

9M06

BASIC 709 MAIN FRAME DIAGNOSTIC TEST
MANUAL LOAD

A. UNIT TESTED

1. PURPOSE OF TEST THIS DIAGNOSTIC PROGRAM USES A MANUAL LOAD TO BOOTSTRAP A MODIFIED VERSION OF 9M01 INTO THE 709 COMPUTER. THE MANUAL LOAD IS PERFORMED BY USING A 24 WORD PER CARD DECK AND BY MANUALLY SETTING THE CONTROL KEYS ON THE 766 DATA SYNCHRONIZER UNIT, THE PROGRAM TESTS ALL MAIN FRAME INSTRUCTIONS EXCEPT THOSE PRIMARILY ASSOCIATED WITH INDEXING AND FLOATING POINT. WHEN THE TEST DISCOVERS A MACHINE ERROR, IT WILL INTERROGATE THE SENSE SWITCHES TO SEE WHETHER AN ERROR IS TO BE INDICATED, A LOOP IS TO BE ESTABLISHED, OR A CONTINUATION OF THIS TEST AND/OR A NEW TEST IS DESIRED BY THE MACHINE OPERATOR.

NOTE THIS IS JUST A TEST FOR 704 INSTRUCTIONS IN THE 709 AND DOES NOT INCLUDE 709 INSTRUCTIONS EXCEPT IN THE END OF TEST LINK

2. METHOD OF TEST THE FORMAT OF THE DIAGNOSTIC IS ESSENTIALLY THE SAME AS 9M01 EXCEPT THAT 9M06 DOES NOT USE THE DIAGNOSTIC ENGINEERING SENSE SWITCHES INTERROGATION AND PRINT SUBROUTINE 9DEPR. IN 9M06 ERROR DETECTION IS PROVIDED WITH A MINIMUM OF PROGRAMMING ALTHOUGH STILL UNDER SENSE SWITCH CONTROL AS SHOWN IN PART C BELOW.

B. AREA OF MACHINE REQUIRED

1. MF, CF, CR
2. STORAGE LOCATIONS 0000-4774

C. PROGRAM CONTROL

1. DECK 106 24 WORD/CARD BINARY CARDS
2 BLANK CARDS

2. SENSE SWITCH CONTROL

- | | |
|-------------------|---|
| A. SWITCH #1 UP | GO TO NEXT ROUTINE |
| B. SWITCH #1 DOWN | LOOP IN ROUTINE |
| C. SWITCH #2 UP | HALT ON ERROR |
| D. SWITCH #2 DOWN | BYPASS ERROR INDICATION |
| E. SWITCH #3 | NO EFFECT |
| F. SWITCH #4 | NO EFFECT |
| G. SWITCH #5 UP | BYPASS LONG ADDER TESTS + NORMAL DVH STOPS |
| H. SWITCH #5 DOWN | PERFORM LONG ADDER TESTS + NORMAL DVH STOPS |

- I. SWITCH #6 UP READ IN NEXT DIAGNOSTIC
- J. SWITCH #6 DOWN REPEAT PROGRAM

3. MANUAL LOAD

- A. INITIALIZE MAIN FRAME BY DEPRESSING THE CLEAR KEY AND PUT THE CARD READER IN THE READY STATUS.
- B. SET ONE CHANNEL ON THE DSU TO MANUAL BY PUSHING EITHER THE AUTO MAN A BUTTON ON THE CONTROL PANEL OF THE DSU.
- C. PLACE AN OCTAL WORD COUNT OF 4775 IN POSITIONS 3-17 OF THE KEYS ON THE DSU CONTROL PANEL AND PLACE THE ADDRESS OF THAT LOCATION AT WHICH THE FIRST INSTRUCTION OF THE PROGRAM IS DESIRED TO BE PLACED IN POSITIONS 21-35 OF THE SAME KEYS.
- D. DEPRESS THE LOAD CONTROL WORD AND THEN THE LOAD CARDS BUTTONS ON THE DSU CONTROL PANEL. THE MANUAL LOAD PROCEDURE IS THEN COMPLETE AND CARDS SHOULD IMMEDIATELY START BEING READ. AT THE END OF THE TEST THE AUTO MANU BUTTON SHOULD AGAIN BE DEPRESSED TO RESTORE THE DSU TO AUTOMATIC CONTROL FROM THE COMPUTER.

D. NORMAL STOPS

- Q 4510 DVH WITH HALT WHEN SENSE
- 4524 SWITCH FVE IS DOWN.
- 4553 PUSH START TO CONTINUE ,WILL NOT HALT ON NEXT PASS.

E. ERROR STOPS

CONSULT PROGRAM LISTING AT LOCATION INDICATED BY INSTRUCTION COUNTER FOR INSTRUCTION THAT FAILED. PUSHING THE START BUTTON WILL CAUSE THE PROGRAM TO CONTINUE.

F. PRINT OUTS

NONE

G. COMMENTS

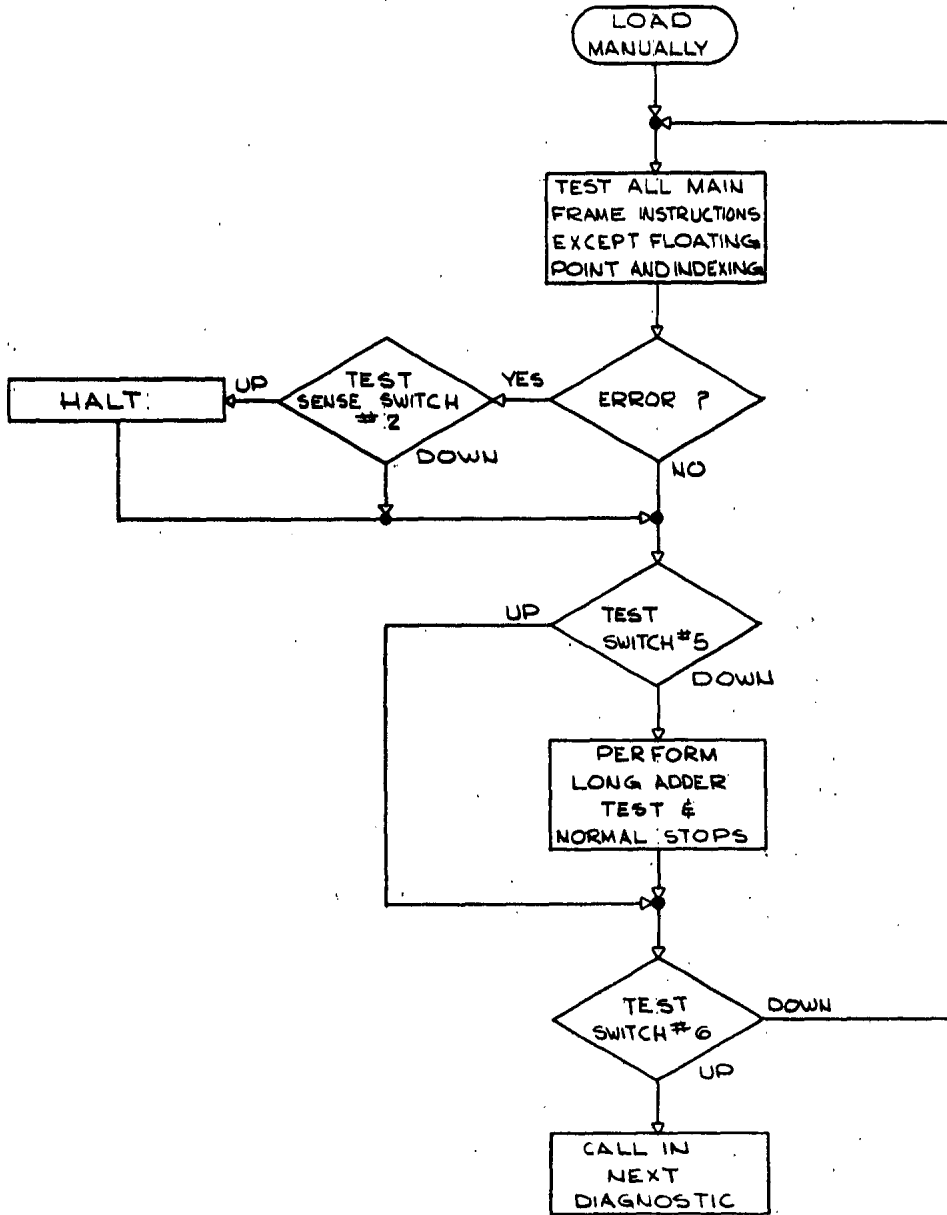
THIS DIAGNOSTIC IS TO BE USED WHEN 9M01 WILL NOT LOAD WITH EITHER OF ITS LOADERS,OR WHEN A TIGHTER LOOP IS DESIRED FOR SCOPING A MAIN FRAME INSTRUCTION EXCEPT FOR THOSE ASSOCIATED WITH INDEXING,FLOATING POINT,OR UNIQUELY WITH THE 709. THERE IS A RESTART IN THE PROGRAM WHICH IS RESET AFTER THE TRAPPING ROTUINES. RESTART IS TO THE BEGINNING OF THE TEST. AFTER THE 9M06 HAS BEEN RUN,RESTORE THE DSU TO AUTOMATIC BY AGAIN DEPRESSING THE AUTO MAN BUTTON ON THE CONTROL PANEL OF THE DSU THAT WAS DEPRESSED IN INITIALLY LOADING 9M06.

TABLE OF MAIN FRAME INSTRUCTION LOCATIONS
AND ORDER IN WHICH THEY ARE TESTED.

1.	TOV	BEGINS AT	0032
2.	TNO	BEGINS AT	0062
3.	TZE	BEGINS AT	0111
4.	TNZ	BEGINS AT	0137
5.	ALS	BEGINS AT	0156
6.	ARS	BEGINS AT	0220
7.	LBT	BEGINS AT	0261
8.	PBT	BEGINS AT	0302
9.	TPL	BEGINS AT	0325
10.	TMI	BEGINS AT	0344
11.	CLM	BEGINS AT	0363
12.	SSP	BEGINS AT	0422
13.	SSM	BEGINS AT	0462
14.	CHS	BEGINS AT	0502
15.	LLS	BEGINS AT	0604
16.	LRS	BEGINS AT	0703
17.	LGL	BEGINS AT	0777
18.	RQL	BEGINS AT	1072
19.	TQP	BEGINS AT	1111
20.	NOP	BEGINS AT	1120
21.	COM	BEGINS AT	1163
22.	ADD	BEGINS AT	1353
23.	SUB	BEGINS AT	1424
24.	SBM	BEGINS AT	1610
25.	CLA	BEGINS AT	1659
26.	CLS	BEGINS AT	1774
28.	CAL	BEGINS AT	2034
29.	ACL	BEGINS AT	2102
30.	STO	BEGINS AT	2163
31.	SLW	BEGINS AT	2174
32.	STP	BEGINS AT	2222
33.	STA	BEGINS AT	2339
34.	STD	BEGINS AT	2402
35.	CAS	BEGINS AT	2432
36.	LDQ	BEGINS AT	2545
37.	STQ	BEGINS AT	2571
38.	SLQ	BEGINS AT	2624
39.	TLQ	BEGINS AT	2666
40.	RND	BEGINS AT	2742
41.	MPY	BEGINS AT	2754
42.	MPR	BEGINS AT	3132
43.	DVP	BEGINS AT	3216
44.	DCT	BEGINS AT	3270
45.	DVH WITH NO HALT	BEGINS AT	3343
46.	ANA	BEGINS AT	3423

47.	ANS	BEGINS AT	3519
48.	ORA	BEGINS AT	3571
49.	ORS	BEGINS AT	3659
50.	TTR	BEGINS AT	3751
51.	ETM	BEGINS AT	3760
52.	LTM	BEGINS AT	3760
53.	PSE LIGHTS	BEGINS AT	4225
54.	MSE LIGHTS	BEGINS AT	4225
55.	STZ	BEGINS AT	4364
56.	PSE SENSE SWITCHES	BEGINS AT	4402
57.	M06 TEST	BEGINS AT	4450
58.	M07 TEST	BEGINS AT	4467
59.	DVH WITH HALT	BEGINS AT	4506
60.	ADDER TEST	BEGINS AT	4541
61.	MPY TEST	BEGINS AT	4625
62.	MPY/DVP TEST	BEGINS AT	4656

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00030 ORG 24

* -***- DIAGNOSTIC TEST 9M06 -***-

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*           *****
*           *
*           *   BASIC 709 MAIN FRAME TEST   *
*           *   WITH NO INDEXING A MANUAL  *
*           *   LOAD MUST BE USED.         *
*           *
*           *****
  
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00030  0500  00  0  04705      CLA END+2      POST
00031  0601  00  0  00000      STO 0        RESTART
  
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                                TEST OVERFLOW IN ACC
00032  0140  00  0  00033  A      TOV A+1      TURN OFF OVERFLOW TRGR
00033  0140  00  0  00035      TOV A+3      NO GOOD, DID NOT TURN OFF
00034  0020  00  0  00037      TRA A+5      OK
00035  0760  00  0  00162      PSE 114     TEST SENSE SWITCH TWO
00036  0420  00  0  00000      HPR        ERROR STOP WITH TWO UP
00037  0760  00  0  00161      PSE 113     TEST SWITCH ONE TO LOOP
00040  0020  00  0  00042      TRA A7
00041  0020  00  0  00032      TRA A      REPEAT
  
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                                TEST OVERFLOW ALS
00042  0500  00  0  04725  A7     CLA PTW      PLACE BIT IN ACC 1
00043  0767  00  0  00001      ALS 1       SHOULD OVERFLOW.
00044  0140  00  0  00047      TOV A7+5    OK, SHOULD OVFL
00045  0760  00  0  00162      PSE 114     TEST SENSE SWITCH TWO
00046  0420  00  0  00000      HPR        ERROR STOP WITH TWO UP
00047  0760  00  0  00161      PSE 113     TEST SWITCH ONE TO LOOP
00050  0020  00  0  00052      TRA A8
00051  0020  00  0  00042      TRA A7     REPEAT
  
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                                TEST OVERFLOW WITH NO
00052  0500  00  0  04713  A8     CLA ZERO     CLEAR ACC
00053  0140  00  0  00055      TOV A8+3    SHOULD NOT OVFL
00054  0020  00  0  00057      TRA A8+5    OK, DID NOT OVFL
00055  0760  00  0  00162      PSE 114     TEST SENSE SWITCH TWO
00056  0420  00  0  00000      HPR        ERROR STOP WITH TWO UP
00057  0760  00  0  00161      PSE 113     TEST SWITCH ONE TO LOOP
00060  0020  00  0  00062      TRA A9
00061  0020  00  0  00052      TRA A8     REPEAT
  
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TEST TNO WITH NO ACC
OVFL
00062 0500 00 0 04713 A9 CLA ZERO CLEAR ACC
00063 -0140 00 0 00066 TNO A9+4 TEST FOR NO OVFL
00064 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
00065 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
00066 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
00067 0020 00 0 00071 TRA A10
00070 0020 00 0 00062 TRA A9 REPEAT

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TEST TNO WITH ACC OVFL
PLACE BIT IN ACC 1
00071 0500 00 0 04725 A10 CLA PTW
00072 0767 00 0 00001 ALS 1 SHIFT TO FORCE OVERFLOW
00073 -0140 00 0 00075 TNO A10+4 SHOULD NOT TRANSFER
00074 0020 00 0 00077 TRA A10+6 OK
00075 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
00076 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
00077 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
00100 0020 00 0 00102 TRA A11
00101 0020 00 0 00071 TRA A10 REPEAT

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TEST WHETHER TNO TURNS
IT OFF
00102 0140 00 0 00104 A11 TOV A11+2
00103 0020 00 0 00106 TRA A11+4 OK, DID TURN IT OFF
00104 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
00105 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
00106 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
00107 0020 00 0 00111 TRA A12
00110 0020 00 0 00102 TRA A11 REPEAT

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TEST TZE INSTRUCTION
WITH ARS
00111 0500 00 0 04713 A12 CLA ZERO CLEAR ACCUMULATOR
00112 0100 00 0 00115 TZE A12+4 TEST FOR ZERO
00113 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
00114 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
00115 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
00116 0020 00 0 00120 TRA A13
00117 0020 00 0 00111 TRA A12 REPEAT

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TEST TZE, WITH CLA
BRING IN ZERO
00120 0500 00 0 04713 A13 CLA ZERO
00121 0100 00 0 00124 TZE A13+4 TEST FOR ZERO
00122 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
00123 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
00124 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
00125 0020 00 0 00127 TRA A14
00126 0020 00 0 00120 TRA A13 REPEAT

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TEST TZE, WITH CLA

00127	0500	00	0	00127	A14	CLA A14	BRING IN NO ZERO
00130	0100	00	0	00132		TZE A14+3	SHOULD NOT TRANSFER
00131	0020	00	0	00134		TRA A14+5	OK, DID NOT TRANSFER
00132	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00133	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00134	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00135	0020	00	0	00137		TRA A15	
00136	0020	00	0	00127		TRA A14	REPEAT
							TEST TNZ, ACC NOT ZERO
00137	0500	00	0	00137	A15	CLA A15	BRING IN NON ZERO
00140	-0100	00	0	00143		TNZ A15+4	SHOULD TRANSFER
00141	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00142	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00143	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00144	0020	00	0	00146		TRA A16	
00145	0020	00	0	00137		TRA A15	REPEAT
							TEST TNZ, ACC IS ZERO
00146	0500	00	0	04713	A16	CLA ZERO	CLEAR ACC
							TEST TNZ, ACC IS ZERO
00147	-0100	00	0	00151		TNZ A16+3	SHOULD NOT TRANSFER
00150	0020	00	0	00153		TRA A16+5	
00151	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00152	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00153	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00154	0020	00	0	00156		TRA A21	
00155	0020	00	0	00146		TRA A16	
							TEST ALS
00156	0500	00	0	04713	A21	CLA ZERO	TEST ALS BY MOVING ZERO
00157	0767	00	0	00010		ALS 8	EIGHT LEFT
00160	0100	00	0	00163		TZE A21+5	OK
00161	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00162	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00163	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00164	0020	00	0	00166		TRA A22	
00165	0020	00	0	00156		TRA A21	
							TEST ALS, MOVE A ONE
00166	0500	00	0	04714	A22	CLA ONE	PLACE ONE IN ACC 35
00167	-0100	00	0	00172		TNZ A22+4	OK, ONE IS IN ACC
00170	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00171	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
							TEST ALS, MOVE A ONE
00172	0140	00	0	00173		TOV A22+5	TURN OFF OVFL
00173	0767	00	0	00001		ALS 1	
00174	-0100	00	0	00177		TNZ A22+9	OK, BIT IS STILL THERE
00175	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00176	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00177	0140	00	0	00201		TOV A22+11	MOVE ON WHEN BIT GETS TO P
00200	0020	00	0	00173		TRA A22+5	LOOP ACROSS ACC
00201	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

