

D. PROGRAM CONTROL

1. DECK	000	9LD01 BINARY LOADER
	001 - 080	PROGRAM CARDS - 9B01
	081 - 104	PROGRAM CARDS - 9IOM
	105 - 133	PROGRAM CARDS - 9DEPR
	134	TRANSFER CARD - TRA 0030
	135 - 136	BLANK CARDS

2. SENSE SWITCH CONTROL

SWITCH #5 IF INITIALLY UP, PROGRAM WILL EXECUTE FIRST SECTION.
THROW DOWN AFTER 1ST SECTION HAS STARTED, TO GET INTO SECOND
SECTION. IF INITIALLY DOWN THE SECOND SECTION WILL
BE EXECUTED.

SWITCH #6 UP-READ IN NEXT PROGRAM.
DOWN-RETURN TO START PROGRAM.

SEE 9DEPR FOR USE OF OTHER SWITCHES.

E. NORMAL STOPS

1. 5517-INITIAL HALT TO ENTER I/O SELECTION INTO KEYS.
2. 5533-IF DSC C WAS SELECTED AT FIRST STOP.
3. 5540-IF DSC E WAS SELECTED AT FIRST STOP.
4. 5525-INDICATES NO TAG KEYS WERE THROWN DOWN AT FIRST STOP.

NOTE-SEE DIAGRAM IN 9IOM FOR I/O SELECTION EXPLANATION.

F. ERROR STOPS

1. THERE ARE EIGHT ERROR STOPS FOR EACH CARD MACHINE, IN THE FIRST SECTION
OF THE TEST. THESE STOPS WILL OCCUR, IF THE FIRST COMMAND SET INTO
THE DSC WAS RECEIVED INCORRECTLY. AN IMMEDIATE DISCONNECT WILL BE
FORCE. ALSO, IF AN ERROR OCCURS.
2. 6517
OR---WITH SWITCH #3 DOWN.
6545

G. I/O SELECTION

1. ON STOP AT 5517 THROW DOWN TAG KEY
18 IF CHANNEL E IS TO BE SELECTED.
19 IF CHANNEL C IS TO BE SELECTED.
20 IF CHANNEL A IS TO BE SELECTED.

ALSO KEY

- 33 IF PUNCH ON CHANNEL A
- 34 IF PRINTER ON CHANNEL A
- 35 IF CARD READER ON CHANNEL A

DEPRESS START KEY

- 2. ON STOP AT 5533 KEY
 - 33 IF PUNCH ON CHANNEL C
 - 34 IF PRINTER ON CHANNEL C
 - 35 IF CARD READER ON CHANNEL C

DEPRESS START KEY

- 3. ON STOP AT 5540 KEY
 - 33 IF PUNCH ON CHANNEL E
 - 34 IF PRINTER ON CHANNEL E
 - 35 IF CARD READER ON CHANNEL E

ON DEPRESSING START KEY, THE PROGRAM
WILL OPERATE ON ALL UNITS AND
CHANNELS SELECTED.

- 4. THE THREE STOPS MENTIONED ABOVE WILL OCCUR ONLY IF ALL THREE TAG KEYS ARE THROWN DOWN AT FIRST STOP. IF ALL TAG KEYS ARE NOT DOWN, THE NUMBER OF STOPS, WILL CORRESPOND TO THE NUMBER OF TAG KEYS DOWN.

H. PRINT OUT

- 1. ERROR PRINT OUTS FROM 9DEPR.

I. COMMENTS

- 1. THERE ARE EIGHT POSSIBLE COMBINATIONS OF BUFFER CONTROL TRIGGERS. S,1,2 AND ALL POSSIBLE COMBINATIONS OF THESE WILL TOTAL EIGHT. THE FIRST SECTION OF THE PROGRAM, WILL FORCE A DISCONNECT, AND HALT IF THE FIRST RCH IN EACH SEQUENCE DOES NOT SET THE DSC CORRECTLY.
- 2. SECTION 1-SWITCH #5 UP.

EACH TRIGGER IS TESTED INDIVIDUALLY, AND IN ALL COMBINATIONS WITH THE OTHERS, AS FOLLOWS.

- A. BCD SHIFT IMAGE. PUNCH AND READ THREE CARDS AND WRITE PRINTER, THREE LINES, FOR EACH COMBINATION. FIRST CHARACTER WILL REMAIN THE SAME FOR EACH OF THREE CARDS, AND THREE LINES.

- 1. ALL TRIGGERS OFF-IOCD/COUNT AND DISCONNECT.

S TRIGGER ON-IOCP/COUNT AND PROCEED.

TRIGGER 1 ON-IORP/RECORD AND PROCEED.

TRIGGER 2 ON-TCH/TRANSFER IN CHANNEL. IND. ADDRESSED

TRIGGERS S,1 ON-IOSP/SIGNAL AND PROCEED.

TRIGGERS S,2 ON-IOCT/COUNT AND TRANSFER.

TRIGGERS 1,2 ON-IORT/RECORD AND TRANSFER.

TRIGGERS S,1,2 ON-IOST/SIGNAL AND TRANSFER.

- B. THERE WILL BE 24 CARDS PUNCHED AND READ, AND 24 LINES PRINTED WITH TRIGGERS, AS ABOVE. THERE WILL ALSO BE 24 ADDITIONAL CARDS PUNCHED AND READ, AND 24 LINES PRINTED WITH AS MANY TRIGGERS AS POSSIBLE USED IN EACH CYCLE.

NOTE--THERE WILL BE ONE BLANK CARD PASSED AND ONE NON-PRINT LINE TO TEST THAT RCH WITH WC-0 WILL SEND EACH CARD MACHINE THROUGH A CYCLE.

- C. RCH, LCH, AND SCH ARE TESTED INDIRECTLY ADDRESSED, AND INDIRECTLY ADDRESSED AND INDEXED, IN THE PRINTER SECTION.

3. SECTION 2-SWITCH #5 DOWN.

THIS IS PRIMARILY A RELIABILITY SECTION, TO BE USED UNDER BIAS.

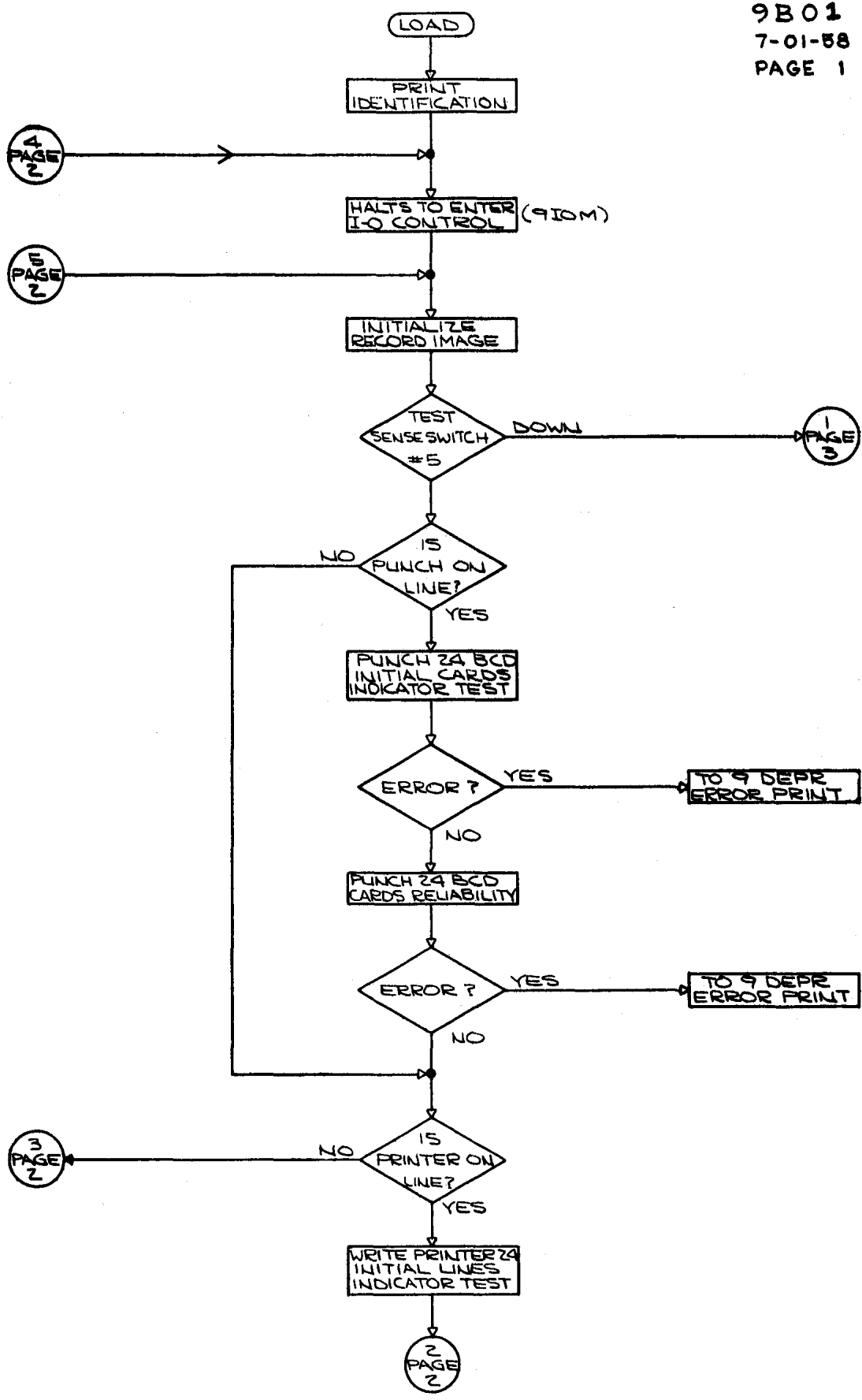
RANDOM BINARY CARDS WILL BE PUNCHED AND READ, AND READ PRINTER WILL BE TESTED WITH A SHIFTING BCD IMAGE. AS MANY BUFFER CONTROL TRIGGERS AS POSSIBLE ARE USED DURING EACH CARD CYCLE.

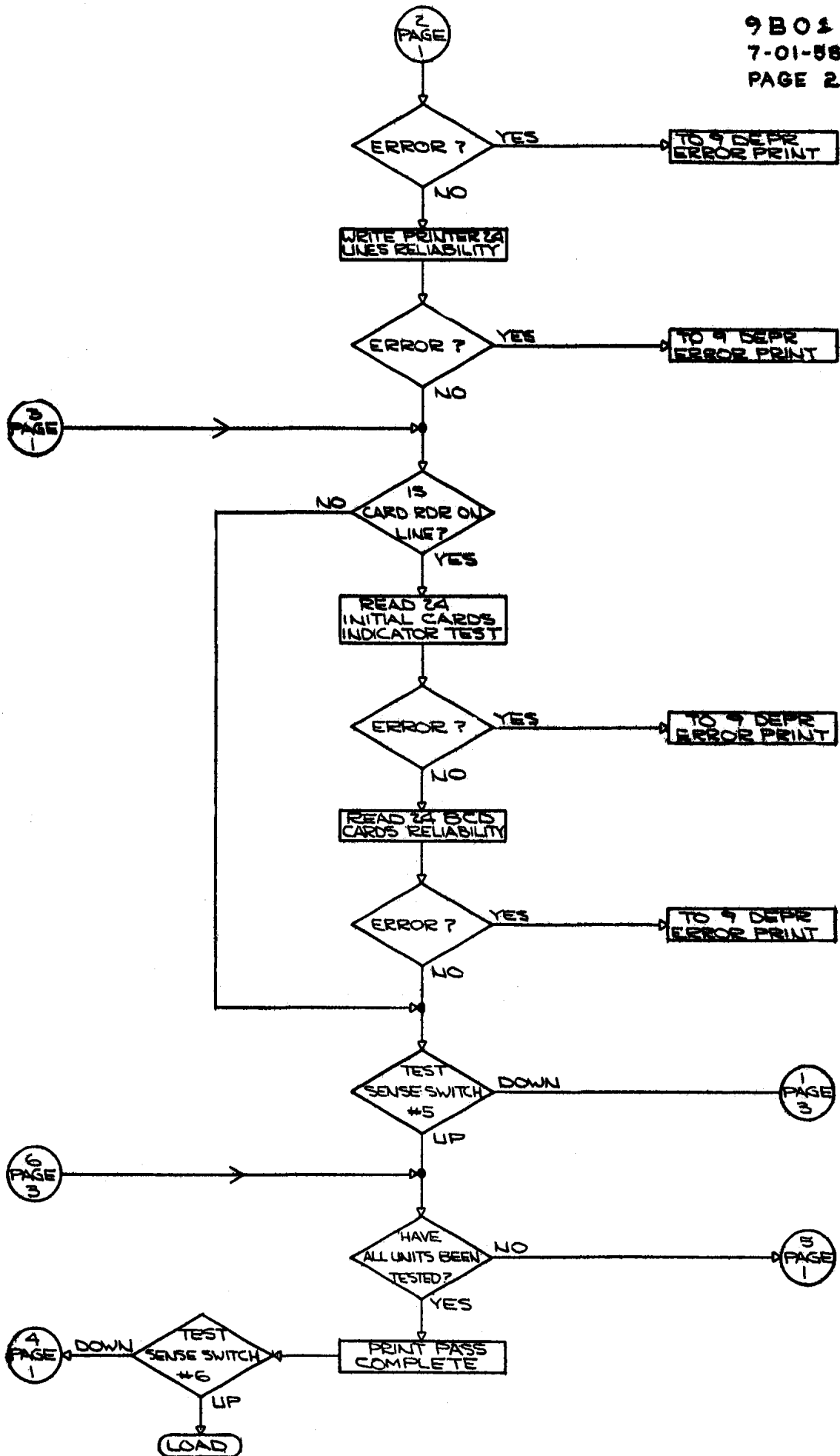
IF ALL THREE CARD MACHINES ARE SELECTED, THIS SECTION WILL PUNCH A CARD, READ A CARD, AND PRINT A LINE, FOR 24 CARDS.

NOTE--THE ABOVE PARAGRAPH BEING THE CASE, IT MIGHT BE ADVISABLE TO SELECT ONLY THE PUNCH ON THE FIRST PASS, IF A PREPUNCHED DECK IS NOT AVAILABLE.

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9B01 A

00030 ORG 24

TEST DATA TRANSMISSION
USING PUNCH, PRINTER
AND CARD READER

00030 0020 00 0 02473 TRA WPRA PRINT IDENTIFICATION

00031 0074 00 4 05514 TEST TSX IOC,4 TO ENTER I/O SELECTION

*ENTER INTO KEYS ON HALT AT 5517-EY 20 FOR CHANNEL
*A-KEY 19 FOR CHANNEL C AND KEY 18 FOR CHANNEL E,
*ALSO ENTER KEY 35 TO SPECIFY CARD READER
*KEY 34 TO SPECIFY PRINTER
*KEY 33 TO SPECIFY PUNCH

*IF CHANNELS C+D WERE SELECTED IN TAG BITS AT
*FIRST STOP SECOND STOP WILL OCCUR AT 5533
*ENTER KEYS 35,34,33 AS NEEDED FOR CHANNELS C+D.

*IF CHANNELS E+F WERE SELECTED IN TAG BITS AT
*FIRST STOP SECOND STOP WILL OCCUR AT 5540
*ENTER KEYS 35,34,33 AS NEEDED FOR CHANNELS E+F.

*IF NO TAG KEYS WERE THROWN DOWN ON FIRST HALT
*AN ADDITIONAL HALT MAY OCCUR AT 5525 TO INDICATE THIS

* SECTION 1 WILL TEST PUNCHING,PRINTING AND
* READING SHIFTING BCD RECORDS WITH SENSE SWITCH
* 5 UP

* SECTION 2 WILL TEST PUNCH AND CARD READER
* BY USING BINARY RECORDS AND READ PRINTER IS
* CHECKED BY USING SHIFTING BCD RECORDS
* WITH SENSE SWITCH 5 DOWN

00032 0500 00 0 03333 CLA ENK+2 POST RESTART TO TRANSFER
00033 0601 00 0 00000 STO 0 TO 30

00034 0441 00 0 05500 LDI CTRL1
00035 0056 00 100000 RNT 0,1 TEST FOR CHAN A
00036 0020 00 0 00041 TRA TCHC NO-CHECK FOR CHAN C
00037 0774 00 2 00041 AXT TCHC,2 YES
00040 0020 00 0 00071 TRA BEG

00041 0441 00 0 05501 TCHC LDI CTRL2
00042 0056 00 200000 RNT 0,2 TEST FOR CHAN C
00043 0020 00 0 00046 TRA TCHE NO-TEST FOR CHAN E
00044 0774 00 2 00046 AXT TCHE,2 YES
00045 0020 00 0 00053 TRA CHANC

00046 0441 00 0 05502 TCHE LDI CTRL3
00047 0056 00 400000 RNT 0,4 TEST FOR CHAN E.

