. OPN RTBA 1 Indicates that the error occurred as a result of READING TAPE 1 in BINARY on CHANNEL A.
- b. Word Generated Refers to the WORD WRITTEN or GENERATED in storage that is being compared to the WORD READ from TAPE UNIT 1.
- c. Word Read Indicates the WORD of the RECORD that was read into storage in ERROR from TAPE 1.
- d. MSE 0000 Indicates the status of the 4 SENSE BIGHTS.
- e. ETI ERROR TRACK IDENTIFICATION just below word read provides quick identification of the FAILING TRACK. This identification will occur only if it is called in by the TSX instruction.

When SENSE SWITCH 3 is DOWN the MQ will contain the CORRECT WORD and the ACC will contain the WORD READ.

3.

TAPE REDUNDANCY PRINT - OUT

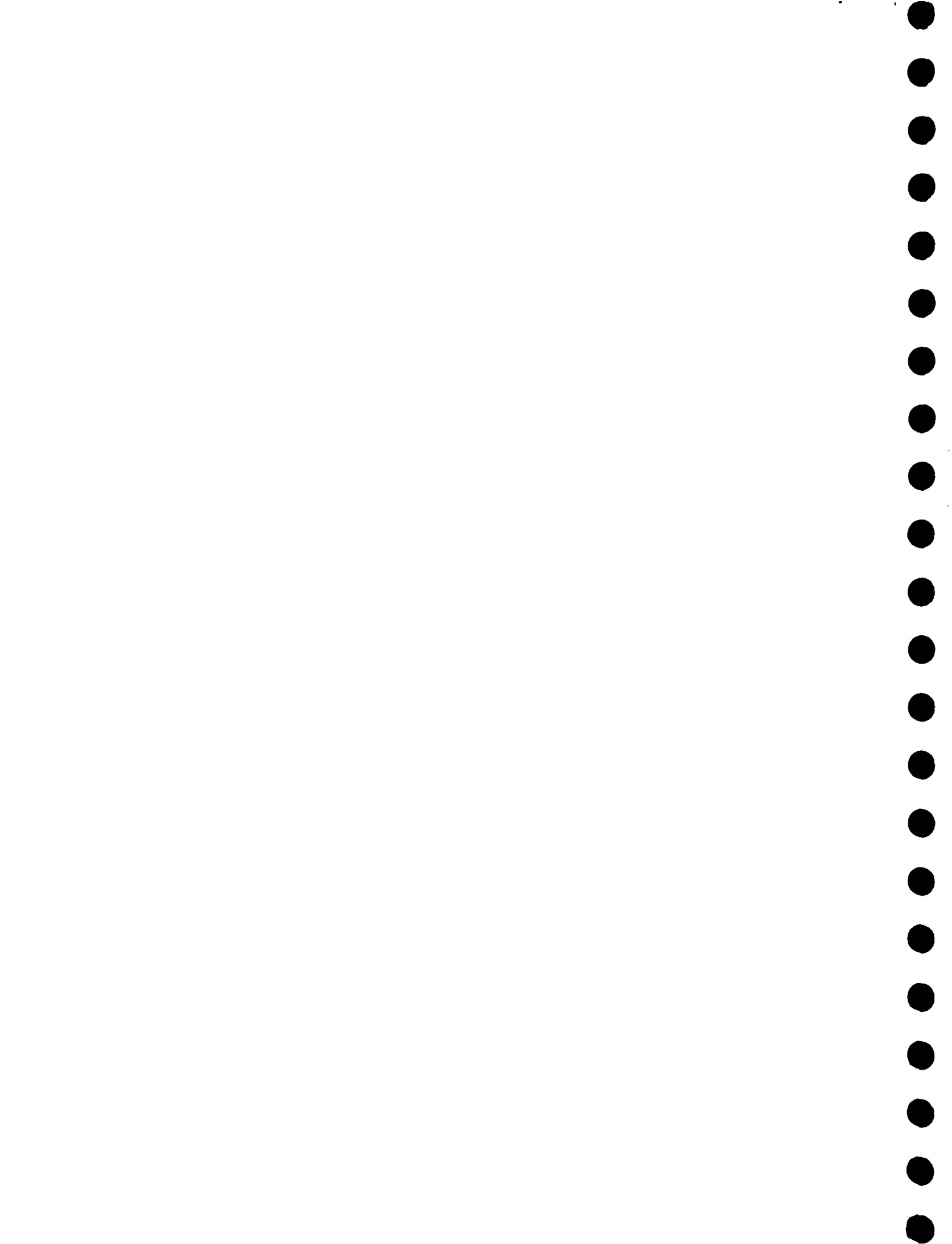
TEST LOC 01204, OPN RTBA , ERROR LOC 01230, 0 LOC 000026007650 , SW 000001
INDS 000000000000, KEYS 002000001151 TAPE CK-CHN A0, B1, C0, D0, E0, F0, G0, H0

- a. Tape CK-CHAN Identifies channel in which A Redundancy Error Occurred. A one denotes an ERROR on this channel. A zero denotes NO ERROR on this channel.

4.

ONE LINE PRINT - OUT

TEST LOC 01224, OPN TCOA , ERROR LOC 01226, 0 LOC 000026007650 , SW 000001



DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 1

DEPRX

* SENSE SWITCHES INTERROGATION AND DIAGNOSTIC * PRINT SUBROUTINE

76400

ORG 32000

76400 0020 00 0 76444
76401 0000 00 0 77661
76402 0020 00 0 76446
76403 0020 00 0 76447
76404 0020 00 0 76450
76405 0020 00 0 76461
76406 0020 00 0 76523

TRA ERROR-4
HTR PR
TRA ERROR-2
TRA ERROR-1
TRA ERROR
TRA OK
TRA RDNCK

ILLEGAL ENTRY.

76407 +000000000000
76410 +000000000000

WDNO OCT
RECNO OCT

76411 +000000000001
76412 +000000000050
76413 +000000000050
76414 +000000000001
76415 +000000000001
76416 0020 00 0 76460
76417 0020 00 0 76520

KONST OCT 1
OCT 50
OCT 50
OCT 1
OCT 1
TRA OK-1
TRA OK2

COUNT CONSTANT

EXIT FROM PRINT PROG
EXIT FROM PRINT WHEN
ENTRY IS TO ERROR-1

76420 +000000000001

OCT 1

76421 0766 00 0 01361
76422 0760 00 0 01363
76423 0074 00 1 76430
76424 0500 00 0 76436
76425 0120 00 0 77231
76426 0020 00 0 77023

CH14 WRS 753
SPRA 3
TSX WPRA+1,1
CLA LOC
TMI CH35-7
TRA CH18

PRINTER
DOUBLE SPACE
PRINT FIRST LINE
IS THIS A 1 LINE PR OUT
YES
NO

76427 0766 00 0 01361
76430 0540 00 0 77615
76431 0060 00 0 76431
76432 0020 00 1 00001

WPRA WPRA
RCHA CTWD
TCOA *
TRA !,!

