9M03A

709 INDEXING TEST-4K,8K AND 32K STORAGES

A. UNIT TESTED

1. PURPOSE OF TEST

TO GIVE A COMPREHENSIVE TEST OF ALL INDEXING INSTRUCTIONS AND INDEX REGISTERS, INCLUDING MULTIPLE TAG INDEXING.

2. METHOD OF TEST

THIS PROGRAM MAY BE DIVIDED INTO 5 PARTS

A. 000000-01411 A BASIC TEST WHICH STARTS WITH THE ASSUMPTION THAT ONLY HTR AND AXT ARE WORKING AND CHECKS THAT THE 20 INDEXING INSTRUCTIONS ARE OPERATING CORRECTLY. THIS PART OF THE TEST CHECKS THE DECODING, OPERATION AND ROUTING OF EACH INSTRUCTION RATHER THEN THE REGISTERS THEMSELVES, SINCE ONLY XRA IS USED.

B. 01412-01763 SIZE OF STORAGE TEST-TESTS FOR A 4,8,16 OR 32K STORAGE AND SETS APPORRIATE CONSTANTS.

C. 01764-06733 COMPREHENISIVE TEST OF ALL INDEX REGISTERS, INCLUDING MULTIPLE TAG INDEXING.

D. 06734 PRINT SECTION FOR PROGRAM NAME.

E. 06771 PRINT SECTION FOR PASS COMPLETE.

B. AREA OF MACHINE REQUIRED

1. MF, CF, CR, AND PR.

2. STORAGE LOCATIONS 00000-07025

C. PROGRAM CONTROL

1.

000	9LD02A HIGH END LOADER
001-164	9M03A PROGRAM
165	TRANSFER CARD-TRA 06734
166-167	2 BLANK CARDS

2. SENSE SWITCH CONTROL

A. SWITCH #1 UP	NEXT SECTION OF PROGRAM
B. SWITCH #1 DOWN	REPEAT PRESENT SECTION
C. SWITCH #2 UP	STOP ON ERROR
D. SWITCH #2 DOWN	BYPASS ERROR
E. SWITCH #3 UP	COUNT BY 100
F. SWITCH #3 DOWN	COUNT BY 1000
G. SWITCH #4 UP	COUNT BY 1
H. SWITCH #4 DOWN	TEST SWITCH #3
I. SWITCH #5 UP	BYPASS HPR AND TSX HALT
J. SWITCH #5 DOWN	TEST HPR AND TSX ON HALT
K. SWITCH #6 UP	CALL IN NEXT DIAGNOSTIC
L. SWITCH #6 DOWN	REPEAT COMPLETE TEST

NORMAL STOPS

00000 - AFTER PRINTING OUT THE PROGRAM NAME, THE MACHINE WILL STOP IN ORDER TO CHECK HTR TO 00001. HOWEVER, FOR ALL FOLLOWING PASSES THE PROGRAM NAME WILL NOT BE PRINTED OUT NORE WILL THERE BE A STOP AT 00000 AS THE PROGRAM WILL AUTOMATICALLY TRANSFER TO 00001.

02660 - WITH SWITCH #5 DOWN - TEST HPR AND TSX FOR XRA.

04035 - WITH SWITCH #5 DOWN - TEST HPR AND TSX FOR XRB.

05211 - WITH SWITCH #5 DOWN - TEST HPR AND TSX FOR XRC.

ERROR STOPS

SINCE THE FIRST PART OF THE PROGRAM - UP TO 01764-DOES NOT USE SENSE SWITCHES ALL ERROR STOPS WILL BE HTR.

IN THE LAST PART OF THE PROGRAM -BEYOND 01764- AN ERROR STOP WILL APPEAR IN EACH SECTION FOLLOWING SENSE SWITCH #2 TEST.

NOTE - SWITCH #2 MUST BE UP TO STOP ON ERROR.

PRINT OUTS

THIS PROGRAM DOES NOT USE 4DEPR. IT DOES HOWEVER HAVE ITS OWN PRINT IMAGE FOR PROGRAM NAME, STORAGE SIZE, AND PASS COMPLETE.

1. 06741 -NOW RUNNING 9M03A INDEXING TEST - PRINTS OUT FOR THE FIRST PASS ONLY.

2. 01575 -SETTING CONSTANSTS FOR --K CAPACITY STORAGE - PRINTS OUT FOR THE FIRST PASS ONLY.

3. 06776 -PASS COMPLETE 9M03A-

G. COMMENTS

THE STANDARD PRINT ROUTINE WAS NOT INCLUDED WITH THIS TEST, AS THE PRINT ROUTINE ITSELF USES A GREAT DEAL OF INDEXING.

IF IT IS DESIRABLE TO TEST ONLY INDEX REGISTER A-PLACE A TRA TO 01764 AT LOCATION 03136 AND TRANSFER MANUALLY TO 01764.

TO LOOP IN XRB SECTION, PLACE A TRA TO 03140 AT LOCATION 04313 AND TRANSFER MANUALLY TO 03140.

TO LOOP IN XRC SECTION, PLACE A TRA TO 04315 IN LOCATION 05467 AND TRANSFER MANUALLY TO 04315.

TO LOOP IN MULTIPLE TAG INDEXING, PLACE TRA TO 05471 IN LOCATION 06565 AND TRANSFER MANUALLY TO 05471.

TEST LOCATIONS

0	TEST - HTR - HALT AND TRANSFER
2	TEST - TXL-TRANSFER ON XR LOW OR EQUAL
6	TEST - TXL WITH XRA LOW
36	TEST - TXL WITH ZERO TAG
43	TEST - TXL WITH ZERO TAG AND DECREMENT
67	TEST - TXL WITH XRA HIGH
136	TEST - NO TRANSFER WITH TXL ON XRA HIGH
166	TEST - NO TRANSFER WITH TXH ON XRA EQUAL
212	TEST - NO TRANSFER ON TXH WITH XRA LOW
232	TEST - THAT TXL AND TXH DO NOT CHANGE XRA
305	TEST - TNX WITH XRA LOW
321	TEST - TNX WITH XRA EQUAL
333	TEST - TIX WITH XRA LOW
351	TEST - TIX WITH XRA EQUAL
407	TEST - AXC-ADDRESS TO INDEX COMPLEMENTED
424	TEST - TIX-TRANSFER ON INDEX
442	TEST - NO TRANSFER AND DECREMENT WITH TNX
452	TEST - COUNT-DOWN WITH TIX
462	TEST - COUNT-DOWN WITH TNX
472	TEST - TXI-TRANSFER WITH XR INCREMENTED
527	TEST - COUNT-DOWN WITH TXI, TIX, TNX

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 546  TEST - TSX TRANSFER AND SET INDEX
 562  TEST - LXA-LOAD INDEX FROM ADDRESS
 636  TEST - LAC-LOAD COMPLEMENT OF ADDRESS IN INDEX
 720  TEST - SXA-STORE INDEX IN ADDRESS
 751  TEST - LXD-LOAD INDEX FROM DECREMENT
 775  TEST - SXD-STORE INDEX IN DECREMENT
1043  TEST - LDC-LOAD COMPLEMENT OF DECREMENT IN INDEX
1101  TEST - PDX-PLACE DECREMENT IN INDEX
1122  TEST - PDC-PLACE COMPLEMENT OF DECREMENT IN INDEX
1145  TEST - PAX-PLACE ADDRESS IN INDEX
1166  TEST - PAC-PLACE COMPLEMENT OF ADDRESS IN INDEX
1241  TEST - PXD-PLACE INDEX IN DECREMENT
1311  TEST - PXA-PLACE INDEX IN ADDRESS