00202	0020	00	0	00204		TRA	A23	
00203	0020	00	0	00166		TRA	A22	
00204	0500	00	0	04725	A23	CLA	PTW	ALS TEST, TEST IN Q POS
00205	0767	00	0	00002		ALS	2	PLACE BIT IN 1
00206	-0100	00	0	00211		TNZ	A23+5	MOVE IT TO Q
00207	0760	00	0	00162		PSE	114	LOST BIT IN Q
00210	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00211	0767	00	0	00001		ALS	1	MOVE BIT OUT OF ACC
00212	0100	00	0	00215		TZE	A23+9	SHOULD BE ZERO NOW
00213	0760	00	0	00162		PSE	114	DID NOT MOVE BIT OUT OF Q
00214	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00215	0760	00	0	00161		PSE	113	TEST SWITCH ONE TO LOOP
00216	0020	00	0	00220		TRA	A24	
00217	0020	00	0	00204		TRA	A23	
ARS TEST								
00220	0500	00	0	04714	A24	CLA	ONE	PUT BIT IN 35 OF ACC
00221	0140	00	0	00222		TOV	A24+2	TURN OFF OVFL
00222	-0100	00	0	00225		TNZ	A24+5	OK, BIT IS IN ACC
00223	0760	00	0	00162		PSE	114	LOST BIT IN STARTING
00224	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00225	0767	00	0	00042		ALS	34	
00226	-0100	00	0	00231		TNZ	A25	OK, BIT IS IN POS 1
00227	0760	00	0	00162		PSE	114	TEST SWITCH ONE TO LOOP
00230	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
ARS TEST								
00231	-0140	00	0	00234	A25	TNO	A25+3	OVFL SHOULD BE OFF
00232	0760	00	0	00162		PSE	114	TEST SENSE SWITCH TWO
00233	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00234	0767	00	0	00001		ALS	1	
00235	0771	00	0	00001		ARS	1	
00236	-0100	00	0	00241		TNZ	A26	OK, BIT STILL THERE
00237	0760	00	0	00162		PSE	114	LOST BIT FROM P TO 1
00240	0420	00	0	00000		HPR		OR 1 TO P
ARS TEST, TEST POS Q								
00241	0771	00	0	00001	A26	ARS	1	INDICATIONS
00242	0140	00	0	00243		TOV	A26+2	TURN OFF OVFL
00243	0767	00	0	00001		ALS	1	
00244	-0140	00	0	00247		TNO	A26+6	OVFL SHOULD BE OFF
00245	0760	00	0	00162		PSE	114	TEST SENSE SWITCH TWO
00246	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00247	0767	00	0	00002		ALS	2	GO OVER TO Q
00250	-0100	00	0	00253		TNZ	A26+10	OK, BIT STILL THERE
00251	0760	00	0	00162		PSE	114	LOST BIT
00252	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP

00253	0140	00	0	00256		TOV A26+13	OVFL SHOULD BE ON
00254	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00255	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00256	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00257	0020	00	0	00261		TRA A27	
00260	0020	00	0	00220		TRA A24	
TEST LBT							
00261	0500	00	0	04714	A27	CLA ONE	PLACE ONE IN ACC 25
00262	0760	00	0	00001		LBT	
00263	0020	00	0	00265		TRA A27+4	DID NOT SENSE ONE BIT
00264	0020	00	0	00267		TRA A27+6	
00265	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00266	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00267	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00270	0020	00	0	00272		TRA A28	
00271	0020	00	0	00261		TRA A27	
TEST LBT							
00272	0500	00	0	04713	A28	CLA ZERO	PLACE ZERO IN ACC 35
00273	0760	00	0	00001		LBT	
00274	0020	00	0	00277		TRA A28+5	OK, DID NOT SENSE ONE
00275	0760	00	0	00162		PSE 114	ERROR SHOULD NOT SKIP
00276	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00277	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00300	0020	00	0	00302		TRA A29	
00301	0020	00	0	00272		TRA A28	
PBT TEST							
00302	0500	00	0	04713	A29	CLA ZERO	PLACE ZERO IN ACC
00303	0767	00	0	00022		ALS 18	MOVE ZERO INTO P
00304	-0760	00	0	00001		PBT	
00305	0020	00	0	00310		TRA A29+6	OK, SENSED ZERO
00306	0760	00	0	00162		PSE 114	DID NOT SENSE ONE BIT
00307	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00310	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00311	0020	00	0	00313		TRA A30	
00312	0020	00	0	00302		TRA A29	
PBT TEST							
00313	0500	00	0	04714	A30	CLA ONE	PLACE ONE ZERO IN ACC 35
00314	0767	00	0	00043		ALS 35	SHIFT ONE TO P POSITION
00315	-0760	00	0	00001		PBT	
00316	0020	00	0	00320		TRA A30+5	DID NOT SKIP WITH ONE IN P
00317	0020	00	0	00322		TRA A30+7	
00320	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00321	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00322	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00323	0020	00	0	00325		TRA A31	
00324	0020	00	0	00313		TRA A30	

							TPL TEST
00325	0500	00	0	04725	A31	CLA PTW	BRING IN PLUS NUMBER
00326	0120	00	0	00331		TPL A31+4	TRANSFER IF OK
00327	0760	00	0	00162		PSE 114	ERROR DID NOT TRANSFER
00330	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00331	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00332	0020	00	0	00334		TRA A32	
00333	0020	00	0	00325		TRA A31	
							TPL TEST
00334	0500	00	0	04724	A32	CLA MTW	BRING IN MINUS NUMBER
00335	0120	00	0	00337		TPL A32+3	SHOULD NOT TRANSFER
00336	0020	00	0	00341		TRA A32+5	
00337	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00340	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00341	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00342	0020	00	0	00344		TRA A33	
00343	0020	00	0	00334		TRA A32	
							TMI TEST
00344	0500	00	0	04724	A33	CLA MTW	BRING IN MINUS NUMBER
00345	-0120	00	0	00350		TMI A33+4	OK, SHOULD TRANSFER
00346	0760	00	0	00162		PSE 114	ERROR, DID NOT TRANSFER
00347	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00350	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00351	0020	00	0	00353		TRA A34	
00352	0020	00	0	00344		TRA A33	
							TMI TEST
00353	0500	00	0	04725	A34	CLA PTW	BRING IN PLUS NUMBER
00354	-0120	00	0	00356		TMI A34+3	SHOULD NOT TRANSFER
00355	0020	00	0	00360		TRA A34+5	OK, DID NOT TRANSFER
00356	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00357	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00360	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00361	0020	00	0	00363		TRA A35	
00362	0020	00	0	00353		TRA A34	
							CLM TEST, TWO PARTS
00363	0500	00	0	04721	A35	CLA ONES	BRING IN -377777777777
00364	0760	00	0	00000		CLM	
00365	0100	00	0	00370		TZE A35+5	OK, NOW SEE IF SIGN IS SAME
00366	0760	00	0	00162		PSE 114	DID NOT CLEAR POS 1-35
00367	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
							TMI TEST
00370	-0120	00	0	00373		TMI A35+8	OK, DID NOT CHANGE SIGN
00371	0760	00	0	00162		PSE 114	CHANGED SIGN
00372	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00373	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00374	0020	00	0	00376		TRA A36	
00375	0020	00	0	00363		TRA A35	

00376	0500	00	0	04730	A36	CLA PONES	CLM TEST, TWO PARTS
00377	0760	00	0	00000		CLM	BRING IN +377777777777
00400	0100	00	0	00403		TZE A36+5	OK. NOW SEE IF SIGN IS SAME
00401	0760	00	0	00162		PSE 114	DID NOT CLEAR POS 1-35
00402	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00403	0120	00	0	00406		TPL A36+8	OK, SIGN UNCHANGED
00404	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00405	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00406	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00407	0020	00	0	00411		TRA A37	
00410	0020	00	0	00376		TRA A36	
CLM TEST, CHECK OF P ANDQ							
00411	0500	00	0	04721	A37	CLA ONES	BRING IN ONES
00412	0767	00	0	00006		ALS 6	SHIFT INTO P AND Q
00413	0760	00	0	00000		CLM	
00414	0100	00	0	00417		TZE A37+6	OK, SHOULD CLEAR P AND Q
00415	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00416	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00417	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00420	0020	00	0	00422		TRA A38	
00421	0020	00	0	00411		TRA A37	
SSP TEST							
00422	0500	00	0	04721	A38	CLA ONES	MAKE ACC SIGN MINUS
00423	0760	00	0	00003		SSP	NOW MAKE POSITIVE
00424	0120	00	0	00427		TPL A38+5	OK, SHOULD TRANSFER
00425	0760	00	0	00162		PSE 114	DID NOT CHANGE MINUS TO PLUS
00426	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00427	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00430	0020	00	0	00432		TRA A39	
00431	0020	00	0	00422		TRA A38	
SSP TEST							
00432	0500	00	0	04730	A39	CLA PONES	BRING IN PLUS NUMBER
00433	0760	00	0	00003		SSP	
00434	0120	00	0	00437		TPL A39+5	SHOULD TRANSFER
00435	0760	00	0	00162		PSE 114	DID NOT TRANSFER, CHANGED SIGN
00436	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00437	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00440	0020	00	0	00442		TRA A40	
00441	0020	00	0	00432		TRA A39	
SSM TEST							
00442	0500	00	0	04730	A40	CLA PONES	BRING IN PLUS NUMBER
00443	-0760	00	0	00003		SSM	MAKE IT MINUS

00444	-0120	00	0	00447		TMI A40+5	SHOULD TRANSFER
00445	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGNS
00446	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00447	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00450	0020	00	0	00452		TRA A41	
00451	0020	00	0	00442		TRA A40	
SSM TEST							
00452	0500	00	0	04721	A41	CLA ONES	BRING IN NEGATIVE NUMBER
00453	-0760	00	0	00003		SSM	SHOULD NOT CHANGE
00454	-0120	00	0	00457		TMI A41+5	SHOULD TRANSFER
00455	0760	00	0	00162		PSE 114	INADVERTENTLY CHANGED SIGN
00456	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00457	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00460	0020	00	0	00462		TRA A42	
00461	0020	00	0	00452		TRA A41	
CHS TEST							
00462	0500	00	0	04730	A42	CLA PONES	BRING IN PLUS NUMBER
00463	0760	00	0	00002		CHS	MAKE IT MINUS
00464	-0120	00	0	00467		TMI A42+5	SHOULD TRANSFER
00465	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGNS
00466	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00467	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00470	0020	00	0	00472		TRA A43	
00471	0020	00	0	00462		TRA A42	
CHS TEST							
00472	0500	00	0	04721	A43	CLA ONES	BRING IN NEGATIVE NUMBER
00473	0760	00	0	00002		CHS	MAKE IT POSITIVE
00474	0120	00	0	00477		TPL A43+5	SHOULD TRANFER
00475	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGNS
00476	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00477	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00500	0020	00	0	00502		TRA A44	
00501	0020	00	0	00472		TRA A43	
LLS TEST							
00502	0140	00	0	00503	A44	TOV A44+1	TURN OFF OVFL
00503	0560	00	0	04713		LDQ ZERO	BRING ZERO INTO ACC + MQ
00504	0500	00	0	04713		CLA ZERO	SEE IF PICKED UP BITS
00505	0763	00	0	00022		LLS 18	BY SHIFT
00506	0100	00	0	00511		TZE A45	SHOULD TRANFER
00507	0760	00	0	00162		PSE 114	PICKED UP BI
00510	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
LLS TEST							
00511	-0600	00	0	04726	A45	STQ TEMP	CHECK FOR MQ PICK UP
00512	0500	00	0	04726		CLA TEMP	OF BITS BY LLS
00513	0100	00	0	00516		TZE A45+5	OK, NO PICK UP
00514	0760	00	0	00162		PSE 114	PICKED UP A ONE
00515	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00516	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

00517	0020	00	0	00521		TRA A46	
00520	0020	00	0	00502		TRA A44	REPEAT TO A44
LLS TEST							
00521	0500	00	0	04713	A46	CLA ZERO	CLEAR ACCUMULATOR
00522	0560	00	0	04714		LDQ ONE	MOVE BIT FROM MQ 35 TO MQ 1
00523	0763	00	0	00042		LLS 34	DOES IT MOVE CORRECTLY
00524	0100	00	0	00527		TZE A47	OK, PROCEED
00525	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00526	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00527	-0600	00	0	04726	A47	STQ TEMP	IS THE BIT STILL IN MQ
00530	0500	00	0	04726		CLA TEMP	
00531	0402	00	0	04725		SUB PTW	
00532	0100	00	0	00535		TZE A47+6	SHOULD TRANSFER
00533	0760	00	0	00162		PSE 114	LOST THE BIT IN THE MQ
00534	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00535	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00536	0020	00	0	00540		TRA A48	
00537	0020	00	0	00521		TRA A46	GO BACK UP TO A 46
LLS TEST, CHECK FOR SIGNS							
00540	0500	00	0	04724	A48	CLA MTW	MAKE ACC NEGATIVE
00541	0560	00	0	04725		LDQ PTW	MAKE MQ POSITIVE
00542	0763	00	0	00000		LLS	
00543	0120	00	0	00546		TPL A48+6	OK, SHOULD TRANSFER
00544	0760	00	0	00162		PSE 114	DID NOT CHANGE ACC SIGN
00545	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00546	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00547	0020	00	0	00551		TRA A49	
00550	0020	00	0	00540		TRA A48	
LLS TEST, CHECK FOR SIGNS							
00551	0500	00	0	04725	A49	CLA PTW	MAKE ACC POSITIVE
00552	0560	00	0	04724		LDQ MTW	MAKE MQ NEGATIVE
00553	0763	00	0	00000		LLS	
00554	-0120	00	0	00557		TMI A49+6	OK, SHOULD TRANSFER
00555	0760	00	0	00162		PSE 114	DID NOT CHANGE ACC SIGN
00556	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00557	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00560	0020	00	0	00562		TRA A50	
00561	0020	00	0	00551		TRA A49	
LLS TEST, CHECK SIGNS							
00562	0500	00	0	04725	A50	CLA PTW	MAKE ACC POSITIVE
00563	0560	00	0	04725		LDQ PTW	MAKE MQ POSITIVE
00564	0763	00	0	00000		LLS	
00565	0120	00	0	00570		TPL A50+6	SHOULD TRANSFER
00566	0760	00	0	00162		PSE 114	CHANGED SIGNS INADVERTENTLY
00567	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00570	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

00571	0020	00	0	00573		TRA	A51	
00572	0020	00	0	00562		TRA	A50	
00573	0500	00	0	04724	A51	CLA	MTW	LLS TEST, CHECK FOR SIGNS
00574	0560	00	0	04724		LDQ	MTW	MAKE ACC NEGATIVE
00575	0763	00	0	00000		LLS		MAKE MQ NEGATIVE
00576	-0120	00	0	00601		TMI	A51+6	SHOULD TRANSFER
00577	0760	00	0	00162		PSE	114	SIGNS CHANGED INADVERTENTLY
00600	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00601	0760	00	0	00161		PSE	113	TEST SWITCH ONE TO LOOP
00602	0020	00	0	00604		TRA	A52	
00603	0020	00	0	00573		TRA	A51	
LRS TEST								
00604	0500	00	0	04714	A52	CLA	ONE	PLACE 1 IN ACC 35
00605	0560	00	0	04713		LDQ	ZERO	CLEAR MQ
00606	0765	00	0	00043		LRS	35	SHIFT A ONE TO MQ
00607	-0600	00	0	04726		STQ	TEMP	STORE MQ IN TEMP STORAGE
00610	0500	00	0	04726		CLA	TEMP	BRING CONTENTS OF MQ TO ACC
00611	-0100	00	0	00614		TNZ	A52+8	OK, SHOULD STILL HAVE ONE
00612	0760	00	0	00162		PSE	114	CHANGED SIGNS INADVERTENTLY
00613	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00614	0760	00	0	00161		PSE	113	TEST SWITCH ONE TO LOOP
00615	0020	00	0	00617		TRA	A53	
00616	0020	00	0	00604		TRA	A52	
LRS TEST								
00617	0560	00	0	04713	A53	LDQ	ZERO	CLEAR MQ
00620	0500	00	0	04725		CLA	PTW	PLATE BIT IN ACC 1
00621	0765	00	0	00044		LRS	36	MOVE A ONE TO MQ
00622	0100	00	0	00625		TZE	A53+6	OK, ACC SHOULD BE CLEAR
00623	0760	00	0	00162		PSE	114	DID NOT CLEAR ACC
00624	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00625	0760	00	0	00161		PSE	113	TEST SWITCH ONE TO LOOP
00626	0020	00	0	00630		TRA	A54	
00627	0020	00	0	00617		TRA	A53	
LRS TEST								
00630	0500	00	0	04724	A54	CLA	MTW	PLACE BIT IN ACC POS 1
00631	0765	00	0	00042		LRS	34	MOVE IT TO ACC POS 35
00632	0760	00	0	00001		LBT		IS IT THERE
00633	0020	00	0	00635		TRA	A54+5	NO
00634	0020	00	0	00637		TRA	A54+7	YES
00635	0760	00	0	00162		PSE	114	LOST THE BIT IN THE MQ
00636	0420	00	0	00000		HPR		ERROR STOP WITH TWO UP
00637	0760	00	0	00161		PSE	113	TEST SWITCH ONE TO LOOP
00640	0020	00	0	00642		TRA	A55	
00641	0020	00	0	00630		TRA	A54	

LRS TEST, CHECK SIGNS

00642	0500	00	0	04725	A55	CLA PTW	MAKE ACC POSITIVE
00643	0560	00	0	04724		LDQ MTW	MAKE MQ NEGATIVE
00644	0765	00	0	00000		LRS	CHANGE SIGN OF MQ
00645	-0600	00	0	04726		STQ TEMP	STORE IT
00646	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
00647	0120	00	0	00652		TPL A55+8	SHOULD BE PLUS
00650	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGNS
00651	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00652	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00653	0020	00	0	00655		TRA A56	
00654	0020	00	0	00642		TRA A55	
LRS TEST, CHECK SIGNS							
00655	0500	00	0	04724	A56	CLA MTW	MAKE ACC NEGATIVE
00656	0560	00	0	04725		LDQ PTW	MAKE MQ POSITIVE
00657	0765	00	0	00000		LRS	CHANGE MQ SIGN
00660	-0600	00	0	04726		STQ TEMP	SAVE IT
00661	0500	00	0	04726		CLA TEMP	TEST IT
00662	-0120	00	0	00665		TMI A56+8	OK
00663	0760	00	0	00162		PSE 114	DID NOT CHANGE MQ SIGN
00664	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00665	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00666	0020	00	0	00670		TRA A57	
00667	0020	00	0	00655		TRA A56	
LRS TEST, CHECK SIGNS							
00670	0500	00	0	04725	A57	CLA PTW	MAKE ACC POSITIVE
00671	0560	00	0	04725		LDQ PTW	MAKE MQ POSITIVE
00672	0765	00	0	00000		LRS	MQ SIGN SHOULD STAY POSITIVE
00673	-0600	00	0	04726		STQ TEMP	SAVE IT
00674	0500	00	0	04726		CLA TEMP	BRING TO ACC
00675	0120	00	0	00700		TPL A57+8	OK, SHOULD BE PLUS
00676	0760	00	0	00162		PSE 114	CHANGE SIGN INADVERTENTLY
00677	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00700	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00701	0020	00	0	00703		TRA A58	
00702	0020	00	0	00670		TRA A57	
LGL TEST							
00703	0140	00	0	00704	A58	TOV A58+1	TURN OFF OVERFLOW
00704	0500	00	0	04713		CLA ZERO	PLACE ZERO IN ACC
00705	0560	00	0	04713		LDQ ZERO	PLACE ZERO IN MQ
00706	-0763	00	0	00010		LGL 8	
00707	-0600	00	0	04726		STQ TEMP	SAVE MQ
00710	0500	00	0	04726		CLA TEMP	BRING IT INTO ACC
00711	0100	00	0	00714		TZE A58+9	OK, SHOULD BE ZERO
00712	0760	00	0	00162		PSE 114	PICKED UP BITS
00713	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00714	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00715	0020	00	0	00717		TRA A59	
00716	0020	00	0	00703		TRA A58	