IOCD PR,0,24

EXIT

76433 0766 00 0 01361
76434 0760 00 0 01364
76435 0020 00 0 76430

WPR WPRA
SPRA 4
TRA WPRA+1

OCT SPACE

76436 +000000000000
76437 +000000000000

LOC OCT 0
OCT 0

TEST LOC + ERROR ADDR
DECREMENT CONTAINS 2,5
COMP OF LAST ROUTINE

76440 +000000000000
76441 +000000000000
76442 -000000000000
76443 +000000000007

OCT 0
OCT 0
OCT -0
OCT 7

+0
TRAP ROUTINE INDICATOR

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 2

76444	0600	00	0	76414		STZ KONST+3	INDICATE I/O TYPE PRINT OUT
76445	0020	00	0	76450		TRA ERROR	
76446	0600	00	0	76414		STZ KONST+3	SET STORAGE TO ZEROS MODIFY INSTRUCTIONS FOR RETURN ADDR TO MAIN PROG
76447	0020	00	0	76507		TRA MOD	
76450	0600	00	0	76411	ERROR	STZ KONST	DO NOT REPEAT SECTION
76451	0600	00	0	76412		STZ KONST+1	IF SENSE SW 4 IS DOWN
76452	-0634	00	4	77525		SXD STOR+6,4	SAVE XRC
76453	0774	00	4	76416		AXT KONST+5,4	CORRECT ADDRESS
76454	0634	00	4	76473		SXA RELY-1,4	TO EXIT INSTRUCTION
76455	-0534	00	4	77525		LXD STOR+6,4	RESTORE SAVED XRC
76456	0760	00	0	00162		PSE 114	SSW 2
76457	0020	00	0	76465		TRA SSW3	UP-INDICATE ERRORS
76460	2 00001	4		76461		TIX OK,4,1	
76461	-0634	00	4	76437	OK	SXD LOC-1,4	2. S COMPI. OF PROGRAM LOCATION LAST PERFORMED
76462	0760	00	0	00161		PSE 113	IF SENSE SW 1 IS UP THEN
76463	0020	00	0	76474		TRA RELY	CHECK SS 4
76464	0020	00	4	00001		TRA 1,4	IF DOWN REPEAT SECTION OF PROG
76465	0760	00	0	00163	SSW3	PSE 115	IF SENSE SW 3 IS UP
76466	0020	00	0	76577		TRA PRINT	PRINT ON ERROR
76467	-0634	00	4	77525		SXD STOR+6,4	IF SS 3 IS DOWN STOP ON ERROR
76470	-0535	00	4	77525		LDC STOR+6,4	
76471	0000	00	0	76472		HTR *-1	TRUE ERROR LOC IS IN XRC
76472	-0534	00	4	77525		LXD STOR+6,4	RESTORE SAVED XRC
76473	0020	00	0	00000		TRA	EXIT INSTRUCTION
76474	0760	00	0	00164	RELY	PSE 116	IF SENSE SWITCH 4 IS UP
76475	0020	00	4	00003		TRA 3,4	GO TO NEXT SECTION OF THE PROGRAM. IF DOWN REPEAT SECTION OF THE PROGRAM N TIMES OR THE NUMBER OF TIMES INSERTED IN LOC KONST+2.
76476	0500	00	0	76412		CLA KONST+1	COUNTER
76477	0402	00	0	76411		SUB KONST	L+1 REDUCE COUNT BY 1
76500	0601	00	0	76412		STO KONST+1	
76501	-0100	00	0	76464		TNZ OK-3	
76502	0500	00	0	76413		CLA KONST+2	L+50 COUNT CONSTANT
76503	0601	00	0	76412		STO KONST+1	
76504	0500	00	0	77531		CLA STOR+1	L +1
76505	0601	00	0	76411		STO KONS	
76506	0020	00	4	00003		TRA 3,4	CONT. PROG

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 3

76507	-0634	00	4	77525	MOD	SXD STOR+6,4	SAVE XRC
76510	0774	00	4	76417		AXT KONST+6,4	CORRECT ADDRESS
76511	0634	00	4	76473		SXA RELY-1,4	TO EXIT INSTRUCTION
76512	-0534	00	4	77525		LXD STOR+6,4	RESTORE SAVED-XRC
76513	0600	00	0	76415		STZ KONST+4	SET STORAGE TO ZEROS
76514	0600	00	0	76412		STZ KONST+1	
76515	0600	00	0	76411		STZ KONST	
76516	0760	00	0	00162	ERR	PSE 1,4	SSW 2
76517	0020	00	0	76465		TRA SSW3	INDICATE ERRORS
76520	0760	00	0	00161	OK2	PSE 1,3	SSW 1
76521	0020	00	4	00002		TRA 2,4	UP-GO TO NEXT ROUTINE
76522	0020	00	4	00001		TRA 1,4	REPEAT TEST
							PUT DSC REDUNDANCY
							CHECKS IN PRINT RECORD
							ACC CONTENTS
76523	0601	00	0	77517	RDNCK	STO STOR	
76524	0771	00	0	00043		ARS 35	
76525	0602	00	0	77525		SLW STOR+6	OVFL BITS P+Q
76526	-0600	00	0	77521		STQ STOR+2	MQ CONTENTS
76527	-0634	00	1	77523		SXD STOR+4,1	PLACE XRA IN DECR.
76530	-0500	00	0	77564		CAL MASK+9	RESET RECORD IMAGE
76531	0320	00	0	77514		ANS REC4R+9	INDICATIONS
76532	-0500	00	0	77552		CAL BIT2+3	
76533	0602	00	0	77513		SLW REC4R+8	FOR REDUNDANCY TAPE CK
76534	0602	00	0	76420		SLW KONST+7	PUT A BIT IN WORD
76535	0060	00	0	76535		TCOR *	CHECK CHAN IN OPERATION
76536	0061	00	0	76536		TCOB *	
76537	0062	00	0	76537		TCOC *	
76540	0063	00	0	76540		TCOD *	
76541	0064	00	0	76541		TCOE *	
76542	0065	00	0	76542		TCOF *	
76543	0066	00	0	76543		TCOG *	
76544	0067	00	0	76544		TCOH *	
*							CHECK CHANNELS A-B-C-D-E-F-G-H- FOR REDUNDANCY CHECK.
76545	0500	00	0	77544		CLA IDE+7	INITIALIZE IDE
76546	0601	00	0	77535		STO IDE	
76547	0774	00	1	00010		AXT 8,1	
76550	-0500	00	0	77535		CAL IDE	GET CURSOR
76551	0022	00	0	77350	TRC	TRCA YES	AN ERROR ON THIS CHAN.
76552	-0602	00	0	77514		ORS REC4R+9	NO ERROR ON THIS CHAN.
76553	-0765	00	0	00003		LGR 3	SHIFT CURSOR TO
76554	0601	00	0	77535		STO IDE	NEXT CHAN. LOC.
76555	0500	00	0	76551		CLA TRC	GET INST.
76556	0120	00	0	76560		TPL *-2	IS IT PLUS
76557	0400	00	1	77527		ADD STOR+8,1	NO- CHANGE INST.
76560	0760	00	0	00002		CHS	YES- CHANGE SGN.
76561	0601	00	0	76551		STO TRC	STO NEW INST.
76562	2	00001	1	76550		TIX TRC-1,1,1	BACK FOR NEXT INST.