00050	0020	00	0	00062		TRA RST1	OUT TO RESET TO CHAN A
00051	0774	00	2	00062		AXT RST1,2	YES
00052	0020	00	0	00055		TRA CHANE	
00053	0441	00	0	05501	CHANC	LDI CTRL2	
00054	0020	00	0	00057		TRA TSX	
00055	0441	00	0	05502	CHANE	LDI CTRL3	
00056	0020	00	0	00057		TRA TSX	
00057	0074	00	4	05512	TSX	TSX CTX,4	OUT TO CONTROL
00060	0023	73	0	00071		HTR BEG,0,FINAL	
00061	0020	00	0	00071		TRA BEG	
00062	0441	00	0	02563	RST1	LDI RESET	RESET TO CHAN A
00063	0604	00	0	05500		STI CTRL1	
00064	0600	00	0	05501		STZ CTRL2	
00065	0600	00	0	05502		STZ CTRL3	
00066	0074	00	4	05512		TSX CTX,4	
00067	0023	73	0	00071		HTR BEG,0,FINAL	
00070	0020	00	0	02456		TRA H53+3	
00071	0534	00	1	03165	BEG	LXA K6,1	L+30
00072	-0500	00	1	03165		CAL K5+24,1	RELOCATE RECORD
00073	0602	00	1	03373		SLW K50+24,1	IMAGE
00074	2 00001	1	00072			TIX BEG+1,1,1	
00075	0760	00	0	00165		SWT 5	
00076	0020	00	0	00100		TRA F19-1	UP-SECTION 1
00077	0020	00	0	02217		TRA GENRN-1	GO TO SECTION 2
00100	0634	00	2	03170		SXA COUNT,2	
00101	0056	00	000004		F19	RNT 000004	IS CARD PUNCH ON LINE
00102	0020	00	0	00553		TRA F28A	NO
00103	0020	00	0	00105		TRA WPU-1	YES
00104	664764216060					BCD 1WPUA	
00105	0774	00	1	00003		AXT 3,1	
00106	0766	00	0	01341	WPU	WPUA	PUNCH THREE CARDS
00107	0540	00	0	02674		RCHA PU	WITH NO TGRS ON-RIPPLE BCD IMAGE-FIRST CHAR A.
00110	0640	00	0	03055		SCHA SCHA	
00111	0020	00	0	00113		TRA *+2	
00112	622330216060					BCD 1SCHA	
00113	0500	00	0	03055		CLA SCHA	RESULTS SCH OPERATION
00114	0560	00	0	02614		LDQ ARSR	CORRECT CONTENTS DSC
00115	0340	00	0	02614		CAS ARSR	
00116	0020	00	0	00120		TRA *+2	ERROR
00117	0020	00	0	00124		TRA *+5	OK
00120	0540	00	0	02564		RCHA STOP	DISCONNECT
00121	0074	00	4	06503		TSX ERROR-1,4	RCH COMMAND DID
00122	0761	00	0	00113		NOP *-7	NOT SET DSC PROPERLY

00123	0000	00	0	00106	HTR WPU	RETURN TO TRY AGAIN
00124	0060	00	0	00124	TCOA *	WAIT FOR ONE CARD
00125	0640	00	0	03056	SCHA SCHA+1	SAVE CONTENTS OF CHANNEL
00126	0020	00	0	00130	TRA *+2	
00127	622330216060				BCD 1SCHA	
00130	0500	00	0	03056	CLA SCHA+1	RESULTS SCH OPERATION
00131	0560	00	0	02615	LDQ ARSR+1	CORRECT CONTENTS DSC
00132	0340	00	0	02615	CAS ARSR+1	
00133	0020	00	0	00135	TRA *+2	ERROR
00134	0020	00	0	00141	TRA *+5	OK
00135	0074	00	4	06503	TSX ERROR-1,4	
00136	0761	00	0	00130	NOP *-6	
00137	0020	00	0	00141	TRA *+2	
00140	314663606060				BCD 1IOT	
00141	0760	00	0	00005	IOT	
00142	0020	00	0	00144	TRA *+2	INDICATOR ON-ERROR
00143	0020	00	0	00146	TRA *+3	OFF-OK
00144	0074	00	4	06503	TSX ERROR-1,4	
00145	-3 00000	4	00141	TXL *-4,4		
00146	2 00001	1	00106	TIX WPU,1,1	RETURN FOR THREE CARDS	
00147	0074	00	4	02172	TSX F43,4	OUT TO RIPPLE IMAGE
00150	0766	00	0	01341	WPU1 WPUA	PUNCH THREE CARDS
00151	0540	00	0	02675	RCHA PU1	WITH S TRG ON-RIPPLE BCD IMAGE-FIRT CHAR. B
00152	0640	00	0	03057	SCHA SCHA+2	SAVE CONTENTS DSC
00153	0020	00	0	00155	TRA *+2	
00154	622330216060				BCD 1SCHA	
00155	0500	00	0	03057	CLA SCHA+2	RESULTS SCH OPERATION
00156	0560	00	0	02616	LDQ ARSR+2	CORRECT CONTECT DSC
00157	0340	00	0	02616	CAS ARSR+2	
00160	0020	00	0	00162	TRA *+2	ERROR
00161	0020	00	0	00166	TRA *+5	OK
00162	0540	00	0	02565	RCHA STOP+1	DISCONNECT
00163	0074	00	4	06503	TSX ERROR-1,4	RCH COMMAND
00164	0761	00	0	00155	NOP *-7	DID NOT SET DSC PROPERLY
00165	0000	00	0	00150	HTR WPU1	RETURN TO TRY AGAIN
00166	0060	00	0	00166	TCOA *	WAIT FOR THREE CARDS
00167	0640	00	0	03060	SCHA SCHA+3	SAVE CONTENTS DSC
00170	0020	00	0	00172	TRA *+2	
00171	622330216060				BCD 1SCHA	
00172	0500	00	0	03060	CLA SCHA+3	RESULT SCH OPERATION
00173	0560	00	0	02617	LDQ ARSR+3	CORRECT CONTENTS DSC
00174	0340	00	0	02617	CAS ARSR+3	

00175	0020	00	0	00177	TRA	*+2	ERROR
00176	0020	00	0	00203	TRA	*+5	OK
00177	0074	00	4	06503	TSX	ERROR-1,4	
00200	0761	00	0	00172	NOP	*-6	
00201	0020	00	0	00203	TRA	*+2	
00202	314663606060				BCD	1IOT	
00203	0760	00	0	00005	IOT		
00204	0020	00	0	00206	TRA	*+2	INDICATOR ON-ERROR
00205	0020	00	0	00210	TRA	*+3	OFF-OK
00206	0074	00	4	06503	TSX	ERROR-1,4	
00207	-3 00000	4	00203	TXL	*-4,4		
00210	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
00211	0766	00	0	01341	WPU2	WPUA	PUNCH THREE CARDS
00212	0540	00	0	02701	RCHA	PU2	WITH TGR 1 ON
							BCD IMAGE-FIRST CHAR C
00213	0640	00	0	03061	SCHA	SCHA+4	SAVE CONTENTS DSC
00214	0020	00	0	00216	TRA	*+2	
00215	622330216060				BCD	1SCHA	
00216	0500	00	0	03061	CLA	SCHA+4	RESULTS SCH OPERATION
00217	0560	00	0	02620	LDQ	ARSR+4	CORRECT CONTENTS DSC
00220	0340	00	0	02620	CAS	ARSR+4	
00221	0020	00	0	00223	TRA	*+2	ERROR
00222	0020	00	0	00227	TRA	*+5	
00223	0540	00	0	02566	RCHA	STOP+2	DISCONNECT
00224	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
00225	0761	00	0	00216	NOP	*-7	DID NOT SET
							DSC PROPERLY
00226	0000	00	0	00211	HTR	WPU2	RETURN TO TRY AGAIN
00227	0060	00	0	00227	TCOA	*	WAIT FOR THREE CARDS
00230	0640	00	0	03062	SCHA	SCHA+5	SAVE CONTENTS DSC
00231	0020	00	0	00233	TRA	*+2	
00232	622330216060				BCD	1SCHA	
00233	0500	00	0	03062	CLA	SCHA+5	RESULTS SCH OPERATION
00234	0560	00	0	02621	LDQ	ARSR+5	CORRECT CONTENTS DSC
00235	0340	00	0	02621	CAS	ARSR+5	
00236	0020	00	0	00240	TRA	*+2	ERROR
00237	0020	00	0	00244	TRA	*+5	OK
00240	0074	00	4	06503	TSX	ERROR-1,4	
00241	0761	00	0	00233	NOP	*-6	
00242	0020	00	0	00244	TRA	*+2	
00243	314663606060				BCD	1IOT	
00244	0760	00	0	00005	IOT		
00245	0020	00	0	00247	TRA	*+2	INDICATOR ON-ERROR
00246	0020	00	0	00251	TRA	*+3	OFF-OK
00247	0074	00	4	06503	TSX	ERROR-1,4	

00250	-3	00000	4	00244		TXL *-4,4	
00251	0074	00	4	02172		TSX F43,4	OUT TO SHIFT IMAGE
00252	0766	00	0	01341	WPU3	WPUA	
00253	0540	00	0	02705		RCHA PU3	PUNCH THREE CARDS WITH TGR 2 ON-RIPPLE BCD IMAGE-FIRST CHAR D
00254	0640	00	0	03063		SCHA SCHA+6	SAVE CONTENTS DSC
00255	0020	00	0	00257		TRA *+2	
00256	622330216060					BCD 1SCHA	
00257	0500	00	0	03063		CLA SCHA+6	RESULTS SCH OPERATION
00260	0560	00	0	02622		LDQ ARSR+6	CORRECT CONTENTS
00261	0340	00	0	02622		CAS ARSR+6	
00262	0020	00	0	00264		TRA *+2	ERROR
00263	0020	00	0	00270		TRA *+5	OK
00264	0540	00	0	02567		RCHA STOP+3	DISCONNECT
00265	0074	00	4	06503		TSX ERROR-1,4	RCH COMMAND
00266	0761	00	0	00257		NOP *-7	DID NOT SET DSC PROPERLY
00267	0000	00	0	00252		HTR WPU3	RETURN TO TRY AGAIN
00270	0060	00	0	00270		TCOA *	WAIT FOR THREE CARDS
00271	0640	00	0	03064		SCHA SCHA+7	SAVE CONTENTS DSC
00272	0020	00	0	00274		TRA *+2	
00273	622330216060					BCD 1SCHA	
00274	0500	00	0	03064		CLA SCHA+7	RESULTS SCH OPERATION
00275	0560	00	0	02623		LDQ ARSR+7	CORRECT CONTENTS DSC
00276	0340	00	0	02623		CAS ARSR+7	
00277	0020	00	0	00301		TRA *+2	ERROR
00300	0020	00	0	00305		TRA *+5	OK
00301	0074	00	4	06503		TSX ERROR-1,4	
00302	0761	00	0	00274		NOP *-6	
00303	0020	00	0	00305		TRA *+2	
00304	314663606060					BCD 1IOT	
00305	0760	00	0	00005		IOT	
00306	0020	00	0	00310		TRA *+2	INDICATOR ON-ERROR
00307	0020	00	0	00312		TRA *+3	OFF-OK
00310	0074	00	4	06503		TSX ERROR-1,4	
00311	-3	00000	4	00305		TXL *-4,4	
00312	0074	00	4	02172		TSX F43,4	OUT TO SHIFT IMAGE
00313	0766	00	0	01341	WPU4	WPUA	
00314	0540	00	0	02716		RCHA PU4	PUNCH THREE CARDS WITH S+1 TGRS ON-RIPPLE BCD IMAGE-FIRST CHAR E
00315	0640	00	0	03065		SCHA SCHA+8	
00316	0020	00	0	00320		TRA *+2	

00317	622330216060		BCD 1SCHA	
00320	0500 00 0 03065		CLA SCHA+8	RESULT SCH OPERATION
00321	0560 00 0 02624		LDQ ARSR+8	CORRECT CONTENTS DSC
00322	0340 00 0 02624		CAS ARSR+8	
00323	0020 00 0 00325		TRA *+2	ERROR
00324	0020 00 0 00331		TRA *+5	OK
00325	0540 00 0 02570		RCHA STOP+4	DISCONNECT
00326	0074 00 4 06503		TSX ERROR-1,4	RCH COMMAND
00327	0761 00 0 00320		NOP *-7	DID NOT SET DSC PROPERLY
00330	0000 00 0 00313		HTR WPU4	RETURN TO TRY AGAIN
00331	0060 00 0 00331		TCOA *	WAIT FOR THREE CARDS
00332	0640 00 0 03066		SCHA SCHA+9	SAVE CONTENTS DSC
00333	0020 00 0 00335		TRA *+2	
00334	622330216060		BCD 1SCHA	
00335	0500 00 0 03066		CLA SCHA+9	RESULTS SCH OPERATION
00336	0560 00 0 02625		LDQ ARSR+9	CORRECT CONTENTS DSC
00337	0340 00 0 02625		CAS ARSR+9	
00340	0020 00 0 00342		TRA *+2	ERROR
00341	0020 00 0 00346		TRA *+5	OK
00342	0074 00 4 06503		TSX ERROR-1,4	
00343	0761 00 0 00335		NOP *-6	
00344	0020 00 0 00346		TRA *+2	
00345	314663606060		BCD 1IOT	
00346	0760 00 0 00005		IOT	
00347	0020 00 0 00351		TRA *+2	INDICATOR ON-ERROR
00350	0020 00 0 00353		TRA *+3	OFF-OK
00351	0074 00 4 06503		TSX ERROR-1,4	
00352	-3 00000 4 00346		TXL *-4,4	
00353	0074 00 4 02172		TSX F43,4	OUT TO SHIFT IMAGE
00354	0774 00 1 00002		AXT 2,1	
00355	0766 00 0 01341	WPU5	WPUA	
00356	0540 00 0 02723		RCHA PU5	PUNCH THREE CARDS
00357	0544 00 0 02725		LCHA PU5+2	WITH TGRS 1+2 ON-RIPPLE BCD IMAGE-FIRST CHAR F
00360	0640 00 0 03067		SCHA SCHA+10	SAVE CONTENTS DSC
00361	0020 00 0 00363		TRA *+2	
00362	622330216060		BCD 1SCHA	
00363	0500 00 0 03067		CLA SCHA+10	RESULT SCH INSTRUCTION
00364	0560 00 0 02626		LDQ ARSR+10	CORRECT CONTENTS DSC
00365	0340 00 0 02626		CAS ARSR+10	
00366	0020 00 0 00370		TRA *+2	ERROR
00367	0020 00 0 00374		TRA *+5	
00370	0540 00 0 02571		RCHA STOP+5	DISCONNECT
00371	0074 00 4 06503		TSX ERROR-1,4	RCH COMMAND
00372	0761 00 0 00363		NOP *-7	DID NOT SET

00373	0000 00 0 00355		HTR WPU5	DSC PROPERLY RETURN TO TRY AGAIN
00374	2 00001 1 00357		TIX WPU5+2,1,1	RETURN FOR THREE CARDS
00375	0060 00 0 00375		TCOA *	WAIT FOR DSC TO END OP.
00376	0640 00 0 03070		SCHA SCHA+11	SAVE CONTENTS DSC
00377	0020 00 0 00401		TRA *+2	
00400	622330216060		BCD 1SCHA	
00401	0500 00 0 03067		CLA SCHA+10	RESULTS SCH OPERATION
00402	0560 00 0 02626		LDQ ARSR+10	CORRECT CONTENTS DSC
00403	0340 00 0 02626		CAS ARSR+10	
00404	0020 00 0 00406		TRA *+2	ERROR
00405	0020 00 0 00412		TRA *+5	OK
00406	0074 00 4 06503		TSX ERROR-1,4	
00407	0761 00 0 00401		NOP *-6	
00410	0020 00 0 00412		TRA *+2	
00411	314663606060		BCD 1IOT	
00412	0760 00 0 00005		IOT	
00413	0020 00 0 00415		TRA *+2	INDICATOR ON-ERROR
00414	0020 00 0 00417		TRA *+3	
00415	0074 00 4 06503		TSX ERROR-1,4	
00416	-3 00000 4 00412		TXL *-4,4	
00417	0074 00 4 02172		TSX F43,4	OUT TO SHIFT IMAGE
00420	0774 00 1 00002		AXT 2,1	
00421	0766 00 0 01341	WPU6	WPUA	
00422	0540 00 0 02727		RCHA PU6	PUNCH THREE CARDS
00423	0544 00 0 02731		LCHA PU6+2	WITH TGRS S+1 ON-RIPPLE BCD IMAGE-FIRST CHAR G
00424	0640 00 0 03071		SCHA SCHA+12	SAVE CONTENTS DSC
00425	0020 00 0 00427		TRA *+2	
00426	622330216060		BCD 1SCHA	
00427	0500 00 0 03071		CLA SCHA+12	RESULT SCH OPERATION
00430	0560 00 0 02630		LDQ ARSR+12	CORRECT CONTENTS DSC
00431	0340 00 0 02630		CAS ARSR+12	
00432	0020 00 0 00434		TRA *+2	ERROR
00433	0020 00 0 00440		TRA *+5	
00434	0540 00 0 02572		RCHA STOP+6	DISCONNECT
00435	0074 00 4 06503		TSX ERROR-1,4	LCH COMMAND
00436	0761 00 0 00427		NOP *-7	DID NOT SET DSC PROPERLY
00437	0000 00 0 00421		HTR WPU6	RETURN TO TRY AGAIN
00440	2 00001 1 00423		TIX WPU6+2,1,1	RETURN FOR THREE CARDS
00441	0060 00 0 00441		TCOA *	WAIT FOR DSC TO END OP
00442	0640 00 0 03072		SCHA SCHA+13	
00443	0020 00 0 00445		TRA *+2	
00444	622330216060		BCD 1SCHA	

00445	0500	00	0	03072		CLA SCHA+13	RESULTS SCH OPERATION
00446	0560	00	0	02631		LDQ ARSR+13	CORRECT CONTENTS DSC
00447	0340	00	0	02631		CAS ARSR+13	
00450	0020	00	0	00452		TRA *+2	ERROR
00451	0020	00	0	00456		TRA *+5	OK
00452	0074	00	4	06503		TSX ERROR-1,4	
00453	0761	00	0	00445		NOP *-6	
00454	0020	00	0	00456		TRA *+2	
00455	314663606060					BCD 1IOT	
00456	0760	00	0	00005		IOT	
00457	0020	00	0	00461		TRA *+2	INDICATOR ON-ERROR
00460	0020	00	0	00463		TRA *+3	OFF-OK
00461	0074	00	4	06503		TSX ERROR-1,4	
00462	-3 00000	4	4	00456		TXL *-4,4	
00463	0074	00	4	02172		TSX F43,4	OUT TO SHIFT IMAGE
00464	0774	00	1	00002		AXT 2,1	
00465	0766	00	0	01341	WPU7	WPUA	
00466	0540	00	0	02733		RCHA PU7	PUNCH THREE CARDS
00467	0544	00	0	02735		LCHA PU7+2	WITH TGRS S,1+2 ON-RIPPLE BCD IMAGE-FIRST CHAR H
00470	0640	00	0	03073		SCHA SCHA+14	SAVE CONTENTS DSC
00471	0020	00	0	00473		TRA *+2	
00472	622330216060					BCD 1SCHA	
00473	0500	00	0	03073		CLA SCHA+14	RESULT SCH OPERATION
00474	0560	00	0	02632		LDQ ARSR+14	CORRECT CONTENTS DSC
00475	0340	00	0	02632		CAS ARSR+14	
00476	0020	00	0	00500		TRA *+2	ERROR
00477	0020	00	0	00504		TRA *+5	OK
00500	0540	00	0	02573		RCHA STOP+7	DISCONNECT
00501	0074	00	4	06503		TSX ERROR-1,4	LCH COMMAND
00502	0761	00	0	00473		NOP *-7	DID NOT SET DSC PROPERLY
00503	0000	00	0	00465		HTR WPU7	RETURN TO TRY AGAIN
00504	2 00001	1	00467			TIX WPU7+2,1,1	RETURN FOR THREE CARDS
00505	0060	00	0	00505		TCOA *	WAIT FOR DSC TO END OP
00506	0640	00	0	03074		SCHA SCHA+15	SAVE CONTENTS DSC
00507	0020	00	0	00511		TRA *+2	
00510	622330216060					BCD 1SCHA	
00511	0500	00	0	03074		CLA SCHA+15	RESULTS SCH OPERATION
00512	0560	00	0	02633		LDQ ARSR+15	CORRECT CONTENTS DSC
00513	0340	00	0	02633		CAS ARSR+15	
00514	0020	00	0	00516		TRA *+2	
00515	0020	00	0	00520		TRA *+3	OK
00516	0074	00	4	06503		TSX ERROR-1,4	
00517	0761	00	0	00511		NOP *-6	
00520	0020	00	0	00522		TRA *+2	