00717	0500	00	0	04713	A59	CLA ZERO	LGL TEST, SHIFT ACROSS
00720	0560	00	0	04714		LDQ ONE	PLACE ZERO IN ACC
00721	-0763	00	0	00001		LGL 1	PLACE ONE IN MQ 35
00722	-0600	00	0	04726		STQ TEMP	SHIFT ONE
00723	0500	00	0	04726		CLA TEMP	SAVE MQ
00724	-0100	00	0	00721		TNZ A59+2	TEST FOR BIT
00725	-0120	00	0	00730		TMI A59+9	OK, SWEEP ACROSS MQ
00726	0760	00	0	00162		PSE 114	FINISH ACC SHOULD BE MINUS
00727	0420	00	0	00000		HPR	FAILED TO SHIFT, LOST A BIT
00730	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
00731	0020	00	0	00733		TRA A60	TEST SWITCH ONE TO LOOP
00732	0020	00	0	00717		TRA A59	
LGL TEST, SEEK P POSITION							
00733	0140	00	0	00734	A60	TOV A60+1	TURN OFF OVERFLOW
00734	0560	00	0	04732		LDQ MZE	
00735	-0763	00	0	00044		LGL 36	MOVE BIT FROM MQ S TO ACC P
00736	-0760	00	0	00001		PBT	IS THERE A BIT IN ACC P
00737	0020	00	0	00741		TRA A60+6	ERROR
00740	0020	00	0	00743		TRA A60+8	OK, PROCEED
00741	0760	00	0	00162		PSE 114	NO BIT IN P
00742	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00743	0140	00	0	00746		TOV A61	OK, PROCEED
00744	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00745	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00746	-0763	00	0	00002	A61	LGL 2	MOVE BIT OUT OF Q
00747	0100	00	0	00752		TZE A61+4	OK, SHOULD BE ZERO
00750	0760	00	0	00162		PSE 114	DID NOT MOVE PAST Q
00751	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00752	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
00753	0020	00	0	00755		TRA A61A	
00754	0020	00	0	00733		TRA A60	
LGL TEST							
00755	0560	00	0	04733	A61A	LDQ PTHR	PLACE BIT IN MQ 2 POS
00756	-0763	00	0	00003		LGL 3	MOVE BIT TO ACC 35
00757	0760	00	0	00001		LBT	CHECK ACC
00760	0020	00	0	00762		TRA A61A+5	DID NOT SHIFT TO ACC 35
00761	0020	00	0	00764		TRA A61A+7	OK, CHECK MQ
00762	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00763	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00764	-0600	00	0	04726		STQ TEMP	PLACE MQ IN TEMP STOR
00765	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
00766	0100	00	0	00771		TZE A61A+12	SHOULD BE ZERO
00767	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00770	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00771	0120	00	0	00774		TPL A61A+15	OK, MQ IS PLUS, PROCEED
00772	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
00773	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
00774	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

00775	0020	00	0	00777		TRA A62	
00776	0020	00	0	00755		TRA A61A	
00777	0560	00	0	04732	A62	LDQ MZE	RQL TEST PLACE BIT IN MQC SIGN POS
01000	-0773	00	0	00001		RQL 1	
01001	-0600	00	0	04726		STQ TEMP	SAVE MQ
01002	0500	00	0	04726		CLA TEMP	BRING MQ TO ACC
01003	0760	00	0	00001		LBT	TEST FOR ROTATE
01004	0020	00	0	01006		TRA A62+7	DID NOT ROTATE
01005	0020	00	0	01010		TRA A62+9	OK, BIT WENT FROM MQ S TO 35
01006	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01007	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01010	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01011	0020	00	0	01013		TRA A62A	
01012	0020	00	0	00777		TRA A62	
01013	0140	00	0	01014	A62A	TOV A62A+1	RQL TEST TURN OFF OVFL
01014	0500	00	0	04713		CLA ZERO	LOAD ACC WITH ZERO
01015	0560	00	0	04713		LDQ ZERO	LOAD MQ WITH ZERO
01016	-0773	00	0	00020		RQL 16	
01017	-0600	00	0	04726		STQ TEMP	MOVE MQ TO ACC
01020	0500	00	0	04726		CLA TEMP	
01021	0100	00	0	01024		TZE A62A+9	OK, SHOULD BE ZERO
01022	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01023	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01024	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01025	0020	00	0	01027		TRA A63	
01026	0020	00	0	01013		TRA A62A	
01027	0560	00	0	04732	A63	LDQ MZE	START WITH BIT IN MQ S
01030	-0773	00	0	00001		RQL 1	SHIFT UNTIL IT GET BACK
01031	-0600	00	0	04726		STQ TEMP	AROUND
01032	0500	00	0	04726		CLA TEMP	
01033	-0100	00	0	01030		TNZ A63+1	LOOP 35 TIMES
01034	-0120	00	0	01037		TMI A63+8	YES, IT GOT BACK TO S POS
01035	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01036	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01037	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01040	0020	00	0	01042		TRA A63A	
01041	0020	00	0	01027		TRA A63	
01042	0560	00	0	04714	A63A	LDQ ONE	RQL MODULO TEST PLACE ONE IN MQ 35
01043	-0773	00	0	00400		RQL 256	SHOULD NOT SHIFT
01044	-0600	00	0	04726		STQ TEMP	LOAD MQ INTO ACC
01045	0500	00	0	04726		CLA TEMP	
01046	0760	00	0	00001		LBT	HAVE WE SHIFTED
01047	0020	00	0	01051		TRA A63A+7	YES, ERROR
01050	0020	00	0	01053		TRA A63A+9	NO
01051	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

01052	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01053	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01054	0020	00	0	01056		TRA A63B	
01055	0020	00	0	01042		TRA A63A	
01056	0560	00	0	04714	A63B	LDQ ONE	RQL MODULO TEST
01057	-0773	00	0	00444		RQL 292	PLACE ONE IN MQ 35
01060	-0600	00	0	04726		STQ TEMP	SHOULD MAKE ONE ROTATION
01061	0500	00	0	04726		CLA TEMP	LOAD MQ INTO ACC
01062	0760	00	0	00001		LBT	
01063	0020	00	0	01065		TRA A63B+7	WAS MODULO INTERPRETED OK
01064	0020	00	0	01067		TRA A63B+9	NO, ERROR
01065	0760	00	0	00162		PSE 114	YES, MODULO PROCESS WORKS
01066	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
01067	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
01070	0020	00	0	01072		TRA A64	TEST SWITCH ONE TO LOOP
01071	0020	00	0	01056		TRA A63B	
01072	0560	00	0	04725	A64	LDQ PTW	TQP TEST
01073	0162	00	0	01076		TQP A64+4	PLACE PLUS NUMBER IN MQ
01074	0760	00	0	00162		PSE 114	SHOULD TRANSFER
01075	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
01076	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
01077	0020	00	0	01101		TRA A65	TEST SWITCH ONE TO LOOP
01100	0020	00	0	01072		TRA A64	
01101	0560	00	0	04724	A65	LDQ MTW	TQP TEST
01102	0162	00	0	01104		TQP A65+3	PLACE NEGATIVE NO IN MQ
01103	0020	00	0	01106		TRA A65+5	SHOULD NOT TRANSFER
01104	0760	00	0	00162		PSE 114	OK
01105	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
01106	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
01107	0020	00	0	01111		TRA A66	TEST SWITCH ONE TO LOOP
01110	0020	00	0	01101		TRA A65	
01111	0761	00	0	01113	A66	NOP A66+2	NOP TEST
01112	0020	00	0	01115		TRA A66+4	PERFORM NOP
01113	0760	00	0	00162		PSE 114	OK
01114	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
01115	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
01116	0020	00	0	01120		TRA A67	TEST SWITCH ONE TO LOOP
01117	0020	00	0	01111		TRA A66	
01120	0500	00	0	04721	A67	CLA ONES	COM TEST
01121	0760	00	0	00006		COM	PLACE ONES IN ACC
01122	0767	00	0	00002		ALS 2	SHOULD NOW BE ZERO

01123	0100	00	0	01126		TZE A67+6	OK, IT IS ZERO
01124	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01125	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01126	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01127	0020	00	0	01131		TRA A68	
01130	0020	00	0	01120		TRA A67	
COM TEST							
01131	0500	00	0	04721	A68	CLA ONES	PLACE ONES IN ACC
01132	0560	00	0	04721		LDQ ONES	PLACE ONES IN MQ
01133	0763	00	0	00010		LLS 8	SHIFT BITS TO P AND Q
01134	0760	00	0	00006		COM	MAKE IT ALL ZEROS
01135	0100	00	0	01140		TZE A68+7	OK, ALL ZEROS
01136	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01137	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01140	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01141	0020	00	0	01143		TRA A69	
01142	0020	00	0	01131		TRA A68	
COM TEST, CHECK SIGN							
01143	0500	00	0	04730	A69	CLA PONES	BRING IN PLUS NUMBER
01144	0760	00	0	00006		COM	MAKE COM
01145	0120	00	0	01150		TPL A69+5	OK, SIGN DID NOT CHANGE
01146	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01147	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01150	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01151	0020	00	0	01153		TRA A70	
01152	0020	00	0	01143		TRA A69	
COM TEST, CHECK SIGN							
01153	0500	00	0	04721	A70	CLA ONES	BRING IN NEG NUMBER
01154	0760	00	0	00006		COM	COM
01155	-0120	00	0	01160		TMI A70+5	OK, SIGN DID NOT CHANGE
01156	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01157	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01160	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01161	0020	00	0	01163		TRA A71	
01162	0020	00	0	01153		TRA A70	
ADD TEST, SIGNS POSITIVE							
01163	0500	00	0	04714	A71	CLA ONE	HAVE BOTH SIGNS POSITIVE
01164	0400	00	0	04714		ADD ONE	ADD
01165	0760	00	0	00001		LBT	SHOULD HAVE ZERO IN ACC 35
01166	0020	00	0	01171		TRA A72	OK
01167	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01170	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
ADD TEST, SIGNS POSITIVE							
01171	0771	00	0	00001	A72	ARS 1	SHIFT ONE TO CHECK ANSWER
01172	0760	00	0	00001		LBT	
01173	0020	00	0	01175		TRA A72+4	DID NOT ADD CORRECTLY
01174	0020	00	0	01177		TRA A72+6	CHECK SIGN

01175	0760	00	0	00162		PSE 114	BIT ERROR
01176	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01177	0120	00	0	01202		TPL A72+9	OK, SIGN IS PLUS
01200	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01201	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01202	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01203	0020	00	0	01205		TRA A73	
01204	0020	00	0	01163		TRA A71	
							ADD TEST, SIGNS NEGATIVE
01205	0500	00	0	04734	A73	CLA MONE	BRING IN MINUS ONE
01206	0400	00	0	04734		ADD MONE	ADD MINUS ONE
01207	0760	00	0	00001		LBT	TEST ANSWER
01210	0020	00	0	01213		TRA A74	OK, ACC 35 IS A ZERO
01211	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01212	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01213	0771	00	0	00001	A74	ARS 1	SHOULD GET A ONE
01214	0760	00	0	00001		LBT	TEST
01215	0020	00	0	01217		TRA A74+4	DID NOT SENSE A ONE
01216	0020	00	0	01221		TRA A74+6	CHECK SIGN
01217	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01220	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01221	-0120	00	0	01224		TMI A74+9	OK, SIGN IS MINUS
01222	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01223	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01224	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01225	0020	00	0	01227		TRA A75	
01226	0020	00	0	01205		TRA A73	REPEAT SECTION
							ADD TEST, ACC PLUS, MEMORY
							NEGATIVE
01227	0500	00	0	04716	A75	CLA THREE	MAKE ACC PLUS THREE
01230	0400	00	0	04735		ADD M2	ADD MEM MINUS TWO
01231	0760	00	0	00001		LBT	SHOULD GET A ONE
01232	0020	00	0	01234		TRA A75+5	
01233	0020	00	0	01236		TRA A76	OK
01234	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01235	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01236	0771	00	0	00001	A76	ARS 1	SEE THAT HAVE NO CARRY
01237	0760	00	0	00001		LBT	TEST FOR ZERO
01240	0020	00	0	01243		TRA A76+5	CHECK SIGN
01241	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01242	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01243	0120	00	0	01246		TPL A76+8	OK, SIGN SHOULD BE PLUS
01244	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01245	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01246	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01247	0020	00	0	01251		TRA A77	
01250	0020	00	0	01227		TRA A75	REPEAT SECTION

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ADD TEST, ACC MINUS
MEMORY PLUS
01251 0500 00 0 04736 A77 CLA M3 MAKE ACC MINUS THREE
01252 0400 00 0 04715 ADD TWO ADD PLUS TWO
01253 0760 00 0 00001 LBT TEST FOR ONE
01254 0020 00 0 01256 TRA A77+5
01255 0020 00 0 01260 TRA A78 OK
01256 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01257 0420 00 0 00000 HPR ERROR STOP WITH TWO UP

01260 0771 00 0 00001 A78 ARS 1 SEE THAT HAVE NO CARRY
01261 0760 00 0 00001 LBT SHOULD BE ZERO
01262 0020 00 0 01265 TRA A78+5 CHECK SIGN
01263 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01264 0420 00 0 00000 HPR ERROR STOP WITH TWO UP

01265 -0120 00 0 01270 TMI A78+8 OK, SIGN IS MINUS
01266 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01267 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01270 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01271 0020 00 0 01273 TRA A79
01272 0020 00 0 01251 TRA A77

ADD TEST
01273 0500 00 0 04715 A79 CLA TWO MAKE ACC PLUS TWO
01274 0400 00 0 04736 ADD M3 ADD MINUS THREE
01275 0760 00 0 00001 LBT TEST FOR ONE
01276 0020 00 0 01300 TRA A79+5
01277 0020 00 0 01302 TRA A80 OK
01300 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01301 0420 00 0 00000 HPR ERROR STOP WITH TWO UP

01302 0771 00 0 00001 A80 ARS 1 CHECK FOR ZERO FIRST
01303 0760 00 0 00001 LBT TEST FOR ZERO
01304 0020 00 0 01307 TRA A80+5 CHECK SIGN
01305 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01306 0420 00 0 00000 HPR ERROR STOP WITH TWO UP

01307 -0120 00 0 01312 TMI A80+8 OK, SIGN IS MINUS
01310 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01311 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01312 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01313 0020 00 0 01315 TRA A81
01314 0020 00 0 01273 TRA A79 REPEAT SECTION

ADD TEST
01315 0500 00 0 04735 A81 CLA M2 MAKE ACC MINUS TWO
01316 0400 00 0 04716 ADD THREE ADD PLUS THREE
01317 0760 00 0 00001 LBT TEST FOR ONE
01320 0020 00 0 01322 TRA A81+5
01321 0020 00 0 01324 TRA A82 OK, GOT A ONE
01322 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01323 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
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01324	0771	00	0	00001	A82	ARS 1	CHECK NEXT POSITION
01325	0760	00	0	00001		LBT	FOR A ZERO
01326	0020	00	0	01331		TRA A82+5	CHECK SIGN
01327	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01330	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01331	0120	00	0	01334		TPL A82+8	OK, PROCEED
01332	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01333	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01334	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01335	0020	00	0	01337		TRA A82A	
01336	0020	00	0	01315		TRA A81	
							ADD TEST, WITH RIPPLE
01337	0500	00	0	04730	A82A	CLA PONES	BRING IN PLUS ONES
01340	0400	00	0	04714		ADD ONE	ADD ONE TO RIPPLE
01341	-0760	00	0	00001		PBT	P SHOULD HAVE BIT
01342	0020	00	0	01344		TRA A82A+5	NO P BIT
01343	0020	00	0	01346		TRA A82A+7	OK, CHECK OVFL
01344	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01345	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01346	0140	00	0	01351		TOV A82A+10	OK, PROCEED
01347	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01350	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01351	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01352	0020	00	0	01354		TRA A83	
01353	0020	00	0	01337		TRA A82A	
							ADD MAGNITUDE TEST
01354	0500	00	0	04734	A83	CLA MONE	ACC NEGATIVE ONE
01355	0401	00	0	04715		ADM TWO	STORAGE PLUS TWO
01356	0760	00	0	00001		LBT	TEST FOR ONE.
01357	0020	00	0	01361		TRA A83+5	NO
01360	0020	00	0	01363		TRA A83+7	CHECK SIGN.
01361	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01362	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01363	0120	00	0	01366		TPL A83+10	OK, SIGN IS PLUS
01364	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01365	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01366	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01367	0020	00	0	01371		TRA A84	
01370	0020	00	0	01354		TRA A83	
							ADM TEST
01371	0500	00	0	04734	A84	CLA MONE	BRING IN MINUS ONE
01372	0401	00	0	04735		ADM M2	STORAGE MINUS 2
01373	0760	00	0	00001		LBT	TEST FOR ONE
01374	0020	00	0	01376		TRA A84+5	NO
01375	0020	00	0	01400		TRA A84+7	OK, CHECK SIGN
01376	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

01377	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01400	0120	00	0	01403		TPL A84+10	OK, PROCEED
01401	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01402	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01403	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01404	0020	00	0	01406		TRA A84A	
01405	0020	00	0	01371		TRA A84	
ADM TEST, WITH RIPPLE							
01406	0500	00	0	04730	A84A	CLA PONES	BRING IN PLUS ONES
01407	0401	00	0	04734		ADM MONE	ADM OF MINUS ONE
01410	-0760	00	0	00001		PBT	SHOULD GET BIT IN P
01411	0020	00	0	01413		TRA A84A+5	NO P BIT
01412	0020	00	0	01415		TRA A84A+7	05, CHECK OVFL
01413	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01414	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01415	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
OK, PROCEED							
01416	0140	00	0	01421		TOV A84A+11	
01417	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01420	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01421	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01422	0020	00	0	01424		TRA A85	
01423	0020	00	0	01406		TRA A84A	
SUB TEST							
01424	0500	00	0	04714	A85	CLA ONE	MAKE ACC PLUS ONE
01425	0402	00	0	04734		SUB MONE	SUB MINUS ONE
01426	0760	00	0	00001		LBT	TEST FOR ZERO
01427	0020	00	0	01432		TRA A85+6	
01430	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01431	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
OK, PROCEED							
01432	0120	00	0	01435		TPL A86	
01433	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01434	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
IN ACC POS 34							
01435	0771	00	0	00001	A86	ARS 1	
01436	0760	00	0	00001		LBT	
01437	0020	00	0	01441		TRA A86+4	ERROR, NO ONE BIT
01440	0020	00	0	01443		TRA A86+6	OK, GOT A ONE BIT
01441	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01442	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01443	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01444	0020	00	0	01446		TRA A87	
01445	0020	00	0	01424		TRA A85	REPEAT SECTION
SUB TEST							
01446	0500	00	0	04734	A87	CLA MONE	MAKE ACC MINUS ONE
01447	0402	00	0	04714		SUB ONE	SUB PLUS ONE
01450	0760	00	0	00001		LBT	TEST FOR ZERO
01451	0020	00	0	01454		TRA A87+6	OK, CHECK SIGN