1412  TEST - SIZE OF STORAGE

XRA  XRB  XRC
1764-3140-4315  TEST - THAT NO INDEX TAG LEAVES ADDRESS UNALTERED
1774-3150-4325  TEST - XR IS RESET TO ZERO IF ADDRESSES ARE MODIFIED
2006-3162-4337  TEST - PLACE XR IN DECREMENT
2017-3205-4362  TEST - PLACE XR IN DECREMENT AND COMPLEMENT
2037-3225-4402  TEST - STORE DECREMENT AFTER PXD AND COMPLEMENT
2047-3235-4412  TEST - LOAD INDEX FROM DECREMENT & PLACE INDEX IN DEC.
2073-3247-4424  TEST - ADDRESS MODIFICATION
2114-3270-4445  TEST - TRANSFER WITH INDEX INCREMENTED
2134-3310-4465  TEST - STORE INDEX IN DECREMENT
2157-3333-4510  TEST - PLACE DECREMENT IN INDEX
2171-3345-4522  TEST - LOAD INDEX FROM ADDRESS
2204-3360-4570  TEST - PLACE ADDRESS IN INDEX
2217-3373-4570  TEST - TRANSFER ON INDEX HIGH, WHEN INDEX IS LOW
2237-3413-4570  TEST - TRANSFER ON INDEX HIGH, WHEN INDEX IS EQUAL
2257-3433-4610  TEST - TRANSFER ON INDEX HIGH, WHEN INDEX IS HIGH
2276-3453-4627  TEST - TRANSFER ON INDEX LOW, WHEN INDEX IS HIGH
2316-3473-4647  TEST - TRANSFER ON INDEX LOW, WHEN INDEX IS EQUAL
2335-3512-4666  TEST - TRANSFER ON INDEX LOW, WHEN INDEX IS LOW
2354-3531-4705  TEST - TRANSFER ON INDEX, WHEN INDEX IS HIGH
2373-3550-4724  TEST - TRANSFER ON INDEX, WHEN INDEX IS EQUAL
2413-3570-4744  TEST - TRANSFER ON INDEX, WHEN INDEX IS LOW
2433-3610-4764  TEST - TRANSFER ON NO INDEX, WHEN INDEX IS LESS THAN DEC.
2452-3627-5003  TEST - TRANSFER ON NO INDEX, WHEN INDEX IS EQUAL TO DEC.
2471-3646-5022  TEST - TRANSFER ON NO INDEX, WHEN INDEX IS GREATER THAN DEC.
2511-3666-5042  TEST - TRANSFER AND SET INDEX
2530-3705-5061  TEST - TRANSFER ON INDEX FOR COUNTING
2560-3735-5111  TEST - TRANSFER ON NO INDEX FOR COUNTING
2606-3763-5137  TEST - TRANSFER ON INDEX INCREMENTED FOR COUNTING
2635-4012-5166  TEST - ADDRESS MODIFICATION FOR ALL POSITIONS IN MEMORY
2713-4070-5244  TEST - PLACE INDEX IN ADDRESS
2747-4124-5300  TEST - PLACE INDEX IN ADDRESS AND COMPLEMENT
2767-4144-5320  TEST - STORE ADDRESS AFTER COMPLEMENT
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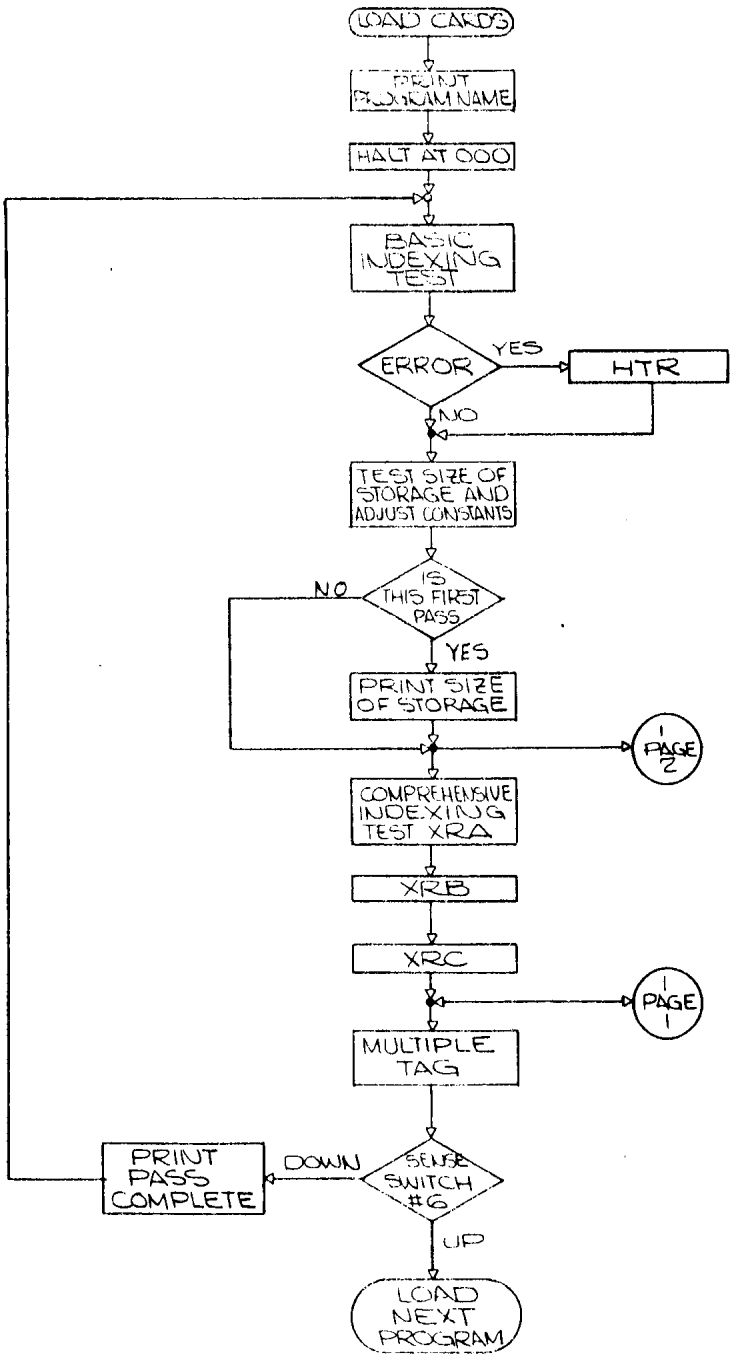
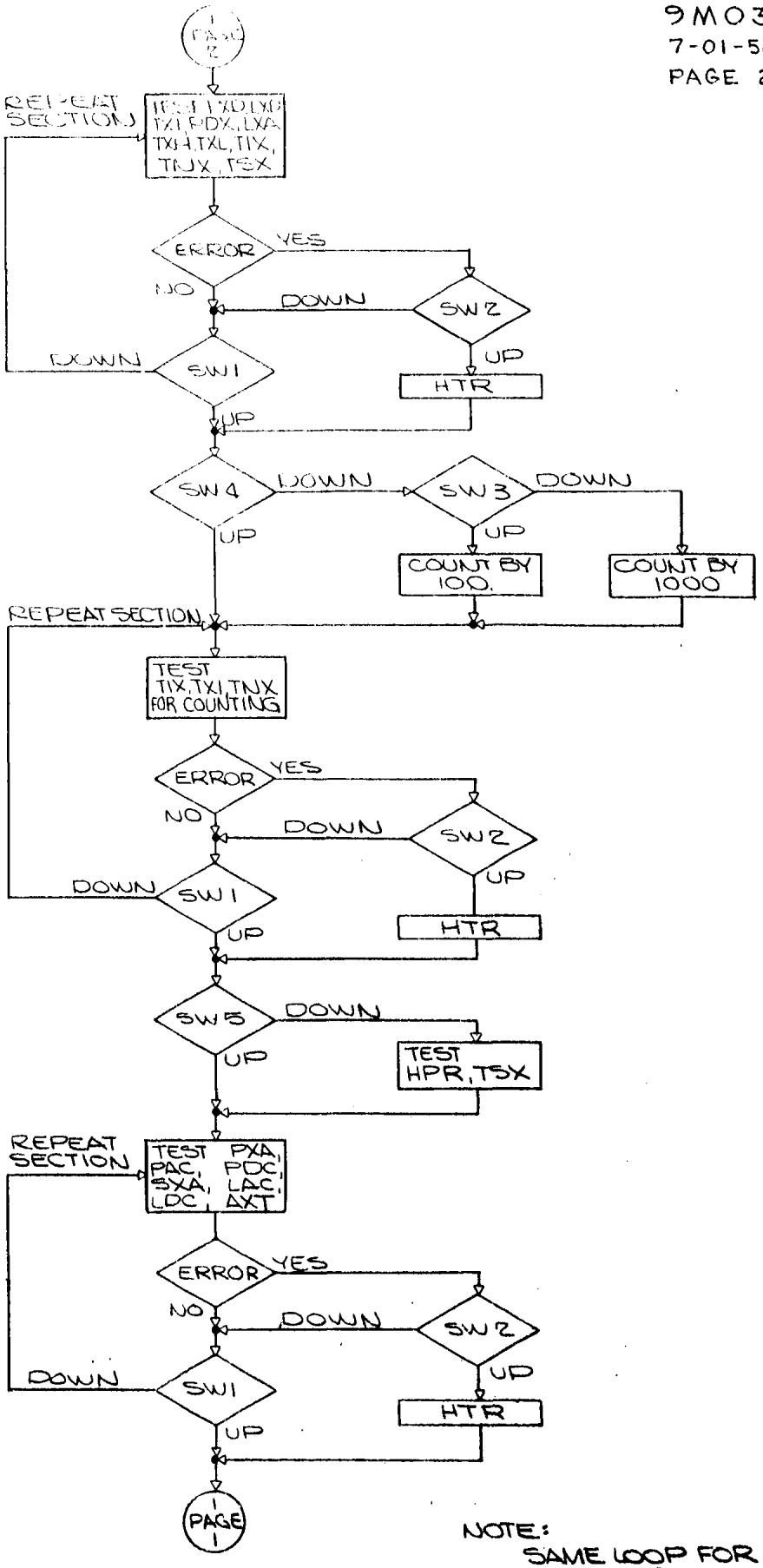
2777-4154-5330 TEST - STORE INDEX IN ADDRESS
3034-4211-5365 TEST - PLACE 2-S COMPLEMENT OF ADDRESS IN INDEX
3051-4226-5402 TEST - PLACE 2-S COMPLEMENT OF DECREMENT IN INDEX
3066-4243-5417 TEST - LOAD ADDRESS 2-S COMPLEMENT IN INDEX
3100-4255-5431 TEST - LOAD DECREMENT 2-S COMPLEMENT IN INDEX
3112-4267-5443 TEST - LOAD OWN ADDRESS IN INDEX
3125-4302-5456 TEST - LOAD COMPLEMENT OF OWN ADDRESS