00521	314663606060		BCD 1IOT	
00522	0760 00 0 00005		IOT	
00523	0020 00 0 00525		TRA *+2	INDICATOR ON-ERROR
00524	0020 00 0 00527		TRA *+3	OFF-OK
00525	0074 00 4 06503		TSX ERROR-1,4	
00526	-3 00000 4 00522		TXL *-4,4	
00527	0074 00 4 02172		TSX F43,4	SHIFT IMAGE
00530	0020 00 0 00532		TRA *+2	CONTINUE TO RELIABILITY SECTION

* TEST PUNCH-24 CARDS-BCD

				PUNCH 24 RIPPLE CARDS
00531	664764216060		BCD 1WPUA	CARD PUNCH
00532	-0534 00 2 03165	F22	LXD K6,2	L+30
00533	0760 00 0 00005		IOT	TURN I/O CHECK OFF
00534	0020 00 0 00535		TRA *+1	
00535	0766 00 0 01341	PUNCH	WPUA	
00536	0540 00 0 03171		RCHA K8	RESET LOAD CHAN A
00537	0544 00 0 03174		LCHA K8+3	S AND 1 TGR ON
00540	0544 00 0 03177		LCHA K8A+2	IND ADDRESS
00541	0060 00 0 00541		TCOA *	
00542	0020 00 0 00544		TRA *+2	
00543	314663606060		BCD 1IOT	TEST I/O TGR+IND
00544	0760 00 0 00005		IOT	TEST I/O CHECK IND
00545	0020 00 0 00547		TRA *+2	ON-ERROR
00546	0020 00 0 00551		TRA *+3	OK
00547	0074 00 4 06503		TSX ERROR-1,4	I/O IND ON IN ERROR
00550	-3 00000 4 00544		TXL *-4,4,0	FOR CARD PUNCH
00551	0074 00 4 02172	F24	TSX F43,4	RIPPLE CARD IMAGE
00552	2 00001 2 00535	F27	TIX PUNCH,2,1	24 CARDS HAVE BEEN PUNCHED
00553	0056 00 000002	F28A	RNT 000002	IS PRINTER ON LINE
00554	0020 00 0 01244		TRA F35	NO-CHECK CARD READER
00555	0020 00 0 00557		TRA WPR-5	YES-PRINT NO ECHO CHECKING
00556	664751216060		BCD 1WPRA	
00557	0534 00 1 03165		LXA K6,1	L30
00560	-0500 00 1 03165		CAL K5+24,1	INITIALIZE RECORD IMAGE
00561	0602 00 1 03373		SLW K50+24,1	
00562	2 00001 1 00560		TIX *-2,1,1	
00563	0774 00 1 00003		AXT 3,1	
00564	0766 00 0 01361	WPR	WPRA	PRINT THREE LINES WITH NO TGRS ON-RIPPLE BCD IMAGE-FIRST CHAR A.

00565	0540	60	0	03046	RCHA* IND	
						RCH INDIRECTLY ADDRESSED
00566	0640	00	0	03075	SCHA SCHA1	
00567	0020	00	0	00571	TRA *+2	
00570	622330216060				BCD 1SCHA	
00571	0500	00	0	03075	CLA SCHA1	RESULTS SCH OPERATION
00572	0560	00	0	02634	LDQ ARSR1	CORRECT CONTENTS DSC
00573	0340	00	0	02634	CAS ARSR1	
00574	0020	00	0	00576	TRA *+2	ERROR
00575	0020	00	0	00602	TRA *+5	OK
00576	0540	00	0	02574	RCHA STOP1	DISCONNECT
00577	0074	00	4	06503	TSX ERROR-1,4	RCH COMMAND DID
00600	0761	00	0	00571	NOP *-7	NOT SET DSC PROPERLY
00601	0000	00	0	00564	HTR WPR	RETURN TO TRY AGAIN
00602	0060	00	0	00602	TCOA *	WAIT FOR ONE CARD
00603	0640	00	0	03076	SCHA SCHA1+1	SAVE CONTENTS OF CHANNEL
00604	0020	00	0	00606	TRA *+2	
00605	622330216060				BCD 1SCHA	
00606	0500	00	0	03076	CLA SCHA1+1	RESULTS SCH OPERATION
00607	0560	00	0	02635	LDQ ARSR1+1	CORRECT CONTENTS DSC
00610	0340	00	0	02635	CAS ARSR1+1	
00611	0020	00	0	00613	TRA *+2	ERROR
00612	0020	00	0	00617	TRA *+5	OK
00613	0074	00	4	06503	TSX ERROR-1,4	
00614	0761	00	0	00606	NOP *-6	
00615	0020	00	0	00617	TRA *+2	
00616	314663606060				BCD 1IOT	
00617	0760	00	0	00005	IOT	
00620	0020	00	0	00622	TRA *+2	INDICATOR ON-ERROR
00621	0020	00	0	00624	TRA *+3	OFF-OK
00622	0074	00	4	06503	TSX ERROR-1,4	
00623	-3	00000	4	00617	TXL *-4,4	
00624	2	00001	1	00564	TIX WPR,1,1	RETURN FOR THREE LINES
00625	0074	00	4	02172	TSX F43,4	OUT TO RIPPLE IMAGE
00626	0774	00	1	00001	AXT 1,1	
00627	0766	00	0	01361	WPR1 WPR	PRINT THREE LINES WITH S TGR ON-RIPPLE BCD IMAGE-FIRT CHAR. B
00630	0540	60	1	03050	RCHA* IND+2,1	RCH INDIRECTLY ADDRESSED AND INDEXED
00631	0640	00	0	03077	SCHA SCHA1+2	SAVE CONTENTS DSC
00632	0020	00	0	00634	TRA *+2	
00633	622330216060				BCD 1SCHA	

00634	0500	00	0	03077	CLA	SCHA1+2	RESULTS SCH OPERATION
00635	0560	00	0	02636	LDQ	ARSR1+2	CORRECT CONTENTS DSC
00636	0340	00	0	02636	CAS	ARSR1+2	
00637	0020	00	0	00641	TRA	*+2	ERROR
00640	0020	00	0	00645	TRA	*+5	OK
00641	0540	00	0	02575	RCHA	STOP1+1	DISCONNECT
00642	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
00643	0761	00	0	00634	NOP	*-7	DID NOT SET DSC PROPERLY
00644	0000	00	0	00627	HTR	WPR1	RETURN TO TRY AGAIN
00645	0060	00	0	00645	TCOA	*	WAIT FOR THREE LINES
00646	0640	00	0	03100	SCHA	SCHA1+3	SAVE CONTENTS DSC
00647	0020	00	0	00651	TRA	*+2	
00650	622330216060				BCD	1SCHA	
00651	0500	00	0	03100	CLA	SCHA1+3	RESULTS SCH OPERATION
00652	0560	00	0	02637	LDQ	ARSR1+3	CORRECT CONTENTS DSC
00653	0340	00	0	02637	CAS	ARSR1+3	
00654	0020	00	0	00656	TRA	*+2	ERROR
00655	0020	00	0	00662	TRA	*+5	OK
00656	0074	00	4	06503	TSX	ERROR-1,4	
00657	0761	00	0	00651	NOP	*-6	
00660	0020	00	0	00662	TRA	*+2	
00661	314663606060				BCD	1IOT	
00662	0760	00	0	00005	IOT		
00663	0020	00	0	00665	TRA	*+2	INDICATOR ON-ERROR
00664	0020	00	0	00667	TRA	*+3	OFF-OK
00665	0074	00	4	06503	TSX	ERROR-1,4	
00666	-3 00000	4	00662	TXL	*-4,4		
00667	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
00670	0766	00	0	01361	WPR2	WPRA	PRINT THREE LINES
00671	0540	00	0	02744	RCHA	PR2	WITH TGR 1 ON BCD IMAGE-FIRST CHAR C
00672	0640	60	0	03053	SCHA*	IND+5	SCH INDIRECTLY ADDRESSED
00673	0020	00	0	00675	TRA	*+2	
00674	622330216060				BCD	1SCHA	
00675	0500	00	0	03101	CLA	SCHA1+4	RESULTS SCH OPERATION
00676	0560	00	0	02640	LDQ	ARSR1+4	CORRECT CONTENTS DSC
00677	0340	00	0	02640	CAS	ARSR1+4	
00700	0020	00	0	00702	TRA	*+2	ERROR
00701	0020	00	0	00706	TRA	*+5	
00702	0540	00	0	02576	RCHA	STOP1+2	DISCONNECT
00703	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
00704	0761	00	0	00675	NOP	*-7	DID NOT SET DSC PROPERLY
00705	0000	00	0	00670	HTR	WPR2	RETURN TO TRY AGAIN

00706	0060	00	0	00706	TCOA *	WAIT FOR THREE LINES
00707	0640	00	0	03102	SCHA SCHA1+5	SAVE CONTENTS DSC
00710	0020	00	0	00712	TRA *+2	
00711	622330216060				BCD 1SCHA	
00712	0500	00	0	03102	CLA SCHA1+5	RESULTS SCH OPERATION
00713	0560	00	0	02641	LDQ ARSR1+5	CORRECT CONTENTS DSC
00714	0340	00	0	02641	CAS ARSR1+5	
00715	0020	00	0	00717	TRA *+2	ERROR
00716	0020	00	0	00723	TRA *+5	OK
00717	0074	00	4	06503	TSX ERROR-1,4	
00720	0761	00	0	00712	NOP *-6	
00721	0020	00	0	00723	TRA *+2	
00722	314663606060				BCD 1IOT	
00723	0760	00	0	00005	IOT	
00724	0020	00	0	00726	TRA *+2	INDICATOR ON-ERROR
00725	0020	00	0	00730	TRA *+3	OFF-OK
00726	0074	00	4	06503	TSX ERROR-1,4	
00727	-3	00000	4	00723	TXL *-4,4	
00730	0074	00	4	02172	TSX F43,4	OUT TO SHIFT IMAGE
00731	0774	00	1	00001	AXT 1,1	
00732	0766	00	0	01361	WPR3 WPR3	
00733	0540	00	0	02750	RCHA PR3	PRINT THREE LINES WITH TGR 2 ON-RIPPLE BCD IMAGE-FIRST CHAR D
00734	0640	00	0	03103	SCHA SCHA1+6	SAVE CONTENTS DSC
00735	0020	00	0	00737	TRA *+2	
00736	622330216060				BCD 1SCHA	
00737	0500	00	0	03103	CLA SCHA1+6	RESULTS SCH OPERATION
00740	0560	00	0	02642	LDQ ARSR1+6	CORRECT CONTENTS
00741	0340	00	0	02642	CAS ARSR1+6	
00742	0020	00	0	00744	TRA *+2	ERROR
00743	0020	00	0	00750	TRA *+5	OK
00744	0540	00	0	02577	RCHA STOP1+3	DISCONNECT
00745	0074	00	4	06503	TSX ERROR-1,4	RCH COMMAND
00746	0761	00	0	00737	NOP *-7	DID NOT SET DSC PROPERLY
00747	0000	00	0	00732	HTR WPR3	RETURN TO TRY AGAIN
00750	0060	00	0	00750	TCOA *	WAIT FOR THREE LINES
00751	0640	60	1	03055	SCHA* IND+7,1	SCH INDIRECTLY ADDRESSED AND INDEXED
00752	0020	00	0	00754	TRA *+2	
00753	622330216060				BCD 1SCHA	
00754	0500	00	0	03104	CLA SCHA1+7	RESULTS SCH OPERATION
00755	0560	00	0	02643	LDQ ARSR1+7	CORRECT CONTENTS DSC

00756	0340	00	0	02643	CAS	ARSR1+7	
00757	0020	00	0	00761	TRA	*+2	ERROR
00760	0020	00	0	00765	TRA	*+5	OK
00761	0074	00	4	06503	TSX	ERROR-1,4	
00762	0761	00	0	00754	NOP	*-6	
00763	0020	00	0	00765	TRA	*+2	
00764	314663606060				BCD	1IOT	
00765	0760	00	0	00005	IOT		
00766	0020	00	0	00770	TRA	*+2	INDICATOR ON-ERROR
00767	0020	00	0	00772	TRA	*+3	OFF-OK
00770	0074	00	4	06503	TSX	ERROR-1,4	
00771	-3	00000	4	00765	TXL	*-4,4	
00772	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
00773	0766	00	0	01361	WPR4	WPRA	
00774	0540	00	0	02761	RCHA	PR4	PRINT THREE LINES WITH S+1 TGRS ON-RIPPLE BCD IMAGE-FIRST CHAR E
00775	0640	00	0	03105	SCHA	SCHA1+8	
00776	0020	00	0	01000	TRA	*+2	
00777	622330216060				BCD	1SCHA	
01000	0500	00	0	03105	CLA	SCHA1+8	RESULTS SCH OPERATION
01001	0560	00	0	02644	LDQ	ARSR1+8	CORRECT CONTENTS DSC
01002	0340	00	0	02644	CAS	ARSR1+8	
01003	0020	00	0	01005	TRA	*+2	ERROR
01004	0020	00	0	01011	TRA	*+5	OK
01005	0540	00	0	02600	RCHA	STOP1+4	DISCONNECT
01006	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
01007	0761	00	0	01000	NOP	*-7	DID NOT SET DSC PROPERLY
01010	0000	00	0	00773	HTR	WPR4	RETURN TO TRY AGAIN
01011	0060	00	0	01011	TCOA	*	WAIT FOR THREE LINES
01012	0640	00	0	03106	SCHA	SCHA1+9	SAVE CONTENTS DSC
01013	0020	00	0	01015	TRA	*+2	
01014	622330216060				BCD	1SCHA	
01015	0500	00	0	03106	CLA	SCHA1+9	RESULTS SCH OPERATION
01016	0560	00	0	02645	LDQ	ARSR1+9	CORRECT CONTENTS DSC
01017	0340	00	0	02645	CAS	ARSR1+9	
01020	0020	00	0	01022	TRA	*+2	ERROR
01021	0020	00	0	01026	TRA	*+5	OK
01022	0074	00	4	06503	TSX	ERROR-1,4	
01023	0761	00	0	01015	NOP	*-6	
01024	0020	00	0	01026	TRA	*+2	
01025	314663606060				BCD	1IOT	
01026	0760	00	0	00005	IOT		
01027	0020	00	0	01031	TRA	*+2	INDICATOR ON-ERROR

01030	0020	00	0	01033	TRA	*/+3	OFF-OK
01031	0074	00	4	06503	TSX	ERROR-1,4	
01032	-3	00000	4	01026	TXL	*-4,4	
01033	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
01034	0774	00	1	00003	AXT	3,1	
01035	0766	00	0	01361	WPR5	WPR5	
01036	0540	00	0	02766	RCHA	PR5	PRINT THREE LINES
01037	0544	00	0	02770	LCHA	PR5+2	WITH TGRS 1+2 ON-RIPPLE BCD IMAGE-FIRST CHAR F
01040	0640	00	0	03107	SCHA	SCHA1+10	SAVE CONTENTS DSC
01041	0020	00	0	01043	TRA	*/+2	
01042	622330216060				BCD	1SCHA	
01043	0500	00	0	03107	CLA	SCHA1+10	RESULT SCH INSTRUCTION
01044	0560	00	0	02646	LDQ	ARSR1+10	CORRECT CONTENTS DSC
01045	0340	00	0	02646	CAS	ARSR1+10	
01046	0020	00	0	01050	TRA	*/+2	ERROR
01047	0020	00	0	01054	TRA	*/+5	
01050	0540	00	0	02601	RCHA	STOP1+5	DISCONNECT
01051	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
01052	0761	00	0	01043	NOP	*-7	DID NOT SET DSC PROPERLY
01053	0000	00	0	01035	HTR	WPR5	RETURN TO TRY AGAIN
01054	2	00001	1	01037	TIX	WPR5+2,1,1	RETURN FOR THREE LINES
01055	0060	00	0	01055	TCOA	*	WAIT FOR DSC TO END OP.
01056	0640	00	0	03110	SCHA	SCHA1+11	SAVE CONTENTS DSC
01057	0020	00	0	01061	TRA	*/+2	
01060	622330216060				BCD	1SCHA	
01061	0500	00	0	03110	CLA	SCHA1+11	RESULTS SCH OPERATION
01062	0560	00	0	02647	LDQ	ARSR1+11	CORRECT CONTENTS DSC
01063	0340	00	0	02647	CAS	ARSR1+11	
01064	0020	00	0	01066	TRA	*/+2	ERROR
01065	0020	00	0	01072	TRA	*/+5	OK
01066	0074	00	4	06503	TSX	ERROR-1,4	
01067	0761	00	0	01061	NOP	*-6	
01070	0020	00	0	01072	TRA	*/+2	
01071	314663606060				BCD	1IOT	
01072	0760	00	0	00005	IOT		
01073	0020	00	0	01075	TRA	*/+2	INDICATOR ON-ERROR
01074	0020	00	0	01077	TRA	*/+3	OFF-OK
01075	0074	00	4	06503	TSX	ERROR-1,4	
01076	-3	00000	4	01072	TXL	*-4,4	
01077	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
01100	0774	00	1	00002	AXT	2,1	
01101	0766	00	0	01361	WPR6	WPR6	
01102	0540	00	0	02772	RCHA	PR6	PRINT THREE LINES

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                                WITH TGRS S+2 ON-RIPPLE
                                BCD IMAGE-FIRST CHAR G
01103  0544 60 0 03050      LCHA* IND+2
                                LCH INDIRECTLY ADDRESSED
01104  0640 00 0 03111      SCHA SCHA1+12 SAVE CONTENTS DSC
01105  0020 00 0 01107      TRA *+2

01106  622330216060        BCD 1SCHA

01107  0500 00 0 03111      CLA SCHA1+12 RESULTS SCH OPERATION
01110  0560 00 0 02650      LDQ ARSR1+12 CORRECT CONTENTS DSC
01111  0340 00 0 02650      CAS ARSR1+12
01112  0020 00 0 01114      TRA *+2          ERROR
01113  0020 00 0 01120      TRA *+5
01114  0540 00 0 02602      RCHA STOP1+6   DISCONNECT
01115  0074 00 4 06503      TSX ERROR-1,4  LCH COMMAND
01116  0761 00 0 01107      NOP *-7        DID NOT SET
                                DSC PROPERLY
01117  0000 00 0 01101      HTR WPR6       RETURN TO TRY AGAIN