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 4

76563 0500 00 0 77513
76564 0402 00 0 77552
76565 0100 00 0 76567
76566 0600 00 0 76420

CLA REC4R+8
SUB BIT2+3
TZE CONT
STZ KONST+7

WAS THERE A REDUNDANCY
TAPE CHECK ON ANY CHAN
IF NOT-RETURN TO MAIN
PROGRAM-OK

76567 0500 00 0 77525
76570 0560 00 0 77517
76571 0763 00 0 00043
76572 0560 00 0 77521
76573 -0534 00 1 77523

CONT CLA STOR+6
LDQ STOR
LLS 35
LDQ STOR+2
LXD STOR+4,1

RESET REGISTERS

RESTORE SAVED XRA

76574 0520 00 0 76420
76575 0020 00 4 00002
76576 0020 00 0 76446

ZET KONST+7
TRA 2,4
TRA ERROR-2

TAPE CHK REDUNDANCY
NO-CONTINUE PROG
YES-INTERROGATE SENSE SW

* PRINT ROUTINE

76577 0601 00 0 77517
76600 0771 00 0 00043
76601 0602 00 0 77525
76602 0754 00 2 00002
76603 0621 00 0 77523
76604 -0634 00 1 77523
76605 -0634 00 4 77525
76606 -0600 00 0 77521
76607 0604 00 0 77356

PRINT STO STOR
ARS 35
SLW STOR+6
PXA 2,2
STA STOR+4
SKD STOR+4,1
SKD STOR+6,4
STQ STOR+2
STI INDS

ACC CONTENTS

OVFL BITS

XRB
PLACE XRA IN DECR.
PLACE XRC IN DECR.
MQ CONTENTS
SAVE INDICATORS

76610 0500 00 0 77530
76611 0760 00 0 00012
76612 0020 00 0 77345
76613 0771 00 0 00003

CHK1 CLA STOR+9
DCT
TRA DVPLO
ARS 3

L 100000
DIV CK TEST
DCT LITE IS ON

76614 -0140 00 0 76623
76615 -0602 00 0 77525
76616 0500 00 0 77552
76617 0767 00 0 00007

TNO CHK4-3
ORS STOR+6
CLA BIT2+3
ALS 7

OVFL LITE IS OFF
OVFL LITE WAS ON

TO TURN OVFL BACK ON

76620 0500 00 0 77354
76621 0601 00 0 77245
76622 0020 00 0 76625

CLA NOPO
STO EXIT-1
TRA CHK4-1

TO INSURE OVFL LITE
IS ON BEFORE EXITING

76623 0500 00 0 77355
76624 0601 00 0 77245
76625 0760 00 0 00000

CLA OFF
STO EXIT-1
CLM

TO INSURE OVFL LITE
IS OFF BEFORE EXITING
CLEAR ACC.

76626 0774 00 1 00004
76627 0767 00 0 00003
76630 -0760 00 1 00145
76631 0020 00 0 76634
76632 0400 00 0 77531
76633 0760 00 1 00145
76634 2 00001 1 76627

CHK4 AXT 4,1
ALS 3
MSE 101,1
TRA *-3
ADD STOR+10
PSE 101,1
TIX CHK4+1,1,1

L +4 SENSE LITES

IS LITE OFF

L +1 - WAS ON
RESET LITES

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 5

76635	0774	00	1	00006	CHK3	AXT 6,1	L +6 SENSE SWITCHES
76636	0767	00	0	00003		ALS 3	
76637	0760	00	1	00167		PSE 119,1	IS SSW UP
76640	0020	00	0	76642		TRA CHK3+5	WAS UP
76641	0400	00	0	77531		ADD STOR+10	L +1 - WAS DOWN
76642	2 00001	1		76636		TIX CHK3+1,1,1	

76643	0602	00	0	77527	SLW STOR+8	STO PSE + MSE INDICATIONS
-------	------	----	---	-------	------------	---------------------------

* CHECK IF ERROR TRACK IDENTIFICATION WAS CALLED FOR

76644	0560	00	0	77352	LDQ TRPRI	PUT TRA IN MQ
76645	0441	00	4	00000	LDI 0,4	GET TSX INSTR.
76646	-0054	00		000001	LFT 1	IS THIS A TAPE TEST
76647	-0600	00	0	77227	STQ MUNGN	YES-SET UP FOR ETI

* CHECK IF ENTRY TO SUB ROUTINE WAS AT ERROR -1

76650	0500	00	0	76415	CHK3A CLA KONST+4	ERROR -1 IND.
76651	0100	00	0	76657	TZE CHK3A+7	YES
76652	0500	00	0	76602	CLA PRINT+3	NO
76653	0621	00	0	76665	STA CHK5+1	RESET ADDR TO 2
76654	0500	00	0	76416	CLA KONST+5	SET UP FOR
76655	0601	00	0	77246	STO EXIT	RETURN TO OK-1
76656	0020	00	0	76664	TRA CHK5	