MULTIPLE TAG

5461 TEST - TAG ONE
5520 TEST - TAG TWO
5543 TEST - TAG THREE
5567 TEST - TAG FOUR
5613 TEST - TAG FIVE
5637 TEST - TAG SIX
5663 TEST - TAG SEVEN
5707 TEST - INDEX READ IN WITH MULTIPLE TAG
5751 TEST - TAG ZERO
6025 TEST - TRANSFER ON INDEX
6100 TEST - TRANSFER ON INDEX LOW
6153 TEST - TRANSFER ON NO INDEX
6226 TEST - TRANSFER ON INDEX INCREMENTED
6300 TEST - TRANSFER AND SET INDEX TAG ONE
6343 TEST - TRANSFER AND SET INDEX TAG ZERO
6404 TEST - LOAD INDEX FROM ADDRESS TAG ZERO
6433 TEST - LOAD INDEX FROM DECREMENT TAG ZERO
6462 TEST - PLACE ADDRESS IN INDEX TAG ZERO
6512 TEST - PLACE DECREMENT IN INDEX TAG ZERO
6542 TEST - STORE INDEX IN DECREMENT TAG ZERO
6556 TEST - PLACE INDEX IN DECREMENT TAG ZERO

6


LOAD CARDS
PRINT PROGRAM NAME
HALT AT 000
BASIC INDEXING TEST
ERROR
YES
HTR
NO
TEST SIZE OF STORAGE AND ADJUST CONSTANTS
IS THIS FIRST PASS
NO
YES
PRINT SIZE OF STORAGE
1 PAGE 2
COMPREHENSIVE INDEXING TEST XRA
XRB
XRC
1 PAGE 1
MULTIPLE TAG
SENSE SWITCH #6
DOWN
PRINT PASS COMPLETE
UP
LOAD NEXT PROGRAM



NOTE:
SAME LOOP FOR XRA, XRB, AND XRC

```
*          9M03A     INDEXING TEST


00000  0000 00 0 00001         HTR *+1       HALT OK, PRESS START,,


                                 TEST XRA FIRST
                                 TRANSFER ON TXL. ADDER X CARRY AT ER6
                                 WITH XRA LOW OF EQUAL.


00001  0774 00 1 00300   SWING AXT 3C,1       300 TO XRA
00002 -3 03000 1 00004         TXL *+2,1,3M  SHOULD TRANSFER, XRA
                                             LOW, ADDER X CARRY AT
                                             ER6. SYSTEMS 2.07.02

00003  0000 00 0 00004         HTR *+1       FAILED TO TRANSFER ON
                                             LOW XRA=300. DEC=3000.

                                 TRY TXL AGAIN TO SEE IF XRA STILL HAS
                                 300

00004 -3 00300 1 00006         TXL *+2,1,3C  SHOULD TRANSFER

00005  0000 00 0 00006         HTR *+1       FAILED TO TRANSFER. XRA
                                             SHOULD STILL HAVE 300.
                                             IF THERE WAS NO STOP AT
                                             LOC 2. THEN XRA MAY HAVE
                                             BEEN CHANGED.
                                             SYSTEMS 2.08.53


                                 TXL WITH XRA LOW

00006  0774 00 1 00200   LOW   AXT 2C,1       200 TO XRA
00007 -3 00300 1 00011         TXL *+2,1,3C  SHOULD TRANSFER

00010  0000 00 0 00011         HTR *+1       FAILED TO TRANSFER
                                             ON XRA LOW
                                             XRA=200, DEC=300

00011  0774 00 1 00200         AXT 2C,1      200 TO XRA
00012 -3 00201 1 00014         TXL *+2,1,2C+1 SHOULD TRANSFER

00013  0000 00 0 00014         HTR *+1       FAILED TO TRANSFER
                                             ON XRA ONE LESS THEN DEC.
                                             XRA=200, DEC=201

00014  0774 00 1 00001         AXT 1,1       1 TO XRA
00015 -3 77777 1 00017         TXL *+2,1,32K SHOULD TRANSFER

00016  0000 00 0 00017         HTR *+1       FAILED TO TRANFER ON
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                                                XRA LOW
                                                XRA=1, DEC=77777

00017  0774 00 1 77776          AXT 32K-1,1    77776 TO XRA
00020 -3 77777 1 00022          TXL *+2,1,32K  SHOULD TRANSFER

00021  0000 00 0 00022          HTR *+1        FAILED TO TRANSFER ON
                                                XRA ONE LESS THEN DEC.
                                                XRA=7776, DEC=77777

00022  0774 00 1 00000          AXT 0,1        CLEAR XRA
00023 -3 00001 1 00025          TXL *+2,1,1    SHOULD TRANSFER

00024  0000 00 0 00025          HTR *+1        FAILED TO TRANSFER ON
                                                XRA ZERO
                                                XRA=0, DEC=1

00025  0774 00 1 00000          AXT 0,1        CLEAR XRA
00026 -3 40000 1 00030          TXL *+2,1,40M  SHOULD TRANSFER

00027  0000 00 0 00030          HTR *+1        FAILED TO TRANSFER ON
                                                XRA ZERO
                                                XRA=0, DEC=40000

00030  0774 00 1 00000          AXT 0,1        CLEAR XRA
00031 -3 00000 1 00033          TXL *+2,1,0    SHOULD TRANSFER

00032  0000 00 0 00033          HTR *+1        FAILED TO TRANSFER ON
                                                BOTH XRA AND DEC=0

00033  0774 00 1 22223          AXT A2+1,1     22223 TO XRA
00034 -3 55555 1 00036          TXL *+2,1,50M+5M+5C+5D+5 SHOULD TRANSFER
                                                EXCEPT ON
                                                16K MACHINES
00035  0000 00 0 00036          HTR *+1        FAILED TO TRANSFER
                                                WITH TWOS COMP. OF
                                                XRA EQAUL TO DEC.
                                                XRA=2223, DEC=55555
                                                COMP. OF XRA=55555


                                    TXL WITH ZERO TAG

00036  0774 00 1 77777   SWEET AXT 32K,1      ALL 7-S TO XRA
00037 -3 00001 0 00041          TXL *+2,0,1    SHOULD TRANSFER

00040  0000 00 0 00041          HTR *+1        FAILED TO TRANSFER
                                                WITH ZERO TAG
                                                DEC=1

00041 -3 77777 0 00043          TXL *+2,0,32K  SHOULD TRANSFER

00042  0000 00 0 00043          HTR *+1        FAILED TO TRANSFER
                                                WITH ZERO TAG
                                                DEC =77777
```