01120  2 00001 1 01103      TIX WPR6+2,1,1 RETURN FOR THREE CARDS
01121  0060 00 0 01121      TCOA *         WAIT FOR DSC TO END OP
01122  0640 00 0 03112      SCHA SCHA1+13
01123  0020 00 0 01125      TRA *+2

01124  622330216060        BCD 1SCHA

01125  0500 00 0 03112      CLA SCHA1+13 RESULTS SCH OPERATION
01126  0560 00 0 02651      LDQ ARSR1+13 CORRECT CONTENTS DSC
01127  0340 00 0 02651      CAS ARSR1+13
01130  0020 00 0 01132      TRA *+2          ERROR
01131  0020 00 0 01136      TRA *+5          OK
01132  0074 00 4 06503      TSX ERROR-1,4
01133  0761 00 0 01125      NOP *-6
01134  0020 00 0 01136      TRA *+2

01135  314663606060        BCD 1IOT

01136  0760 00 0 00005      IOT
01137  0020 00 0 01141      TRA *+2          INDICATOR ON-ERROR
01140  0020 00 0 01143      TRA *+3          OFF-OK
01141  0074 00 4 06503      TSX ERROR-1,4
01142  -3 00000 4 01136     TXL *-4,4

01143  0074 00 4 02172      TSX F43,4       OUT TO SHIFT IMAGE

01144  0774 00 1 00002      AXT 2,1
01145  0766 00 0 01361      WPR7 WPRA
01146  0540 00 0 02776      RCHA PR7        PUNCH THREE CARDS
                                WITH TGRS S,1+2 ON-RIPPLE
                                BCD IMAGE-FIRST CHAR H
01147  0544 60 1 03053      LCHA* IND+5,1
                                LCH INDIRECTLY ADDRESSED
                                AND INDEXED
01150  0640 00 0 03113      SCHA SCHA1+14 SAVE CONTENTS DSC
01151  0020 00 0 01153      TRA *+2

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01152	622330216060		BCD 1SCHA	
01153	0500 00 0 03113		CLA SCHA1+14	RESULTS SCH OPERATION
01154	0560 00 0 02652		LDQ ARSR1+14	CORRECT CONTENTS DSC
01155	0340 00 0 02652		CAS ARSR1+14	
01156	0020 00 0 01160		TRA *+2	ERROR
01157	0020 00 0 01164		TRA *+5	OK
01160	0540 00 0 02603		RCHA STOP1+7	DISCONNECT
01161	0074 00 4 06503		TSX ERROR-1,4	LCH COMMAND
01162	0761 00 0 01153		NOP *-7	DID NOT SET DSC PROPERLY
01163	0000 00 0 01145		HTR WPR7	RETURN TO TRY AGAIN
01164	2 00001 1 01147		TIX WPR7+2,1,1	RETURN FOR THREE CARDS
01165	0060 00 0 01165		TCOA *	WAIT FOR DSC TO END OP
01166	0640 00 0 03114		SCHA SCHA1+15	SAVE CONTENTS DSC
01167	0020 00 0 01171		TRA *+2	
01170	622330216060		BCD 1SCHA	
01171	0500 00 0 03114		CLA SCHA1+15	RESULTS SCH OPERATION
01172	0560 00 0 02653		LDQ ARSR1+15	CORRECT CONTENTS DSC
01173	0340 00 0 02653		CAS ARSR1+15	
01174	0020 00 0 01176		TRA *+2	ERROR
01175	0020 00 0 01200		TRA *+3	OK
01176	0074 00 4 06503		TSX ERROR-1,4	
01177	0761 00 0 01171		NOP *-6	
01200	0020 00 0 01202		TRA *+2	
01201	314663606060		BCD 1IOT	
01202	0760 00 0 00005		IOT	
01203	0020 00 0 01205		TRA *+2	INDICATOR ON-ERROR
01204	0020 00 0 01207		TRA *+3	OFF-OK
01205	0074 00 4 06503		TSX ERROR-1,4	
01206	-3 00000 4 01202		TXL *-4,4	
01207	0020 00 0 01211		TRA *+2	CONTINUE TO RELIABILITY SECTION
* TEST PRINTER-24 LINES-WRITE PRINTER				
01210	664751216060		BCD 1WPRA	TEST PRINTER
01211	-0534 00 2 03165	F28	LXD K6,2	L+30
01212	0760 00 0 00005		IOT	TURN I/O CHECK OFF
01213	0020 00 0 01214		TRA *+1	
01214	0766 00 0 01361	PRNTR	WPRA	
01215	0540 00 0 03171		RCHA K8	S TGR ON
01216	0544 00 0 03174		LCHA K8+3	S AND 1 TGRS ON
01217	0544 00 0 03177		LCHA K8A+2	IND ADDRESS
01220	0060 00 0 01220		TCOA *	
01221	0640 00 0 03325		SCHA Z2	CHECK DSC - LOC AND ADDR
01222	0020 00 0 01224		TRA *+2	

01223	314663606060		BCD 1IOT	TEST I/O TGR+IND
01224	0760 00 0 00005		IOT	TEST I/O CHECK IND
01225	0020 00 0 01227		TRA *+2	ON-ERROR
01226	0020 00 0 01231		TRA *+3	OK
01227	0074 00 4 06503		TSX ERROR-1,4	I/O IND ON IN ERROR
01230	-3 00000 4 01224		TXL *-4,4,0	FOR PRINTER
01231	0020 00 0 01233		TRA *+2	CONTINUE
01232	622330216060		BCD 1SCHA	TEST SCHA INSTR
01233	0500 00 0 03330		CLA Z2+3	CORRECT CONTENTS
01234	0340 00 0 03325		CAS Z2	RESULTS STO CHAN OPER
01235	0020 00 0 01237		TRA *+2	ERROR
01236	0020 00 0 01242		TRA F30	
01237	0560 00 0 03325		LDQ Z2	ERROR LOC AND ADDR OF
01240	0074 00 4 06503		TSX ERROR-1,4	DSC
01241	0761 00 0 01233		NOP *-6	DO NOT REPEAT
01242	0074 00 4 02172	F30	TSX F43,4	RIPPLE CARD IMAGE
01243	2 00001 2 01214		TIX PRNTR,2,1	24 PRINT RECORDS COMPLETE
01244	0056 00 000001	F35	RNT 1	IS CARD READER ON LINE
01245	0020 00 0 02214		TRA F50	
01246	0020 00 0 01247		TRA F36	
01247	0534 00 1 03165	F36	LXA K6,1	L 30
01250	-0500 00 1 03165		CAL K5+24,1	INITIALIZE RECORD IMAGE
01251	0602 00 1 03373		SLW K50+24,1	
01252	2 00001 1 01250		TIX F36+1,1,1	
01253	0500 00 0 03165		CLA K6	L+30
01254	0400 00 0 03167		ADD K6+2	L+1
01255	0621 00 0 06556		STA WDNO	SET WORD NO CONSTANT
01256	0500 00 0 03334		CLA SVNTW	
01257	0771 00 0 00022		ARS 18	SHIFT TO ADDR
01260	0400 00 0 03167		ADD K6+2	L+1
01261	0601 00 0 06557		STO RECNO	SET RECORD NO,CONSTANT
01262	0774 00 2 00110		AXT 72,2	
01263	0020 00 0 01265		TRA *+2	
01264	512324216060		BCD 1RCDA	
01265	0774 00 1 00003		AXT 3,1	
01266	0762 00 0 01321	RCD	RCDA	READ THREE CARDS
01267	0540 00 0 03002		RCHA CR	WITH NO TGRS ON-RIPPLE BCD IMAGE-FIRST CHAR A.
01270	0640 00 0 03115		SCHA SCHA2	
01271	0020 00 0 01273		TRA *+2	
01272	622330216060		BCD 1SCHA	
01273	0500 00 0 03115		CLA SCHA2	RESULTS SCH OPERATION
01274	0560 00 0 02654		LDQ ARSR2	CORRECT CONTENTS DSC
01275	0340 00 0 02654		CAS ARSR2	

01276	0020	00	0	01300	TRA	*+2	ERROR
01277	0020	00	0	01304	TRA	*+5	OK
01300	0540	00	0	02604	RCHA	STOP2	DISCONNECT
01301	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND DID
01302	0761	00	0	01273	NOP	*-7	NOT SET DSC PROPERLY
01303	0000	00	0	01266	HTR	RCD	RETURN TO TRY AGAIN
01304	0060	00	0	01304	TCOA	*	WAIT FOR ONE CARD
01305	0640	00	0	03116	SCHA	SCHA2+1	SAVE CONTENTS OF CHANNEL
01306	0020	00	0	01310	TRA	*+2	
01307	622330216060				BCD	1SCHA	
01310	0500	00	0	03116	CLA	SCHA2+1	RESULTS SCH OPERATION
01311	0560	00	0	02655	LDQ	ARSR2+1	CORRECT CONTENTS DSC
01312	0340	00	0	02655	CAS	ARSR2+1	
01313	0020	00	0	01315	TRA	*+2	ERROR
01314	0020	00	0	01321	TRA	*+5	OK
01315	0074	00	4	06503	TSX	ERROR-1,4	
01316	0761	00	0	01310	NOP	*-6	
01317	0020	00	0	01321	TRA	*+2	
01320	314663606060				BCD	1IOT	
01321	0760	00	0	00005	IOT		
01322	0020	00	0	01324	TRA	*+2	INDICATOR ON-ERROR
01323	0020	00	0	01326	TRA	*+3	OFF-OK
01324	0074	00	4	06503	TSX	ERROR-1,4	
01325	-3 00000	4	01321	TXL	*-4,4		
01326	2 00001	1	01266	TIX	RCD,1,1	RETURN FOR THREE CARDS	
01327	2 00002	2	01330	TIX	*+1,2,2		
01330	0534	00	1	03165	LXA	K6,1	L 30
01331	0500	00	1	04324	CLA	Q2+48,1	WORD READ
01332	0560	00	1	03373	LDQ	K50+24,1	WORD GENERATED
01333	0340	00	1	03373	CAS	K50+24,1	
01334	0020	00	0	01336	TRA	*+2	ERROR
01335	0020	00	0	01340	TRA	*+3	OK
01336	0074	00	4	06502	TSX	ERROR-2,4	
01337	0761	00	0	01265	NOP	RCD-1	
01340	2 00001	1	01331	TIX	*-7,1,1	RETURN TO TEST ALL WORDS	
01341	2 00001	2	01342	TIX	*+1,2,1		
01342	0074	00	4	02172	TSX	F43,4	OUT TO RIPPLE IMAGE
01343	0762	00	0	01321	RCD1	RCDA	READ THREE CARDS
01344	0540	00	0	03003	RCHA	CR1	WITH S TGR ON-RIPPLE BCD IMAGE-FIRT CHAR. B
01345	0640	00	0	03117	SCHA	SCHA2+2	SAVE CONTENTS DSC
01346	0020	00	0	01350	TRA	*+2	
01347	622330216060				BCD	1SCHA	
01350	0500	00	0	03117	CLA	SCHA2+2	RESULTS SCH OPERATION
01351	0560	00	0	02656	LDQ	ARSR2+2	CORRECT CONTENTS DSC

01352	0340	00	0	02656	CAS	ARSR2+2	
01353	0020	00	0	01355	TRA	*+2	ERROR
01354	0020	00	0	01361	TRA	*+5	OK
01355	0540	00	0	02605	RCHA	STOP2+1	DISCONNECT
01356	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
01357	0761	00	0	01350	NOP	*-7	DID NOT SET DSC PROPERLY
01360	0000	00	0	01343	HTR	RCD1	RETURN TO TRY AGAIN
01361	0060	00	0	01361	TCOA	*	WAIT FOR THREE CARDS
01362	0640	00	0	03120	SCHA	SCHA2+3	SAVE CONTENTS DSC
01363	0020	00	0	01365	TRA	*+2	
01364	622330216060				BCD	1SCHA	
01365	0500	00	0	03120	CLA	SCHA2+3	RESULTS SCH OPERATION
01366	0560	00	0	02657	LDQ	ARSR2+3	CORRECT CONTENTS DSC
01367	0340	00	0	02657	CAS	ARSR2+3	
01370	0020	00	0	01372	TRA	*+2	ERROR
01371	0020	00	0	01376	TRA	*+5	OK
01372	0074	00	4	06503	TSX	ERROR-1,4	
01373	0761	00	0	01365	NOP	*-6	
01374	0020	00	0	01376	TRA	*+2	
01375	314663606060				BCD	1IOT	
01376	0760	00	0	00005	IOT		
01377	0020	00	0	01401	TRA	*+2	INDICATOR ON-ERROR
01400	0020	00	0	01403	TRA	*+3	OFF-OK
01401	0074	00	4	06503	TSX	ERROR-1,4	
01402	-3 00000	4		01376	TXL	*-4,4	
01403	2 00002	2		01404	TIX	*+1,2,2	
01404	0534	00	1	03165	LXA	K6,1	L 30
01405	0500	00	1	04324	CLA	Q2+48,1	WORD READ
01406	0560	00	1	03373	LDQ	K50+24,1	WORD GENERATED
01407	0340	00	1	03373	CAS	K50+24,1	
01410	0020	00	0	01412	TRA	*+2	ERROR
01411	0020	00	0	01414	TRA	*+3	OK
01412	0074	00	4	06502	TSX	ERROR-2,4	
01413	0761	00	0	01265	NOP	RCD-1	
01414	2 00001	1		01405	TIX	*-7,1,1	RETURN TO TEST ALL WORDS
01415	2 00001	2		01416	TIX	*+1,2,1	
01416	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
01417	0762	00	0	01321	RCD2	RCDA	READ THREE CARDS
01420	0540	00	0	03007	RCHA	CR2	WITH TGR 1 ON BCD IMAGE-FIRST CHAR C
01421	0640	00	0	03121	SCHA	SCHA2+4	SAVE CONTENTS DSC
01422	0020	00	0	01424	TRA	*+2	
01423	622330216060				BCD	1SCHA	
01424	0500	00	0	03121	CLA	SCHA2+4	RESULTS SCH OPERATION
01425	0560	00	0	02660	LDQ	ARSR2+4	CORRECT CONTENTS DSC

01426	0340	00	0	02660	CAS	ARSR2+4	
01427	0020	00	0	01431	TRA	*+2	ERROR
01430	0020	00	0	01435	TRA	*+5	
01431	0540	00	0	02606	RCHA	STOP2+2	DISCONNECT
01432	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
01433	0761	00	0	01424	NOP	*-7	DID NOT SET DSC PROPERLY
01434	0000	00	0	01417	HTR	RCD2	RETURN TO TRY AGAIN
01435	0060	00	0	01435	TCOA	*	WAIT FOR THREE CARDS
01436	0640	00	0	03122	SCHA	SCHA2+5	SAVE CONTENTS DSC
01437	0020	00	0	01441	TRA	*+2	
01440	622330216060				BCD	1SCHA	
01441	0500	00	0	03122	CLA	SCHA2+5	RESULTS SCH OPERATION
01442	0560	00	0	02661	LDQ	ARSR2+5	CORRECT CONTENTS DSC
01443	0340	00	0	02661	CAS	ARSR2+5	
01444	0020	00	0	01446	TRA	*+2	ERROR
01445	0020	00	0	01452	TRA	*+5	OK
01446	0074	00	4	06503	TSX	ERROR-1,4	
01447	0761	00	0	01441	NOP	*-6	
01450	0020	00	0	01452	TRA	*+2	
01451	314663606060				BCD	1IOT	
01452	0760	00	0	00005	IOT		
01453	0020	00	0	01455	TRA	*+2	INDICATOR ON-ERROR
01454	0020	00	0	01457	TRA	*+3	OFF-OK
01455	0074	00	4	06503	TSX	ERROR-1,4	
01456	-3 00000	4		01452	TXL	*-4,4	
01457	2 00002	2		01460	TIX	*+1,2,2	
01460	0534	00	1	03165	LXA	K6,1	L 30
01461	0500	00	1	04324	CLA	Q2+48,1	WORD READ
01462	0560	00	1	03373	LDQ	K50+24,1	WORD GENERATED
01463	0340	00	1	03373	CAS	K50+24,1	
01464	0020	00	0	01466	TRA	*+2	ERROR
01465	0020	00	0	01470	TRA	*+3	OK
01466	0074	00	4	06502	TSX	ERROR-2,4	
01467	0761	00	0	01265	NOP	RCD-1	
01470	2 00001	1		01461	TIX	*-7,1,1	RETURN TO TEST ALL WORDS
01471	2 00001	2		01472	TIX	*+1,2,1	
01472	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
01473	0762	00	0	01321	RCD3	RCDA	
01474	0540	00	0	03013	RCHA	CR3	READ THREE CARDS WITH TGR 2 ON-RIPPLE BCD IMAGE-FIRST CHAR D
01475	0640	00	0	03123	SCHA	SCHA2+6	SAVE CONTENTS DSC
01476	0020	00	0	01500	TRA	*+2	
01477	622330216060				BCD	1SCHA	
01500	0500	00	0	03123	CLA	SCHA2+6	RESULTS SCH OPERATION

01501	0560	00	0	02662	LDQ	ARSR2+6	CORRECT	CONTENTS
01502	0340	00	0	02662	CAS	ARSR2+6		
01503	0020	00	0	01505	TRA	*+2	ERROR	
01504	0020	00	0	01511	TRA	*+5	OK	
01505	0540	00	0	02607	RCHA	STOP2+3	DISCONNECT	
01506	0074	00	4	06503	TSX	ERROR-1,4	RCH	COMMAND
01507	0761	00	0	01500	NOP	*-7	DID NOT SET	DSC PROPERLY
01510	0000	00	0	01473	HTR	RCD3	RETURN TO TRY AGAIN	
01511	0060	00	0	01511	TCOA	*	WAIT FOR THREE CARDS	
01512	0640	00	0	03124	SCHA	SCHA2+7	SAVE	CONTENTS DSC
01513	0020	00	0	01515	TRA	*+2		
01514	622330216060				BCD	1SCHA		
01515	0500	00	0	03124	CLA	SCHA2+7	RESULTS	SCH OPERATION
01516	0560	00	0	02663	LDQ	ARSR2+7	CORRECT	CONTENTS DSC
01517	0340	00	0	02663	CAS	ARSR2+7		
01520	0020	00	0	01522	TRA	*+2	ERROR	
01521	0020	00	0	01526	TRA	*+5	OK	
01522	0074	00	4	06503	TSX	ERROR-1,4		
01523	0761	00	0	01515	NOP	*-6		
01524	0020	00	0	01526	TRA	*+2		
01525	314663606060				BCD	1IOT		
01526	0760	00	0	00005	IOT			
01527	0020	00	0	01531	TRA	*+2	INDICATOR	ON-ERROR
01530	0020	00	0	01533	TRA	*+3	OFF-OK	
01531	0074	00	4	06503	TSX	ERROR-1,4		
01532	-3 00000	4	01526	TXL	*-4,4			
01533	2 00002	2	01534	TIX	*+1,2,2			
01534	0534	00	1	03165	LXA	K6,1	L	30
01535	0500	00	1	04324	CLA	Q2+48,1	WORD	READ
01536	0560	00	1	03373	LDQ	K50+24,1	WORD	GENERATED
01537	0340	00	1	03373	CAS	K50+24,1		
01540	0020	00	0	01542	TRA	*+2	ERROR	
01541	0020	00	0	01544	TRA	*+3	OK	
01542	0074	00	4	06502	TSX	ERROR-2,4		
01543	0761	00	0	01265	NOP	RCD-1		
01544	2 00001	1	01535	TIX	*-7,1,1	RETURN TO TEST ALL WORDS		
01545	2 00001	2	01546	TIX	*+1,2,1			
01546	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE	
01547	0762	00	0	01321	RCD4	RCDA		
01550	0540	00	0	03025	RCHA	CR4	READ THREE CARDS	WITH S+1 TGRS ON-RIPPLE
							BCD IMAGE-FIRST CHAR E	
01551	0640	00	0	03125	SCHA	SCHA2+8		
01552	0020	00	0	01554	TRA	*+2		
01553	622330216060				BCD	1SCHA		