76657	0500	00	0	77531	CLA STOR+10	L +1
76660	0601	00	0	76415	STO KONST+4	
76661	0621	00	0	76665	STA CHK5+1	RESET ADDR TO 1
76662	0500	00	0	76417	CLA KONST+6	SET UP FOR
76663	0601	00	0	77246	STO EXIT	RETURN TO OK2

* OBTAIN TEST LOC. AND ERROR ADDRESS

76664	-0534	00	4	77525	CHK5	LXD STOR+6,4	XRC
76665	-0754	00	4	00002		PXD 2,4	
76666	0760	00	0	00006		COM	
76667	0400	00	0	77551		ADD BIT2+2	+1 TO DECREMENT
76670	0622	00	0	76436		STO LOC	ERROR ADDR INTO DECR
76671	0771	00	0	00022		ARS 18	
76672	0402	00	0	76665		SUB CHK5+1	L +2
76673	0621	00	0	76674		STA CHK6	

76674	-0500	00	0	00000	CHK6	CAL 0	PLACE
76675	0621	00	0	76436		STA LOC	TEST LOC INTO ADDR
76676	0630	00	0	76436		STP LOC	

* OBTAIN BCD OPERATION

76677	0402	00	0	77531	SUB STOR+10	L +1
76700	0621	00	0	76701	STA *-1	
76701	0560	00	0	00000	LDQ 0	BCD OPERATION

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 6

76702	0774	00	1	00006	CHK7	AXT 6,1	
76703	0760	00	0	00000		CLM	
76704	-0763	00	0	00002		LGL 2	
76705	0734	00	4	00000		PAX 0,4	ZONE BIT
76706	-0763	00	0	00004		LGL 4	
76707	0340	00	0	77534		CAS BIT-2	CHECK FOR BLANK L +60
76710	0020	00	0	76712		TRA *-2	
76711	0020	00	0	76725		TRA CHK7A	YES
76712	0340	00	0	77543		CAS BIT-9	CHECK FOR HYPHEN
76713	0020	00	0	76715		TRA *-2	
76714	0020	00	0	77343		TRA TRAP	YES- INDICATES A TRAP ROUTINE
76715	-0320	00	0	77545		ANA BIT-11	MASK FOR NUMERIC
76716	0734	00	2	00000		PAX 0,2	
76717	3 00012	2	76725		TXH CHK7A,2,10	IGNORE SPECIAL CHARS	
76720	0500	00	0	77533		CLA BIT-1	COL INDICATOR
76721	0771	00	1	00006		ARS 6,1	
76722	-0602	00	2	77370		ORS REC1L+9,2	
76723	-3 00000	4	76725		TXL *-2,4		
76724	-0602	00	4	77373		ORS REC1L+12,4	
76725	2 00001	1	76703	CHK7A	TIX CHK7+1,1,1		
76726	0560	00	0	00000	CHK8	LDA 0	
76727	0774	00	1	00014		AXT 12,1	
76730	0074	00	2	77337		TSX CH22,2	
76731	-0500	00	0	77544		CAL BIT-10	COL IND
76732	0771	00	1	00014		ARS 12,1	
76733	-0602	00	4	77404		ORS REC1R+9,4	
76734	2 00001	1	76730		TIX *-4,1,1		
76735	-0500	00	0	76436	CH1	CAL LOC	PUT TEST LOC INTO IMAGE
76736	0765	00	0	00017		LRS 15	
76737	0774	00	1	00005		AXT 5,1	
76740	0074	00	2	77333		TSX CH21,2	
76741	-0500	00	0	77532		CAL BIT	BIT COLUMN 10
76742	0771	00	1	00005		ARS 5,1	
76743	-0602	00	4	77370		ORS REC1L+9,4	
76744	2 00001	1	76740		TIX CH1-3,1,1		
							PUT ERROR ADDR INTO IMAGE
76745	-0534	00	4	76436	CH5	LXD LOC,4	
76746	-0754	00	4	00000		PXD 0,4	
76747	0765	00	0	00041		LRS 33	
76750	0774	00	1	00005		AXT 5,1	
76751	0074	00	2	77333		TSX CH21,2	
76752	-0500	00	0	76442		CAL LOC-4	-0
76753	0771	00	1	00006		ARS 6,1	
76754	-0602	00	4	77404		ORS REC1R+9,4	
76755	2 00001	1	76751		TIX CH5-4,1,1		

76756	-0500	00	0	77527	CH7	CAL STOR+8	PUT PSE SW INTO IMAGE
76757	0765	00	0	00022		LRS 18	
76760	0774	00	1	00006		AXT 6,1	
76761	0074	00	2	77333		TSX CH21,2	
76762	-0500	00	0	77543		CAL BIT+9	
76763	0771	00	1	00006		ARS 6,1	
76764	-0602	00	4	77404		ORS REC1R+9,4	
76765	2 00001	1		76761		TIX CH7-3,1,1	
76766	0774	00	4	00014	CH10	AXT 12,4	PUT 1ST REC IN PR IMAGE
76767	0774	00	1	00030		AXT 24,1	
76770	-0500	00	4	77373		CAL REC1L+12,4	LEFT HALF IMAGE
76771	0602	00	1	77711		SLW PR+24,1	
76772	-0500	00	4	77407		CAL REC1R+12,4	
76773	0602	00	1	77712		SLW PR+25,1	
76774	2 00001	4		76775		TIX CH10+7,4,1	
76775	2 00002	1		76770		TIX CH10+2,1,2	
* RESET IMAGES BY MASKING							
76776	0774	00	4	00014	CH11	AXT 12,4	
76777	-0500	00	0	77553		CAL MASK	
77000	0320	00	4	77373		ANS REC1L+12,4	RESET REC1L
77001	-0500	00	0	77554		CAL MASK+1	
77002	0320	00	4	77407		ANS REC1R+12,4	RESET REC1R
77003	-0500	00	0	77555		CAL MASK+2	
77004	0320	00	4	77423		ANS REC2L+12,4	RESET REC2L
77005	-0500	00	0	77556		CAL MASK+3	
77006	0320	00	4	77437		ANS REC2R+12,4	RESET REC2R
77007	-0500	00	0	77557		CAL MASK+4	
77010	0320	00	4	77453		ANS REC3L+12,4	RESET REC3L
77011	-0500	00	0	77560		CAL MASK+5	
77012	0320	00	4	77467		ANS REC3R+12,4	RESET REC3R
77013	-0500	00	0	77563		CAL MASK+6	
77014	0320	00	4	77503		ANS REC4L+12,4	RESET REC4L
77015	-0500	00	0	77561		CAL MASK+6	
77016	0320	00	4	77601		ANS P92-1,4	RESET I/O IMAGE 2L
77017	-0500	00	0	77562		CAL MASK+7	
77020	0320	00	4	77615		ANS P95-1,4	RESET I/O IMAGE 3L
77021	2 00001	4		76777		TIX CH11+1,4,1	
77022	0020	00	0	76421		TRA CH14	