01452	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01453	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01454	-0120	00	0	01457		TMI A88	OK, PROCEED
01455	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01456	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01457	0771	00	0	00001	A88	ARS 1	CHECK FOR ONE IN POS 34
01460	0760	00	0	00001		LBT	SHOULD GET A ONE
01461	0020	00	0	01463		TRA A88+4	NO, DID NOT GET IT
01462	0020	00	0	01465		TRA A88+6	OK, PROCEED
01463	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01464	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01465	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01466	0020	00	0	01470		TRA A89	
01467	0020	00	0	01446		TRA A87	
							SUB TEST, END CARRY
01470	0500	00	0	04716	A89	CLA THREE	ACC PLUS THREE
01471	0402	00	0	04715		SUB TWO	SUB PLUS TWO
01472	0760	00	0	00001		LBT	SHOULD HAVE PLUS ONE
01473	0020	00	0	01475		TRA A89+5	DID NOT GET ONE
01474	0020	00	0	01477		TRA A89+7	OK, CHECK SIGN
01475	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01476	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01477	0120	00	0	01502		TPL A89+10	OK PROCEED
01500	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01501	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01502	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01503	0020	00	0	01505		TRA A90	
01504	0020	00	0	01470		TRA A89	
							SUB TEST, NO END CARRY
01505	0500	00	0	04715	A90	CLA TWO	ACC PLUS TWO
01506	0402	00	0	04716		SUB THREE	SUB PLUS THREE
01507	0760	00	0	00001		LBT	TEST FOR ONE
01510	0020	00	0	01512		TRA A90+5	NO GOT ERROR
01511	0020	00	0	01514		TRA A90+7	OK, PROCEED
01512	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01513	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01514	-0120	00	0	01517		TMI A91	OK, PROCEED
01515	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01516	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01517	0771	00	0	00001	A91	ARS 1	CHECK ACC POS 34
01520	0760	00	0	00001		LBT	SHOULD BE ZERO
01521	0020	00	0	01524		TRA A91+5	OK IT IS ZERO
01522	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01523	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01524	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01525	0020	00	0	01527		TRA A92	
01526	0020	00	0	01505		TRA A90	REPEAT SECTION

01602	0140	00	0	01605		TOV A95A+10	OK, PROCEED
01603	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01604	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01605	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01606	0020	00	0	01610		TRA A96	
01607	0020	00	0	01573		TRA A95A	
SBM TEST							
01610	0500	00	0	04714	A96	CLA ONE	ACC PLUS ONE
01611	-0400	00	0	04735		SBM M2	SBM MINUS TWO
01612	0760	00	0	00001		LBT	TEST FOR ONE
01613	0020	00	0	01615		TRA A96+5	NO GOOD, GOT ZERO
01614	0020	00	0	01617		TRA A96+7	OK, CHECK SIGN
01615	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01616	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01617	-0120	00	0	01622		TMI A96+10	OK, PROCEED
01620	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01621	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01622	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01623	0020	00	0	01625		TRA A97	
01624	0020	00	0	01610		TRA A96	
SBM TEST							
01625	0500	00	0	04714	A97	CLA ONE	ACC PLUS ONE
01626	-0400	00	0	04715		SBM TWO	SBM PLUS TWO
01627	0760	00	0	00001		LBT	TEST FOR ONE
01630	0020	00	0	01632		TRA A97+5	GOT ZERO
01631	0020	00	0	01634		TRA A97+7	OK, CHECK SIGN
01632	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01633	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01634	-0120	00	0	01637		TMI A97+10	OK, PROCEED
01635	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01636	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01637	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01640	0020	00	0	01642		TRA A97A	
01641	0020	00	0	01625		TRA A97	
SBM TEST, WITH RIPPLE							
01642	0500	00	0	04721	A97A	CLA ONES	BRING IN MINUS ONES
01643	-0400	00	0	04714		SBM ONE	SBM OF PLUS ONE
01644	-0760	00	0	00001		PBT	SHOULD BE BIT IN P
01645	0020	00	0	01647		TRA A97A+5	NO BIT IN P
01646	0020	00	0	01651		TRA A97A+7	OK, CHECK OVFL
01647	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01650	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01651	0140	00	0	01654		TOV A97A+10	OK, PROCEED
01652	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01653	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01654	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

01655 0020 00 0 01657 TRA A98
01656 0020 00 0 01642 TRA A97A

01657 0500 00 0 04734 A98 CLA MONE MAKE ACC MINUS
01660 -0120 00 0 01663 TMI A98+4 CHECK SIGN LOADING
01661 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01662 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01663 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01664 0020 00 0 01666 TRA A99
01665 0020 00 0 01657 TRA A98

01666 0500 00 0 04714 A99 CLA ONE MAKE ACC PLUS
01667 0120 00 0 01672 TPL A99+4 CHECK SIGN, SHOULD BE PLUS
01670 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01671 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01672 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01673 0020 00 0 01675 TRA A100
01674 0020 00 0 01666 TRA A99

01675 0500 00 0 04713 A100 CLA ZERO SEE IF ACC IS CLEAR
01676 0100 00 0 01701 TZE A100+4 OK, SHOULD BE ZERO
01677 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01700 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01701 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01702 0020 00 0 01704 TRA B
01703 0020 00 0 01675 TRA A100

01704 0500 00 0 04725 B CLA PTW BIT IN ACC 1
01705 0767 00 0 00001 ALS 1 SHIFT TO P POSITION
01706 -0760 00 0 00001 PBT TEST P FOR A ONE
01707 0020 00 0 01711 TRA B+5 NO, GOT A ZERO
01710 0020 00 0 01713 TRA B+7 OK, CHECK OVFL
01711 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01712 0420 00 0 00000 HPR ERROR STOP WITH TWO UP

01713 0140 00 0 01716 TOV B+10 OK, PROCEED
01714 0760 00 0 00162 PSE 114 TEST SENSE SWITCH TWO
01715 0420 00 0 00000 HPR ERROR STOP WITH TWO UP
01716 0760 00 0 00161 PSE 113 TEST SWITCH ONE TO LOOP
01717 0020 00 0 01721 TRA B1
01720 0020 00 0 01704 TRA B

01721 0500 00 0 04714 B1 CLA ONE SEE IF Q AND P POS ARE
CLEAR
01722 -0760 00 0 00001 PBT P POS SHOULD BE ZERO
01723 0020 00 0 01726 TRA B1+5 OK, NOW TEST Q POS

01724	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01725	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01726	0771	00	0	00001		ARS 1	SHIFT FOR Q
01727	-0760	00	0	00001		PBT	Q POS SHOULD BE ZERO
01730	0020	00	0	01733		TRA B1+10	OK, CHECK OVFL
01731	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01732	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01733	-0140	00	0	01736		TNO B1+13	OK, OVFL SHOULD BE OFF
01734	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01735	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01736	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01737	0020	00	0	01741		TRA B2	
01740	0020	00	0	01721		TRA B1	
							CLA TEST
01741	0500	00	0	04714	B2	CLA ONE	SEE THAT ONE IS IN ACC 35
01742	0760	00	0	00001		LBT	IS ONE THERE
01743	0020	00	0	01745		TRA B2+4	NO
01744	0020	00	0	01747		TRA B2+6	YES, ONE IS THERE
01745	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01746	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01747	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01750	0020	00	0	01752		TRA B3	
01751	0020	00	0	01741		TRA B2	
							CLA TEST, WITH RIPPLE
01752	0500	00	0	04730	B3	CLA PONES	BRING IN PLUS ONES
01753	0400	00	0	04714		ADD ONE	ADD ONE
01754	0760	00	0	00001		LBT	CHECK ACC 35 FOR ZERO
01755	0020	00	0	01760		TRA B3+6	OK, IS ZERO
01756	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01757	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01760	-0760	00	0	00001		PBT	TEST P POS FOR ONE
01761	0020	00	0	01763		TRA B3+9	ERROR
01762	0020	00	0	01765		TRA B3+11	OK, CHECK ACC RESULT
01763	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01764	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01765	0767	00	0	00002		ALS 2	OK, CHECK FOR ZERO IN OTHER
01766	0100	00	0	01771		TZE B3+15	POS BY MOVING BIT PAST Q
01767	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
01770	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
01771	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
01772	0020	00	0	01774		TRA B4	
01773	0020	00	0	01752		TRA B3	
							CLS TEST
01774	0502	00	0	04734	B4	CLS MONE	BRING IN MINUS ONE
01775	0120	00	0	02000		TPL B4+4	SHOULD BECOME PLUS
01776	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGN

01777	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02000	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02001	0020	00	0	02003		TRA B5	
02002	0020	00	0	01774		TRA B4	
CLS TEST							
02003	0502	00	0	04714	B5	CLS ONE	BRING IN ONE
02004	-0120	00	0	02007		TMI B5+4	SHOULD BE MINUS
02005	0760	00	0	00162		PSE 114	DID NOT CHANGE SIGN
02006	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02007	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02010	0020	00	0	02012		TRA B6	
02011	0020	00	0	02003		TRA B5	
CLS TEST							
02012	0502	00	0	04714	B6	CLS ONE	BRING IN ONE IN ACC 35
02013	0760	00	0	00001		LBT	CHECK, IS ONE IN ACC 35
02014	0020	00	0	02016		TRA B6+4	NO GOOD, DID NOT GET ONE
02015	0020	00	0	02020		TRA B6+6	PROCEED
02016	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02017	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02020	-0760	00	0	00001		PBT	SEE IF P IS CLEAR
02021	0020	00	0	02024		TRA B6+10	OK, PROCEED
02022	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02023	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02024	0771	00	0	00001		ARS 1	SHIFT TO CHECK Q
02025	-0760	00	0	00001		PBT	SHOULD BE ZERO
02026	0020	00	0	02031		TRA B6+15	OK, IT IS ZERO, PROCEED
02027	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02030	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02031	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02032	0020	00	0	02034		TRA B7	
02033	0020	00	0	02012		TRA B6	
CAL TEST							
02034	-0500	00	0	04734	B7	CAL MONE	CHECK THAT P HAS ONE
02035	-0760	00	0	00001		PBT	SHOULD HAVE ONE
02036	0020	00	0	02040		TRA B7+4	
02037	0020	00	0	02042		TRA B8	OK, PROCEED
02040	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02041	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02042	0120	00	0	02045	B8	TPL B8+3	CHECK THAT SIGN DID NOT CHANGE
02043	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02044	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02045	0771	00	0	00001		ARS 1	CHECK Q POS
02046	-0760	00	0	00001		PBT	SHOULD BE ZERO
02047	0020	00	0	02052		TRA B8+8	OK, PROCEED
02050	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

02051	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02052	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02053	0020	00	0	02055		TRA B9	
02054	0020	00	0	02034		TRA B7	
CAL TEST							
02055	-0500	00	0	04714	B9	CAL ONE	BRING IN PLUS ONE
02056	-0760	00	0	00001		PBT	P SHOULD BE ZERO
02057	0020	00	0	02062		TRA B9+5	OK, PROCEED
02060	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02061	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02062	0760	00	0	00001		LBT	TEST ACC 35 FOR ONE
02063	0020	00	0	02065		TRA B9+8	DID NOT BRING IN A ONE
02064	0020	00	0	02067		TRA B10	OK, PROCEED
02065	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02066	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02067	0120	00	0	02072	B10	TPL B10+3	SIGN SHOULD BE PLUS
02070	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02071	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02072	0771	00	0	00001		ARS 1	CHECK Q POS FOR ZERO
02073	-0760	00	0	00001		PBT	
02074	0020	00	0	02077		TRA B10+8	OK, PROCEED
02075	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02076	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02077	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02100	0020	00	0	02102		TRA B11	
02101	0020	00	0	02055		TRA B9	
ACL TEST							
02102	0500	00	0	04713	B11	CLA ZERO	CHECK P POSITION AND SIGN
02103	0361	00	0	04714		ACL ONE	POSITION
02104	-0760	00	0	00001		PBT	SHOULD BE A ZERO IN A
02105	0020	00	0	02110		TRA B11+6	CHECK SIGN
02106	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02107	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02110	0120	00	0	02113		TPL B11+9	OK, PROCEED
02111	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02112	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02113	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02114	0020	00	0	02116		TRA B12	
02115	0020	00	0	02102		TRA B11	
ACL TEST							
02116	0500	00	0	04713	B12	CLA ZERO	BRING IN MINUS NUMBER
02117	0361	00	0	04734		ACL MONE	SHOULD GET ONE IN P POS
02120	-0760	00	0	00001		PBT	
02121	0020	00	0	02123		TRA B12+5	NO GOOD, GOT ZERO
02122	0020	00	0	02125		TRA B12+7	CHECK SIGN
02123	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

02124	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02125	0120	00	0	02130		TPL B12+10	OK, PROCEED
02126	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02127	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02130	0760	00	0	00001		LBT	CHECK FOR ONE IN ACL 35
02131	0020	00	0	02133		TRA B12+13	GOT A FALSE CARRY
02132	0020	00	0	02135		TRA B12+15	OK
02133	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02134	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02135	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02136	0020	00	0	02140		TRA B13	
02137	0020	00	0	02116		TRA B12	
ACL TEST							
02140	-0500	00	0	04734	B13	CAL MONE	ACC BIT IN POS P AND POS 35
02141	0361	00	0	04734		ACL MONE	ACL MINUS ONE
02142	-0760	00	0	00001		PBT	SHOULD GET ZERO IN P
02143	0020	00	0	02146		TRA B13+6	OK, PROCEED
02144	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02145	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02146	0760	00	0	00001		LBT	TEST FOR XXX CARRY
02147	0020	00	0	02151		TRA B13+9	NO GOOD, GOT A ZERO
02150	0020	00	0	02153		TRA B13+11	OK, PROCEED
02151	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02152	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02153	0771	00	0	00001		ARS 1	OK, NOW SEE IF Q BIT
02154	-0760	00	0	00001		PBT	HAS A ONE
02155	0020	00	0	02160		TRA B13+16	Q SHOULD BE CLEARED
02156	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02157	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02160	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02161	0020	00	0	02163		TRA B14	
02162	0020	00	0	02140		TRA B13	
STO TEST							
02163	0500	00	0	04721	B14	CLA ONES	BRING IN ALL ONES
02164	0601	00	0	04726		STO TEMP	PLACE IN TEMP STORAGE
02165	0402	00	0	04726		SUB TEMP	SUB SAME QUANTITY
02166	0100	00	0	02171		TZE B14+6	SHOULD BE ZERO
02167	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02170	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02171	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02172	0020	00	0	02174		TRA B15	
02173	0020	00	0	02163		TRA B14	
SLW TEST							
02174	-0500	00	0	04734	B15	CAL MONE	PUT BIT IN POS P AND POS 35
02175	0120	00	0	02200		TPL B15+4	OK, SIGN SHOULD BE PLUS
02176	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

02177	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02200	0602	00	0	04726		SLW TEMP	SLW IN TEMP STORAGE
02201	0500	00	0	04726		CLA TEMP	BRING WORD BACK
02202	0402	00	0	04734		SUB MONE	SUB ORIGINAL
02203	0100	00	0	02206		TZE B15+10	OK, SHOULD GET ZERO
02204	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02205	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02206	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02207	0020	00	0	02211		TRA B16	
02210	0020	00	0	02174		TRA B15	
							SLW TEST
02211	0500	00	0	04734	B16	CLA MONE	PUT BIT IN P, SIGN MINUS
02212	0602	00	0	04726		SLW TEMP	SLW IN TEMP STORAGE
02213	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
02214	0120	00	0	02217		TPL B16+6	SIGN SHOULD NOW BE PLUS
02215	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02216	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02217	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02220	0020	00	0	02222		TRA B17	
02221	0020	00	0	02211		TRA B16	
							STP TEST
02222	0500	00	0	04713	B17	CLA ZERO	INITIALIZE TEMP STORAGE
02223	0601	00	0	04726		STO TEMP	
02224	0500	00	0	04721		CLA ONES	BRING IN ALL ONES
02225	0630	00	0	04726		STP TEMP	STP IN TEMP STORAGE
02226	0500	00	0	04726		CLA TEMP	BRING BACK, SIGN IS PLUS
02227	0120	00	0	02232		TPL B17+8	SHOULD BE PLUS
02230	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02231	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02232	0767	00	0	00001		ALS 1	CHECK ACC POS 1
02233	-0760	00	0	00001		PBT	SHOULD BE ONE
02234	0020	00	0	02236		TRA B17+12	ERROR IN ONE POS
02235	0020	00	0	02240		TRA B17+14	OK, PROCEED
02236	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02237	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02240	0140	00	0	02243		TOV B17+17	OVFL SHOULD BE ON
02241	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02242	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02243	0767	00	0	00001		ALS 1	CHECK ACC POS 2
02244	-0760	00	0	00001		PBT	SHOULD BE ZERO
02245	0020	00	0	02247		TRA B17+21	ERROR IN TWO POSITION
02246	0020	00	0	02251		TRA B17+23	
02247	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02250	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02251	0140	00	0	02254		TOV B17+26	OVFL SHOULD BE ON
02252	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02253	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02254	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

02255	0020	00	0	02257		TRA B18	
02256	0020	00	0	02222		TRA B17	
STP TEST							
02257	0500	00	0	04713	B18	CLA ZERO	INITIALIZE TEMP STORAGE
02260	0601	00	0	04726		STO TEMP	
02261	0500	00	0	04713		CLA ZERO	BRING IN PLUS ZERO
02262	0630	00	0	04726		STP TEMP	STORE P, 1, 2, ZEROS
02263	0500	00	0	04726		CLA TEMP	BRING BACK TO ACC
02264	0120	00	0	02267		TPL B18+8	OK, SHOULD BE PLUS
02265	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02266	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02267	0767	00	0	00001		ALS 1	CHECK ONE POSITION
02270	-0760	00	0	00001		PBT	SHOULD BE ZERO
02271	0020	00	0	02274		TRA B18+13	OK, CHECK OVFL
02272	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02273	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02274	-0140	00	0	02277		TNO B18+16	OK, OVFL SHOULD BE OFF
02275	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02276	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02277	0767	00	0	00001		ALS 1	CHECK TWO POSITION
02300	-0760	00	0	00001		PBT	SHOULD BE ZERO
02301	0020	00	0	02304		TRA B18+21	OK, CHECK OVFL
02302	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02303	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02304	-0140	00	0	02307		TNO B18+24	OK, OVFL SHOULD BE OFF
02305	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02306	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02307	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02310	0020	00	0	02312		TRA B19	
02311	0020	00	0	02257		TRA B18	
STP TEST							
02312	0500	00	0	04713	B19	CLA ZERO	INITIALIZE TEMP STORAGE
02313	0601	00	0	04726		STO TEMP	
02314	-0500	00	0	04721		CAL ONES	BRING IN ONES, CHECK POS
02315	0767	00	0	00001		ALS 1	P AND POS Q
02316	0630	00	0	04726		STP TEMP	STO IN TEMP STORAGE
02317	0771	00	0	00001		ARS 1	DID CLEAR Q POSITION
02320	-0760	00	0	00001		PBT	
02321	0020	00	0	02323		TRA B19+9	NO GOOD, GOT ZERO
02322	0020	00	0	02325		TRA B19+11	CHECK SIGN
02323	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02324	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02325	0120	00	0	02330		TPL B19+14	
02326	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02327	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02330	0500	00	0	04726		CLA TEMP	BRING BACK CONTENTS OF TEMP