01554	0500	00	0	03125	CLA	SCHA2+8	RESULTS SCH OPERATION
01555	0560	00	0	02664	LDQ	ARSR2+8	CORRECT CONTENTS DSC
01556	0340	00	0	02664	CAS	ARSR2+8	
01557	0020	00	0	01561	TRA	*+2	ERROR
01560	0020	00	0	01565	TRA	*+5	OK
01561	0540	00	0	02570	RCHA	STOP+4	DISCONNECT
01562	0074	00	4	06503	TSX	ERROR-1,4	RCH COMMAND
01563	0761	00	0	01554	NOP	*-7	DID NOT SET DSC PROPERLY
01564	0000	00	0	01547	HTR	RCD4	RETURN TO TRY AGAIN
01565	0060	00	0	01565	TCOA	*	WAIT FOR THREE CARDS
01566	0640	00	0	03126	SCHA	SCHA2+9	SAVE CONTENTS DSC
01567	0020	00	0	01571	TRA	*+2	
01570	622330216060				BCD	1SCHA	
01571	0500	00	0	03126	CLA	SCHA2+9	RESULTS SCH OPERATION
01572	0560	00	0	02665	LDQ	ARSR2+9	CORRECT CONTENTS DSC
01573	0340	00	0	02665	CAS	ARSR2+9	
01574	0020	00	0	01576	TRA	*+2	ERROR
01575	0020	00	0	01602	TRA	*+5	OK
01576	0074	00	4	06503	TSX	ERROR-1,4	
01577	0761	00	0	01571	NOP	*-6	
01600	0020	00	0	01602	TRA	*+2	
01601	314663606060				BCD	1IOT	
01602	0760	00	0	00005	IOT		
01603	0020	00	0	01605	TRA	*+2	INDICATOR ON-ERROR
01604	0020	00	0	01607	TRA	*+3	OFF-OK
01605	0074	00	4	06503	TSX	ERROR-1,4	
01606	-3 00000	4	01602	TXL	*-4,4		
01607	2 00002	2	01610	TIX	*+1,2,2		
01610	0534	00	1	03165	LXA	K6,1	L 30
01611	0500	00	1	04324	CLA	Q2+48,1	WORD READ
01612	0560	00	1	03373	LDQ	K50+24,1	WORD GENERATOR
01613	0340	00	1	03373	CAS	K50+24,1	
01614	0020	00	0	01616	TRA	*+2	ERROR
01615	0020	00	0	01620	TRA	*+3	OK
01616	0074	00	4	06502	TSX	ERROR-2,4	
01617	0761	00	0	01265	NOP	RCD-1	
01620	2 00001	1	01611	TIX	*-7,1,1	RETURN TO TEST ALL WORDS	
01621	2 00001	2	01622	TIX	*+1,2,1		
01622	0074	00	4	02172	TSX	F43,4	OUT TO SHIFT IMAGE
01623	0774	00	1	00002	AXT	2,1	
01624	0762	00	0	01321	RCD5	RCDA	
01625	0540	00	0	03032	RCHA	CR5	READ THREE CARDS
01626	0544	00	0	03034	LCHA	CR5+2	WITH TGRS 1+2 ON-RIPPLE BCD IMAGE-FIRST CHAR F
01627	0640	00	0	03127	SCHA	SCHA2+10	SAVE CONTENTS DSC
01630	0020	00	0	01632	TRA	*+2	

01631	622330216060		BCD 1SCHA	
01632	0500 00 0 03127		CLA SCHA2+10	RESULT SCH INSTRUCTION
01633	0560 00 0 02666		LDQ ARSR2+10	CORRECT CONTENTS DSC
01634	0340 00 0 02666		CAS ARSR2+10	
01635	0020 00 0 01637		TRA *+2	ERROR
01636	0020 00 0 01643		TRA *+5	
01637	0540 00 0 02611		RCHA STOP2+5	DISCONNECT
01640	0074 00 4 06503		TSX ERROR-1,4	RCH COMMAND
01641	0761 00 0 01632		NOP *-7	DID NOT SET DSC PROPERLY
01642	0000 00 0 01624		HTR RCD5	RETURN TO TRY AGAIN
01643	2 00001 1 01626		TIX RCD5+2,1,1	RETURN FOR THREE CARDS
01644	0060 00 0 01644		TCOA *	WAIT FOR DSC TO END OP,
01645	0640 00 0 03130		SCHA SCHA2+11	SAVE CONTENTS DSC
01646	0020 00 0 01650		TRA *+2	
01647	622330216060		BCD 1SCHA	
01650	0500 00 0 03130		CLA SCHA2+11	RESULTS SCH OPERATION
01651	0560 00 0 02667		LDQ ARSR2+11	CORRECT CONTENTS DSC
01652	0340 00 0 02667		CAS ARSR2+11	
01653	0020 00 0 01655		TRA *+2	ERROR
01654	0020 00 0 01661		TRA *+5	OK
01655	0074 00 4 06503		TSX ERROR-1,4	
01656	0761 00 0 01650		NOP *-6	
01657	0020 00 0 01661		TRA *+2	
01660	314663606060		BCD 1IOT	
01661	0760 00 0 00005		IOT	
01662	0020 00 0 01664		TRA *+2	INDICATOR ON-ERROR
01663	0020 00 0 01666		TRA *+3	OFF-OK
01664	0074 00 4 06503		TSX ERROR-1,4	
01665	-3 00000 4 01661		TXL *-4,4	
01666	2 00002 2 01667		TIX *+1,2,2	
01667	0534 00 1 03165		LXA K6,1	L 30
01670	0500 00 1 04324		CLA Q2+48,1	WORD READ
01671	0560 00 1 03373		LDQ K50+24,1	WORD GENERATED
01672	0340 00 1 03373		CAS K50+24,1	
01673	0020 00 0 01675		TRA *+2	ERROR
01674	0020 00 0 01677		TRA *+3	OK
01675	0074 00 4 06502		TSX ERROR-2,4	
01676	0761 00 0 01265		NOP RCD-1	
01677	2 00001 1 01670		TIX *-7,1,1	RETURN TO TEST ALL WORDS
01700	2 00001 2 01701		TIX *+1,2,1	
01701	0074 00 4 02172		TSX F43,4	OUT TO SHIFT IMAGE
01702	0774 00 1 00002		AXT 2,1	
01703	0762 00 0 01321	RCD6	RCDA	
01704	0540 00 0 03036		RCHA CR6	READ THREE CARDS
01705	0544 00 0 03040		LCHA CR6+2	WITH TGRS S+1 ON-RIPPLE BCD IMAGE-FIRST CHAR G

01706	0640	00	0	03131	SCHA	SCHA2+12	SAVE	CONTENTS	DSC
01707	0020	00	0	01711	TRA	*+2			
01710	622330216060				BCD	1SCHA			
01711	0500	00	0	03131	CLA	SCHA2+12	RESULTS	SCH	OPERATION
01712	0560	00	0	03131	LDQ	SCHA2+12	CORRECT	CONTENTS	DSC
01713	0340	00	0	02670	CAS	ARSR2+12			
01714	0020	00	0	01716	TRA	*+2	ERROR		
01715	0020	00	0	01722	TRA	*+5			
01716	0540	00	0	02612	RCHA	STOP2+6	DISCONNECT		
01717	0074	00	4	06503	TSX	ERROR-1,4	LCH	COMMAND	
01720	0761	00	0	01711	NOP	*-7	DID	NOT	SET
							DSC	PROPERLY	
01721	0000	00	0	01703	HTR	RCD6	RETURN	TO	TRY
							AGAIN		
01722	2	00001	1	01705	TIX	RCD6+2,1,1	RETURN	FOR	THREE
01723	0060	00	0	01723	TCOA	*	WAIT	FOR	DSC
							TO	END	OP
01724	0640	00	0	03132	SCHA	SCHA2+13			
01725	0020	00	0	01727	TRA	*+2			
01726	622330216060				BCD	1SCHA			
01727	0500	00	0	03132	CLA	SCHA2+13	RESULTS	SCH	OPERATION
01730	0560	00	0	02671	LDQ	ARSR2+13	CORRECT	CONTENTS	DSC
01731	0340	00	0	02671	CAS	ARSR2+13			
01732	0020	00	0	01734	TRA	*+2	ERROR		
01733	0020	00	0	01740	TRA	*+5			
01734	0074	00	4	06503	TSX	ERROR-1,4			
01735	0761	00	0	01727	NOP	*-6			
01736	0020	00	0	01740	TRA	*+2			
01737	314663606060				BCD	1IOT			
01740	0760	00	0	00005	IOT				
01741	0020	00	0	01743	TRA	*+2	INDICATOR	ON-ERROR	
01742	0020	00	0	01745	TRA	*+3	OFF-OK		
01743	0074	00	4	06503	TSX	ERROR-1,4			
01744	-3	00000	4	01740	TXL	*-4,4			
01745	2	00002	2	01746	TIX	*+1,2,2			
01746	0534	00	1	03165	LXA	K6,1	L	30	
01747	0500	00	1	04324	CLA	Q2+48,1	WORD	READ	
01750	0560	00	1	03373	LDQ	K50+24,1	WORD	GENERATED	
01751	0340	00	1	03373	CAS	K50+24,1			
01752	0020	00	0	01754	TRA	*+2	ERROR		
01753	0020	00	0	01756	TRA	*+3	OK		
01754	0074	00	4	06502	TSX	ERROR-2,4			
01755	0761	00	0	01265	NOP	RCD-1			
01756	2	00001	1	01747	TIX	*-7,1,1	RETURN	TO	TEST
							ALL	WORDS	
01757	2	00001	2	01760	TIX	*+1,2,1			
01760	0074	00	4	02172	TSX	F43,4	OUT	TO	SHIFT
							IMAGE		
01761	0774	00	1	00002	AXT	2,1			
01762	0762	00	0	01321	RCD7	RCDA			

01763	0540	00	0	03042	RCHA CR7	READ THREE CARDS
01764	0544	00	0	03044	LCHA CR7+2	WITH TGRS S,1+2 ON-RIPPLE BCD IMAGE-FIRST CHAR H
01765	0640	00	0	03133	SCHA SCHA2+14	SAVE CONTENTS DSC
01766	0020	00	0	01770	TRA *+2	
01767	622330216060				BCD 1SCHA	
01770	0500	00	0	03133	CLA SCHA2+14	RESULTS SCH OPERATION
01771	0560	00	0	02672	LDQ ARSR2+14	CORRECT CONTENTS DSC
01772	0340	00	0	02672	CAS ARSR2+14	
01773	0020	00	0	01775	TRA *+2	ERROR
01774	0020	00	0	02001	TRA *+5	OK
01775	0540	00	0	02613	RCHA STOP2+7	DISCONNECT
01776	0074	00	4	06503	TSX ERROR-1,4	LCH COMMAND
01777	0761	00	0	01770	NOP *-7	DID NOT SET DSC PROPERLY
02000	0000	00	0	01762	HTR RCD7	RETURN TO TRY AGAIN
02001	2	00001	1	01764	TIX RCD7+2,1,1	RETURN FOR THREE CARDS
02002	0060	00	0	02002	TCOA *	WAIT FOR DSC TO END OF
02003	0640	00	0	03134	SCHA SCHA2+15	SAVE CONTENTS DSC
02004	0020	00	0	02006	TRA *+2	
02005	622330216060				BCD 1SCHA	
02006	0500	00	0	03134	CLA SCHA2+15	RESULTS SCH OPERATION
02007	0560	00	0	02673	LDQ ARSR2+15	CORRECT CONTENTS DSC
02010	0340	00	0	02673	CAS ARSR2+15	
02011	0020	00	0	02013	TRA *+2	ERROR
02012	0020	00	0	02015	TRA *+3	OK
02013	0074	00	4	06503	TSX ERROR-1,4	
02014	0761	00	0	02006	NOP *-6	
02015	0020	00	0	02017	TRA *+2	
02016	314663606060				BCD 1IOT	
02017	0760	00	0	00005	IOT	
02020	0020	00	0	02022	TRA *+2	INDICATOR ON-ERROR
02021	0020	00	0	02024	TRA *+3	OFF-OK
02022	0074	00	4	06503	TSX ERROR-1,4	
02023	-3	00000	4	02017	TXL *-4,4	
02024	2	00002	2	02025	TIX *+1,2,2	
02025	0534	00	1	03165	LXA K6,1	L 30
02026	0500	00	1	04324	CLA Q2+48,1	WORD READ
02027	0560	00	1	03373	LDQ K50+24,1	WORD GENERATED
02030	0340	00	1	03373	CAS K50+24,1	
02031	0020	00	0	02033	TRA *+2	ERROR
02032	0020	00	0	02035	TRA *+3	OK
02033	0074	00	4	06502	TSX ERROR-2,4	
02034	0761	00	0	01265	NOP RCD-1	
02035	2	00001	1	02026	TIX *-7,1,1	RETURN TO TEST ALL WORDS
02036	2	00001	2	02037	TIX *+1,2,1	
02037	0074	00	4	02172	TSX F43,4	SHIFT IMAGE
02040	0020	00	0	02042	TRA *+2	CONTINUE TO RELIABILITY

SECTION

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*          TEST CARD READER-24 CARDS-BCD

02041  512324216060          BCD 1RCDA      TEST CARD READER CHAN-A

02042  0760 00 0 00005      F38  IOT          TURN OFF I/O CHECK
02043  0020 00 0 02044          TRA  *+1

02044  0762 00 0 01321      CRDR  RCDA
02045  0540 00 0 03202          RCHA K9          DSC NOT IN OPERATION
02046  0544 00 0 03207          LCHA K9+5
02047  0544 00 0 03211          LCHA K9+7
02050  0060 00 0 02050          TCOA  *
02051  0640 00 0 03325          SCHA Z2          CHECK DSC LOC AND ADDR
02052  0020 00 0 02054          TRA  *+2

02053  314663606060          BCD 1IOT        TEST I/O TGR+IND

02054  0760 00 0 00005          IOT          TEST I/O CHECK IND
02055  0020 00 0 02057          TRA  *+2        ON-ERROR
02056  0020 00 0 02061          TRA  *+3        OK

02057  0074 00 4 06503          TSX ERROR-1,4  I/O IND ON IN ERROR
02060  -3 00000 4 02054          TXL *-4,4,0    FOR CARD READER
02061  0020 00 0 02063          TRA  *+2

02062  622330216060          BCD 1SCHA      TEST SCHA INSTR

02063  0500 00 0 03325          CLA Z2          RESULTS SCH OPERATION
02064  0340 00 0 03327          CAS Z2+2
02065  0020 00 0 02067          TRA  *+2        ERROR
02066  0020 00 0 02072          TRA  *+4        OK-CORRECT LOC AND ADDR
02067  0560 00 0 03327          LDQ Z2+2       CORRECT CONTENTS DSC
02070  0074 00 4 06503          TSX ERROR-1,4
02071  0761 00 0 02063          NOP *-6

                                COMPARE CARD IMAGE WITH
                                IMAGE IN STORAGE

02072  0534 00 1 03165      F39  LXA K6,1    L 30
02073  0500 00 1 03423          CLA K50+48,1   WORD READ
02074  0560 00 1 03373          LDQ K50+24,1   WORD GENERATED
02075  0340 00 1 03373          CAS K50+24,1
02076  0020 00 0 02100          TRA F41-2      ERROR
02077  0020 00 0 02102          TRA F41        OK
02100  0074 00 4 06502          TSX ERROR-2,4  COMPARISON ERROR
02101  0761 00 0 02042          NOP F38

02102  2 00001 1 02073      F41  TIX F39+1,1,1 DECREMENT WORD NUMBER
02103  0074 00 4 02172          TSX F43,4      R
02104  0534 00 4 03313      F40  LXA K12+7,4  L 14
02105  0600 00 4 03407          STZ K50+36,4   SET ZEROS IN 1ST 12
02106  2 00001 4 02105          TIX *-1,4,1    WORDS OF READ IN AREA

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02107 2 00001 2 02110 TIX *+1,2,1 DECREMENT RECORD NUMBER
02110 0760 00 0 00005 IOT TURN I/O CHECK OFF
02111 0020 00 0 02112 TRA *+1

* TEST CARD READER USING TGR 19

02112 0762 00 0 01321 RCDA READ CARD WITH BIT
 IN 19 OF CONTROL WORD
02113 0540 00 0 03276 RCHA K13
02114 0544 00 0 03300 LCHA K13+2 SHOULD NOT READ IN 1ST 12
02115 0060 00 0 02115 TCOA * WORDS
02116 0640 00 0 03325 SCHA Z2
02117 0020 00 0 02121 TRA *+2 CONTINUE

02120 314663606060 BCD 1IOT TEST I/O TGR+IND

02121 0760 00 0 00005 IOT TEST I/O CHECK IND
02122 0020 00 0 02124 TRA *+2 ON-ERROR
02123 0020 00 0 02126 TRA *+3 OK
02124 0074 00 4 06503 TSX ERROR-1,4 I/O IND ON IN ERROR
02125 -3 00000 4 02121 TXL *-4,4,0 FOR CARD READER
02126 0020 00 0 02130 TRA *+2

02127 622330216060 BCD 1SCHA TEST STO CHAN INSTR

02130 0500 00 0 03325 CLA Z2 RESULTS SCH OPERATION
02131 0340 00 0 03303 CAS K13+5
02132 0020 00 0 02134 TRA *+2 ERROR IN CHAN CONTENTS
02133 0020 00 0 02137 TRA *+4
02134 0560 00 0 03303 LDQ K13+5 CORRECT CONTENTS DSC
02135 0074 00 4 06503 TSX ERROR-1,4
02136 0761 00 0 02130 NOP *-6 DO NOT REPEAT