TXL WITH ZERO TAG AND DECREMENT

```
00043 -3 00000 0 00045         TXL *+2
00044  0000 00 0 00045         HTR *+1       FAILED TO TRANSFER
00045 -3 00000 0 00047         TXL *+2
00046  0000 00 0 00047         HTR *+1       FAILED TO TRANSFER
00047 -3 00000 0 00051         TXL *+2
00050  0000 00 0 00051         HTR *+1       FAILED TO TRANSFER
00051 -3 00000 0 00053         TXL *+2
00052  0000 00 0 00053         HTR *+1       FAILED TO TRANSFER
00053 -3 00000 0 00055         TXL *+2
00054  0000 00 0 00055         HTR *+1       FAILED TO TRANSFER
00055 -3 00000 0 00057         TXL *+2
00056  0000 00 0 00057         HTR *+1       FAILED TO TRANSFER
00057 -3 00000 0 00061         TXL *+2
00060  0000 00 0 00061         HTR *+1       FAILED TO TRANSFER
00061 -3 00000 0 00063         TXL *+2
00062  0000 00 0 00063         HTR *+1       FAILED TO TRANSFER
00063 -3 00000 0 00065         TXL *+2
00064  0000 00 0 00065         HTR *+1       FAILED TO TRANSFER
00065 -3 00000 0 00067         TXL *+2
00066  0000 00 0 00067         HTR *+1       FAILED TO TRANSFER
```

TRY TXH WITH XRA HIGH

```
00067  0774 00 1 00200   CHAR  AXT 2C,1      200 TO XRA
00070  3 00100 1 00072         TXH *+2,1,C   SHOULD TRANSFER

00071  0000 00 0 00072         HTR *+1       FAILED TO TRANSFER
                                             ON XRA HIGH
                                             XRA=200, DEC=100
                                             NO ADDER X CARRY AT
                                             ER6 SHOULD CAUSE
                                             TRANSFER. SYSTEM 2.07.02

00072  0774 00 1 00001         AXT 1,1       1 TO XRA
00073  3 00000 1 00075         TXH *+2,1,0   SHOULD TRANSFER

00074  0000 00 0 00075         HTR *+1       FAILED TO TRANSFER ON
                                             XRA=1, DEC=0

00075  0774 00 1 55555         AXT 50M+5M+5C+5D+5,1 ALL 5-S TO XRA
00076  3 22222 1 00100         TXH *+2,1,A2  SHOULD TRANSFER,EXCEPT
                                             ON 16K MACHINES.
00077  0000 00 0 00100         HTR *+1       FAILED TO TRANSFER
                                             XRA=55555, DEC=22222

00100  0774 00 1 74000         AXT 70M+4M,1  74000 TO XRA
00101  3 02000 1 00103         TXH *+2,1,2M  SHOULD TRANSFER

00102  0000 00 0 00103         HTR *+1       FAILED TO TRANSFER
                                             XRA=74000, DEC=2000

00103  0774 00 1 76000         AXT 70M+6M,1  76000 TO XRA
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```
00104  3 01000 1 00106         TXH *+2,1,M   SHOULD TRANSFER

00105  0000 00 0 00106         HTR *+1       FAILED TO TRANSFER
                                             XRA=76000, DEC =1000

00106  0774 00 1 77000         AXT 70M+7M,1  77000 TO XRA
00107  3 00400 1 00111         TXH *+2,1,4C  SHOULD TRANSFER

00110  0000 00 0 00111         HTR *+1       FAILED TO TRANSFER
                                             XRA=77000, DEC=400

00111  0774 00 1 77400         AXT 70M+7M+4C,1 77400 TO XRA
00112  3 00200 1 00114         TXH *+2,1,2C  SHOULD TRANFER

00113  0000 00 0 00114         HTR *+1       FAILED TO TRANSFER
                                             XRA=77400, DEC=200

00114  0774 00 1 77600         AXT 70M+7M+6C,1 77600 TO XRA
00115  3 00100 1 00117         TXH *+2,1,C   SHOULD TRANSFER

00116  0000 00 0 00117         HTR *+1       FAILED TO TRANSFER
                                             XRA=77600, DEC=100

00117  0774 00 1 77700         AXT 70M+7M+7C,1 77700 TO XRA
00120  3 00040 1 00122         TXH *+2,1,4D  SHOULD TRANSFER

00121  0000 00 0 00122         HTR *+1       FAILED TO TRANSFER
                                             XRA=77700, DEC=40

00122  0774 00 1 77740         AXT 70M+7M+7C+4D,1 77740 TO XRA
00123  3 00020 1 00125         TXH *+2,1,2D  SHOULD TRANSFER

00124  0000 00 0 00125         HTR *+1       FAILED TO TRANSFER
                                             XRA=77740, DEC=20

00125  0774 00 1 77760         AXT 70M+7M+7C+6D,1 77760 TO XRA
00126  3 00010 1 00130         TXH *+2,1,D   SHOUDL TRANSFER

00127  0000 00 0 00130         HTR *+1       FAILED TO TRANSFER
                                             XRA=77760, DEC =10

00130  0774 00 1 77770         AXT 32K-7,1   77770 TO XRA
00131  3 00004 1 00133         TXH *+2,1,4   SHOULD TRANSFER

00132  0000 00 0 00133         HTR *+1       FAILED TO TRANSFER
                                             XRA=77770, DEC=4

00133  0774 00 1 77774         AXT 32K-3,1   77774 TO XRA
00134  3 00002 1 00136         TXH *+2,1,2   SHOULD TRANSFER

00135  0000 00 0 00136         HTR *+1       FAILED TO TRANSFER
                                             XRA=77774, DEC=2.

                                THE PROGRAM WILL NOW ASSUME THAT
                                TXL WILL TRANSFER ON ZERO TAG AND
```

XRA LOW, AND THAT TXH WILL TRANSFER ON XRA HIGH. WE WILL USE THESE FACTS TO SEE THAT TXL WILL NOT TRANSFER ON XRA HIGH AND THAT TXH WILL NOT TRANSFER ON XRA LOW. IF THERE HAS BEEN AN ERROR IN THE PRECEEDING TEST, THEY SHOULD BE INVESTIGATED BEFORE WE CONTINUE.