02331	-0120	00	0	02334	TMI B19+18	OK, GOT P POS IN STORAGE
02332	0760	00	0	00162	PSE 114	TEST SENSE SWITCH TWO
02333	0420	00	0	00000	HPR	ERROR STOP WITH TWO UP
02334	0760	00	0	00161	PSE 113	TEST SWITCH ONE TO LOOP
02335	0020	00	0	02337	TRA B20	
02336	0020	00	0	02312	TRA B19	
STA TEST						
02337	0500	00	0	04750	B20 CLA RTN	SET UP ERROR TRA B20+7
02340	0601	00	0	04726	STO TEMP	IN STORAGE IF STA FAILS
02341	0500	00	0	04751	CLA RTN+1	SET UP ERROR TRA B20+5
02342	0621	00	0	04726	STA TEMP	PLACE IT IN STORAGE
02343	0020	00	0	04726	TRA TEMP	GO THERE AND MAKE TRANSFER
02344	0402	00	0	04751	SUB RTN+1	SEE IF ACC REMAINS SAME
02345	0100	00	0	02350	TZE B20+9	OK, CHECKS OUT
02346	0760	00	0	00162	PSE 114	TEST SENSE SWITCH TWO
02347	0420	00	0	00000	HPR	ERROR STOP WITH TWO UP
02350	0760	00	0	00161	PSE 113	TEST SWITCH ONE TO LOOP
02351	0020	00	0	02353	TRA B21	
02352	0020	00	0	02337	TRA B20	
STA TEST						
02353	0500	00	0	04713	B21 CLA ZERO	INITIALIZE TEMP STORAGE
02354	0601	00	0	04726	STO TEMP	WITH ZERO
02355	0500	00	0	04723	CLA 8CF	ALL ONES 21-35
02356	0621	00	0	04726	STA TEMP	PLACE ONES IN TEMP STORE
02357	0500	00	0	04726	CLA TEMP	BRING IT TO ACC
02360	0402	00	0	04723	SUB 8CF	SUB 8CF
02361	0100	00	0	02364	TZE B21+9	OK
02362	0760	00	0	00162	PSE 114	TEST SENSE SWITCH TWO
02363	0420	00	0	00000	HPR	ERROR STOP WITH TWO UP
02364	0760	00	0	00161	PSE 113	TEST SWITCH ONE TO LOOP
02365	0020	00	0	02367	TRA B22	
02366	0020	00	0	02353	TRA B21	
STA TEST						
02367	0500	00	0	04723	B22 CLA 8CF	INITIALIZE TEMP STORAGE
02370	0601	00	0	04726	STO TEMP	WITH ONES IN POS 21-35
02371	0500	00	0	04713	CLA ZERO	BRING ZERO INTO ACC
02372	0621	00	0	04726	STA TEMP	STA IN TEMP STORAGE
02373	0500	00	0	04726	CLA TEMP	BRING IT BACK
02374	0100	00	0	02377	TZE B22+8	OK, REPLACE ONES WITH
						ZEROS
02375	0760	00	0	00162	PSE 114	TEST SENSE SWITCH TWO
02376	0420	00	0	00000	HPR	ERROR STOP WITH TWO UP
02377	0760	00	0	00161	PSE 113	TEST SWITCH ONE TO LOOP
02400	0020	00	0	02402	TRA B23	
02401	0020	00	0	02367	TRA B22	
STD TEST						
02402	0500	00	0	04713	B23 CLA ZERO	INITIALIZE TEMP STORAGE
02403	0601	00	0	04726	STO TEMP	WITH ALL ZERO

02404	0500	00	0	04723		CLA 8CF	BRING IN 15 ONES
02405	0767	00	0	00022		ALS 18	MOVE TO DECREMENT
02406	0622	00	0	04726		STD TEMP	PUT ONES IN TEMP STORE
02407	0402	00	0	04726		SUB TEMP	SUB TEMP STORE FROM ACC
02410	0100	00	0	02413		TZE B23+9	OK, SHOULD GET ZERO
02411	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02412	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02413	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02414	0020	00	0	02416		TRA B24	
02415	0020	00	0	02402		TRA B23	
STD TEST							
02416	0500	00	0	04723	B24	CLA 8CF	INITIALIZE TEMP STORAGE
02417	0767	00	0	00022		ALS 18	WITH ALL ONES IN
02420	0601	00	0	04726		STO TEMP	DECREMENT FIELD
02421	0500	00	0	04713		CLA ZERO	BRING IN ZERO
02422	0622	00	0	04726		STD TEMP	STD WITH ZEROS
02423	0500	00	0	04726		CLA TEMP	BRING BACK TEST FOR ZEROS
02424	0100	00	0	02427		TZE B24+9	OK
02425	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02426	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02427	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02430	0020	00	0	02432		TRA B25	
02431	0020	00	0	02416		TRA B24	
CAS TEST							
02432	0500	00	0	04716	B25	CLA THREE	MAKE ACC GRATER THEN
02433	0340	00	0	04715		CAS TWO	STORAGE, SIGNS PLUS
02434	0020	00	0	02440		TRA B25+6	OK, PROCEED
02435	0020	00	0	02436		TRA B25+4	SHOULD NOT BE EQUAL
02436	0760	00	0	00162		PSE 114	SHOULD NOT BE LESS
02437	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02440	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02441	0020	00	0	02443		TRA B26	
02442	0020	00	0	02432		TRA B25	
CAS TEST							
02443	0500	00	0	04715	B26	CLA TWO	MAKE ACC GREATER THEN
02444	0340	00	0	04736		CAS M3	STORAGE, SIGNS UNLIKE
02445	0020	00	0	02451		TRA B26+6	OK, PROCEED
02446	0020	00	0	02447		TRA B26+4	SHOULD NOT BE EQUAL
02447	0760	00	0	00162		PSE 114	SHOULD NOT BE LESS
02450	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02451	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02452	0020	00	0	02454		TRA B27	
02453	0020	00	0	02443		TRA B26	
CAS TEST							
02454	0500	00	0	04735	B27	CLA M2	MAKE ACC GREATER THEN
02455	0340	00	0	04736		CAS M3	STORAGE, SIGNS MINUS
02456	0020	00	0	02462		TRA B27+6	OK, PROCEED
02457	0020	00	0	02460		TRA B27+4	SHOULD NOT BE EQUAL

02460	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02461	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02462	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02463	0020	00	0	02465		TRA B28	
02464	0020	00	0	02454		TRA B27	

							CAS TEST
02465	0500	00	0	04715	B28	CLA TWO	MAKE ACC LESS THAN
02466	0340	00	0	04716		CAS THREE	STORAGE, SIGNS PLUS
02467	0020	00	0	02472		TRA B28+5	SHOULD NOT BE GREATER
02470	0020	00	0	02472		TRA B28+5	SHOULD NOT BE EQUAL
02471	0020	00	0	02474		TRA B28+7	SHOULD BE LESS
02472	0760	00	0	00162		PSE 114	SHOULD NOT BE LESS
02473	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02474	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02475	0020	00	0	02477		TRA B29	
02476	0020	00	0	02465		TRA B28	

							CAS TEST
02477	0500	00	0	04736	B29	CLA M3	MAKE ACC LES THAN
02500	0340	00	0	04715		CAS TWO	STORAGE, SIGNS PLUS
02501	0020	00	0	02504		TRA B29+5	SHOULD NOT BE GREATER
02502	0020	00	0	02504		TRA B29+5	SHOULD NOT BE EQUAL
02503	0020	00	0	02506		TRA B29+7	SHOULD BE LESS
02504	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02505	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02506	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02507	0020	00	0	02511		TRA B30	
02510	0020	00	0	02477		TRA B29	

							CAS TEST
02511	0500	00	0	04736	B30	CLA M3	MAKE ACC LES THAN
02512	0340	00	0	04735		CAS M2	STORAGE, SIGNS UNLIKE
02513	0020	00	0	02516		TRA B30+5	SHOULD NOT BE GREATER
02514	0020	00	0	02516		TRA B30+5	SHOULD NOT BE EQUAL
02515	0020	00	0	02520		TRA B30+7	OK, PROCEED
02516	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02517	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02520	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02521	0020	00	0	02523		TRA B31	
02522	0020	00	0	02511		TRA B30	

							CAS TEST
02523	0500	00	0	04715	B31	CLA TWO	
02524	0340	00	0	04715		CAS TWO	
02525	0020	00	0	02527		TRA B31+4	SHOULD NOT BE GREATER
02526	0020	00	0	02531		TRA B31+6	OK, PROCEED
02527	0760	00	0	00162		PSE 114	SHOULD NOT BE LESS
02530	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02531	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02532	0020	00	0	02534		TRA B32	
02533	0020	00	0	02523		TRA B31	

							CAS TEST PLUS ZERO AND MINUS ZERO
02534	0500	00	0	04713	B32	CLA ZERO	MAKE ACC GREATER THAN
02535	0340	00	0	04732		CAS MZE	STORAGE
02536	0020	00	0	02542		TRA B32+6	OK, PROCEED
02537	0020	00	0	02540		TRA B32+4	SHOULD NOT BE EQUAL
02540	0760	00	0	00162		PSE 114	SHOULD NOT BE LESS
02541	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02542	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02543	0020	00	0	02545		TRA B33	
02544	0020	00	0	02534		TRA B32	
							LDQ TEST
02545	0500	00	0	04713	B33	CLA ZERO	CLEAR ACC AND MQ TO START
02546	0771	00	0	00044		ARS 36	
02547	0560	00	0	04721		LDQ ONES	BRING IN ALL ONES TO MQ
02550	0763	00	0	00000		LLS 0	SHIFT SIGNS
02551	-0120	00	0	02554		TMI B33+7	OK, SIGN IS MINUS
02552	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02553	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02554	0763	00	0	00043		LLS 35	SHIFT ONES TO ACC
02555	0140	00	0	02556		TOV B33+9	TURN OFF OVFL
02556	0400	00	0	04734		ADD MONE	ADD MINUS ONE TO RIPPLE
02557	0140	00	0	02562		TOV B33+13	SHOULD OVFL
02560	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02561	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02562	0767	00	0	00002		ALS 2	REMOVE P AND Q POSITION
02563	0100	00	0	02566		TZE B33+17	OK, SHOULD GET ZERO NOW
02564	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02565	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02566	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02567	0020	00	0	02571		TRA B34	
02570	0020	00	0	02545		TRA B33	
							STQ TEST
02571	0560	00	0	04721	B34	LDQ ONES	BRING ALL ONES TO MQ
02572	-0600	00	0	04726		STQ TEMP	PLACE IN TEMP STORAGE
02573	0500	00	0	04726		CLA TEMP	BRING IN ACC
02574	-0120	00	0	02577		TMI B34+6	OK, SIGN IS MINUS
02575	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02576	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02577	0140	00	0	02600		TOV B34+7	TURN OFF OVFL
02600	0400	00	0	04734		ADD MONE	ADD MINUS ONE TO RIPPLE
02601	0140	00	0	02604		TOV B34+11	SHOULD OVFL
02602	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02603	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02604	0767	00	0	00002		ALS 2	REMOVE P AND Q POSITION
02605	0100	00	0	02610		TZE B34+15	SHOULD GET ZERO

02606	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02607	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02610	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02611	0020	00	0	02613		TRA B35	
02612	0020	00	0	02571		TRA B34	
LDQ TEST							
02613	0560	00	0	04713	B35	LDQ ZERO	BRING IN ALL ZEROS TO MQ
02614	-0600	00	0	04726		STQ TEMP	PLACE IN TEMP STORAGE
02615	0500	00	0	04726		CLA TEMP	BRING IN ACC
02616	0100	00	0	02621		TZE B35+6	OK, SHOULD BE ZERO
02617	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02620	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02621	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02622	0020	00	0	02624		TRA B36	
02623	0020	00	0	02613		TRA B35	
SLQ TEST							
02624	0500	00	0	04713	B36	CLA ZERO	MAKE ACC AND TEMP STORAGE
02625	0601	00	0	04726		STO TEMP	ALL ZEROS
02626	0560	00	0	04721		LDQ ONES	MAKE MQ ALL ONES
02627	-0620	00	0	04726		SLQ TEMP	PLACE S, 1-17 IN TEMP STORAGE
02630	0500	00	0	04726		CLA TEMP	BRING BACK TO ACC
02631	-0120	00	0	02634		TMI B36+8	SHOULD BE MINUS
02632	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02633	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
SSP							
02634	0760	00	0	00003		SSP	MAKE SIGN PLUS
02635	0140	00	0	02636		TOV B36+10	TURN OFF OVFL
02636	0767	00	0	00001		ALS 1	SHIFT TO P POS UNTIL ONLY
02637	0140	00	0	02636		TOV B36+10	BIT LEFT IN Q
02640	-0100	00	0	02643		TNZ B36+15	OK, SHOULD NOT GET ZERO
02641	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02642	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
ALS 2							
02643	0767	00	0	00002		ALS 2	OK, SHOULD BE ZERO
02644	-0140	00	0	02647		TNO B36+19	OK, SHOULD NOT GET EXTRA BITS
PSE 114							
02645	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
HPR							
02646	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
PSE 113							
02647	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
TRA B37							
02650	0020	00	0	02652		TRA B37	
TRA B36							
02651	0020	00	0	02624		TRA B36	
SLQ TEST							
02652	0560	00	0	04713	B37	LDQ ZERO	BRING ZEROS TO MQ
02653	0500	00	0	04721		CLA ONES	PLACE ONES IN TEMP STORAGE
02654	0601	00	0	04726		STO TEMP	
02655	-0620	00	0	04726		SLQ TEMP	PLACE ZEROS IN S, 1-17
02656	0500	00	0	04726		CLA TEMP	OF ACC
02657	0771	00	0	00022		ARS 18	SHIFT ONES OUT
02660	0100	00	0	02663		TZE B37+9	OK, RESET SHOULD BE ZEROS
02661	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

02662	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02663	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02664	0020	00	0	02666		TRA B38	
02665	0020	00	0	02652		TRA B37	

							TLQ TEST
02666	0500	00	0	04715	B38	CLA TWO	MQ LESS THAN ACC
02667	0560	00	0	04736		LDQ M3	MQ MINUS 3 ACC PLUS 2
02670	0040	00	0	02673		TLQ B38+5	OK, SHOULD TRANSFER
02671	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02672	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02673	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02674	0020	00	0	02676		TRA B39	
02675	0020	00	0	02666		TRA B38	

							TLQ TEST
02676	0500	00	0	04736	B39	CLA M3	MQ GREATER THEN ACC
02677	0560	00	0	04735		LDQ M2	MQ MINUS 2 ACC MINUS 3
02700	0040	00	0	02702		TLQ B39+4	SHOULD NOT TRANSFER
02701	0020	00	0	02704		TRA B39+6	OK, PROCEED
02702	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02703	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02704	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02705	0020	00	0	02707		TRA B40	
02706	0020	00	0	02676		TRA B39	

							TLQ TEST
02707	0500	00	0	04715	B40	CLA TWO	MQ EQUALS ACC
02710	0560	00	0	04715		LDQ TWO	BOTH PLUS TWO
02711	0040	00	0	02713		TLQ B40+4	SHOULD NOT TRANSFER
02712	0020	00	0	02715		TRA B40+6	OK, PROCEED
02713	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02714	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02715	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02716	0020	00	0	02720		TRA B41	
02717	0020	00	0	02707		TRA B40	

							TLQ TEST
02720	0500	00	0	04713	B41	CLA ZERO	MQ LESS THEN ACC
02721	0560	00	0	04732		LDQ MZE	MQ MINUS 0 ACC PLUS 0
02722	0040	00	0	02725		TLQ B41+5	OK, SHOULD TRANSFER
02723	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02724	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02725	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02726	0020	00	0	02730		TRA B42	
02727	0020	00	0	02720		TRA B41	

							TLQ TEST
02730	0500	00	0	04732	B42	CLA MZE	MQ GREATER THEN ACC
02731	0560	00	0	04713		LDQ ZERO	MQ PLUS 0 ACC MINUS 0
02732	0040	00	0	02734		TLQ B42+4	SHOULD NOT TRANSFER

02733	0020	00	0	02736		TRA B42+6	OK, PROCEED
02734	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02735	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02736	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02737	0020	00	0	02741		TRA B43	
02740	0020	00	0	02730		TRA B42	
RND TEST							
02741	0500	00	0	04713	B43	CLA ZERO	CLEAR ACC
02742	0560	00	0	04725		LDQ PTW	PLACE BIT IN MQ 1 POS
02743	0760	00	0	00010		RND	ROUND SHOULD GO TO ACC
02744	0760	00	0	00001		LBT	POS 35, IS IT THERE
02745	0020	00	0	02747		TRA B43+6	NO, ERROR
02746	0020	00	0	02751		TRA B43+8	YES, OK
02747	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02750	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02751	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02752	0020	00	0	02754		TRA B44	
02753	0020	00	0	02741		TRA B43	
MPY TEST							
02754	0500	00	0	04730	B44	CLA PONES	PLACE ALL ONES IN ACC
02755	0767	00	0	00002		ALS 2	PLACE ONES IN P AND Q
02756	0560	00	0	04713		LDQ ZERO	MULTPLY ZERO BY ZERO
02757	0200	00	0	04713		MPY ZERO	CHECK ACC AND MQ FOR ZERO
02760	0100	00	0	02763		TZE B44+7	OK, SHOULD BE ZERO
02761	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02762	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02763	-0600	00	0	04726		STQ TEMP	SAVE MQ
02764	0500	00	0	04726		CLA TEMP	BRING TO ACC TO CHECK
02765	0100	00	0	02770		TZE B44+12	OK, SHOULD BE ZERO
02766	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02767	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
02770	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
02771	0020	00	0	02773		TRA B45	
02772	0020	00	0	02754		TRA B44	
MPY TEST							
02773	0560	00	0	04714	B45	LDQ ONE	MULTIPLY ONE BY ONE
02774	0200	00	0	04714		MPY ONE	SHOULD GET ZERO IN ACC
02775	0100	00	0	03000		TZE B45+5	OK, PROCEED
02776	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
02777	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03000	-0600	00	0	04726		STQ TEMP	SAVE MQ AND CHECK
03001	0500	00	0	04726		CLA TEMP	FOR ONE IN ACC 34
03002	-0100	00	0	03005		TNZ B45+10	OK, PROCEED
03003	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03004	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03005	0771	00	0	00002		ARS 2	SHIFT OVER
03006	0100	00	0	03011		TZE B45+14	OK, CHECKS OUT