77023	0500	00	0	77527	CH18	CLA	STOR+8	PUT MSE LITES INTO IMAGE
77024	0765	00	0	00036		LRS	30	
77025	0774	00	1	00004		AXT	4,1	
77026	0074	00	2	77333		TSX	CH21,2	
77027	-0500	00	0	77546		CAL	BIT-12	BIT COL 6
77030	0771	00	1	00004		ARS	4,1	
77031	-0602	00	4	77420		ORS	REC2L+9,4	
77032	-0500	00	0	77540		CAL	BIT-6	BIT COL 5
77033	0771	00	1	00004		ARS	4,1	
77034	-0602	00	4	77576		ORS	P92-2,4	
77035	2 00001	1		77026		TIX	CH18+3,1,1	
77036	0500	00	0	76414		CLA	KONST+3	IS THIS A MAIN FRAME
77037	0100	00	0	77247		TZE	CH41	PRINT OUT -NO
FORM CARD IMAGE FOR 2ND REC								
77040	0500	00	0	77523	CH15	CLA	STOR+4	
77041	0765	00	0	00041		LRS	33	
77042	0774	00	1	00004		AXT	4,1	
77043	0074	00	2	77333		TSX	CH21,2	
77044	-0500	00	0	77537		CAL	BIT-5	BIT COLUMN
77045	0771	00	1	00004		ARS	4,1	
77046	-0602	00	4	77420		ORS	REC2L+9,4	
77047	2 00001	1		77043		TIX	CH15+3,1,1	
77050	0074	00	2	77333		TSX	CH21,2	
77051	-0500	00	0	76442		CAL	LOC-4	L -0
77052	-0602	00	4	77434		ORS	REC2R+9,4	
77053	0074	00	2	77333	CH16	TSX	CH21,2	
77054	0774	00	1	00005		AXT	5,1	
77055	0074	00	2	77333		TSX	CH21,2	
77056	-0500	00	0	77547		CAL	BIT2	BIT COL 8
77057	0771	00	1	00005		ARS	5,1	
77060	-0602	00	4	77434		ORS	REC2R+9,4	BIT IN IMAGE
77061	2 00001	1		77055		TIX	CH16+2,1,1	
77062	0500	00	0	77525	CH17	CLA	STOR+6	PUT XRC INTO IMAGE
77063	0765	00	0	00041		LRS	33	
77064	0774	00	1	00005		AXT	5,1	
77065	0074	00	2	77333		TSX	CH21,2	
77066	-0500	00	0	77550		CAL	BIT2+1	BIT IN COL 19
77067	0771	00	1	00005		ARS	5,1	
77070	-0602	00	4	77434		ORS	REC2R+9,4	BIT IN IMAGE
77071	2 00001	1		77065		TIX	CH17+3,1,1	
77072	0560	00	0	77521	CH27	LDR	STOR+2	CONTENTS OF MQ
77073	0774	00	1	00014		AXT	12,1	
77074	0074	00	2	77337		TSX	CH22,2	
77075	-0500	00	0	77544		CAL	BIT-10	BIT COL 15
77076	0771	00	1	00014		ARS	12,1	
77077	-0602	00	4	77420		ORS	REC2L+9,4	
77100	2 00001	1		77074		TIX	CH27+2,1,1	

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 9

77101 -0500 00 0 76441	CAL LOC-3	WAS ROUTINE USING TRAP
77102 0402 00 0 77543	SUB BIT-9	
77103 -0100 00 0 77107	TNZ *-4	NO
77104 -0500 00 0 77531	CAL STOR+10	L +1
77105 -0602 00 0 77433	ORS REC2R+8	
77106 0020 00 0 77111	TRA *-3	
77107 -0500 00 0 77531	CAL STOR+10	L +1
77110 -0602 00 0 77434	ORS REC2R+9	
77111 0600 00 0 76441	STZ LOC-3	
77112 0774 00 4 00014	CH23 AXT 12,4	
77113 0774 00 1 00030	AXT 24,1	
77114 -0500 00 4 77423	CAL REC2L+12,4 LEFT HALF	
77115 0602 00 1 77711	SLW PR-24,1	
77116 -0500 00 4 77437	CAL REC2R+12,4 RIGHT HALF IMAGE	
77117 0602 00 1 77712	SLW PR-25,1	
77120 2 00001 4 77121	TIX CH23+7,4,1	
77121 2 00002 1 77114	TIX CH23+2,1,2	
77122 0074 00 1 76427	TSX WPRA,1	PRINT 2ND LINE
77123 -0500 00 0 77525	CH20 CAL STOR+6	PUT TGRS INTO
77124 0765 00 0 00022	LRS 18	IMAGE
77125 0074 00 2 77333	TSX CH21,2	
77126 -0500 00 0 77531	CAL STOR+10	BIT IN 35
77127 -0602 00 4 77450	ORS REC3L+9,4	INDICATE DIV CK
77130 0074 00 2 77333	TSX CH21,2	
77131 -0500 00 0 77536	CAL BIT-4	BIT COL 12
77132 0771 00 0 00001	ARS 1	
77133 -0602 00 4 77464	ORS REC3R+9,4	ACC OVFL
77134 0760 00 0 00000	CH24 CLM	PUT Q + P BITS
77135 0763 00 0 00013	LLS 11	INTO IMAGE
77136 0734 00 4 00000	PAX 0,4	
77137 -0500 00 0 77536	CAL BIT-4	BIT IN COL 9
77140 0767 00 0 00002	ALS 2	
77141 -0602 00 4 77450	ORS REC3L+9,4	Q BIT
77142 0760 00 0 00000	CLM	GET P BIT
77143 0763 00 0 00001	LLS 1	
77144 0734 00 4 00000	PAX 0,4	
77145 -0500 00 0 77536	CAL BIT-4	
77146 0771 00 0 00002	ARS 2	BIT IN COL 13
77147 -0602 00 4 77450	ORS REC3L+9,4	
77150 0560 00 0 77517	CH25 LDQ STOR	
77151 -0500 00 0 77540	CAL BIT-6	PUT + SIGN OF
77152 0162 00 0 77155	TQP CH25+5	ACC IN IMAGE
77153 -0602 00 0 77451	ORS REC3L+10	MINUS SIGN OF ACC IN IMAGE
77154 0020 00 0 77156	TRA CH26	
77155 -0602 00 0 77452	ORS REC3L+11	INTO IMAGE