NO TRANSFER WITH TXL ON XRA HIGH.

```
00136  0774 00 1 00200   IOT   AXT 2C,1      200 TO XRA
00137 -3 00100 1 00141          TXL *+2,1,C   SHOULD NOT TRANSFER
00140  3 00100 1 00142          TXH *+2,1,C   THIS SHOULD TRANSFER
                                              IF XRA STILL HAS 200.
                                              SEE LOC 70
00141  0000 00 0 00142          HTR *+1       TXL TRANSFERED ON
                                              XRA HIGH
                                              XRA=200, DEC=100
```

THIS STOP COULD INDICATE THAT THE TXH AT LOC 140 DID NOT TRANSFER. BUT SINCE WE ASSUME THAT TXH WOULD WORK WITH THIS COMBINATION OF NUMBER-SEE LOC 70-WE SAY THAT THE ERROR WAS CAUSED BY TXL AT 137.

```
00142  0774 00 1 00001          AXT 1,1       1 TO XRA
00143 -3 00000 1 00145          TXL *+2,1,0   SHOULD NOT TRANSFER
00144  3 00000 1 00146          TXH *+2,1,0   SHOULD TRANSFER, SEE
                                              LOC 73.
00145  0000 00 0 00146          HTR *+1       TXL TRANSFERED ON
                                              XRA HIGH
                                              XRA=1, DEC=0

00146  0774 00 1 55555          AXT 50M+5M+5C+5D+5,1 ALL 5-S TO XRA
00147 -3 22222 1 00151          TXL *+2,1,A2 SHOULD NOT TRANSFER
                                              ON 4K,8K, AND 32 MACHINES
00150  3 22222 1 00152          TXH *+2,1,A2 SHOULD TRANSFER ON 4K,
                                              8K, AND 32K MACHINES.
                                              SEE LOC 76.
00151  0000 00 0 00152          HTR *+1       TXL TRANSFERED ON
                                              XRA HIGH
                                              XRA=55555, DEC=22222

00152  0774 00 1 74000          AXT 70M+4M,1  74000 TO XRA
00153 -3 02000 1 00155          TXL *+2,1,2M  SHOULD NOT TRANSFER
00154  3 02000 1 00156          TXH *+2,1,2M  SHOULD TRANSFER. SEE
                                              LOC 101.
00155  0000 00 0 00156          HTR *+1       TXL TRANSFERED ON
                                              XRA HIGH
```

```
                                                    XRA =74000, DEC=2000

00156  0774 00 1 76000         AXT 70M+6M,1  76000 TO XRA
00157 -3 01000 1 00161         TXL *+2,1,M   SHOULD NOT TRANSFER
00160  3 01000 1 00162         TXH *+2,1,M   SHOULD TRANSFER,
                                             SEE LOC 104
00161  0000 00 0 00162         HTR *+1       TXL TRANSFERED ON
                                             XRA HIGH.
                                             XRA=76000, DEC=1000

00162  0774 00 1 77000         AXT 70M+7M,1  77000 TO XRA
00163 -3 00400 1 00165         TXL *+2,1,4C  SHOULD NOT TRANSFER
00164  3 00400 1 00166         TXH *+2,1,4C  SHOULD TRANSFER, SEE
                                             LOC 107
00165  0000 00 0 00166         HTR *+1       TXL TRANSFERED ON
                                             XRA HIGH.
                                             XRA=77000, DEC=400


                                 NO TRANSFER WITH TXH ON XRA EQUAL

00166  0774 00 1 00300   COMIN AXT 3C,1       300 TO XRA
00167  3 00300 1 00171         TXH *+2,1,3C  ADDER X CARRY AT ER6
                                             SHOULD BLOCK TRANSFER
00170 -3 00000 0 00172         TXL *+2       SHOULD TRANSFER, SEE
                                             LOC 43
00171  0000 00 0 00172         HTR *+1       TXH TRANSFERED ON
                                             XRA EQUAL
                                             XRA=300, DEC=300

                                 IF TXL WITH ZERO TAG AND DECREMENT
                                 WORKED OK AT LOC 43,WE ASSUME
                                 IT WILL WORK HERE.


00172  0774 00 1 00000         AXT 0,1       CLEAR XRA
00173  3 00000 1 00175         TXH *+2,1,0   SHOULD NOT TRANSFER
00174 -3 00000 0 00176         TXL *+2       SHOULD TRANSFER, SEE
                                             LOC 43
00175  0000 00 0 00176         HTR *+1       TXH TRANSFERED WITH
                                             XRA AND DEC BOTH ZERO.

00176  0774 00 1 77777         AXT 32K,1     77777 TO XRA
00177  3 77777 1 00201         TXH *+2,1,32K SHOULD NOT TRANSFER
00200 -3 00000 0 00202         TXL *+2       SHOULD TRANSFER, SEE
                                             LOC 43
00201  0000 00 0 00202         HTR *+1       TXH TRANSFERED ON
                                             XRA EQUAL
                                             XRA=777777, DEC=77777

00202  0774 00 1 22222         AXT A2,1      22222 TO XRA
00203  3 22222 1 00205         TXH *+2,1,A2  SHOULD NOT TRANSFER
00204 -3 00000 0 00206         TXL *+2       SHOULD TRANSFER, SEE
                                             LOC 43
00205  0000 00 0 00206         HTR *+1       TXH TRANSFER ON
                                             XRA EQUAL
```

```
                                                XRA=22222, DEC=22222

00206  0774 00 1 05555         AXT 5M+5C+5D+5,1 55555 TO XRA
00207  3 05555 1 00211         TXH *+2,1,5M+5C+5D+5 SHOULD NOT TRANSFER
00210 -3 00000 0 00212         TXL *+2        SHOULD TRANSFER, SEE
                                              LOC 43
00211  0000 00 0 00212         HTR *+1        TXH TRANSFER ON
                                              XRA EQUAL
                                              XRA=55555, DEC=55555



                                   NO TRANSFER ON TXH WITH XRA LOW

00212  0774 00 1 00000   FORTO AXT 0,1        CLEAR XRA
00213  3 00001 1 00215         TXH *+2,1,1    SHOULD NOT TRANSFER
00214 -3 00000 0 00216         TXL *+2        SHOULD TRANSFER, SEE
                                              LOC 43
00215  0000 00 0 00216         HTR *+1        TXH TRANSFER ON
                                              XRA LOW
                                              XRA=0, DEC=1

00216  0774 00 1 77776         AXT 32K-1,1    77776 TO XRA
00217  3 77777 1 00221         TXH *+2,1,32K SHOULD NOT TRANSFER
00220 -3 00000 0 00222         TXL *+2        SHOULD TRANSFER, SEE
                                              LOC 43
00221  0000 00 0 00222         HTR *+1        TXH TRANSFER ON
                                              XRA LOW
                                              XRA=77776, DEC=77777

00222  0774 00 1 22223         AXT A2+1,1 02223 IN XRA
00223  3 55555 1 00225         TXH *+2,1,50M+5M+5C+5D+5 SHOULD NOT TRANS
                                              ON 4K,8K, OR 32K MACHINES
00224 -3 00000 0 00226         TXL *+2        SHOULD TRANSFER, SEE
                                              LOC 43
00225  0000 00 0 00226         HTR *+1        TXH TRANSFER ON
                                              XRA LOW
                                              XRA=22223, DEC=55555

00226  0774 00 1 22222         AXT A2,1       22222 TO XRA
00227  3 22223 1 00231         TXH *+2,1,A2+1 SHOULD NOT TRANSFER
00230 -3 00000 0 00232         TXL *+2        SHOULD TRANSFER, SEE
                                              LOC 43
00231  0000 00 0 00232         HTR *+1        TXH TRANSFER ON
                                              XRA LOW
                                              XRA=22222, DEC=22223


                                   CHECK THAT TXL AND TXH DOES NOT
                                   CHANGE XRA.

00232  0774 00 1 00000   CARRY AXT 0,1        CLEAR XRA
00233  3 00300 1 00236         TXH *+3,1,3C   SHOULD NOT TRANSFER
00234 -3 00000 1 00237         TXL *+3,1,0    SHOULD TRANSFER ONLY
                                              IF XRA IS STILL ZERO.
00235  0000 00 0 00237         HTR *+2        NO TXL TRANSFER, XRA
```

```
                                                SHOULD HAVE STILL BEEN
                                                ZERO AT LOC 234

00236  0000 00 0 00237         HTR *+1         TXH TRANSFER ON
                                                XRA=0, DEC=300

00237  0774 00 1 22222         AXT A2,1        22222 TO XRA
00240  3 22222 1 00245         TXH *+5,1,A2    SHOULD NOT TRANSFER
00241 -3 00000 1 00244         TXL *+3,1,0     SHOULD NOT TRANSFER
00242 -3 22222 1 00246         TXL *+4,1,A2    SHOULD TRANSFER, XRA
                                                SHOULD STILL HAVE 22222

00243  0000 00 0 00246         HTR *+3         FAILED TO TRANSFER FROM
                                                LOC 242, XRA SHOULD
                                                HAVE BEEN=22222

00244  0000 00 0 00246         HTR *+2         SHOULD NOT HAVER
                                                TRANSFER FROM LOC 241
                                                XRA SHOULD HAVE HAD 22222

00245  0000 00 0 00246         HTR *+1         TXH TRANSFER ON
                                                XRA EQUAL, LOC 240
                                                XRA=22222, DEC=22222


00246  0774 00 1 00300         AXT 3C,1        300 TO XRA
00247  3 00277 1 00251         TXH *+2,1,3C-1 SHOULD TRANSFER
00250  0000 00 0 00251         HTR *+1         FAILED TO TRANSFER
                                                ON XRA HIGH
                                                XRA=300, DEC=277

00251 -3 00300 1 00253         TXL *+2,1,3C    SHOULD TRANSFER
00252  0000 00 0 00253         HTR *+1         FAILED TO TRANSFER, XRA
                                                SHOULD HAVE STILL BEEN
                                                300.
00253 -3 00277 1 00255         TXL *+2,1,3C-1 SHOULD NOT TRANSFER
00254 -3 00000 0 00256         TXL *+2         OK,