02137 0500 00 0 03305 CLA K12+1 L+14
02140 0400 00 0 03167 ADD K6+2 L+1
02141 0601 00 0 06556 STO WDNO SET WORD NO CONSTANT
02142 0534 00 1 03305 LXA K12+1,1 L 14
02143 0500 00 1 03407 CLA K50+36,1 WORD READ
02144 0340 00 0 03306 CAS K12+2
02145 0020 00 0 02147 TRA *+2
02146 0020 00 0 02152 TRA *+4 OK
02147 0560 00 0 03306 LDQ K12+2 WORD GENERATED

* ERROR USING TGR 19 OF CONTROL WORD

02150 0074 00 4 06502 TSX ERROR-2,4 1ST 12 WORDS OF STORAGE
02151 0020 00 0 02042 TRA F38
02152 2 00001 1 02143 TIX *-7,1,1

02153 0500 00 0 03165 CLA K6 L+30
02154 0400 00 0 03167 ADD K6+2 L+1
02155 0621 00 0 06556 STA WDNO WORD NUMBER

02156	0534	00	1	03305		LXA	K12+1,1	L	14
02157	0500	00	1	03423		CLA	K50+48,1	WORD	READ
02160	0340	00	1	03373		CAS	K50+24,1		
02161	0020	00	0	02163		TRA	*+2	ERROR	
02162	0020	00	0	02166		TRA	*+4	OK	
02163	0560	00	1	03373		LDQ	K50+24,1	WORD	GENERATED
02164	0074	00	4	06502		TSX	ERROR-2,4		
02165	0020	00	0	02042		TRA	F38		
02166	2	00001	1	02157		TIX	*-7,1,1		
02167	0074	00	4	02172		TSX	F43,4		
02170	2	00001	2	02044		TIX	CRDR,2,1	24	CARDS HAVE BEEN READ
02171	0020	00	0	02214		TRA	F50		
RIPPLE STORAGE IMAGE									
02172	0534	00	1	03165	F43	LXA	K6,1	L	30
02173	-0500	00	1	03373		CAL	K50+24,1		
02174	0560	00	1	03374		LDQ	K50+25,1		
02175	-0760	00	0	00001		PBT			
02176	0020	00	0	02200		TRA	F44		
02177	0020	00	0	02206		TRA	F45		
02200	-0763	00	0	00001	F44	LGL	1		
02201	0602	00	1	03373		SLW	K50+24,1		
02202	-0763	00	0	00044		LGL	36		
02203	0602	00	1	03374		SLW	K50+25,1		
02204	2	00002	1	02173		TIX	F43+1,1,2		
02205	0020	00	0	02213		TRA	F46		
02206	-0763	00	0	00001	F45	LGL	1		
02207	0602	00	1	03373		SLW	K50+24,1		
02210	-0763	00	0	00044		LGL	36		
02211	0400	00	0	03167		ADD	K6+2	L	+1
02212	0020	00	0	02203		TRA	F44+3		
02213	0020	00	4	00001	F46	TRA	1,4		

* TEST FOR SECOND SECTION-BINARY RECS

02214	0760	00	0	00165	F50	SWT	5	TEST	SWITCH 5
02215	0020	00	0	02450		TRA	CHECK	UP-CHECK	TO SEE IF ALL DSCS
SELECTED HAVE BEEN TESTED									
02216	0020	00	0	02217		TRA	GENRN-1	DOWN-CONTINUE	WITH RAND.
NOS.									
02217	0634	00	2	03170		SXA	COUNT,2		
02220	0534	00	2	03307	GENRN	LXA	K12+3,2	L+60	
02221	-0500	00	0	03423		CAL	K17		
02222	0401	00	0	03423		ADM	K17		
02223	0602	00	2	03521		SLW	Q1+61,2	FORM	RANDOM NUMBERS
02224	2	00001	2	02222		TIX	GENRN+2,2,1		
02225	0534	00	2	03307	GEN1	LXA	K12+3,2	L+60	
02226	-0500	00	2	03521		CAL	Q1+61,2		
02227	0534	00	1	03310		LXA	K12+4,1	L+0030	
02230	0401	00	2	03521		ADM	Q1+61,2		

02231	0602	00	1	04274		SLW Q2+24,1	FORM RECORD IMAGE
02232	2	00001	1	02230		TIX GEN1+3,1,1	
02233	0056	00		000004		RNT 4	IS PUNCH TO BE TESTED
02234	0020	00	0	02257		TRA G9	NO-LOOK FOR NEXT UNIT-CR
02235	0020	00	0	02237		TRA G7	YES

* TEST PUNCHING BINARY RECORDS-60 CARDS

02236	664764216060					BCD 1WPUA	TEST PUNCHING BINARY RECORDS
02237	-0060	00	0	02241	G7	TCNA G7+2	IS DSC A IN OPN-NO
02240	0020	00	0	02237		TRA G7	YES
02241	0760	00	0	00005		IOT	TURN I/O CHECK OFF
02242	0020	00	0	02243		TRA *+1	
02243	0766	00	0	01341		WPUA	PUNCH BINARY RECORDS
02244	0540	00	0	03216		RCHA K18	S TGR ON PUNCH 9L+9R
02245	0544	00	0	03221		LCHA K18+3	S AND 1 TGRS,6+5 ROWS
02246	0544	00	0	03224		LCHA K18A+2	IND ADDR
02247	0060	00	0	02247		TCOA *	
02250	0020	00	0	02252		TRA *+2	
02251	314663606060					BCD 1IOT	TEST I/O TGR+IND
02252	0760	00	0	00005		IOT	TEST I/O CHECK IND
02253	0020	00	0	02255		TRA *+2	ON-ERROR
02254	0020	00	0	02257		TRA *+3	OK
02255	0074	00	4	06503		TSX ERROR-1,4	I/O IND ON IN ERROR
02256	-3	00000	4	02252		TXL *-4,4,0	FOR CARD PUNCH
							CHECK CTRL WORD FOR CR
							IS CARD READER TO BE
							TESTED
02257	0056	00		000001	G9	RNT 1	RT HALF INDS ON TEST
02260	0020	00	0	02336		TRA G15-1	NO CHECK FOR READ PRINTER
02261	0020	00	0	02263		TRA G11	YES

* TEST READING BINARY RECORDS-60 CARDS

02262	512324216060					BCD 1RCDA	TEST READING BINARY RECORDS FROM CARD READER
02263	-0060	00	0	02265	G11	TCNA G11+2	IS CHAN A IN OPER-NO
02264	0020	00	0	02263		TRA G11	YES
02265	0760	00	0	00005		IOT	TURN I/O CHECK OFF
02266	0020	00	0	02267		TRA *+1	
02267	0500	00	0	03310		CLA K12+4	L+30
02270	0400	00	0	03167		ADD K6+2	L+1
02271	0601	00	0	06556		STO WDNO	SET WORD NO CONSTANT
02272	0500	00	0	03307		CLA K12+3	L+60
02273	0400	00	0	03167		ADD K6+2	L+1
02274	0601	00	0	06557		STO RECNO	SET REC NO CONSTANT

02275	0762	00	0	01321		RCDA	
02276	0540	00	0	03253		RCHA K20	IND ADDR
02277	0544	00	0	03263		LCHA K21	S AND 2 TGRS ON
02300	0544	00	0	03265		LCHA K21+2	S TGR ON READ 5L
02301	0544	00	0	03271		LCHA K22	S TGR ON-READ 2L-1R
02302	-0060	00	0	02304		TCNA *+2	HAS LAST WORD BEEN READ
02303	0020	00	0	02302		TRA *-1	NO
02304	0640	00	0	03325		SCHA Z2	TEST STORE CHAN INST
02305	0020	00	0	02307		TRA *+2	CONTINUE
02306	314663606060					BCD 1IOT	TEST I/O TGR+IND
02307	0760	00	0	00005		IOT	TEST I/O CHECK IND
02310	0020	00	0	02312		TRA *+2	ON-ERROR
02311	0020	00	0	02314		TRA *+3	OK
02312	0074	00	4	06503		TSX ERROR-1,4	I/O IND ON IN ERROR
02313	-3	00000	4	02307		TXL *-4,4,0	FOR CARD READER
02314	0020	00	0	02316		TRA *+2	CONTINUE
02315	622330216060					BCD 1SCHA	TEST STO CHAN INSTR
02316	0500	00	0	03325		CLA Z2	RESULTS SCH OPERATION
02317	0340	00	0	03326		CAS Z2+1	
02320	0020	00	0	02322		TRA *+2	ERROR IN CHAN CONTENTS
02321	0020	00	0	02325		TRA *+4	OK
02322	0560	00	0	03326		LDQ Z2+1	CORRECT CONTENTS DSC
02323	0074	00	4	06503		TSX ERROR-1,4	
02324	0761	00	0	02316		NOP *-6	DO NOT REPEAT
02325	0534	00	1	03310	G13	LXA K12+4,1	L0030
02326	0500	00	1	04324		CLA Q2+48,1	WORD READ
02327	0560	00	1	04274		LDQ Q2+24,1	WORD GENERATED
02330	0340	00	1	04274		CAS Q2+24,1	
02331	0020	00	0	02333		TRA G14	ERROR
02332	0020	00	0	02335		TRA *+3	OK
02333	0074	00	4	06502	G14	TSX ERROR-2,4	GO TO ERROR ROUTINE
02334	0761	00	0	02263		NOP G11	
02335	2	00001	1	02326		TIX G13+1,1,1	
							IS PRINTER TO BE TESTED
02336	-0634	00	2	03341		SXD XRAB+1,2	SAVE XRB
02337	0056	00	000002		G15	RNT 2	RT-HALF IND ON TEST
02340	0020	00	0	02441		TRA H40	
02341	0020	00	0	02343		TRA F34	

* TEST READ PRINTER-BCD RECORDS
* SHIFTING PRINT IMAGE

02342	514751216060		BCD 1RPRA	TEST READ PRINTER
02343	0761 00 0 00000	F34	NOP	
02344	0760 00 0 00005		IOT	TURN I/O CHECK OFF
02345	0020 00 0 02346		TRA *+1	
02346	0762 00 0 01361		RPRA	READ PRINTER USING RIPPLE BCD RECORDS
02347	0540 00 0 03227		RCHA K19	S + 1 TGRS ON-9-2 ROWS
02350	0544 00 0 03231		LCHA K19+2	S TGR ON
02351	0544 00 0 03247		LCHA K19B	S TGR ON
02352	0060 00 0 02352		TCOA *	
02353	0640 00 0 03325		SCHA Z2	
02354	0020 00 0 02356		TRA *+2	CONTINUE
02355	314663606060		BCD 1IOT	TEST I/O TGR+IND
02356	0760 00 0 00005		IOT	TEST I/O CHECK IND
02357	0020 00 0 02361		TRA *+2	ON-ERROR
02360	0020 00 0 02363		TRA *+3	OK
02361	0074 00 4 06503		TSX ERROR-1,4	
02362	-3 00000 4 02356		TXL *-4,4,0	
02363	0020 00 0 02365		TRA *+2	CONTINUE
02364	622330216060		BCD 1SCHA	TEST STO CHAN INSTR
02365	0500 00 0 03325		CLA Z2	RESULTS SCH OPERATION
02366	0340 00 0 03252		CAS K19B+3	
02367	0020 00 0 02371		TRA *+2	CHAN ERROR
02370	0020 00 0 02374		TRA *+4	OK
02371	0560 00 0 03252		LDQ K19B+3	CORRECT CONTENTS DSC
02372	0074 00 4 06503		TSX ERROR-1,4	
02373	0761 00 0 02365	FINAL	NOP *-6	DO NOT REPEAT CHECK ECHO IMAGE
02374	-0500 00 0 03422		CAL K50+47	
02375	0361 00 0 03376		ACL K50+27	8 ROW RIGHT
02376	0602 00 0 03376		SLW K50+27	
02377	-0500 00 0 03421		CAL K50+46	8 ROW LEFT
02400	0361 00 0 03375		ACL K50+26	
02401	0602 00 0 03375		SLW K50+26	
02402	-0500 00 0 03420		CAL K50+45	
02403	0361 00 0 03376		ACL K50+27	
02404	0602 00 0 03376		SLW K50+27	
02405	-0500 00 0 03417		CAL K50+44	
02406	0361 00 0 03375		ACL K50+26	
02407	0602 00 0 03375		SLW K50+26	
02410	-0500 00 0 03422		CAL K50+47	
02411	0361 00 0 03410		ACL K50+37	
02412	0602 00 0 03410		SLW K50+37	
02413	-0500 00 0 03421		CAL K50+46	

02414	0361	00	0	03407		ACL	K50+36	
02415	0602	00	0	03407		SLW	K50+36	
02416	-0500	00	0	03420		CAL	K50+45	4 ROW RIGHT
02417	0361	00	0	03406		ACL	K50+35	
02420	0602	00	0	03406		SLW	K50+35	
02421	-0500	00	0	03417		CAL	K50+44	4 ROW LEFT
02422	0361	00	0	03405		ACL	K50+34	
02423	0602	00	0	03405		SLW	K50+34	
02424	0500	00	0	03322		CLA	K26	L+22
02425	0400	00	0	03167		ADD	K6+2	L+1
02426	0621	00	0	06556		STA	WDNO	WORD NUMBER
02427	0534	00	1	03322		LXA	K26,1	L 22
02430	0500	00	1	03415		CLA	K50+42,1	WORD READ
02431	0560	00	1	03365		LDQ	K50+18,1	WORD GENERATED
02432	0340	00	1	03365		CAS	K50+18,1	
02433	0020	00	0	02435		TRA	*+2	ERROR
02434	0020	00	0	02437		TRA	*+3	OK
02435	0074	00	4	06502		TSX	ERROR-2,4	ERROR IN ECHO CHECKING
02436	0020	00	0	02343		TRA	F34	PRINTER
02437	2 00001	1	1	02430		TIX	*-7,1,1	
02440	0074	00	4	02172		TSX	F43,4	
02441	0534	00	1	03310	H40	LXA	K12+4,1	L+30
02442	-0534	00	2	03341		LXD	XRAB+1,2	
02443	-0500	00	2	03521		CAL	Q1+61,2	
02444	0401	00	2	03521		ADM	Q1+61,2	
02445	0602	00	1	04274		SLW	Q2+24,1	
02446	2 00001	1	1	02444		TIX	H40+3,1,1	
02447	2 00001	2	2	02233	H54	TIX	G7-4,2,1	
02450	0500	00	0	03170	CHECK	CLA	COUNT	
02451	0621	00	0	02452		STA	*+1	
02452	0020	00	0	00000		TRA		
02453	0760	00	0	00166	H53	SWT	6	TEST SWITCH 6
02454	0020	00	0	02461		TRA	NEXT	
02455	0020	00	0	00031		TRA	TEST	DOWN-REPEAT
02456	0760	00	0	00163		SWT	3	
02457	0020	00	0	02466		TRA	PASS	
02460	0020	00	0	02453		TRA	H53	TEST SW6
02461	0762	00	0	01321	NEXT	RCDA		
02462	0540	00	0	02465		RCHA	*+3	
02463	0544	00	0	00000		LCHA	0	
02464	0020	00	0	00001		TRA	1	
02465	-1 00003	0	0	00000		MON	0,0,3	CONTROL-READ CARD
02466	0766	00	0	01361	PASS	WPRA		PRINT PASS COMPLETE
02467	0760	00	0	01363		SPRA	3	
02470	0540	00	0	02472		RCHA	PASS1	
02471	0020	00	0	02453		TRA	H53	TEST SW6

02472 0000 30 0 02533 PASS1 IOCD PASSC,0,24

02473 0760 00 0 00163 WPRA SWT 3 TEST FOR PRINTER
 02474 0020 00 0 02476 TRA *+2
 02475 0020 00 0 00031 TRA TEST

02476 0766 00 0 01361 WPRA
 02477 0760 00 0 01363 SPRA 3
 02500 0540 00 0 02502 RCHA *+2
 02501 0020 00 0 00031 TRA TEST

02502 0000 30 0 02503 IOCD PRINT,0,24

02503	+000000000450	PRINT	OCT 450	9L
02504	+100004000000		OCT 100004000000	9R
02505	+000000000000		OCT 0	8L
02506	+000000000000		OCT 0	8R
02507	+000000002002		OCT 2002	7L
02510	+000000000000		OCT 0	7R
02511	+000000030300		OCT 30300	6L
02512	+000060000000		OCT 60000000	6R
02513	+000000041004		OCT 41004	5L
02514	+000010400000		OCT 10400000	5R
02515	+000000000020		OCT 20	4L
02516	+000100000000		OCT 10000000	4R
02517	+000000000000		OCT 0	3L
02520	+000001100000		OCT 1100000	3R
02521	+000000000000		OCT 0	2L
02522	+040200200000		OCT 40200200000	2R
02523	+000000000000		OCT 0	1L
02524	+014000000000		OCT 14000000000	1R
02525	+000000010000		OCT 10000	0L
02526	+020101300000		OCT 20101300000	0R
02527	+000000062564		OCT 62564	11L
02530	-001004000000		OCT 401004000000	11R
02531	+000000001212		OCT 1212	12L
02532	+044270400000		OCT 44270400000	12R

* PRINT - 9B01-PASS COMPLETE
 * IMAGE - 9B01-PASS COMPLETE

02533	+000002000000	PASSC	OCT 000002000000	9 ROW LEFT
02534	+000000000000		OCT 000000000000	9 ROW RIGHT
02535	+000000000000		OCT 000000000000	8 L
02536	+000000000000		OCT 000000000000	8 R
02537	+000000040100		OCT 000000040100	7 L
02540	+000000000000		OCT 000000000000	7 R
02541	+000000000400		OCT 000000000400	6 L
02542	+000000000000		OCT 000000000000	6 R
02543	+000000000024		OCT 000000000024	5 L
02544	+000000000000		OCT 000000000000	5 R
02545	+000000000200		OCT 000000000200	4 L
02546	+000000000000		OCT 000000000000	4 R
02547	+000000001050		OCT 000000001050	3 L
02550	+000000000000		OCT 000000000000	3 R
02551	+000001014000		OCT 000001014000	2 L

02552 +0000000000000 OCT 000000000000 2 R
02553 +0000002200000 OCT 000000220000 1 L
02554 +0000000000000 OCT 000000000000 1 R
02555 +000000414010 OCT 000000414010 0 L
02556 +0000000000000 OCT 000000000000 0 R
02557 +000000140740 OCT 000000140740 11 L
02560 +0000000000000 OCT 000000000000 11 R
02561 +000001021024 OCT 000001021024 12 L
02562 +0000000000000 OCT 000000000000 12 R

02563 0000 00 1 00007 RESET HTR 7,1

*CONTENTS OF DSC IF ERROR HALT OCCURS, DSC ADDRESS
*WILL CONTAIN ADDRESS OF RESET CHANNEL WHICH
*DISCONNECTED THE DSC, WHILE PUNCHING

02564 0000 00 0 00120 STOP IOCD WPU+10,0,0 ERROR WITH ALL TGRS OFF
02565 0000 00 0 00162 IOCD WPU1+10,0,0 ERROR WITH S TGR ON
02566 0000 00 0 00223 IOCD WPU2+10,0,0 ERROR WITH TGR 1 ON
02567 0000 00 0 00264 IOCD WPU3+10,0,0 ERROR WITH TGR 2 ON
02570 0000 00 0 00325 IOCD WPU4+10,0,0 ERROR WITH S+1 TGRS ON
02571 0000 00 0 00370 IOCD WPU5+11,0,0 ERROR WITH 1+2 TGRS ON
02572 0000 00 0 00434 IOCD WPU6+11,0,0 ERROR WITH S+2 TGRS ON
02573 0000 00 0 00500 IOCD WPU7+11,0,0 ERROR WITH ALL TGRS ON

*CONTENTS OF DSC IF ERROR HALT OCCURS. DSC ADDRESS
*WILL CONTAIN ADDRESS OF RESET CHANNEL WHICH
*DISCONNECTED THE DSC, WHILE PRINTING.