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 10

77156 0774 00 1 00014
77157 0074 00 2 77337
77160 -0500 00 0 77544
77161 0771 00 1 00014
77162 -0602 00 4 77450
77163 2 00001 1 77157

CH26 AXT 12,1
TSX CH22,2
CAL BIT-10 BIT COL 15
ARS 12,1
ORS REC3L+9,4
TIX CH26+1,1,1

77164 0774 00 4 00014
77165 0774 00 1 00030
77166 -0500 00 4 77453
77167 0602 00 1 77711
77170 -0500 00 4 77467
77171 0602 00 1 77712
77172 2 00001 4 77173
77173 2 00002 1 77166

CH30 AXT 12,4 PUT 3RD REC INTO
AXT 24,1 PRINT IMAGE
CAL REC3L+12,4 LEFT HALF
SLW PR-24,1
CAL REC3R+12,4 RIGHT HALF
SLW PR-25,1
TIX CH30+7,4,1
TIX CH30+2,1,2

77174 0074 00 1 76427

TSX WPRA,1 PRINT 3RD LINE

77175 0500 00 0 77356
77176 0601 00 0 77661
77177 0560 00 0 77661
77200 0774 00 1 00014
77201 0074 00 2 77337
77202 -0500 00 0 77540
77203 0771 00 1 00015
77204 -0602 00 4 77500
77205 2 00001 1 77201

CH32 CLA INDS PUT INDICATORS IN ACC.
STO PR PUT INDS. IN PR. IMAGE
LDQ PR INDICATOR FROM STORAGE
AXT 12,1
TSX CH22,2
CAL BIT-6
ARS 13,1
ORS REC4L+9,4 INDICATORS INTO
TIX CH32+4,1,1 PRINT RECORD

PUT CONTENT OF KEYS IN

77206 0760 00 0 00004
77207 0774 00 1 00014
77210 0074 00 2 77337
77211 -0500 00 0 77533
77212 0771 00 1 00017
77213 -0602 00 4 77500
77214 2 00001 1 77210

CH33 ENK PRINT RECORD
AXT 12,1
TSX CH22,2
CAL BIT-1
ARS 15,1
ORS REC4L+9,4 KEYS CONTENTS INTO
TIX CH33+2,1,1 PRINT REC

77215 0774 00 4 00014

CH34 AXT 12,4 PUT 4TH REC
INTO PRINT IMAGE

77216 0774 00 1 00030
77217 -0500 00 4 77503
77220 0602 00 1 77711
77221 -0500 00 4 77517
77222 0602 00 1 77712
77223 0520 00 0 76420
77224 0600 00 1 77712
77225 2 00001 4 77226
77226 2 00002 1 77217

AXT 24,1
CAL REC4L+12,4
SLW PR-24,1
CAL REC4R+12,4 TAPE CHECK INDICATIONS
SLW PR-25,1
ZET KONST+7 IS THERE A TAPE CHK
STZ PR-25,1 NO- CLEAR RIGHT IMAGE
TIX *-1,4,1 YES- KEEP RIGHT IMAGE
TIX CH34+2,1,2

77227 0074 00 1 76427

MUNGN TSX WPRA,1 PRINT CONTENTS OF INDS
OR SET UP ETI

77230 0500 00 0 77531
77231 0601 00 0 76414

CL OR+10 L +1
ST KONST+3

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 11

RESET ACC + MQ CONTENTS

77232	0601 00 0	76420	STO KONST+7	
77233	0500 00 0	77525	CLA STOR+6	OVFL BITS
77234	0560 00 0	77517	LDQ STOR	ACC CONTENTS
77235	0763 00 0	00043	LLS 35	
77236	0560 00 0	77521	LDQ STOR+2	
77237	0441 00 0	77356	LDI INDS	
77240	0534 00 2	77523	CH35 LXA STOR+4,2	XRB
77241	-0534 00 1	77523	LXD STOR+4,1	XRA
77242	-0534 00 4	77525	LXD STOR+6,4	XRC
77243	0500 00 0	77353	CLA ORIG	GET-TSX WPR,1
77244	0601 00 0	77227	STO MUNGN	
77245	0140 00 0	77246	TOV EXIT	
77246	0020 00 0	76460	EXIT TRA OK-1	
77247	0500 00 0	76420	CH41 CLA KONST+7	IS THIS A REDUNDANCY TAPE CK PRINT-OUT YES CLEAR RECORD IMAGE LOCATIONS
77250	0100 00 0	77175	TZE CH32	
77251	0774 00 1	00030	AXT 24,1	
77252	0600 00 1	77711	STZ PR-24,1	
77253	2 00001	77252	TIX *-1,1,1	
77254	-0500 00 0	77521	CAL STOR+2	WORD GENERATED
77255	0602 00 0	77702	CH43 SLW PR-17	
77256	0760 00 0	00006	COM	
77257	0602 00 0	77704	SLW PR-19	PRINT IMAGE
77260	0774 00 1	00014	AXT 12,1	
77261	0774 00 2	00030	AXT 24,2	
77262	-0500 00 1	77601	CAL P92-1,1	
77263	0602 00 2	77711	SLW PR-24,2	
77264	2 00001	77265	TIX CH43+8,1,1	
77265	2 00002	77262	TIX CH43+5,2,2	
77266	0074 00 1	76433	TSX WPR,1	PRINT WORD GENERATED
77267	0500 00 0	77523	CH45 CLA STOR+4	
77270	0771 00 0	00022	ARS 18	
77271	0402 00 0	76407	SUB WDNO	WORD NUMBER
77272	0765 00 0	00017	LRS 15	
77273	0774 00 1	00005	AXT 5,1	
77274	0074 00 2	77333	CH46 TSX CH21,2	
77275	-0500 00 0	77541	CAL BIT-7	BIT COL 17
77276	0771 00 1	00005	ARS 5,1	
77277	-0602 00 4	77612	ORS P93,4	WORD NUMBER INTO IMAGE
77300	2 00001	77274	TIX CH46,1,1	