00255  0000 00 0 00256         HTR *+1         SHOULD NOT HAVER
                                                TRANSFERRED AT LOC 253
                                                XRA=300, DEC=277

00256  0774 00 1 00003   ME    AXT 3,1         3 TO XRA
00257 -3 00004 1 00261         TXL *+2,1,4     SHOULD TRANSFER
00260  0000 00 0 00261         HTR *+1         FAILED TO TRANSFER
                                                ON TXL, XRA=3, DEC=4
00261  3 00002 1 00263         TXH *+2,1,2     SHOULD TRANSFER
00262  0000 00 0 00263         HTR *+1         FAILED TO TRANSFER
                                                ON TXH, DEC=2, XRA SHOULD
                                                STILL HAVE 3.

00263 -3 00004 1 00265         TXL *+2,1,4     SHOULD TRANSFER
00264  0000 00 0 00265         HTR *+1         FAILED TO TRANSFER
                                                ON TXL, DEC=4, XRA
                                                SHOULD STILL HAVE 3

00265  0774 00 1 00300         AXT 3C,1        300 TO XRA
```

```
00266 -3 00300 1 00270         TXL *+2,1,3C  SHOULD TRANSFER
00267  0000 00 0 00270         HTR *+1       FAILED TO TRANSFER
                                             XRA=300, DEC=300
00270  3 00277 1 00272         TXH *+2,1,3C-1 SHOULD TRANSFER
00271  0000 00 0 00272         HTR *+1       FAILED TO TRANSFER
                                             DEC=2777, XRA SHOULD
                                             STILL BE 300
00272 -3 00276 1 00274         TXL *+2,1,3C-2 SHOULD NOT TRANSFER
00273 -3 00300 1 00275         TXL *+2,1,3C  SHOULD TRANSFER
00274  0000 00 0 00275         HTR *+1       TXL FAILED, XRA BEING
                                             CHANGED, XRA SHOULD
                                             STILL HAVE 300. XRA
                                             SHOULD NOT CYCLE THROUGH
                                             THE ADDERS.


00275  0774 00 1 77776         AXT 32K-1,1   77776 TO XRA
00276 -3 75776 1 00300         TXL *+2,1,32K-2M-1 SHOULD NOT TRANSFER
00277 -3 00000 0 00301         TXL *+2       OK

00300  0000 00 0 00301         HTR *+1       TXL TRANSFER ON
                                             XRA HIGH, LOC 306
                                             XRA=77776, DEC =75776
00301  3 04000 1 00303         TXH *+2,1,4M  SHOULD TRANSFER
00302  0000 00 0 00303         HTR *+1       FAILED TO TRANSFER,
                                             XRA SHOULD BE HIGH
                                             XRA=77776, DEC=4000
00303  3 77775 1 00305         TXH *+2,1,32K-2 SHOULD TRANSFER
00304  0000 00 0 00305         HTR *+1       FAILED TO TRANSFER
                                             XRA SHOULD STILL BE HIGH
                                             XRA=77776, DEC=77775



                                    WE MAY NOW PROCEED TO TNX AND TIX,
                                    IF THERE HAVE BEEN ANY ERRORS UP TO
                                    THIS POINT, THEY SHOULD BE
                                    INVESTIGATED BEFORE WE CONTINUE.


                                    TNX WITH XRA LOW. ADDER X CARRY
                                    ON AT ER6 SHOULD CAUSE TRANSFER.

00305  0774 00 1 00300   HOME  AXT 3C,1       300 TO XRA
00306 -2 03000 1 00310         TNX *+2,1,3M  SHOULD TRANSFER
00307  0000 00 0 00310         HTR *+1       FAILED TO TRANSFER
                                             ON XRA LOW
                                             XRA=300, DEC=3000
00310 -3 00300 1 00312         TXL *+2,1,3C  SHOULD TRANSFER
00311  0000 00 0 00312         HTR *+1       FAILED TO TRANSFER
                                             ON TXL, XRA SHOULD
                                             HAVESTILL BEEN 300.

00312  3 00277 1 00314         TXH *+2,1,3C-1 SHOULD TRANSFER
00313  0000 00 0 00314         HTR *+1       FAILED TO TRANSFER
```

```
                                                ON TXH, XRA SHOULD
                                                STILL HAVE BEEN 300.


00314  0774 00 1 00000         AXT 0,1        CLEAR XRA
00315 -2 00001 1 00317         TNX *+2,1,1    SHOULD TRANSFER
00316  0000 00 0 00317         HTR *+1        FAILED TO TRANSFER
                                               ON XRA=0, DEC=1
00317 -3 00000 1 00321         TXL *+2,1,0    SHOULD TRANSFER
00320  0000 00 0 00321         HTR *+1        FAILED TO TRANSFER,
                                               XRA SHOULD HAVE BEEN
                                               ZERO.

                                    TNX WITH XRA EQUAL

00321  0774 00 1 77777   MARY  AXT 32K,1      77777 TO XRA
00322 -2 77777 1 00324         TNX *+2,1,32K  SHOULD TRANSFER
                                               XRA=77777, DEC=77777

00323  0000 00 0 00324         HTR *+1        FAILED TO TRANSFER
                                               WITH XRA EQUAL
00324 -3 77777 1 00326         TXL *+2,1,32K  SHOULD TRANSFER
00325  0000 00 0 00326         HTR *+1        FAILED TO TRANSFER,
                                               XRA SHOULD HAVE STILL
                                               HAD 77777
00326  3 77776 1 00330         TXH *+2,1,32K-1 SHOULD TRANSFER
00327  0000 00 0 00330         HTR *+1        FAILED TO TRANSFER
                                               XRA SHOULD HAVE STILL
                                               BEEN 77777

00330  0774 00 1 00000         AXT 0,1        CLEAR XRA
00331 -2 00000 1 00333         TNX *+2,1,0    SHOULD TRANSFER
00332  0000 00 0 00333         HTR *+1        FAILED TO TRANSFER ON
                                               XRA=DEC=ZERO


                                    TIX WITH XRA LOW

00333  0774 00 1 00000   HADA  AXT 0,1        CLEAR XRA
00334  2 00001 1 00336         TIX *+2,1,1    SHOULD NOT TRANSFER
00335 -3 00000 0 00337         TXL *+2        OK
00336  0000 00 0 00337         HTR *+1        TRANSFER ON TIX WITH
                                               XRA LOW
                                               XRA=0, DEC=1

00337 -3 00000 1 00341         TXL *+2,1,0    XRA SHOULD STILL BE
                                               ZERO
00340  0000 00 0 00341         HTR *+1        XRA NOT ZERO


00341  0774 00 1 77776         AXT 32K-1,1    77776 TO XRA
00342  2 77777 1 00344         TIX *+2,1,32K  SHOULD NOT TRANSFER
00343 -3 00000 0 00345         TXL *+2        OK
00344  0000 00 0 00345         HTR *+1        TRANSFER ON TIX WITH
                                               XRA LOW
                                               XRA=77776, DEC=77777
```

```
00345 -3 77776 1 00347         TXL *+2,1,32K-1 SHOULD TRANSFER
00346  0000 00 0 00347         HTR *+1        XRA SHOULD HAVE BEEN
                                               EQUAL, DEC=77776
00347  3 77775 1 00351         TXH *+2,1,32K-2 SHOULD TRANSFER
00350  0000 00 0 00351         HTR *+1        XRA SHOULD BE 77776



                                    TIX WITH XRA EQUAL

00351  0774 00 1 00001   LITIL AXT 1,1        1 TO XRA
00352  2 00001 1 00354         TIX *+2,1,1    SHOULD NOT TRANSFER
00353 -3 00000 0 00355         TXL *+2        OK
00354  0000 00 0 00355         HTR *+1        TIX TRANSFER WITH
                                               XRA EQUAL
                                               XRA=1, DEC=1
00355 -3 00001 1 00357         TXL *+2,1,1    SHOULD TRANSFER
00356  0000 00 0 00357         HTR *+1        XRA SHOULD HAVE
                                               BEEN EQUAL
00357  3 00000 1 00361         TXH *+2,1,0    SHOULD TRANSFER
00360  0000 00 0 00361         HTR *+1        XRA SHOULD BE 1


00361  0774 00 1 00000         AXT 0,1        CLEAR XRA
00362  2 00000 1 00364         TIX *+2,1,0    SHOULD NOT TRANSFER
00363 -3 00000 0 00365         TXL *+2        OK
00364  0000 00 0 00365         HTR *+1        TIX TRANSFER WITH
                                               XRA=DEC=ZERO
00365 -3 00000 1 00367         TXL *+2,1,0    XRA SHOULD BE ZERO
00366  0000 00 0 00367         HTR *+1        XRA NOT STILL ZERO


00367  0774 00 1 00002         AXT 2,1        2 TO XRA
00370  2 00002 1 00372         TIX *+2,1,2    SHOULD NOT TRANSFER
00371 -3 00000 0 00373         TXL *+2        OK
00372  0000 00 0 00373         HTR *+1        TIX TRANSFER ON
                                               XRA EQUAL
                                               XRA=2, DEC=2
00373 -3 00002 1 00375         TXL *+2,1,2    SHOULD TRANSFER
00374  0000 00 0 00375         HTR *+1        XRA SHOULD STILL
                                               HAVE BEEN 2
00375  3 00001 1 00377         TXH *+2,1,1    SHOULD TRANSFER
00376  0000 00 0 00377         HTR *+1        XRA SHOULD STILL
                                               HAVE BEEN 2

00377  0774 00 1 77777         AXT 32K,1      77777 TO XRA
00400  2 77777 1 00402         TIX *+2,1,32K  SHOULD NOT TRANSFER
00401 -3 00000 0 00403         TXL *+2        OK
00402  0000 00 0 00403         HTR *+1        TIX TRANSFER ON
                                               XRA EQUAL
                                               XRA=77777, DEC=77777
00403 -3 77777 1 00405         TXL *+2,1,32K  SHOULD TRANSFER
00404  0000 00 0 00405         HTR *+1        XRA SHOULD STILL
                                               HAVE BEEN 777777
                                               DEC=77777
00405  3 77776 1 00407         TXH *+2,1,32K-1 SHOULD TRANSFER
```

```
00406  0000 00 0 00407         HTR *+1       XRA SHOULD STILL
                                             HAVE BEEN 77777
                                             DEC=77776
```