03007	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03010	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03011	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03012	0020	00	0	03014		TRA B46	
03013	0020	00	0	02773		TRA B45	
MPY TEST							
03014	0560	00	0	04730	B46	LDQ PONES	MULTIPLY ALL ONES
03015	0200	00	0	04714		MPY ONE	BY ONE
03016	0100	00	0	03021		TZE B46+5	OK, ACC SHOULD BE ZERO
03017	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03020	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03021	-0600	00	0	04726		STQ TEMP	SAVE MQ
03022	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
03023	0140	00	0	03023		TOV B46+7	TURN OFF OVFL
03024	0400	00	0	04714		ADD ONE	ADD ONE TO TURN ON OVFL
03025	0140	00	0	03030		TOV B46+12	OK, PROCEED
03026	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03027	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03030	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03031	0020	00	0	03033		TRA B47	
03032	0020	00	0	03014		TRA B46	
MPY TEST							
03033	0560	00	0	04730	B47	LDQ PONES	MULTIPLY ALL ONES
03034	0200	00	0	04730		MPY PONES	BY ALL ONES
03035	0400	00	0	04714		ADD ONE	ADD ONE, 2-35 HAVE ONES
03036	0140	00	0	03037		TOV B47+4	SET OVFL
03037	0400	00	0	04714		ADD ONE	RIPPLE CARRY FOR ACC
03040	0140	00	0	03043		TOV B47+8	OK, DID RIPPLE
03041	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03042	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03043	-0600	00	0	04726		STQ TEMP	SAVE MQ
03044	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
03045	0402	00	0	04714		SUB ONE	SUB ONE
03046	0100	00	0	03051		TZE B47+14	SHOULD TRANSFER
03047	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03050	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03051	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03052	0020	00	0	03054		TRA B48	
03053	0020	00	0	03033		TRA B47	
MPY TEST							
03054	0560	00	0	04713	B48	LDQ ZERO	MULTIPLY PLUS NUMBER BY
03055	0200	00	0	04713		MPY ZERO	PLUS, PRODUCT IS PLUS
03056	0120	00	0	03061		TPL B48+5	OK, ACC IS PLUS
03057	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03060	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03061	0162	00	0	03064		TQP B48+8	OK, MQ IS PLUS
03062	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

03063	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03064	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03065	0020	00	0	03067		TRA B49	
03066	0020	00	0	03054		TRA B48	
MPY TEST							
03067	0560	00	0	04732	B49	LDQ MZE	MULTIPLY MINUS NUMBER BY
03070	0200	00	0	04732		MPY MZE	MINUS NUMBER, CHECK SING
03071	0120	00	0	03074		TPL B49+5	OK, ACC IS PLUS
03072	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03073	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03074	0162	00	0	03077		TQP B49+8	OK, MQ IS PLUS
03075	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03076	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03077	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03100	0020	00	0	03102		TRA B50	
03101	0020	00	0	03067		TRA B49	
MPY TEST							
03102	0560	00	0	04732	B50	LDQ MZE	MULTIPLY MQ MINUS BY
03103	0200	00	0	04713		MPY ZERO	A PLUS, CHECK SIGN
03104	-0120	00	0	03107		TMI B50+5	ACC SHOULD BE MINUS
03105	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03106	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03107	0162	00	0	03111		TQP B50+7	MQ SHOULD BE MINUS
03110	0020	00	0	03113		TRA B50+9	OK, PROCEED
03111	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03112	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03113	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03114	0020	00	0	03116		TRA B51	
03115	0020	00	0	03102		TRA B50	
MPY TEST							
03116	0560	00	0	04713	B51	LDQ ZERO	MULTIPLY MQ PLUS BY
03117	0200	00	0	04732		MPY MZE	MINUS
03120	-0120	00	0	03123		TMI B51+5	ACC IS MINUS
03121	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03122	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03123	0162	00	0	03125		TQP B51+7	MQ IS MINUS
03124	0020	00	0	03127		TRA B51+9	TEST SENSE SWITCH TWO
03125	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03126	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03127	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03130	0020	00	0	03132		TRA B52	
03131	0020	00	0	03116		TRA B51	
MPR TEST							
03132	0560	00	0	04725	B52	LDQ PTW	MULTIPLY +200---BY ONE
03133	-0200	00	0	04714		MPR ONE	SHOULD ROUND TO ACC

03134	-0100	00	0	03137		TNZ B52+5	OK, DID ROUND
03135	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03136	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03137	0771	00	0	00001		ARS 1	OK, NOW MOVE BIT OUT
03140	0100	00	0	03143		TZE B52+9	OK, PROCEED
03141	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03142	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03143	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03144	0020	00	0	03146		TRA B53	
03145	0020	00	0	03132		TRA B52	
MPR TEST							
03146	0560	00	0	04725	B53	LDQ PTW	MULTIPLY PLUS TWO BY
03147	-0200	00	0	04713		MPR ZERO	ZERO SHOULD NOT ROUND
03150	0100	00	0	03153		TZE B53+5	OK, IN ACC CHECK SIGN
03151	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03152	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03153	0120	00	0	03156		TPL B53+8	OK, PROCEED
03154	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03155	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03156	0162	00	0	03161		TQP B53+11	OK, PROCEED
03157	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03160	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03161	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03162	0020	00	0	03164		TRA B54	
03163	0020	00	0	03146		TRA B53	
MPR TEST							
03164	0560	00	0	04724	B54	LDQ MTW	MULTIPLY MINUS TWO BY
03165	-0200	00	0	00000		MPR	ZERO, CHECK SIGNS
03166	0120	00	0	03170		TPL B54+4	ERROR
03167	0020	00	0	03172		TRA B54+6	OK, PROCEED
03170	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03171	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03172	0162	00	0	03174		TQP B54+8	ERROR, SHOULD BE MINUS
03173	0020	00	0	03176		TRA B54+10	OK, PROCEED
03174	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03175	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03176	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03177	0020	00	0	03201		TRA B54A	
03200	0020	00	0	03164		TRA B54	
MPR TEST, WORST CONDITION							
03201	0140	00	0	03202	B54A	TOV B54A+1	TURN OFF OVFL
03202	0560	00	0	04730		LDQ PONES	ALL ONES IN MQ
03203	-0200	00	0	04725		MPR PTW	ACC 1-35 ALL ONES
03204	0402	00	0	04725		SUB PTW	MQ 1, A ONE, FORCE ROUND
03205	0100	00	0	03210		TZE B54A+7	SHOULD BE ZERO
03206	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

03207	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03210	-0140	00	0	03213		TNO B54A+10	SHOULD NOT BE OVFL
03211	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03212	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03213	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03214	0020	00	0	03216		TRA B55	
03215	0020	00	0	03201		TRA B54A	
DVP TEST							
03216	0560	00	0	04715	B55	LDQ TWO	DIVIDEND PLUS TWO
03217	0500	00	0	04713		CLA ZERO	DIVIDE BY ONE SHOULD
03220	0221	00	0	04714		DVP ONE	GET A PLUS TWO IN MQ
03221	0120	00	0	03224		TPL B55+6	OK, PROCEED
03222	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03223	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03224	0100	00	0	03227		TZE B55+9	REMAINDER SHOULD BE ZERO
03225	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03226	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03227	-0600	00	0	04726		STQ TEMP	SAVE CONTENTS OF MQ
03230	0500	00	0	04726		CLA TEMP	BRING TO ACC
03231	0402	00	0	04715		SUB TWO	SUB TWO TO GET ZERO
03232	0100	00	0	03235		TZE B55+15	OK PROCEED
03233	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03234	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03235	-0140	00	0	03240		TNO B55+18	OK, PROCEED
03236	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03237	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03240	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03241	0020	00	0	03243		TRA B56	
03242	0020	00	0	03216		TRA B55	
DVP TEST							
03243	0560	00	0	04721	B56	LDQ ONES	DIVIDE ALL ONES IN MQ
03244	0221	00	0	04724		DVP MTW	BY -200...
03245	0120	00	0	03250		TPL B56+5	OK, SHOULD BE PLUS
03246	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03247	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03250	0601	00	0	04726		STO TEMP	SAVE ACC AND MQ
03251	-0600	00	0	04727		STQ TEMP+1	
03252	0162	00	0	03254		TQP B56+9	ERROR
03253	0020	00	0	03256		TRA B56+11	MQ SHOULD BE MINUS
03254	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03255	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03256	0500	00	0	04727		CLA TEMP+1	ZEROS TO ACC
03257	0402	00	0	04726		SUB TEMP	SUB ONES FROM ACC
03260	0140	00	0	03261		TOV B56+14	TURN OFF OVFL
03261	0767	00	0	00001		ALS 1	SHOULD GET OVFL
03262	0140	00	0	03265		TOV B56+18	OK, GET OVFL

03263	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03264	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03265	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03266	0020	00	0	03270		TRA B57	
03267	0020	00	0	03243		TRA B56	
03270	0760	00	0	00012	B57	DCT	DCT TEST
03271	0020	00	0	03272		TRA B57+2	INITIALIZE THE
03272	0760	00	0	00012		DCT	DCT INDICATOR
03273	0020	00	0	03275		TRA B57+5	TEST INDICATOR OFF
03274	0020	00	0	03277		TRA B57+7	INDICATOR NOT OFF
03275	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03276	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03277	0500	00	0	04713		CLA ZERO	PLACE ZERO IN ACC
03300	0560	00	0	04725		LDQ PTW	MAKE MQ +200... DIVIDE
03301	0221	00	0	04725		DVP PTW	BY +200...
03302	0760	00	0	00012		DCT	TEST INDICATOR OFF
03303	0020	00	0	03305		TRA B57+13	IF ON, DID NOT SHOW
03304	0020	00	0	03307		TRA B57+15	OK, PROCEED
03305	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03306	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03307	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03310	0020	00	0	03312		TRA B58	
03311	0020	00	0	03270		TRA B57	OK, PROCEED
03312	0500	00	0	04725	B58	CLA PTW	DCT TEST
03313	0221	00	0	04731		DVP MON	DIVIDE +200... BY -100...
03314	0760	00	0	00012		DCT	CHECK INDICATOR SHOULD
03315	0020	00	0	03320		TRA B58+6	BE ON
03316	0760	00	0	00162		PSE 114	TEST INDICATOR ON
03317	0420	00	0	00000		HPR	OK, PROCEED
03320	0760	00	0	00161		PSE 113	TEST SENSE SWITCH TWO
03321	0020	00	0	03323		TRA B58A	ERROR STOP WITH TWO UP
03322	0020	00	0	03312		TRA B58	TEST SWITCH ONE TO LOOP
03323	0500	00	0	04714	B58A	CLA ONE	DIVIDE A ONE IN EACH
03324	0601	00	0	04726		STO TEMP	POSITION BY ZERO
03325	0221	00	0	04713		DVP ZERO	
03326	0402	00	0	04726		SUB TEMP	CHECK THAT ACC DID NOT
03327	0100	00	0	03332		TZE B58A+7	CHANGE
03330	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03331	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03332	0760	00	0	00012		DCT	CHECK DIVIDE CHECK LIGHT
03333	0020	00	0	03336		TRA B58A+11	SHOULD BE ON
03334	0760	00	0	00162		PSE 114	OK, PROCEED
03335	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
03336	0767	00	0	00001		ALS 1	ERROR STOP WITH TWO UP
							MOVE ACROSS ACC

03337	-0100	00	0	03324		TNZ B58A+1	BY ONE
03340	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03341	0020	00	0	03343		TRA B62	
03342	0020	00	0	03323		TRA B58A	
03343	0560	00	0	04725	B62	LDQ PTW	DVH TEST, NO HALT MAKE MQ POSITIVE
03344	0500	00	0	04713		CLA ZERO	MAKE ACC ZERO
03345	0220	00	0	04725		DVH PTW	DIVIDE
03346	0120	00	0	03351		TPL B62+6	OK, PROCEED
03347	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03350	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03351	0140	00	0	03352		TOV B62+7	TURN OFF OVFL
03352	0100	00	0	03355		TZE B62+10	
03353	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03354	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03355	-0600	00	0	04726		STQ TEMP	SAVE MQ, ADD IT TO ACC
03356	0500	00	0	04726		CLA TEMP	
03357	-0100	00	0	03362		TNZ B62+15	OK, PROCEED
03360	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03361	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03362	0760	00	0	00001		LBT	CHECK POS 35 FOR ONE
03363	0020	00	0	03365		TRA B62+18	ERROR, GOT A ZERO
03364	0020	00	0	03367		TRA B62+20	OK, PROCEED
03365	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03366	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03367	0771	00	0	00001		ARS 1	OK, SHIFT IT OUT
03370	0100	00	0	03373		TZE B62+24	OK, ALL SHOULD BE ZERO
03371	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03372	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03373	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03374	0020	00	0	03376		TRA B63	
03375	0020	00	0	03343		TRA B62	
03376	0560	00	0	04721	B63	LDQ ONES	DVH TEST, NO HALT MAKE MQ ALL ONES
03377	0220	00	0	04724		DVH MTW	DIVIDE BY -200...
03400	0120	00	0	03403		TPL B63+5	OK, PROCEED
03401	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03402	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03403	0601	00	0	04726		STO TEMP	SAVE AC AND MQ
03404	-0600	00	0	04727		STQ TEMP+1	
03405	0162	00	0	03407		TQP B63+9	ERROR IN MQ SIGN
03406	0020	00	0	03411		TRA B63+11	OK, IS MINUS, PROCEED
03407	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03410	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03411	0500	00	0	04727		CLA TEMP+1	SUB ACC FROM MQ
03412	0402	00	0	04726		SUB TEMP	

03413	0140	00	0	03414		TOV B63+14	TURN OFF OVFL
03414	0763	00	0	00001		LLS 1	SHIFT ONE BIT
03415	0140	00	0	03420		TOV B63+18	OK, SHOULD BE ON
03416	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03417	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03420	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03421	0020	00	0	03423		TRA B64	
03422	0020	00	0	03376		TRA B63	
ANA TEST							
03423	-0500	00	0	04732	B64	CAL MZE	MAKE ACC MINUS ZERO
03424	-0320	00	0	04721		ANA ONES	/AND/ TO ALL POSITIONS ZERO EXCEPT POS P
03425	-0760	00	0	00001		PBT	P SHOULD HAVE BIT
03426	0020	00	0	03430		TRA B64+5	ERROR, NO BIT IN POS P
03427	0020	00	0	03432		TRA B64+7	OK, PROCEED
03430	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03431	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03432	0771	00	0	00001		ARS 1	OK, NOW POS Q SHOULD BE ZERO
03433	-0760	00	0	00001		PBT	SHIFT AND TEST
03434	0020	00	0	03437		TRA B64+12	OK, PROCEED
03435	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03436	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03437	0120	00	0	03442		TPL B64+15	OK, SHOULD BE PLUS
03440	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03441	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03442	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03443	0020	00	0	03445		TRA B65	
03444	0020	00	0	03423		TRA B64	
ANA TEST							
03445	-0500	00	0	04721	B65	CAL ONES	PLACE ALL ONES IN ACC
03446	-0320	00	0	04721		ANA ONES	/AND/ TO ALL ONES
03447	0400	00	0	04714		ADD ONE	ADD ONE, CAUSE RIPPLE
03450	0767	00	0	00001		ALS 1	MOVE OUT Q
03451	0100	00	0	03454		TZE B65+7	OK, PROCEED
03452	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03453	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03454	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03455	0020	00	0	03457		TRA B66	
03456	0020	00	0	03445		TRA B65	
ANA TEST							
03457	-0500	00	0	04713	B66	CAL ZERO	PLACE ZEROS IN ACC
03460	-0320	00	0	04721		ANA ONES	/AND/ TO ALL ZEROS
03461	0100	00	0	03464		TZE B66+5	OK, NO PICK UP
03462	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03463	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03464	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03465	0020	00	0	03467		TRA B67	
03466	0020	00	0	03457		TRA B66	

					ANA TEST		
03467	-0500	00	0	04737	B67	CAL KK30	L-252525252525
03470	-0320	00	0	04740		ANA KK31	L-125252252525
03471	0402	00	0	04741		SUB KK32	L+000000252525
03472	-0760	00	0	00001		PBT	TEST P FOR BIT
03473	0020	00	0	03475		TRA B67+6	ERROR
03474	0020	00	0	03477		TRA B67+8	OK, PROCEED AND MOVE IT OUT
03475	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03476	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
							ANA TEST
03477	0767	00	0	00002		ALS 2	ALL RIGHT MOVE IT OUT
03500	0100	00	0	03503		TZE B67+12	OK, PROCEED
03501	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03502	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03503	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03504	0020	00	0	03506		TRA B68	
03505	0020	00	0	03467		TRA B67	
							ANA TEST
03506	0500	00	0	04737	B68	CLA KK30	L-252525252525
03507	-0320	00	0	04742		ANA KK33	L-252525525252
03510	0402	00	0	04743		SUB KK34	L+252525000000
03511	0100	00	0	03514		TZE B68+6	OK, SHOULD BE ZERO
03512	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03513	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03514	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03515	0020	00	0	03517		TRA B69	
03516	0020	00	0	03506		TRA B68	
							ANS TEST
03517	0500	00	0	04713	B69	CLA ZERO	INITIALIZE TEMP STORAGE
03520	0601	00	0	04726		STO TEMP	WITH ZERO
03521	-0500	00	0	04721		CAL ONES	PLACE ALL ONES IN ACC
03522	0320	00	0	04726		ANS TEMP	/AND/ TO ZERO STORAGE
03523	0500	00	0	04726		CLA TEMP	BRING RESULT TO ACC
03524	0100	00	0	03527		TZE B69+8	SHOULD BE ZERO, CHECK SIGN
03525	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03526	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
							ANS TEST
03527	0120	00	0	03532		TPL B69+11	OK, PROCEED
03530	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03531	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03532	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03533	0020	00	0	03535		TRA B70	
03534	0020	00	0	03517		TRA B69	
							ANS TEST
03535	0500	00	0	04721	B70	CLA ONES	INITIALIZE TEMP STORAGE
03536	0601	00	0	04726		STO TEMP	WITH ALL ONES
03537	-0500	00	0	04713		CAL ZERO	MAKE ACC ZERO
03540	0320	00	0	04726		ANS TEMP	/AND/ TO ONES IN STORAGE

03541	0500	00	0	04726		CLA TEMP	BRING RESULT TO ACC
03542	0767	00	0	00001		ALS 1	SHIFT 0 POS OUT
03543	0100	00	0	03546		TZE B70+9	OK, ALL SHOULD BE ZERO
03544	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03545	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03546	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03547	0020	00	0	03551		TRA B71	
03550	0020	00	0	03535		TRA B70	
03551	0500	00	0	04737	B71	CLA KK30	ANS TEST WITH SIGNS UNLIKE
03552	0601	00	0	04726		STO TEMP	INITIALIZE STORAGE WITH
03553	-0500	00	0	04744		CAL KK35	L-252525252525
03554	0320	00	0	04726		ANS TEMP	MAKE ACC +1252522522525
03555	0402	00	0	04744		SUB KK35	/AND/, THEN CHECK ACC
03556	0100	00	0	03561		TZE B71+8	SUB ORIGINAL CONTENTS
03557	0760	00	0	00162		PSE 114	OK, PROCEED CHECK STORAGE
03560	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
03561	0500	00	0	04726		CLA TEMP	CHECK STORAGE SHOULD
03562	0402	00	0	04741		SUB KK32	BE L+000000252525
03563	0100	00	0	03566		TZE B71+13	OK, IT WAS, PROCEED
03564	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03565	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03566	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03567	0020	00	0	03571		TRA B72	
03570	0020	00	0	03551		TRA B71	
ORA TEST							
03571	0500	00	0	04713	B72	CLA ZERO	MAKE ACC ZERO
03572	-0501	00	0	04721		ORA ONES	/OR/ WITH ONES
03573	-0760	00	0	00001		PBT	CHECK P FOR ONE
03574	0020	00	0	03576		TRA B72+5	ERROR IN P
03575	0020	00	0	03600		TRA B72+7	CHECK OTHER POSITIONS
03576	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03577	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03600	0400	00	0	04714		ADD ONE	CHECK OTHER POSITIONS
03601	0767	00	0	00002		ALS 2	CLEAR P AND Q
03602	0100	00	0	03605		TZE B72+12	OK, SHOULD BE ZERO
03603	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03604	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03605	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03606	0020	00	0	03610		TRA B73	
03607	0020	00	0	03571		TRA B72	
ORA TEST							
03610	-0500	00	0	04721	B73	CAL ONES	MAKE ACC POS P-35 ONES
03611	-0501	00	0	04713		ORA ZERO	/OR/ WITH ZEROS
03612	-0760	00	0	00001		PBT	CHECK P FOR ONE
03613	0020	00	0	03615		TRA B73+5	ERROR IN P
03614	0020	00	0	03617		TRA B73+7	PROCEED
03615	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO