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 12

77301	0534	00	2	77523	CH47	LXA	STOR+4,2	XRB
77302	0760	00	0	00000		CLM		
77303	0754	00	2	00000		PXA	0,2	
77304	0402	00	0	76410		SUB	RECNO	RECORD NUMBER
77305	0765	00	0	00017		LRS	15	
77306	0774	00	1	00005		AXT	5,1	
77307	0074	00	2	77333	CH48	TSX	CH21,2	
77310	-0500	00	0	77540		CAL	BIT-6	BIT COL 5
77311	0771	00	1	00005		ARS	5,1	
77312	-0602	00	4	77612		ORS	P93,4	
77313	2 00001	1		77307		TIX	CH48,1,1	
77314	0774	00	1	00030	CH49	AXT	24,1	CLEAR RECORD IMAGE
77315	0600	00	1	77711		STZ	PR-24,1	LOCATIONS
77316	2 00001	1		77315		TIX	*-1,1,1	
77317	-0500	00	0	77517		CAL	STOR	WORD READ
77320	0602	00	0	77702	CH50	SLW	PR-17	
77321	0760	00	0	00006		COM		
77322	0602	00	0	77704		SLW	PR-19	
77323	0774	00	1	00014	CH51	AXT	12,1	
77324	0774	00	2	00030		AXT	24,2	
77325	-0500	00	1	77615		CAL	P95-1,1	
77326	0602	00	2	77711		SLW	PR-24,2	
77327	2 00001	1		77330		TIX	CH51+5,1,1	
77330	2 00002	2		77325		TIX	CH51+2,2,2	
77331	0074	00	1	76433		TSX	WPR,1	PRINT WORD WRITTEN
77332	0020	00	0	77175		TRA	CH32	PRINT INDICATORS AND KEYS
77333	0760	00	0	00000	CH21	CLM		
77334	0763	00	0	00003		LLS	3	
77335	0734	00	4	00000		PAX	0,4	
77336	0020	00	2	00001		TRA	1,2	
77337	0760	00	0	00000	CH22	CLM		
77340	-0763	00	0	00003		LGL	3	
77341	0734	00	4	00000		PAX	0,4	
77342	0020	00	2	00001		TRA	1,2	
77343	0601	00	0	76441	TRAP	STO	LOC-3	
77344	0020	00	0	76725		TRA	CHK7A	
77345	-0602	00	0	77525	DVPLD	ORS	STOR+6	OCT 100000
77346	0221	00	0	77531		DVP	STOR+10	OCT 1-GET DIV-CHK TO
77347	0000	00	0	76613		TRA	CHK1+3	TURN ON DCT LITE

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 13

77350	-0602 00 0	77513	YES	ORS REC4R+8
77351	0020 00 0	76553		TRA TRC-2
77352	0020 00 0	77646	TRPRI	TRA PRI
77353	0074 00 1	76427	ORIG	TSX WPRA,1
77354	0761 00 0	00000	NOP0	NOP
77355	0140 00 0	77246	OFF	TOV EXIT
77356	+000000000000		INDS	OCT 0 STORAGE FOR INDS.
77357	+000000000320		REC1L	OCT 320,10001000,1000000
77360	+000010001000			
77361	+000001000000			
77362	+004002000042		OCT	4002000042,200000400400
77363	+200000400400			
77364	+000000000000		OCT	0,452010001005
77365	+052010001005			
77366	+100000000000		OCT	100000000000,0,540010001000
77367	+000000000000			
77370	+140010001000		OCT	14003400366,202000000401
77371	+014003400366			
77372	+202000000401		REC1R	OCT 0,4000001000,0,100000200
77373	+000000000000			
77374	+004000001000			
77375	+000000000000		OCT	0,0,4240001000,400,0
77376	+000100000200			
77377	+000000000000		OCT	5000001600,000300000000
77400	+000000000000		OCT	400000000
77401	+004240001000		REC2L	OCT 200000000100,440001000
77402	+000000000400		OCT	200,0,40000000000
77403	+000000000000			
77404	+005000001600		OCT	100000000
77405	+000300000000		OCT	-500400001000,0,40
77406	+000040000000			
77407	+200000000100		OCT	100400001200
77410	+000440001000		OCT	-400140000100
77411	+000000000200		OCT	240000000040
77412	+000000000000			
77413	+040000000000			
77414	+000100000000			
77415	-100400001000			
77416	+000000000000			
77417	+000000000040			
77420	+100400001200			
77421	-000140000100			
77422	+240000000040			

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 14

77423 +000004000404	REC2R OCT 20004000404
77424 +200040010000	OCT 200040010000
77425 +040010000110	OCT 40010000110,0,0,0
77426 +000000000000	
77427 +000000000000	
77430 +000000000000	
77431 +200042011020	OCT 200042011020
77432 +010000000000	OCT 10000000000,200
77433 +0000000000200	
77434 +240050011020	OCT 240050011020
77435 +020004000504	OCT 20004000504,10002000210
77436 +010002000210	
77437 +000000000100	REC3L OCT 100,14420001000
77440 +014420001000	
77441 +000200000000	OCT 200000000,0,40,200
77442 +000000000000	
77443 +000000000040	
77444 +000000000200	
77445 +310420001010	OCT 310420001010,4,-0
77446 +000000000004	
77447 -000000000000	
77450 +010420001040	OCT 10420001040,4200000004
77451 +004200000004	
77452 -300000000310	OCT -700000000310
77453 +000000000000	REC3R OCT 0,-400040000000,0
77454 -000040000000	
77455 +000000000000	
77456 +005000000000	OCT 5000000000,2000000000,0
77457 +002000000000	
77460 +000000000000	
77461 -060440000000	OCT -460440000000,0
77462 +000000000000	
77463 1 00000 0 00000	PON
77464 -002040000000	OCT -402040000000
77465 +004400000000	OCT 4400000000,161000000000
77466 +161000000000	
77467 -000000000000	REC4L OCT -0,100000,0,0
77470 +000000100000	
77471 +000000000000	
77472 +000000000000	
77473 +200000200000	OCT 200000200000
77474 +100000000000	OCT 100000000000
77475 +000000000000	OCT 0,40000440000
77476 +040000440000	
77477 +000000000000	OCT 0,40000140000
77500 +040000140000	
77501 +200000400000	OCT 200000400000
77502 -100000200000	OCT -500000200000