WE MAY NOW TEST XRA CYCLE THROUGH
THE ADDERS. TEST WITH AXC. XRA
TO ADDERS AT I3, SYSTEMS 2.08.49.2.
RETURN TO XRA AT I6,
SYSTEMS 2.08.53.1.

```
00407 -0774 00 1 77500   LAMB  AXC 70M+7M+5C,1 00300 TO XRA
00410 -3 00300 1 00412         TXL *+2,1,3C  SHOULD TRANSFER
00411  0000 00 0 00412         HTR *+1       XRA FAILED TO
                                             GET 300

00412  3 00277 1 00414         TXH *+2,1,3C-1 SHOULD TRANSFER
00413  0000 00 0 00414         HTR *+1       XRA FAILED TO
                                             GET 300

00414 -0774 00 1 77777         AXC 32K,1     00001 TO XRA
00415 -3 00001 1 00417         TXL *+2,1,1   SHOULD TRANSFER
00416  0000 00 0 00417         HTR *+1       XRA FAILED TO
                                             GET ONE

00417  3 00000 1 00421         TXH *+2,1,0   SHOULD TRANSFER
00420  0000 00 0 00421         HTR *+1       XRA FAILED TO
                                             GET ONE.

00421 -0774 00 1 00000         AXC 0,1       CLEAR XRA
00422 -3 00000 1 00424         TXL *+2,1,0   SHOULD TRANSFER
00423  0000 00 0 00424         HTR *+1       XRA NOT ZERO
```