02574 0000 00 0 00576 STOP1 IOCD WPR+10,0,0 ERROR WITH ALL TGRS OFF
02575 0000 00 0 00641 IOCD WPR1+10,0,0 ERROR WITH S TGR ON
02576 0000 00 0 00702 IOCD WPR2+10,0,0 ERROR WITH TGR 1 ON
02577 0000 00 0 00744 IOCD WPR3+10,0,0 ERROR WITH TGR 2 ON
02600 0000 00 0 01005 IOCD WPR4+10,0,0 ERROR WITH S+1 TGRS ON
02601 0000 00 0 01050 IOCD WPR5+11,0,0 ERROR WITH 1+2 TGRS ON
02602 0000 00 0 01114 IOCD WPR6+11,0,0 ERROR WITH S+2 TGRS ON
02603 0000 00 0 01160 IOCD WPR7+11,0,0 ERROR WITH ALL TGRS ON

*CONTENTS OF DSC IF ERROR HALT OCCURS. DSC ADDRESS
*WILL CONTAIN ADDRESS OF RESET CHANNEL WHICH
*DISCONNECTED THE DSC, DURING READING.

02604 0000 00 0 01300 STOP2 IOCD RCD+10,0,0 ERROR WITH ALL TGRS OFF
02605 0000 00 0 01355 IOCD RCD1+10,0,0 ERROR WITH S TGR ON
02606 0000 00 0 01431 IOCD RCD2+10,0,0 ERROR WITH TGR 1 ON
02607 0000 00 0 01505 IOCD RCD3+10,0,0 ERROR WITH TGR 2 ON
02610 0000 00 0 01561 IOCD RCD4+10,0,0 ERROR WITH S+1 TGRS ON
02611 0000 00 0 01637 IOCD RCD5+11,0,0 ERROR WITH 1+2 TGRS ON
02612 0000 00 0 01716 IOCD RCD6+11,0,0 ERROR WITH S+2 TGRS ON
02613 0000 00 0 01775 IOCD RCD7+11,0,0 ERROR WITH ALL TGRS ON

02614 0026 75 0 03344 ARSR IOCD K50+1,0,PU+1 CORRECT CONTENTS DSC

					FIRST
02615	0026	75	0	03373	IOCD K50+24,0,PU+1 GROUP OF THREE CARDS PUNCHED.
02616	-0026	76	0	03344	IOCP K50+1,0,PU1+1 CORRECT CONTENTS DSC SECOND
02617	0027	01	0	02700	IOCD PU1+3,0,PU1+4 GROUP OF THREE CARDS PUNCHED.
02620	2	02702	0	03344	IORP K50+1,0,PU2+1 CORRECT CONTENTS DSC THIRD
02621	0027	05	0	02704	IOCD PU2+3,0,PU2+4 GROUP OF THREE CARDS PUNCHED.
02622	-0027	10	0	03344	IOCP K50+1,0,PU3+3 CORRECT CONTENTS DSC FOURTH
02623	0027	16	0	03373	IOCD K50+24,0,PU3+9 GROUP OF THREE CARDS PUNCHED.
02624	-2	02717	0	03344	IOSP K50+1,0,PU4+1 CORRECT CONTENTS DSC FIFTH
02625	0027	23	0	02722	IOCD PU4+4,0,PU4+5 GROUP OF THREE CARDS PUNCHED.
02626	3	02726	0	03344	IORT K50+1,0,PU5+3 CORRECT CONTENTS DSC SIXTH
02627	3	02726	0	03373	IORT K50+24,0,PU5+3 GROUP OF THREE CARDS PUNCHED.
02630	-1	02732	0	03344	IOCT K50+1,0,PU6+3 CORRECT CONTENTS DSC
02631	-1	02732	0	03373	IOCT K50+24,0,PU6+3 SEVENTH GROUP OF THREE CARDS PUNCHED
02632	-3	02736	0	03344	IOST K50+1,0,PU7+3 CORRECT CONTENTS DSC
02633	-3	02736	0	03373	IOST K50+24,0,PU7+3 EIGHT GROUP OF THREE CARDS PUNCHED.
02634	0027	40	0	03344	ARSR1 IOCD K50+1,0,PR+1 CORRECT CONTENTS DSC FIRST
02635	0027	40	0	03373	IOCD K50+24,0,PR+1 GROUP OF THREE LINES PRINTED.
02636	-0027	41	0	03344	IOCP K50+1,0,PR1+1 CORRECT CONTENTS DSC SECOND
02637	0027	44	0	02743	IOCD PR1+3,0,PR1+4 GROUP OF THREE LINES PRINTED.
02640	2	02745	0	03344	IORP K50+1,0,PR2+1 CORRECT CONTENTS DSC THIRD
02641	0027	50	0	02747	IOCD PR2+3,0,PR2+4 GROUP OF THREE LINES PRINTED.
02642	-0027	53	0	03344	IOCP K50+1,0,PR3+3 CORRECT CONTENTS DSC FOURTH
02643	0027	61	0	03373	IOCD K50+24,0,PR3+9 GROUP OF THREE LINES

PRINTED.

02644	-2	02762	0	03344		IOSP	K50+1,0,PR4+1	CORRECT CONTENTS DSC FIFTH
02645		0027	66	0	02765		IOCD	PR4+4,0,PR4+5 GROUP OF THREE LINES PRINTED.
02646	3	02771	0	03344		IORT	K50+1,0,PR5+3	CORRECT CONTENTS DSC SIXTH
02647	3	02771	0	03373		IORT	K50+24,0,PR5+3	GROUP OF THREE LINES PRINTED.
02650	-1	02775	0	03344		IOCT	K50+1,0,PR6+3	CORRECT CONTENTS DSC
02651	-1	02775	0	03373		IOCT	K50+24,0,PR6+3	SEVENTH GROUP OF THREE LINES PRINTED.
02652	-3	03001	0	03344		IOST	K50+1,0,PR7+3	CORRECT CONTENTS DSC
02653	-3	03001	0	03373		IOST	K50+24,0,PR7+3	EIGHTH GROUP OF THREE LINES PRINTED.
02654		0030	03	0	04274	ARSR2	IOCD	Q2+24,0,CR+1 CORRECT CONTENTS DSC FIRST
02655		0030	03	0	04324		IOCD	Q2+48,0,CR+1 GROUP OF THREE CARDS READ.
02656	-0030	04	0	04274		IOCP	Q2+24,0,CR1+1	CORRECT CONTENTS DSC SECOND
02657		0030	07	0	03006		IOCD	CR1+3,0,CR1+4 GROUP OF THREE CARDS READ.
02660	2	03010	0	04274		IORP	Q2+24,0,CR2+1	CORRECT CONTENTS DSC THIRD
02661		0030	13	0	03012		IOCD	CR2+3,0,CR2+4 GROUP OF THREE CARDS READ.
02662	-0030	16	0	04274		IOCP	Q2+24,0,CR3+3	CORRECT CONTENTS DSC FOURTH
02663		0030	24	0	04324		IOCD	Q2+48,0,CR3+9 GROUP OF THREE CARDS READ.
02664	-2	03026	0	04274		IOSP	Q2+24,0,CR4+1	CORRECT CONTENTS DSC FIFTH
02665		0030	32	0	03031		IOCD	CR4+4,0,CR4+5 GROUP OF THREE CARDS READ.
02666	3	03035	0	04274		IORT	Q2+24,0,CR5+3	CORRECT CONTENTS DSC SIXTH
02667	3	03035	0	04324		IORT	Q2+48,0,CR5+3	GROUP OF THREE CARDS READ.
02670	-1	03041	0	04274		IOCT	Q2+24,0,CR6+3	CORRECT CONTENTS DSC
02671	-1	03041	0	04324		IOCT	Q2+48,0,CR6+3	SEVENTH GROUP OF THREE CARDS READ.
02672	-3	03045	0	04274		IOST	Q2+24,0,CR7+3	CORRECT CONTENTS DSC

02673 -3 03045 0 04324 IOST Q2+48,0,CR7+3 EIGHT GROUP OF THREE
CARDS READ.

*COMMAND TO PUNCH THREE BCD CARDS-NO TGRS ON

02674 0000 30 0 03343 PU IOCD K50,0,24 NO TGRS ON-FIRST CHAR A

*COMMANDS TO PUNCH THREE CARDS-S TGR ON-BCD IMAGE

02675 -0000 30 0 03343 PU1 IOCP K50,0,24 S TGR ON-FIRST CHAR B
02676 -0000 30 0 03343 IOCP K50,0,24
02677 -0000 30 0 03343 IOCP K50,0,24 SHOULD DISCONNECT WITH
02700 0000 00 0 02700 IOCD *,0,0 ADDRESS REGISTER THIS ADDR.

*COMMANDS TO PUNCH THREE BCD CARDS- TGR 1 ON

02701 2 00030 0 03343 PU2 IORP K50,0,24 TGR 1 ON-EOR TGR
FIRST CHAR C
02702 2 00031 0 03343 IORP K50,0,25 WORD COUNT GREATER THEN
02703 2 00074 0 03343 IORP K50,0,60 EOR. SHOULD NOT PUNCH MORE
02704 0000 00 0 02704 IOCD *,0,0 THAN ONE CARD FOR EACH
COMMAND.

*COMMANDS TO PUNCH THREE BCD CARDS-TGR 2 ON

02705 1 00000 0 02707 PU3 TCH *+2,0,0 FIRST CHARACTER D
TGR 2 ON-SHOULD GO TO OWN
ADDRESS FOR FIRST COMMAND.
02706 0000 00 0 02706 IOCD *,0,0 IF INDIRECT ADDRESS TGR
02707 -0000 30 0 03343 IOCP K50,0,24 NOT WORKING, THE
02710 1 00000 0 02712 TCH *+2,0,0 ADDRESS OF WORD
02711 0000 00 0 02711 IOCD *,0,0 RECIEVED BY THE DSC
02712 -0000 30 0 03343 IOCP K50,0,24 WILL APPEAR IN THE
02713 1 00000 0 02715 TCH *+2,0,0 ADDRESS REGISTER.
02714 0000 00 0 02714 IOCD *,0,0
02715 0000 30 0 03343 IOCD K50,0,24 SHOULD DISCONNECT HERE
AFTER WC GOES TO ZERO.

*COMMANDS TO PUNCH THREE BCD CARDS-TGRS S+1 ON

02716 -2 00030 0 03343 PU4 IOSP K50,0,24 TGRS S+1 ON-FIRST CHAR E
THESE TGRS SHOULD PICK UP
02717 -2 00014 0 03343 IOSP K50,0,12 NEXT FOLLOWING COMMAND ON
WHEN WC GOES TO ZERO
02720 -2 00014 0 03357 IOSP K50+12,0,12
02721 -2 00030 0 03343 IOSP K50,0,24
02722 0000 00 0 02722 IOCD *,0,0 ON DISCONNECT, ADDRESS
REGISTER SHOULD CONTAIN
ADDRESS OF THIS COMMAND.

*COMMANDS TO PUNCH THREE BCD CARDS-TGRS 1+2 ON

02723 3 00000 0 03343 PU5 IORT K50,0,0 TGRS 1+2 ON-FIRST CHAR F
FIRST IORT COMMAND SHOULD

02724 0000 00 0 02724 IOCD *,0,0 NOT PUNCH. IT IS A DUMMY
TO GET DSC SET FOR LCH
INSTR. SHOULD GET CONTROL
WORD FROM LCH INSTR. IN
MAIN PROGRAM AT EOR
02725 3 00050 0 03343 IORT K50,0,40 REGARDLESS OF WORD COUNT.
02726 0000 00 0 02726 IOCD *,0,0 IF THIS COMMAND IS PICKED
UP AT EOR, ADDRESS REGISTER
WILL CONTAIN ADDRESS OF
COMMAND RECEIVED BY DSC

*COMMANDS TO PUNCH THREE BCD CARDS-TGRS S+2 ON

02727 -1 00030 0 03343 PU6 IOCT K50,0,24 TGRS S+2 ON-FIRST CHAR G
02730 0000 00 0 02730 IOCD *,0,0
SHOULD GET
COMMAND FROM LCD
INSTR. IN MAIN PROGRAM
02731 -1 00030 0 03343 IOCT K50,0,24 WHEN WC GOES TO ZERO.
02732 0000 00 0 02732 IOCD *,0,0 IF THIS COMMAND IS
PICKED UP, THE DSC ADDRESS
REGISTER WILL CONTAIN
ADDRESS OF COMMAND
RECEIVED BY THE DSC

*COMMANDS TO PUNCH THREE BCD CARDS-S, 1+2 TGRS ON

02733 -3 00030 0 03343 PU7 IOST K50,0,24 TGRS S,1+2 ON FIRST CHAR H
02734 0000 00 0 02734 IOCD *,0,0
02735 -3 00030 0 03343 IOST K50,0,24 SHOULD GET THIS
COMMAND FROM LCH
INSTR. IN MAIN PROGRAM
02736 0000 00 0 02736 IOCD *,0,0 WHEN WORD COUNT GOES TO 0

*COMMAND TO PRINT THREE LINES-NO TGRS ON

02737 0000 30 0 03343 PR IOCD K50,0,24 NO TGRS ON-FIRST CHAR A

*COMMANDS TO PRINT THREE LINES-S TGR ON-BCD IMAGE

02740 -0000 30 0 03343 PR1 IOCP K50,0,24 S TGR ON-FIRST CHAR B
02741 -0000 30 0 03343 IOCP K50,0,24
02742 -0000 30 0 03343 IOCP K50,0,24 SHOULD DISCONNECT WITH
02743 0000 00 0 02743 IOCD *,0,0 ADDRESS REGISTER THIS ADDR.

*COMMANDS TO PRINT THREE LINES- TGR 1 ON

02744 2 00030 0 03343 PR2 IORP K50,0,24 TGR 1 ON-EOR TGR
FIRST CHAR C
02745 2 00031 0 03343 IORP K50,0,25 WORD COUNT GREATER THEN
02746 2 00074 0 03343 IORP K50,0,60 EOR. SHOULD NOT PUNCH MORE
02747 0000 00 0 02747 IOCD *,0,0 THAN ONE CARD FOR EACH
COMMAND.

*COMMANDS TO PRINT THREE LINES-TGR 2 ON

FIRST CHARACTER D

02750	1	00000	0	02752	PR3	TCH	*+2,0,0	TGR 2 ON-SHOULD GO TO OWN ADDRESS FOR FIRST COMMAND.
02751	0000	00	0	02751		IOCD	*,0,0	IF INDIRECT ADDRESS TGR
02752	-0000	30	0	03343		IOCP	K50,0,24	NOT WORKING, THE
02753	1	00000	0	02755		TCH	*+2,0,0	ADDRESS OF WORD
02754	0000	00	0	02754		IOCD	*,0,0	RECEIVED BY THE DSC
02755	-0000	30	0	03343		IOCP	K50,0,24	WILL APPEAR IN THE
02756	1	00000	0	02760		TCH	*+2,0,0	ADDRESS REGISTER.
02757	0000	00	0	02757		IOCD	*,0,0	
02760	0000	30	0	03343		IOCD	K50,0,24	SHOULD DISCONNECT HERE AFTER WC GOES TO ZERO.
*COMMANDS TO PRINT THREE LINES-TGRS S+1 ON								
02761	-2	00030	0	03343	PR4	IOSP	K50,0,24	TGRS S+1 ON-FIRST CHAR R THESE TGRS SHOULD PICK UP
02762	-2	00014	0	03343		IOSP	K50,0,12	NEXT FOLLOWING COMMAND WHEN WC GOES TO ZERO
02763	-2	00014	0	03357		IOSP	K50+12,0,12	
02764	-2	00030	0	03343		IOSP	K50,0,24	
02765	0000	00	0	02765		IOCD	*,0,0	ON DISCONNECT, ADDRESS REGISTER SHOULD CONTAIN ADDRESS OF THIS COMMAND.
*COMMANDS TO PRINT THREE LINES-TGRS 1+2 ON								
02766	3	00000	0	03343	PR5	IORT	K50,0,0	TGRS 1+2 ON-FIRST CHAR F FIRST IORT COMMAND SHOULD
02767	0000	00	0	02767		IOCD	*,0,0	NOT PUNCH. IT IS A DUMMY TO GET DSC SET FOR LCH INSTR. SHOULD GET CONTROL WORD FROM LCH INSTR. IN MAIN PROGRAM AT EOR
02770	3	00030	0	03343		IORT	K50,0,24	REGARDLESS OF WORD COUNT.
02771	0000	00	0	02771		IOCD	*,0,0	IF THIS COMMAND IS PICKED UP AT EOR, ADDRESS REGISTER WILL CONTAIN ADDRESS OF COMMAND RECEIVED BY DSC
*COMMANDS TO PRINT THREE LINES-TGRS S+2 ON								
02772	-1	00030	0	03343	PR6	IOCT	K50,0,24	TGRS S+2 ON-FIRST CHAR G
02773	0000	00	0	02773		IOCD	*,0,0	SHOULD GET COMMAND FROM LCD INSTR. IN MAIN PROGRAM
02774	-1	00030	0	03343		IOCT	K50,0,24	WHEN WC GOES TO ZERO.
02775	0000	00	0	02775		IOCD	*,0,0	IF THIS COMMAND IS PICKED UP, THE DSC ADDRESS REGISTER WILL CONTAIN ADDRESS OF COMMAND RECEIVED BY THE DSC

*COMMANDS TO PRINT THREE LINES-S, 1+2 TGRS ON

02776 -3 00030 0 03343 PR7 IOST K50,0,24 TGRS S, 1+2 ON-FIRST CHAR H
 02777 0000 00 0 02777 IOCD *,0,0
 03000 -3 00030 0 03343 IOST K50,0,24 SHOULD GET THIS
 COMMAND FROM LCH
 03001 0000 00 0 03001 IOCD *,0,0 INSTR. IN MAIN PROGRAM
 AT EOR, OR WHEN WC GOES
 TO ZERO, WHICHEVER
 COMES FIRST.