03616	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03617	0400	00	0	04714		ADD ONE	OK, TEST POS 1-35
03620	0767	00	0	00002		ALS 2	MOVE OUT P AND Q
03621	0100	00	0	03624		TZE B73+12	OK, SHOULD BE ZERO
03622	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03623	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03624	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03625	0020	00	0	03627		TRA B74	
03626	0020	00	0	03610		TRA B73	
03627	0500	00	0	04745	B74	CLA KK36	ORA TEST, SIGNS UNLIKE MAKE ACC +252525252525
03630	-0501	00	0	04742		ORA KK33	/OR/ -252525525252
03631	0402	00	0	04746		SUB KK37	SUB 252525777777
03632	-0760	00	0	00001		PBT	CHECK P FOR ONE
03633	0020	00	0	03635		TRA B74+6	ERROR IN P
03634	0020	00	0	03637		TRA B74+8	OK, PROCEED
03635	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03636	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03637	0767	00	0	00002		ALS 2	MOVE OUT P AND Q
03640	0100	00	0	03643		TZE B74+12	OK, PROCEED
03641	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03642	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03643	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03644	0020	00	0	03646		TRA B75	
03645	0020	00	0	03627		TRA B74	
03646	0500	00	0	04745	B75	CLA KK36	ORA TEST, SIGNS PLUS MAKE ACC 252525252525
03647	-0501	00	0	04744		ORA KK35	/OR/ +125252252525
03650	0402	00	0	04747		SUB KK38	SUB 377777252525
03651	0100	00	0	03654		TZE B75+6	OK, PROCEED
03652	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03653	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03654	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03655	0020	00	0	03657		TRA B76	
03656	0020	00	0	03646		TRA B75	
03657	0500	00	0	04721	B76	CLA ONES	ORS TEST INITIALIZE TEMP STORAGE
03660	0601	00	0	04726		STO TEMP	WITH ONES
03661	0500	00	0	04713		CLA ZERO	MAKE ACC ZERO
03662	-0602	00	0	04726		ORS TEMP	/OR/ TO ONES
03663	0100	00	0	03666		TZE B76+7	ACC SHOULD BE ZERO
03664	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03665	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03666	0500	00	0	04726		CLA TEMP	BRING BACK STORAGE
03667	0400	00	0	04734		ADD MONE	ADD MINUS ONE TO RIPPLE
03670	-0760	00	0	00001		PBT	P SHOULD HAVE BIT
03671	0020	00	0	03673		TRA B76+12	ERROR, NO BIT IN P

03672	0020	00	0	03675		TRA B76+14	OK, PROCEED
03673	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03674	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03675	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03676	0020	00	0	03700		TRA B77	
03677	0020	00	0	03657		TRA B76	
ORS TEST							
03700	0500	00	0	04713	B77	CLA ZERO	INITIALIZE TEMP STORAGE
03701	0601	00	0	04726		STO TEMP	WITH ZEROS
03702	-0500	00	0	04721		CAL ONES	CAL ALL ONES P-35
03703	-0602	00	0	04726		ORS TEMP	/OR/ TO ZEROS
03704	0400	00	0	04714		ADD ONE	CHECK ACC, ADD ONE, SHOULD
03705	-0760	00	0	00001		PBT	GET A BIT IN P
03706	0020	00	0	03711		TRA B77+9	OK, NOW CHECK STORAGE
03707	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03710	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03711	0500	00	0	04726		CLA TEMP	OK, NOW CHECK STORAGE
03712	0400	00	0	04734		ADD MONE	ADD MINUS ONE TO RIPPLE
03713	0140	00	0	03716		TOV B77+14	OK, SHOULD OVERFLOW
03714	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03715	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03716	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03717	0020	00	0	03721		TRA B78	
03720	0020	00	0	03700		TRA B77	
ORA TEST, SIGNS UNLIKE							
03721	0500	00	0	04745	B78	CLA KK36	INITIALIZE TEMP STORAGE
03722	0601	00	0	04726		STO TEMP	WITH 252525252525
03723	0500	00	0	04742		CLA KK33	MAKE ACC-252525525252
03724	-0602	00	0	04726		ORS TEMP	/OR/ TO TEMP STORAGE
03725	0500	00	0	04726		CLA TEMP	BRING TEMP TO ACC
03726	0402	00	0	04746		SUB KK37	SUB 252525777777
03727	0100	00	0	03732		TZE B78+9	OK, PROCEED
03730	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03731	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03732	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03733	0020	00	0	03735		TRA B79	
03734	0020	00	0	03721		TRA B78	
ORS TEST							
03735	0500	00	0	04745	B79	CLA KK36	INITIALIZE TEMP STORAGE
03736	0601	00	0	04726		STO TEMP	WITH +25252525252
03737	-0500	00	0	04740		CAL KK31	MAKE P-35, -12525222525
03740	-0602	00	0	04726		ORS TEMP	/OR/ TO TEMP STORAGE
03741	0500	00	0	04726		CLA TEMP	BRING IT TO ACC
03742	0400	00	0	04747		ADD KK38	ADD 3777777252525
03743	0100	00	0	03746		TZE B79+9	OK, SHOULD BE ZERO
03744	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03745	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03746	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03747	0020	00	0	03751		TRA B80	

03750	0020	00	0	03735		TRA B79	
03751	0140	00	0	03752	B80	TOV B80+1	TTR TEST , NOT IN TRAP MODE TURN OFF OVFL
03752	0021	00	0	03755		TTR B80+4	SHOULD TRAP TRANSFER
03753	0760	00	0	00162		PSE 114	DID NOT TRAP TRANSFER
03754	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03755	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03756	0020	00	0	03760		TRA B81	
03757	0020	00	0	03751		TRA B80	
03760	0760	00	0	00007	B81	ETM	ETM- TEST TO SEE IF GET IN TRAP MODE
03761	0500	00	0	04757		CLA KK85	MAKE ADR AT ONE A TTR
03762	0601	00	0	00001		STO 1	TO B82
03763	0500	00	0	04713		CLA ZERO	CONDITION WILL BE MET
03764	0100	00	0	03765		TZE B81+5	AND SHOULD GO TO ONE
03765	-0760	00	0	00007		LTM	
03766	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03767	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
03770	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
03771	0020	00	0	03773		TRA B82	
03772	0020	00	0	03760		TRA B81	
TTR TEST, IN TRAP MODE							
03773	0760	00	0	00007	B82	ETM	
03774	0021	00	0	04003		TTR B83	SHOULD TTR TO B83
03775	-0760	00	0	00007		LTM	
03776	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
03777	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04000	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04001	0020	00	0	04003		TRA B83	
04002	0020	00	0	03773		TRA B82	
YES TRA IN TRAP MODE							
04003	0760	00	0	00007	B83	ETM	
04004	0500	00	0	04752		CLA KK80	TTR TO B83+9, IS RETURN
04005	0601	00	0	00001		STO 1	ADDRESS AFTER TRAP.
04006	0500	00	0	04753		CLA KK81	HTR B84 IS IN ZERO, IF
04007	0601	00	0	00000		STO 0	INSTRUCTION COUNTER FAILS
04010	0020	00	0	04011		TRA B83+6	SHOULD NOT TRANSFER
04011	-0760	00	0	00007		LTM	
04012	0760	00	0	00162		PSE 114	TRAP FAILS, TRANSFERS
04013	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04014	-0760	00	0	00007		LTM	SHOULD TRAP AND RETURN HERE
04015	0500	00	0	00000		CLA 0	CHECK ADDRESS AT ZERO
04016	0402	00	0	04754		SUB KK82	SUB THE ADDRESS OF TRAP
04017	0100	00	0	04022		TZE B83+15	OK, SHOULD BE EQUAL
04020	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04021	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04022	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

04023	0020	00	0	04025		TRA B84	
04024	0020	00	0	04003		TRA B83	
							TEST CONDITIONAL TRANSFERS, CONDITIONS NOT MET. ADDRESS OF ERROR IS IN 00000 OR TRAP ON PRINTOUT
04025	0760	00	0	00007	B84	ETM	
04026	0500	00	0	04755		CLA KK83	LOC 1 SET TO TTR B84A
04027	0601	00	0	00001		STO 1	SHOULD BE NO TRANSFERS
04030	0560	00	0	04723		LDQ 8CF	MAKE MQ LARGER THAN ACC
04031	0760	00	0	00000		CLM	SET ACC TO ZERO AND SET
04032	0601	00	0	00000		STO 0	LOC 0 TO ZERO
04033	-0100	00	0	04067		TNZ B84C	
04034	-0120	00	0	04067		TMI B84C	
04035	0140	00	0	04067		TOV B84C	
04036	0040	00	0	04067		TLQ B84C	
04037	0534	00	1	04713		LXA ZERO,1	LOAD INDEX A WITH ZERO
04040	3	00000	1	04067		TXH B84C,1	
04041	2	00010	1	04067		TIX B84C,1,8	
04042	0500	00	0	04721		CLA ONES	LOAD ACC WITH ONES
04043	0100	00	0	04067		TZE B84C	
04044	0120	00	0	04067		TPL B84C	
04045	0767	00	0	00014		ALS 12	FORCE OVFL
04046	-0140	00	0	04067		TNO B84C	
04047	0534	00	1	04723		LXA 8CF,1	LOAD INDEX A WITH 77777
04050	-2	00001	1	04067		TNX B84C,1,1	
04051	-3	00001	1	04067		TXL B84C,1,1	
04052	0560	00	0	04732		LDQ MZE	LOAD MQ WITH MINUS ZERO
04053	0162	00	0	04067		TQP B84C	
04054	0162	00	0	04067		TQP B84C	RETEST TO SEE IF TEST IS COMPLETE. IF TRAP OCCURS, COMES BACK HERE
04055	-0760	00	0	00007	B84A	LTM	LEAVES TRAP MODE
04056	0500	00	0	00000		CLA 0	CHECK ADDRESS AT ZERO
04057	0402	00	0	04764		SUB KK86	IS TEST COMPLETE
04060	0100	00	0	04063		TZE B84A+6	YES PROCEED
04061	0760	00	0	00162		PSE 114	NO, ERROR ABOVE, CHECK ZERO ADDRESS
04062	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP CHECK ZERO ADDRESS
04063	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04064	0020	00	0	04066		TRA B84B	
04065	0020	00	0	04025		TRA B84	
04066	0020	00	0	04075	B84B	TRA B85	
04067	-0760	00	0	00007	B84C	LTM	IF TRANSFER IS WRONG, COMES HERE
04070	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04071	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04072	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04073	0020	00	0	04075		TRA B85	

04074	0020	00	0	04025		TRA B84	
							TEST CONDITIONAL TRANSFERS WITH CONDITIONALS SATISFIED THIS IS SET UP FOR
04075	0760	00	0	00007	B85	ETM	TRAP RETURN
04076	0500	00	0	04760		CLA KK85A	INITIALIZE TEMP STORAGE
04077	0601	00	0	04726		STO TEMP	WITH LOC OF FIRST COND TRANSFER
04100	0500	00	0	04756		CLA KK84	TTR B85+6
04101	0601	00	0	00001		STO 1	
04102	0021	00	0	04114		TTR B85+15	OK, START TESTS
04103	0500	00	0	00000		CLA 0	RETURN FROM LOC 1
04104	0340	00	0	04726		CAS TEMP	COMPARE ACC AND TEMP
04105	0021	00	0	04135		TTR B85B	IF TEMP LESS THEN ZERO
04106	0021	00	0	04110		TTR B85+11	IF TEMP EQUAL TO ZERO
04107	0021	00	0	04135		TTR B85B	IF TEMP GRATER THEN ZERO
04110	0400	00	0	04715		ADD TWO	NOW ADVANCE TWO POSITIONS
04111	0621	00	0	04113		STA B85+14	SO AS TO CONTINUE TO THE NEXT SUBTEST
04112	0621	00	0	04726		STA TEMP	RESET ADDRESS OF TEMP
04113	0021	00	0	00000		TTR 0	
04114	0767	00	0	00062		ALS 50	CLEAR ACC
04115	0100	00	0	04127		TZE B85A	TZE TEST
04116	0021	00	0	04127		TTR B85A	
04117	0120	00	0	04127		TPL B85A	TPL TEST
04120	0021	00	0	04127		TTR B85A	
04121	0140	00	0	04127		TOV B85A	TOV TEST
04122	0021	00	0	04127		TTR B85A	
04123	-0140	00	0	04127		TNO B85A	
04124	0021	00	0	04127		TTR B85A	TNO TEST
04125	-0760	00	0	00007		LTM	TEST IS FINISED NOW
04126	0020	00	0	04140		TRA B86	GO TO NEXT SECTION
04127	-0760	00	0	00007	B85A	LTM	COMES HERE ON EROR
04130	0760	00	0	00162		PSE 114	ERROR, DID NOT TRAP
04131	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04132	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04133	0020	00	0	04140		TRA B86	
04134	0020	00	0	04075		TRA B85	
							COMES HERE IF ADDRESS AT ZERO IS INCORRECT
04135	-0760	00	0	00007	B85B	LTM	
04136	0760	00	0	00162		PSE 114	NOT JUMPING PROPERLY
04137	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04140	0760	00	0	00007	B86	ETM	
04141	0500	00	0	04761		CLA KK85B	INITIALIZE TEMP STORAGE
04142	0601	00	0	04726		STO TEMP	WITH LOC OF FIRST COND TRANSFER
04143	0500	00	0	04721		CLA ONES	BRING IN ALL ONES

04144	-0120	00	0	04152		TMI B86A	TMI TEST
04145	0021	00	0	04152		TTR B86A	
04146	-0100	00	0	04152		TNZ B86A	TNZ TEST
04147	0021	00	0	04152		TTR B86A	
04150	-0760	00	0	00007		LTM	TEST IS FINISHED NOW
04151	0020	00	0	04160		TRA B87	GO TO NEXT SECTION
04152	-0760	00	0	00007	B86A	LTM	COMES HERE ON ERROR
04153	0760	00	0	00162		PSE 114	ERROR, DID NOT TRAP
04154	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04155	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04156	0020	00	0	04160		TRA B87	
04157	0020	00	0	04140		TRA B86	
04160	0760	00	0	00007	B87	ETM	TEST TQP, CONDITION SATISFIED
04161	0500	00	0	04762		CLA KK85C	INITIALIZE TEMP STORAGE
04162	0601	00	0	04726		STO TEMP	WITH LOC OF FIRST COND TRANSFER
04163	0560	00	0	00000		LDQ	LOAD MQ POS 35 WITH ONE
04164	0162	00	0	04170		TQP B87A	TEST TQP
04165	0021	00	0	04170		TTR B87A	
04166	-0760	00	0	00007		LTM	TEST IS FINISHED NOW
04167	0020	00	0	04176		TRA B88	GO TO NEXT SECTION
04170	-0760	00	0	00007	B87A	LTM	
04171	0760	00	0	00162		PSE 114	ERROR, DID NOT TRAP
04172	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04173	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04174	0020	00	0	04176		TRA B88	
04175	0020	00	0	04160		TRA B87	
04176	0760	00	0	00007	B88	ETM	CHECK ADDRESS AT ZERO FOR LOCATION OF LAST INST PERFORMED CORRECTLY
04177	0500	00	0	04763		CLA KK85D	INITIALIZE TEMP STORAGE
04200	0601	00	0	04726		STO TEMP	WITH LOC OF FIRST COND TRANSFER
04201	1	00011	1	04217		TXI B88A,1,9	TXI TEST
04202	0021	00	0	04217		TTR B88A	
04203	3	00000	1	04217		TXH B88A,1	TXH TEST
04204	0021	00	0	04217		TTR B88A	
04205	-3	00000	0	04217		TXL B88A	TXL TEST
04206	0021	00	0	04217		TTR B88A	
04207	2	00001	1	04217		TIX B88A,1,1	TIX TEST
04210	0021	00	0	04217		TTR B88A	
04211	-2	77777	1	04217		TNX B88A,1,-1	TNX TEST
04212	0021	00	0	04217		TTR B88A	
04213	0074	00	1	04217		TSX B88A,1	TSX TEST
04214	0021	00	0	04217		TTR B88A	
04215	-0760	00	0	00007		LTM	TEST IS FINISHED
04216	0020	00	0	04222		TRA B88A+3	GO TO NEXT SECTIONS
04217	-0760	00	0	00007	B88A	LTM	COMES HERE ON ERROR
04220	0760	00	0	00162		PSE 114	ERROR, DID NOT TRAP

04221	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04222	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04223	0020	00	0	04225		TRA B89	
04224	0020	00	0	04176		TRA B88	
04225	0500	00	0	04705	B89	CLA END+2	PSE TEST
04226	0601	00	0	00000		STO 0	RESET POST RESTART
04227	0760	00	0	00140		PSE 96	TURN OFF ALL SENSE LIGHTS
04230	-0760	00	0	00141		MSE 97	TEST LIGHT ONE
04231	0020	00	0	04234		TRA B89+7	OK, OFF
04232	0760	00	0	00162		PSE 114	ERROR, LIGHT WAS ON
04233	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04234	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04235	0020	00	0	04237		TRA B90	
04236	0020	00	0	04225		TRA B89	
04237	-0760	00	0	00142	B90	MSE 98	PSE TEST
04240	0020	00	0	04243		TRA B90+4	TEST LIGHT TWO
04241	0760	00	0	00162		PSE 114	OK, PROCEED
04242	0420	00	0	00000		HPR	ERROR, LIGHT WAS ON
04243	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
04244	0020	00	0	04246		TRA B91	TEST SWITCH ONE TO LOOP
04245	0020	00	0	04237		TRA B90	
04246	-0760	00	0	00143	B91	MSE 99	PSE TEST
04247	0020	00	0	04252		TRA B91+4	TEST LIGHT THREE
04250	0760	00	0	00162		PSE 114	OK, PROCEED
04251	0420	00	0	00000		HPR	ERROR, LIGHT WAS ON
04252	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
04253	0020	00	0	04255		TRA B92	TEST SWITCH ONE TO LOOP
04254	0020	00	0	04246		TRA B91	
04255	-0760	00	0	00144	B92	MSE 100	PSE TEST
04256	0020	00	0	04261		TRA B92+4	TEST LIGHT FOUR
04257	0760	00	0	00162		PSE 114	OK, PROCEED
04260	0420	00	0	00000		HPR	ERROR, LIGHT WAS ON
04261	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
04262	0020	00	0	04264		TRA B93	TEST SWITCH ONE TO LOOP
04263	0020	00	0	04255		TRA B92	
04264	0760	00	0	00141	B93	PSE 97	PSE TEST
04265	-0760	00	0	00141		MSE 97	TURN ON LIGHT ONE
04266	0020	00	0	04270		TRA B93+4	TEST LIGHT ONE
04267	0020	00	0	04272		TRA B93+6	ERROR, IT WAS NOT ON
04270	0760	00	0	00162		PSE 114	OK, PROCEED
04271	0420	00	0	00000		HPR	TEST SENSE SWITCH TWO
04272	0760	00	0	00161		PSE 113	ERROR STOP WITH TWO UP
04273	0020	00	0	04275		TRA B94	TEST SWITCH ONE TO LOOP
04274	0020	00	0	04264		TRA B93	