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 15

77503 +000000000000
77504 -000204444446
77505 +040000000020
77506 +000000000200
77507 +020100002000
77510 +000000020000
77511 -204404644444
77512 +002002000000
77513 +100020000000
77514 -200004444444
77515 +043100000000
77516 +124622222222

REC4R OCT 0, -400204444446

OCT 040000000020, 000000000200

OCT 020100002000, 000000020000

OCT -604404644444, 002002000000

OCT 100020000000, -600004444444

OCT 043100000000, 124622222222

77517 +000000000000
77520 -000200000000
77521 +000000000000
77522 -000200000000
77523 +000000000000
77524 -000100000000
77525 +000000000000
77526 +000500000000
77527 +000000000000
77530 +000000100000
77531 +000000000001

STOR

OCT 0 ACC CONTENTS

OCT -200000000 22 TO 24

OCT 0 MA CONTENTS

OCT -200000000 24 TO 26

OCT 0 XRA AND XRB

OCT -100000000 26 TO 27

OCT 0 XRC, OVFL TRGS, OVFL BITS

OCT -500000000 27 TO 22

OCT 0 PSE + MSE VALUES

OCT 100000

OCT -1

77532 +000400000000
77533 +000000100000
77534 +000000000000
77535 +000010000000
77536 +000200000000
77537 +000000000010
77540 +020000000000
77541 +000002000000
77542 +000000001000
77543 +000000000040
77544 +000010000000
77545 +000000000017
77546 +010000000000

BIT

OCT 400000000 BIT COL 10

OCT 100000 BIT COL 21

OCT 60

IDE

OCT 10000000

OCT 200000000 BIT COL 11

OCT 10 BIT COL 33

OCT 020000000000 BIT COL 5

OCT 2000000 BIT COL 17

OCT 1000 BIT COL 27

OCT 40 BIT COL 31

OCT 10000000 BIT COL 15

OCT 17

OCT 010000000000

77547 +002000000000
77548 +000000400000
77551 +000001000000
77552 +100020000000

BIT2

OCT 002000000000 BIT COL 8

OCT 400000 BIT COL 19

OCT 1000000

OCT 100020000000

77553 -377017601777
77554 -007760001700
77555 -360760001760
77556 +374077017776
77557 -356720001776
77560 -377670000000
77561 -341777777777
77562 -340774077777
77563 -360001760000
77564 -377766666666

MASK

OCT 777017601777 REC1L

OCT 407760001700 REC1R

OCT -760760001760 REC2L

OCT 374077017776 REC2R

OCT -756720001776 REC3L

OCT -777670000000 REC3R

OCT -741777777777 P92

OCT -740774077777 P95

OCT -760001760000 REC4L

OCT -777766666666 REC4R+9

DIAGNOSTIC ERROR PRINT SUB ROUTINE

DEPRX
3/15/60
PAGE 16

* IMAGE FOR MSE- COMP ERROR- WORD GENERATED

77565	+000003210040		OCT 3210040,1000000000
77566	+001000000000		
77567	+000020001000		OCT 20001000,100460000
77570	+000100460000		
77571	+100004000704		OCT 100004000704
77572	-000040004002		OCT -000040004002
77573	+001200000010		OCT 1200000010
77574	+200000000000		OCT 200000000000,20
77575	+000000000020		
77576	+201000040010		OCT 201000040010
77577	-000163630240		OCT -000163630240
77600	+100204005526	P92	OCT 100204005526

* IMAGE FOR REC - WORD- WORD READ

77601	-000020000220		OCT -400020000220,400040000
77602	+000400040000		
77603	+000000000000		OCT 0,140001400
77604	+000140001400		
77605	+200000000010		OCT 200000000010,10000102
77606	+000010000102		
77607	+100400040000		OCT 100400040000,0,4
77610	+000000000000		
77611	+000000001004		
77612	+000500041000	P93	OCT 500041000
77613	-000060000620		OCT -400060000620
77614	+300010000116	P95	OCT 300010000116

77615	0 00030 0 77661	CTWD	IOCD PR,0,24	CTRL WORD FOR PRINTING
77616	+000000000000	IMA	OCT 0,0,0	MASKS FOR ERROR TRACKS
77617	+000000000000			
77620	+000000000000			
77621	+101010101010		OCT 101010101010	8 BIT
77622	+000000000000		OCT 0,0,0,0,0,0,0	
77623	+000000000000			
77624	+000000000000			
77625	+000000000000			
77626	+000000000000			
77627	+000000000000			
77630	+000000000000			
77631	+040404040404		OCT 040404040404	4 BIT
77632	+000000000000		OCT 0,0,0	
77633	+000000000000			
77634	+000000000000			
77635	-024242424242		OCT 424242424242	2 + B BIT
77636	+000000000000		OCT 0	
77637	+212121212121		OCT 212121212121	1 + A BIT
77640	+000000000000		OCT 0,0,0,0,0	
77641	+000000000000			
77642	+000000000000			
77643	+000000000000			
77644	+000000000000			
77645	-206060606060		OCT 606060606060	B + A BITS

77646	0500 00 0 76420	PRI	CLA KONST+7	ERROR INDICATOR
77647	0100 00 0 77657		TZE OUT	NO ERROR-
77650	-0500 00 0 77521		CAL STOR+2	ERROR-GET BAD WORD
77651	0322 00 0 77517		ERA STOR	PUT ONES IN ERROR BITS

77652	0774 00 1 00027		AXT 23,1	
77653	0560 00 1 77646	MVE	LDQ IMA-24,1	PUT MASK IN PRINT
77654	-0600 00 1 77711		STQ PR-24,1	IMAGE AND MODIFY
77655	0320 00 1 77711		ANS PR-24,1	WITH ERROR BITS
77656	2 00002 1 77653		TIX MVE,1,2	

77657	0074 00 1 76433	OUT	TSX WPR,1	PRINT LINE FOUR
77660	0020 00 0 77230		TRA MUNGN+1	CONTINUE 9DEPRX

77661	+000000000000	PR	OCT	PRINT IMAGE
-------	---------------	----	-----	-------------

00000

END