*COMMANDS TO READ THREE BCD CARDS-NO TGRS ON

03002 0000 30 0 04274 CR IOCD Q2+24,0,24 NO TGRS ON-FIRST CHAR A

*COMMANDS TO READ THREE CARDS-S TGR ON-BCD IMAGE

03003 -0000 30 0 04274 CR1 IOCP Q2+24,0,24 S TGR ON-FIRST CHAR B
 03004 -0000 30 0 04274 IOCP Q2+24,0,24
 03005 -0000 30 0 04274 IOCP Q2+24,0,24 SHOULD DISCONNECT WITH
 03006 0000 00 0 03006 IOCD *,0,0 ADDRESS REGISTER THIS ADDR.

*COMMANDS TO READ THREE BCD CARDS- TGR 1 ON

03007 2 00030 0 04274 CR2 IORP Q2+24,0,24 TGR 1 ON-EOR TGR
 FIRST CHAR C
 03010 2 00031 0 04274 IORP Q2+24,0,25 WORD COUNT GREATER THEN
 03011 2 00074 0 04274 IORP Q2+24,0,60 EOR. SHOULD NOT PUNCH MORE
 03012 0000 00 0 03012 IOCD *,0,0 THAN ONE CARD FOR EACH
 COMMAND.

*COMMANDS TO READ THREE BCD CARDS-TGR 2 ON

FIRST CHARACTER D

03013 1 00000 0 03015 CR3 TCH *+2,0,0 TGR 2 ON-SHOULD GO TO OWN
 ADDRESS FOR FIRST COMMAND.
 03014 0000 00 0 03014 IOCD *,0,0 IF INDIRECT ADDRESS TGR
 03015 -0000 30 0 04274 IOCP Q2+24,0,24 NOT WORKING, THE
 03016 1 00000 0 03020 TCH *+2,0,0 ADDRESS OF WORD
 03017 0000 00 0 03017 IOCD *,0,0 RECEIVED BY THE DSC
 03020 -0000 30 0 04274 IOCP Q2+24,0,24 WILL APPEAR IN THE
 03021 1 00000 0 03023 TCH *+2,0,0 ADDRESS REGISTER.
 03022 0000 00 0 03022 IOCD *,0,0
 03023 0000 30 0 04274 IOCD Q2+24,0,24 SHOULD DISCONNECT HERE
 03024 0000 00 0 03024 IOCD *,0,0 AFTER WC GOES TO ZERO.

*COMMANDS TO READ THREE BCD CARDS-TGRS S+1 ON

03025 -2 00031 0 04274 CR4 IOSP Q2+24,0,25 TGRS S+1 ON-FIRST CHAR E
 THESE TGRS SHOULD PICK UP
 03026 -2 00014 0 04274 IOSP Q2+24,0,12 NEXT FOLLOWING COMMAND ON
 EOR, OR WHEN WC GOES TO
 ZERO.
 03027 -2 00030 0 04310 IOSP Q2+36,0,24 WHICHEVER COMES FIRST
 03030 -2 00074 0 04274 IOSP Q2+24,0,60
 03031 0000 00 0 03031 IOCD *,0,0 ON DISCONNECT, ADDRESS

REGISTER SHOULD CONTAIN
ADDRESS OF THIS COMMAND.

*COMMANDS TO READ THREE BCD CARDS-TGRS 1+2 ON

03032 3 00000 0 04274 CR5 IORT Q2+24,0,0 TGRS 1+2 ON-FIRST CHAR F
FIRST IORT COMMAND SHOULD
03033 0000 00 0 03033 IOCD *,0,0 NOT PUNCH. IT IS A DUMMY
TO GET DSC SET FOR LCH
INSTR. SHOULD GET CONTROL
WORD FROM LCH INSTR. IN
MAIN PROGRAM AT EOR
03034 3 00050 0 04274 IORT Q2+24,0,40 REGARDLESS OF WORD COUNT.
03035 0000 00 0 03035 IOCD *,0,0 IF THIS COMMAND IS PICKED
UP AT EOR, ADDRESS REGISTER
WILL CONTAIN ADDRESS OF
COMMAND RECEIVED BY DSC

*COMMANDS TO READ THREE BCD CARDS-TGRS S+2 ON

03036 -1 00030 0 04274 CR6 IOCT Q2+24,0,24 TGRS S+2 ON-FIRST CHAR G
03037 0000 00 0 03037 IOCD *,0,0
SHOULD GET
COMMAND FROM LCH
INSTR. IN MAIN PROGRAM
03040 -1 00030 0 04274 IOCT Q2+24,0,24 WHEN WC GOES TO ZERO
03041 0000 00 0 03041 IOCD *,0,0 IF THIS COMMAND IS
PICKED UP, THE DSC ADDRESS
REGISTER WILL CONTAIN
ADDRESS OF COMMAND
RECEIVED BY THE DSC

*COMMANDS TO READ THREE BCD CARDS-S, 1+2 TGRS ON

03042 -3 00031 0 04274 CR7 IOST Q2+24,0,25 TGRS S,1+2 ON-FIRST CHAR H
03043 0000 00 0 03043 IOCD *,0,0
03044 -3 00050 0 04274 IOST Q2+24,0,40 SHOULD GET THIS
COMMAND FROM LCH
03045 0000 00 0 03045 IOCD *,0,0 INSTR. IN MAIN PROGRAM
AT EOR. OR WHEN WC GOES
TO ZERO, WHICHEVER
COMES FIRST

03046 0000 00 0 02737 IND HTR PR
03047 0000 00 0 02740 HTR PR1
03050 0000 00 0 02774 HTR PR6+2
03051 0000 00 0 03000 HTR PR7+2
03052 0000 00 0 03000 HTR PR7+2
03053 0000 00 0 03101 HTR SCHA1+4
03054 0000 00 0 03104 HTR SCHA1+7

03055 SCHA BSS 16 STORAGE FOR CONTS. DSC

03075 SCHA1 BSS 16 STORAGE FOR CONTS. DSC

03115 SCHA2 BSS 16 STORAGE FOR CONTS. DSC

INITIAL PRINT AND PUNCH
IMAGE

03135	+001001002001	K5	OCT 1001002001	9L
03136	+000000200200		OCT 200200	9R
03137	+002002004002		OCT 2002004002	8L
03140	+077600400401		OCT 077600400401	8R
03141	+004004010004		OCT 4004010004	7L
03142	+000001001002		OCT 1001002	7R
03143	+010010020010		OCT 10010020010	6L
03144	+000002002004		OCT 2002004	6R
03145	+020020040020		OCT 20020040020	5L
03146	+000004004010		OCT 4004010	5R
03147	+040040100040		OCT 40040100040	4L
03150	+074010010020		OCT 74010010020	4R
03151	+100100200100		OCT 100100200100	3L
03152	+003620020040		OCT 3620020040	3R
03153	+200200400200		OCT 200200400200	2L
03154	+000040040100		OCT 40040100	2R
03155	-000400000400		OCT 400400000400	1L
03156	+100100100000		OCT 100100100000	1R
03157	+000000777000		OCT 777000	0L
03160	+111000000177		OCT 111000000177	0R
03161	+000777000000		OCT 777000000	11L
03162	+220400177600		OCT 220400177600	11R
03163	-377000000000		OCT 777000000000	12L
03164	-040377600000		OCT 440377600000	12R
03165	+0000600000030	K6	OCT 600000030	
03166	+000001000005		OCT 1000005	
03167	+0000000000001		OCT 1	
03170	+0000000000000	COUNT	OCT 0	TEMP STORAGE
03171	-0000 02 0 03343	K8	IOCP K50,0,2	CONTROL WORD FOR PUNCH AND PRINTERS-S TGR ON FOR 1ST 2 WORDS- 9L,9R
03172	-1 00004 0 03345		IOCT K50+2,0,4	S AND 2 TGRS ON
03173	0000 00 0 03173		IOCD *,0,0	FOR 8 AND 7 ROWS
03174	-2 00004 0 03351		IOSP K50+6,0,4	S AND 1 TGRS ON FOR 6AND 5 ROWS
03175	-3 00010 0 03355	K8A	IOST K50+10,0,8	S,1, AND 2 TGRS ON FOR 4,3,2,AND 1 ROWS
03176	0000 00 0 03176		IOCD *,0,0	
03177	1 00002 0 03201		TCH *+2,0,2	GET CONTROL WORD FROM
03200	0000 00 0 03200		IOCD *,0,0	ADDR OF PREVIOUS WORD
03201	3 00006 0 03365		IORT K50+18,0,6	TGRS 1 AND 2 ON FOR REMAINING WORDS
03202	-0000 04 0 03373	K9	IOCP K50+24,0,4	S-TGR ON FOR 9,8, ROWS
03203	1 00004 0 03205		TCH *+2,0,4	2 TGR ON-SHOULD
03204	0000 00 0 03204		IOCD *,0,0	INDIRECT ADDRESS
03205	-1 00004 0 03377		IOCT K50+28,0,4	S AND 2 TGRS ON
03206	0000 00 0 03206		IOCD *,0,0	7 AND 6 ROWS
03207	-3 00010 0 03403		IOST K50+32,0,8	S,1,2-ON FOR 5,4,3,2
03210	0000 00 0 03210		IOCD *,0,0	ROWS

03211	-0000	04	0	03413		IOCP	K50+40,0,4	S TGR ON - FOR 0,1 ROWS
03212	-0000	02	0	03417		IOCP	K50+44,0,2	S TGR ON FOR 11 ROWS
03213	-0000	02	0	03421		IOCP	K50+46,0,2	S TGR ON FOR 12 ROW
03214	2	00001	0	03343		IORP	K50,0,1	END OF RECORD SHOULD BE RECOGNIZED
03215	0000	00	0	03202	K9A	IOCD	K9	
03216	-0000	02	0	04244	K18	IOCP	Q2,0,2	CONTROL WORD FOR PUNCHING BINARY CARDS 1ST 2 WORDS 9L,9R
03217	-1	00004	0	04246		IOCT	Q2+2,0,4	IND 2 TGR FOR
03220	0000	00	0	03220		IOCD	*,0,0	8 AND 7 ROWS
03221	-2	00004	0	04252		IOSP	Q2+6,0,4	S AND 1 TGRS-FOR 6-5 ROW
03222	-3	00010	0	04256	K18A	IOST	Q2+10,0,8	S,1,2 TGRS ON FOR 4,3,2, AND 1 ROWS
03223	0000	00	0	03223		IOCD	*,0,0	
03224	1	00002	0	03226		TCH	*+2,0,2	GET CONTROL WORD FROM
03225	0000	00	0	03225		IOCD	*,0,0	ADDR OF PREVIOUS WORD
03226	3	00006	0	04266		IORT	Q2+18,0,6	1 AND 2 TGRS ON FOR REMAINING WORDS
* CONTROL WORDS FOR READING PRINTER								
03227	-1	00020	0	03343	K19	IOCT	K50,0,16	9-2 ROWS OF CARD IMAGE
03230	0000	00	0	03230		IOCD	*,0,0	S AND 2 TGRS ON
03231	-0000	02	0	03363		IOCP	K50+16,0,2	1 ROW OF CARD IMAGE
03232	-0000	02	0	03417		IOCP	K50+44,0,2	ECHO PULSES FOR 8-4
03233	1	00000	0	03235		TCH	*+2	INDIRECT ADDR FOR
03234	0000	00	0	03234		IOCD	*,0,0	ZERO ROW OF IMAGE 2- ON
03235	-0000	02	0	03365		IOCP	K50+18,0,2	ZERO ROW
03236	-0000	01	0	03421		IOCP	K50+46,0,1	ECHO PULSES FOR 8-3
03237	-0000	01	0	03422		IOCP	K50+47,0,1	
03240	-0000	02	0	03367	K19A	IOCP	K50+20,0,2	11 ROW-S TGR ON
03241	1	00002	0	03243		TCH	*+2,0,2	2 TGR ON-TAKE CW FROM
03242	0000	00	0	03242		IOCD	*,0,0	ADDR OF PREVIOUS WORD
03243	-0000	02	0	03373		IOCP	K50+24,0,2	9 ECHO ROW
03244	-2	00002	0	03371		IOSP	K50+22,0,2	12 ROW OF CARD IMAGE
03245	-1	00004	0	03375		IOCT	K50+26,0,4	S AND 2 TGRS ON FOR
03246	0000	00	0	03246		IOCD	*,0,0	8 AND 8 ROWS
03247	-0000	10	0	03401	K19B	IOCP	K50+30,0,8	6,5,4,3 ROWS OF CARDS
03250	0000	04	0	03411		IOCD	K50+38,0,4	2 AND 1 ROWS-ALL TGRS OFF
03251	0000	00	0	03251		IOCD	*,0,0	
03252	0032	51	0	03415		IOCD	K50+42,0,K19B+2	CHAN CONTENTS FOR READ PRINTER
03253	1	00062	0	03255	K20	TCH	*+2,0,50	CARD READER CONTROL TGR 2 ON-WORD COUNT
03254	0000	00	0	03254		IOCD	*,0,0	GREATER THEN 0
03255	-0000	02	0	04274		IOCP	Q2+24,0,2	S TGR ON-READ 1ST TWO WORDS INTO STORAGE 9L AND 9R

03256	-0000	02	0	04276		IOCP Q2+26,0,2 S TGR ON-READ 8L AND 8R
03257	1	00000	0	03261		TCH *+2
03260	0000	00	0	03260		IOCD *,0,0
03261	-1	00002	0	04300		IOCT Q2+28,0,2 S AND 2 TGRS ON-READ 7L+7R THEN EXECUTE LOAD CHAN ISNT
03262	0000	00	0	03262		IOCD *,0,0
03263	-1	00002	0	04302	K21	IOCT Q2+30,0,2 READ 6L AND 6R THEN
03264	0000	00	0	03264		IOCD *,0,0 EXECUTE LOAD CHAN INST S AND 2 TGRS SHOULD BEON
03265	-0000	01	0	04304		IOCP Q2+32,0,1 S TGR ON-READ 5L
03266	-2	00001	0	04305		IOSP Q2+33,0,1 AND 5R
03267	-3	00004	0	04306		IOST Q2+34,0,4 S,1, AND 2 TGRS ON-READ 4L 4R,3L,+3R- THEN EXECUTE LCD
03270	0000	00	0	03270		IOCD *,0,0
03271	-0000	04	0	04312	K22	IOCP Q2+38,0,4 READ 2L,2R,1L,1R WITH S ON
03272	-0000	02	0	04316		IOCP Q2+42,0,2 READ 0L, AND 0R-S TGR ON
03273	1	00000	0	03274		TCH *+1
03274	0000	04	0	04320		IOCD Q2+44,0,4 READ 11L,11R,12L + 12R
03275	0000	00	0	03275		IOCD *,0,0 DISCONNECT CARD READER
03276	-1	00014	2	03373	K13	IOCT K50+24,2,12 S AND 2 TGRS ON
03277	0000	00	0	03277		IOCD *,0,0
03300	-0000	14	0	03407		IOCP K50+36,0,12 S TGR ON
03301	2	00000	0	03343		IORP K50 2 TGR ON
03302	0000	00	0	03276		IOCD K13,0,0 NEW CONTROL WORD HERE
03303	0033	03	0	03276		IOCD K13,0,K13+5 CONTENTS OF DSC
03304	+00000000000006				K12	OCT 6,14,0,60
03305	+00000000000014					
03306	+00000000000000					
03307	+00000000000060					
03310	+00000000000030					OCT +30,44
03311	+00000000000044					
03312	+00000000000077					OCT +77,14
03313	+00000000000014					
03314	+00000000000020				K14	OCT 20
03315	+00000000000060					OCT 60
03316	+00000000000006				K16	OCT 6,-0
03317	-00000000000000					
03320	0000	00	0	00000		HTR 0
03321	+00000000000001					OCT +1
03322	+00000000000022				K26	OCT +22
03323	+00000000000062				Z1	OCT +62
03324	+00000000000001					OCT +1
03325	0000	00	0	00000	Z2	IOCD 0
03326	0032	75	0	04324		IOCD Q2+48,0,K22+4
03327	0032	16	0	03202		IOCD K9,0,K9A+1
03330	3	03202	0	03373		IORT K50+24,0,K8A+5
03331	+00000000000000				ENK	OCT 0
03332	+00000000000000					OCT 0
03333	0020	00	0	00030		TRA 24

03334 +0001100000000 SVNTW OCT 1100000000
03335 +0000000000000 CTR1A OCT 0
03336 +0000000000000 CTR2A OCT 0
03337 +0000000000000 CTR3A OCT 0
03340 +0000000000000 XRAB OCT +0 RECORD NUMBER
03341 +0000000000000 OCT
03342 +0000000000000 OCT

ROTATE CARD IMAGE

03343 +0000000000000 K50 OCT 0,0,0,0,0,0,0,0,0,0,0,0
03344 +0000000000000
03345 +0000000000000
03346 +0000000000000
03347 +0000000000000
03350 +0000000000000
03351 +0000000000000
03352 +0000000000000
03353 +0000000000000
03354 +0000000000000
03355 +0000000000000
03356 +0000000000000
03357 +0000000000000 OCT 0,0,0,0,0,0,0,0,0,0,0,0
03360 +0000000000000
03361 +0000000000000
03362 +0000000000000
03363 +0000000000000
03364 +0000000000000
03365 +0000000000000
03366 +0000000000000
03367 +0000000000000
03370 +0000000000000
03371 +0000000000000
03372 +0000000000000

CARD IMAGE

03373 +0000000000000 OCT 0,0,0,0,0,0,0,0,0,0,0,0
03374 +0000000000000
03375 +0000000000000
03376 +0000000000000
03377 +0000000000000
03400 +0000000000000
03401 +0000000000000
03402 +0000000000000
03403 +0000000000000
03404 +0000000000000
03405 +0000000000000
03406 +0000000000000
03407 +0000000000000 OCT 0,0,0,0,0,0,0,0,0,0,0,0
03410 +0000000000000
03411 +0000000000000
03412 +0000000000000
03413 +0000000000000
03414 +0000000000000
03415 +0000000000000
03416 +0000000000000
03417 +0000000000000
03420 +0000000000000

EOF*