04275	0760	00	0	00142	B94	PSE 98	TURN ON LIGHT TWO
04276	-0760	00	0	00142		MSE 98	TEST LIGHT TWO
04277	0020	00	0	04301		TRA B94+4	ERROR, IT WAS NOT ON
04300	0020	00	0	04303		TRA B94+6	OK, PROCEED
04301	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04302	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04303	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04304	0020	00	0	04306		TRA B95	
04305	0020	00	0	04275		TRA B94	
04306	0760	00	0	00143	B95	PSE 99	TURN ON LIGHT THREE
04307	-0760	00	0	00143		MSE 99	TEST LIGHT THREE
04310	0020	00	0	04312		TRA B95+4	ERROR, IT WAS NOT ON
04311	0020	00	0	04314		TRA B95+6	OK, PROCEED
04312	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04313	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04314	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04315	0020	00	0	04317		TRA B96	
04316	0020	00	0	04306		TRA B95	
04317	0760	00	0	00144	B96	PSE 100	TURN ON LIGHT FOUR
04320	-0760	00	0	00144		MSE 100	TEST LIGHT FOUR
04321	0020	00	0	04323		TRA B96+4	ERROR, IT WAS NOT ON
04322	0020	00	0	04325		TRA B96+6	OK, PROCEED
04323	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04324	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04325	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04326	0020	00	0	04330		TRA B93A	
04327	0020	00	0	04317		TRA B96	
							MSE TEST, TEST ALL LIGHTS ARE OUT
04330	-0760	00	0	00141	B93A	MSE 97	TEST LIGHT ONE
04331	0020	00	0	04334		TRA B93A+4	SHOULD BE OFF
04332	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04333	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04334	-0760	00	0	00142		MSE 98	TEST LIGHT TWO
04335	0020	00	0	04340		TRA B93A+8	SHOULD BE OFF
04336	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04337	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04340	-0760	00	0	00143		MSE 99	TEST LIGHT THREE
04341	0020	00	0	04344		TRA B93A+12	SHOULD BE OFF
04342	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04343	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04344	-0760	00	0	00144		MSE 100	TEST LIGHT FOUR
04345	0020	00	0	04350		TRA B93A+16	SHOULD BE OFF
04346	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04347	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04350	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP

04351	0020	00	0	04353		TRA B96A	
04352	0020	00	0	04330		TRA B93A	
04353	0760	00	0	00140	B96A	PSE 96	NOP TEST TO SEE IF NOP IS
04354	0761	00	0	00141		NOP 97	INTERPRETED AS PSE
04355	-0760	00	0	00141		MSE 97	
04356	0020	00	0	04361		TRA B96A+6	GO ON TO NEXT SECTION
04357	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04360	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04361	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04362	0020	00	0	04364		TRA B97	
04363	0020	00	0	04353		TRA B96A	
STZ TEST							
04364	0500	00	0	04721	B97	CLA ONES	INITIALIZE TEMP STORAGE
04365	0601	00	0	04726		STO TEMP	WITH ONES
04366	0560	00	0	04721		LDQ ONES	IN CASE OF FAULTY STO INST,
							HAVE ONES IN MQ AND ACC
04367	0600	00	0	04726		STZ TEMP	STORE ZEROS IN TEMP
04370	0500	00	0	04726		CLA TEMP	SEE IF IT IS NOW ZERO
04371	0100	00	0	04374		TZE B97+8	OK, CHECK SIGN
04372	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04373	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04374	0120	00	0	04377		TPL B97+11	OK, PROCEED
04375	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04376	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04377	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04400	0020	00	0	04402		TRA B98	
04401	0020	00	0	04364		TRA B97	
SENSE SWITCH TEST							
04402	0500	00	0	04765	B98	CLA KK87	PLACE TRA B98A+1 IN B98A
04403	0601	00	0	04433		STO B98A	FOR FIRST TIME THROUGH,
							CHANGES ON SECOND TIME
							THROUGH, EACH SWITCH IS
							REPRESENTED IN MQ AND ACC
							BY GROUP OF SIX BITS
04404	0500	00	0	04713		CLA ZERO	CLEAR ACC
04405	0760	00	0	00161		PSE 113	SW 1
04406	0020	00	0	04410		TRA B98+6	DOWN L -370000000000
04407	0500	00	0	04767		CLA SW1	UP
04410	0760	00	0	00162		PSE 114	SW 2
04411	0020	00	0	04413		TRA B98+9	DOWN L+007700000000
04412	-0501	00	0	04770		ORA SW2	UP
04413	0760	00	0	00163		PSE 115	SW 3
04414	0020	00	0	04416		TRA B98+12	DOWN L +000077000000
04415	-0501	00	0	04771		ORA SW3	UP
04416	0760	00	0	00164		PSE 116	SW 4
04417	0020	00	0	04421		TRA B98+15	DOWN L +000000770000
04420	-0501	00	0	04772		ORA SW4	UP
04421	0760	00	0	00165		PSE 117	SW 5

04422	0020	00	0	04424		TRA B98+18	DOWN L +000000007700
04423	-0501	00	0	04773		ORA SW5	UP
04424	0760	00	0	00166		PSE 118	SW 6
04425	0020	00	0	04427		TRA B98+21	UP
04426	-0501	00	0	04774		ORA SW6	DOWN L +000000000077
04427	0761	00	0	00166		NOP 118	TEST, SEE IF NOP INTERPRETED AS PSE. IF SW6 UP, NOT CONCLUSIVE
04430	0020	00	0	04433		TRA B98A	SENSE SWITCH TEST
04431	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04432	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04433	0020	00	0	04434	B98A	TRA B98A+1	
04434	0601	00	0	04726		STO TEMP	
04435	0560	00	0	04726		LDQ TEMP	
04436	0500	00	0	04766		CLA KK88	RESET SWITCH TO COMPARE
04437	0601	00	0	04433		STO B98A	TO SEE IF AGREE SECOND TIME
04440	0020	00	0	04404		TRA B98+2	REPEAT B98 ONCE
04441	0402	00	0	04726	B98B	SUB TEMP	SUBT FIRST RESULT FROM 2ND
04442	0100	00	0	04445		TZE B98B+4	OK, PROCEED
04443	0760	00	0	00162		PSE 114	ERROR IS SHOWN BY COMPARING
04444	0420	00	0	00000		HPR	ACC RESULTS WITH MQ. IF
04445	0760	00	0	00161		PSE 113	SWITCH WAS UP, ITS
04446	0020	00	0	04450		TRA M06	RESPECTIVE PART OF ACC
04447	0020	00	0	04402		TRA B98	SHOULD BE OFF. IF SWITCH WAS DOWN, THIS PART SHOULD BE ON
04450	0500	00	0	04713	M06	CLA ZERO	ADDER TEST CLEAR ACCUMULATOR
04451	0760	00	0	00006		COM	
04452	0400	00	0	04714		ADD ONE	L +1 RIPPLE CARRY
04453	0100	00	0	04456		TZE M06+6	
04454	0760	00	0	00162		PSE 114	ON ERROR THE RIGHT MOST
04455	0420	00	0	00000		HPR	ONE OR LEFT MOST ZERO IS ADDER THAT FAILED
04456	0760	00	0	00161		PSE 113	
04457	0020	00	0	04461		TRA M06+9	
04460	0020	00	0	04467		TRA M07	
04461	0140	00	0	04464		TOV M06+12	OVFL SHOULD BE ON
04462	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04463	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04464	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04465	0020	00	0	04467		TRA M07	
04466	0020	00	0	04450		TRA M06	
04467	-0500	00	0	04721	M07	CAL ONES	ADDER TEST ONES INTO P,1-35
04470	0361	00	0	04721		ACL ONES	ONES INTO P,1-35
04471	0602	00	0	04726		SLW TEMP	
04472	0500	00	0	04726		CLA TEMP	
04473	0402	00	0	04721		SUB ONES	ONES
04474	0100	00	0	04477		TZE M07+8	

04475	0760	00	0	00162		PSE 114	THE RIGHTMOST ONE OR THE
04476	0420	00	0	00000		HPR	LEFTMOST ZERO WILL
04477	0760	00	0	00161		PSE 113	INDICATE WHICH ADDER
04500	0020	00	0	04502		TRA AAA	FAILED. SIGN POSITION
04501	0020	00	0	04467		TRA M07	CORRESPONDS TO P ADDER POSITION
04502	0760	00	0	00165	AAA	SWT 5	PERFORM OR BYPASS ADDER TEST AND DVH, BYPASS HALTS NEXT PASS
04503	0020	00	0	04703		TRA END	BYPASS ALL HALT
04504	0500	00	0	04567		CLA PLUS+6	INSERT TRA TO BY PASS
04505	0601	00	0	04504		STO AAA+2	HALTS ON NEXT PASS DVH TEST WITH HALT
04506	0500	00	0	04714	B59	CLA ONE	BRING ONE IN ACC
04507	0220	00	0	04713		DVH ZERO	DIVIDE BY ZERO, SHOULD
04510	0402	00	0	04714		SUB ONE	HALT WITH DCT ON
04511	0100	00	0	04514		TZE B59+6	RESULT SHOULD BE ZERO
04512	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04513	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04514	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04515	0020	00	0	04517		TRA B60	
04516	0020	00	0	04506		TRA B59	
04517	0500	00	0	04714	B60	CLA ONE	DVH TEST, WITH HALT DIVIDE ACC BY EQUAL AND
04520	0220	00	0	04714		DVH ONE	STORE, SHOULD HALT
04521	0402	00	0	04714		SUB ONE	TEST ACC SHOULD BE ONE
04522	0100	00	0	04525		TZE B60+6	OK, PROCEED
04523	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04524	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04525	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04526	0020	00	0	04530		TRA B61	
04527	0020	00	0	04517		TRA B60	
04530	0500	00	0	04725	B61	CLA PTW	DVH TEST, WITH HALT PLACE BIT IN Q POSITION
04531	0767	00	0	00002		ALS 2	SO ACC GREATER THEN STO
04532	0220	00	0	04725		DVH PTW	SHOULD HALT
04533	-0100	00	0	04536		TNZ B61+6	OK, SHOULD NOT BE ZERO
04534	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04535	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04536	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04537	0020	00	0	04541		TRA ADD	
04540	0020	00	0	04530		TRA B61	
04541	0534	00	2	04722	ADD	LXA 1CF,2	ADDER TEST L 7777
04542	0500	00	2	07777		CLA 4095,2	BRING IN LOC STORAGE
04543	0760	00	0	00006		COM	
04544	0400	00	2	07777		ADD 4095,2	MAKE ALL ONES
04545	0140	00	0	04546		TOV ADD+5	TURN OFF OVFL

04546	0120	00	0	04561		TPL PLUS	
04547	-0120	00	0	04552		TMI MINUS	
04550	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04551	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP SIGN ERROR
04552	0402	00	0	04714	MINUS	SUB ONE	FORCE RIPPLE
04553	0100	00	0	04570		TZE OVFL	
04554	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04555	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04556	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04557	0020	00	0	04570		TRA OVFL	
04560	0020	00	0	04541		TRA ADD	
04561	0400	00	0	04714	PLUS	ADD ONE	FORCE RIPPLE
04562	0100	00	0	04570		TZE OVFL	
04563	0760	00	0	00162		PSE 114	TEST SENSE SWITCH TWO
04564	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP FAILURE ON TZE INST.
04565	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04566	0020	00	0	04570		TRA OVFL	
04567	0020	00	0	04541		TRA ADD	
04570	-0140	00	0	04577	OVFL	TNO SS	TEST OVFL SHOULD BE ON
04571	0140	00	0	04604		TOV SS1	SHOULD BE OFF NOW
04572	0500	00	2	07777		CLA 4095,2	BRING IN LOC
04573	0340	00	2	07777		CAS 4095,2	COMPARE TO STORAGE
04574	0020	00	0	04611		TRA TT	MEMORY LESS
04575	0020	00	0	04623		TRA LOOP	OK
04576	0020	00	0	04616		TRA TT1	MEMORY HIGH
04577	0760	00	0	00162	SS	PSE 114	OVFL SHOULD BE ON
04600	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04601	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04602	0020	00	0	04572		TRA OVFL+2	
04603	0020	00	0	04541		TRA ADD	
04604	0760	00	0	00162	SS1	PSE 114	TNO DID NOT TURN OFF OVFL
04605	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04606	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04607	0020	00	0	04572		TRA OVFL+2	
04610	0020	00	0	04541		TRA ADD	
04611	0760	00	0	00162	TT	PSE 114	MEMORY LESS
04612	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04613	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04614	0020	00	0	04623		TRA LOOP	
04615	0020	00	0	04541		TRA ADD	
04616	0760	00	0	00162	TT1	PSE 114	MEMORY HIGH
04617	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP
04620	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP
04621	0020	00	0	04623		TRA LOOP	
04622	0020	00	0	04541		TRA ADD	
04623	2	00001	2	04542	LOOP	TIX ADD+1,2,1	
04624	0020	00	0	04625		TRA MPY	

04625	0534	00	2	04722	MPY	LXA 1CF,2	MPY TEST	L 7777	
04626	0534	00	1	04630		LXA MPY+3,1		L 35	
04627	0560	00	0	04714		LDQ ONE			
04630	-0773	00	1	00043		RQL 35,1			
04631	-0600	00	0	04726		STQ TEMP	SAVE BIT		
04632	0200	00	2	07777		MPY 4095,2	MPY BY LOC		
04633	0765	00	1	00043		LRS 35,1			
04634	0100	00	0	04637		TZE MPY+10			
04635	0760	00	0	00162		PSE 114	HIGH ORDER PRODUCT ERROR		
04636	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP		
04637	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP		
04640	0020	00	0	04642		TRA MPY+13			
04641	0020	00	0	04625		TRA MPY			
04642	-0600	00	0	04727		STQ TEMP+1			
04643	0500	00	0	04727		CLA TEMP+1			
04644	0402	00	2	07777		SUB 4095,2	SUB LOC		
04645	0100	00	0	04650		TZE MPY+19			
04646	0760	00	0	00162		PSE 114	LOW ORDER PRODUCT ERROR		
04647	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP		
04650	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP		
04651	0020	00	0	04653		TRA MPY+22			
04652	0020	00	0	04625		TRA MPY			
04653	2	00001	1	04627		TIX MPY+2,1,1			
04654	2	00001	2	04626		TIX MPY+1,2,1			
04655	0020	00	0	04656		TRA DVP			
								MPY AND DVP ALL ONES	
04656	0534	00	1	04722	DVP	LXA 1CF,1		L 7777	
04657	0560	00	1	07777		LDQ 4095,1		LDQ WITH LOC	
04660	0200	00	0	04714		MPY ONE			
04661	0221	00	0	04714		DVP ONE			
04662	0100	00	0	04665		TZE DVP+7			
04663	0760	00	0	00162		PSE 114	HIGH ORDER ERROR		
04664	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP		
04665	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP		
04666	0020	00	0	04670		TRA DVP+10			
04667	0020	00	0	04656		TRA DVP			
04670	-0600	00	0	04726		STQ TEMP			
04671	0500	00	1	07777		CLA 4095,1	BRING IN LOC TO ACC		
04672	0402	00	0	04726		SUB TEMP			
04673	0100	00	0	04676		TZE DVP+16			
04674	0760	00	0	00162		PSE 114	LOW ORDER ERROR		
04675	0420	00	0	00000		HPR	ERROR STOP WITH TWO UP		
04676	0760	00	0	00161		PSE 113	TEST SWITCH ONE TO LOOP		
04677	0020	00	0	04701		TRA DVP+19			
04700	0020	00	0	04656		TRA DVP			

04701 2 00001 1 04657 TIX DVP+1,1,1 LOOP
04702 0020 00 0 04703 TRA END

END OF TEST

04703 0760 00 0 00166 END SWT 6 SENSE SW 6 UP
04704 0020 00 0 04706 TRA *+2 READ IN NEXT PROGRAM
04705 0020 00 0 00030 TRA 24 REPEAT PROGRAM

04706 0762 00 0 01321 C RCDA SELECT CARD READER
04707 0540 00 0 04712 RCHA *+3
04710 0544 00 0 00000 LCHA 0
04711 0020 00 0 00001 TRA 1
04712 -1 00003 0 00000 MON 0,0,3 S AND 2 ON, COUNT 3

CONSTANTS

04713 +0000000000000 ZERO OCT 0
04714 +00000000000001 ONE OCT 1
04715 +00000000000002 TWO OCT 2
04716 +00000000000003 THREE OCT 3
04717 +00000000000004 FOUR OCT 4
04720 +00000000000005 FIVE OCT 5
04721 -3777777777777 ONES OCT 7777777777777
04722 +000000007777 1CF OCT 7777
04723 +000000077777 8CF OCT 77777
04724 -2 00000 0 00000 MTW MTW
04725 2 00000 0 00000 PTW PTW
04726 +0000000000000 TEMP OCT 0
04727 +0000000000000 OCT 0
04730 +3777777777777 PONES OCT 3777777777777
04731 -1 00000 0 00000 MON MON
04732 -0 00000 0 00000 MZE MZE
04733 +1000000000000 PTHR OCT 1000000000000
04734 -00000000000001 MONE OCT -0000000000001
04735 -00000000000002 M2 OCT -0000000000002
04736 -00000000000003 M3 OCT -0000000000003
04737 -252525252525 KK30 OCT -252525252525
04740 -125252252525 KK31 OCT -125252252525
04741 +000000252525 KK32 OCT +000000252525
04742 -252525525252 KK33 OCT -252525525252
04743 +252525000000 KK34 OCT 252525000000
04744 +125252252525 KK35 OCT +125252252525
04745 +252525252525 KK36 OCT +252525252525
04746 +252525777777 KK37 OCT 252525777777
04747 +377777252525 KK38 OCT +377777252525
04750 0020 00 0 02346 RTN TRA B20+7
04751 0020 00 0 02344 TRA B20+5
04752 0021 00 0 04014 KK80 TTR B83+9 SEE SECTION
04753 0000 00 0 04025 KK81 HTR B84 B83 FOR USE

04754	0000	00	0	04010	KK82	HTR B83+5	OF THESE ,KK 80,81,82
04755	0021	00	0	04055	KK83	TTR B84A	
04756	0021	00	0	04103	KK84	TTR B85+6	
04757	0021	00	0	03773	KK85	TTR B82	
04760	0000	00	0	04115	KK85A	HTR B85A-10	
04761	0000	00	0	04144	KK85B	HTR B86+4	
04762	0000	00	0	04164	KK85C	HTR B87+4	
04763	0000	00	0	04201	KK85D	HTR B88+3	
04764	0000	00	0	04054	KK86	HTR B84A-1	
04765	0020	00	0	04434	KK87	TRA B98A+1	
04766	0020	00	0	04441	KK88	TRA B98B	
04767	-3700000000000				SW1	OCT -3700000000000	
04770	+0077000000000				SW2	OCT +0077000000000	
04771	+0000770000000				SW3	OCT +0000770000000	
04772	+0000007700000				SW4	OCT +0000007700000	
04773	+0000000077000				SW5	OCT +0000000077000	
04774	+0000000000077				SW6	OCT +0000000000077	
				00000		END	

EOF*