TIX TRANSFER AND REDUCE XRA ON
NO ADDER X CARRY. THE COMPLEMENT
DIFFERENCE RETURSN TO XRA AT ER6,
CYCLED THROUGH THE ADDERS AND RETURNS
IN TRUE FORM AT ER11.
SYSTEMS 2.08.53.1.

```
00424  0774 00 1 00002   WHOSE AXT 2,1       2 TO XRA
00425  2 00001 1 00427         TIX *+2,1,1   SHOULD TRANSFER
00426  0000 00 0 00427         HTR *+1       FAILED TO TRANSFER
                                             ON TIX.
                                             XRA=2, DEC=1

00427 -3 00001 1 00431         TXL *+2,1,1   SHOULD TRANSFER
```

```
00430  0000 00 0 00431         HTR *+1       FAILED TO DECREMENT
                                             ON TIX. XRA SHOULD=1

00431  3 00000 1 00433         TXH *+2,1,0   SHOULD TRANSFER
00432  0000 00 0 00433         HTR *+1       FAILED TO DECREMENT
                                             ON TIX, XRA SHOULD=1



00433  0774 00 1 77777         AXT 32K,1     77777 TO XRA
00434  2 77776 1 00436         TIX *+2,1,32K-1 SHOULD TRANSFER
00435  0000 00 0 00436         HTR *+1       FAILED TO TRANSFER
                                             ON TIX
                                             XRA=77777, DEC=77776

00436 -3 00001 1 00440         TXL *+2,1,1   SHOULD TRANSFER
00437  0000 00 0 00440         HTR *+1       FAILED TO DECREMENT
                                             ON TIX, XRA SHOULD=1
00440  3 00000 1 00442         TXH *+2,1,0   SHOULD TRANSFER
00441  0000 00 0 00442         HTR *+1       FIALED TO DECREMENT
                                             ON TIX, XRA SHOULD=1

                                    NO TRANSFER AND DECREMENT WITH TNX

00442  0774 00 1 00002   FLEAS AXT 2,1       2 TO XRA
00443 -2 00001 1 00445         TNX *+2,1,1   SHOULD NOT TRANSFER
00444 -3 00000 0 00446         TXL *+2       OK
00445  0000 00 0 00446         HTR *+1       TRANSFER ON TNX WITH
                                             XRA LOW

00446 -3 00001 1 00450         TXL *+2,1,1   SHOULD TRANSFER
00447  0000 00 0 00450         HTR *+1       FAILED TO DECREMENT
                                             ON TNX. XRA SHOULD=1
00450  3 00000 1 00452         TXH *+2,1,0   SHOULD TRANSFER
00451  0000 00 0 00452         HTR *+1       FAILED TO DECREMENT
                                             ON TNX, XRA SHOULD=1



                                    COUNT-DOWN TEST WITH TIX

00452  0774 00 1 77777   WAS   AXT 32K,1     77777 TO XRA
00453  2 00001 1 00455         TIX *+2,1,1   SHOULD TRANSFER
00454  0000 00 0 00462         HTR *+6       FIALED TO TRANSFER
                                             ON TIX. XRA SHOULD
                                             ALWAYS BE HIGH

00455  3 00002 1 00453         TXH *-2,1,2   CONTINUE COUNT-DOWN
                                             UNTIL XRA=2
00456 -3 00002 1 00460         TXL *+2,1,2   XRA SHOULS NOW=2
00457  0000 00 0 00462         HTR *+3       FAILED, XRA SHOULD
                                             COUNT DOWN TO 2 ON
                                             TIX.

00460  3 00001 1 00462         TXH *+2,1,1   SHOULD TRANSFER
```

```
00461  0000 00 0 00462         HTR *+1       FAILED, XRA SHOULD
                                             BE=2.


                                    COUNT-DOWN WITH TNX

00462  0774 00 1 77777   WHITE AXT 32K,1
00463 -3 00002 1 00470         TXL *+5,1,2   TRANSFER WHEN XRA=2
00464 -2 00001 1 00467         TNX *+3,1,1   SHOULD NOT TRANSFER
00465  3 00001 1 00463         TXH *-2,1,1   SHOULD ALWAYS TRANSFER

00466  0000 00 0 00472         HTR *+4       FAILED TO TXH, XRA
                                             SHOULD COUNT DOWN TO
                                             2 AND SKIP OUT
                                             AT LOC 463

00467  0000 00 0 00472         HTR *+3       TRANSFERRED HERE
                                             FROM 464, XRA SHOULD
                                             COUNT DOWN TO 2 ONLY,
                                             SHOULD NEVER TRANSFER
                                             AT LOC 464

00470  3 00001 1 00472         TXH *+2,1,1   XRA SHOULD=2
00471  0000 00 0 00472         HTR *+1       FAILED, XRA SHOULD
                                             COUNT DOWN TO 2
                                             AND TRANSFER ON
                                             XRA EQUAL AT LOC 463


                                    TEXT TXI FOR UNCONDITIONAL TRANSFER
                                    AND INCREMENTING. XR CYCLES THROUGH
                                    ADDERS AT ER3 TO OBTAIN COMPLEMENT.
                                    ADDITION TAKE PLACE AT ER7. THE SUM
                                    IS SAMPLED BACK TO XR AT ER11.
                                    THE SYSTEMS ENVOLVED ARE
                                    XR TO ADD 3-17,  ER3D9 -     2.08.49
                                    ADD 3-17 TO XR  ER5D1
                                    AND  ER11D1                  2.08.53
                                    SR 1-35 TO ADD  ER7D5        2.08.48


00472  0774 00 1 00000   AS    AXT 0,1       CLEAR XRA
00473  1 00001 1 00475         TXI *+2,1,1   SHOULD TRANSFER
00474  0000 00 0 00475         HTR *+1       FAILED TO TRANSFER
                                             ON TXI
00475 -3 00001 1 00477         TXL *+2,1,1   XRA SHOULD=1
00476  0000 00 0 00477         HTR *+1       FAILED TO INCREMENT
                                             WITH TXI,
                                             XRA SHOULD=1

00477  3 00000 1 00501         TXH *+2,1,0   SHOULD TRANSFER
00500  0000 00 0 00501         HTR *+1       FAILED TO INCREMENT
                                             ON TXI.
                                             XRA SHOULD=1
```

```
00501  0774 00 1 77776         AXT 32K-1,1   77776 TO XRA
00502  1 00001 1 00504         TXI *+2,1,1   SHOULD TRANSFER
00503  0000 00 0 00504         HTR *+1       FAILED TO TRANSFER
                                             ON TXI.

00504  3 77776 1 00506         TXH *+2,1,32K-1 SHOULD TRANSFER
00505  0000 00 0 00506         HTR *+1       FAILED TO INCREMENT
                                             ON TXI.
                                             XRA SHOULD=77777
                                             DEC=77776

00506  0774 00 1 00001         AXT 1,1       1 TO XRA
00507  1 77776 1 00511         TXI *+2,1,32K-1 SHOULD TRANSFER
00510  0000 00 0 00511         HTR *+1       FAILED TO TRANSFER
                                             ON TXI

00511  3 77776 1 00513         TXH *+2,1,32K-1 SHOULD TRANSFER
00512  0000 00 0 00513         HTR *+1       FAILED TO INCREMENT
                                             ON TXI.
                                             XRA=77777, DEC=77776

00513  0774 00 1 77777         AXT 32K,1     777777 TO XRA
00514  1 77777 1 00516         TXI *+2,1,32K SHOULD TRANSFER
00515  0000 00 0 00516         HTR *+1       FAILED TO TRANSFER
                                             ON TXI

00516  3 77775 1 00520         TXH *+2,1,32K-2 SHOULD TRANSFER
00517  0000 00 0 00520         HTR *+1       FAILED TO INCREMENT
                                             ON TXI, XRA SHOULD
                                             HAVE 77776, DEC=77775

00520 -3 77776 1 00522         TXL *+2,1,32K-1 SHOULD TRANSFER
00521  0000 00 0 00522         HTR *+1       FAILED TO INCREMENT
                                             ON TXI, XRA SHOULD
                                             HAVE 77776, DEC=77776.

00522  0774 00 1 00001         AXT 1,1       1 TO XRA
00523  1 77777 1 00525         TXI *+2,1,32K SHOULD TRANSFER
00524  0000 00 0 00525         HTR *+1       FAILED TO TRANSFER
                                             ON TXI.

00525 -3 00000 1 00527         TXL *+2,1,0   SHOULD TRANSFER
00526  0000 00 0 00527         HTR *+1       FAILED TO INCREMENT
                                             ON TXL. XRA SHOULD
                                             HAVE ZERO.



                                    COUNT-DOWN TEST WITH TXI, TIX

00527  0774 00 1 77777   SNOW  AXT 32K,1     77777 TO XRA
00530  2 00002 1 00533         TIX *+3,1,2   COUNT DOWN 2

00531 -3 00002 1 00534         TXL *+3,1,2   XRA SHOULD BE 2
00532  0000 00 0 00536         HTR *+4       FAILED TO TRANSFER
```

```
                                                    ON TIX WITH XRA HIGH

00533  1 00001 1 00530         TXI *-3,1,1    TRANSFER AND ADD 1
                                              UNTIL XRA=2

00534  3 00001 1 00536         TXH *+2,1,1    SHOULD TRANSFER
00535  0000 00 0 00536         HTR *+1        FAILED TO COUNT
                                              CORRECTLY, XRA SHOULD
                                              HAVE 2


00536  0774 00 1 77777         AXT 32K,1      77777 TO XRA
00537 -2 00002 1 00542         TNX *+3,1,2    SHOULD COUNT-DOWN
                                              TO 2 AND TRANSFER
00540  1 00001 1 00537         TXI *-1,1,1    SHOUDL TRANSFER
                                              AND ADD 1

00541  0000 00 0 00546         HTR *+5        FAILED TO TRANSFER
                                              TXI

00542  3 00001 1 00544         TXH *+2,1,1    XRA SHOULD BE=2
00543  0000 00 0 00546         HTR *+3        FAILED TO COUNT
                                              CORRECTLY

00544 -3 00002 1 00546         TXL *+2,1,2    SHOULD TRANSFER
00545  0000 00 0 00546         HTR *+1        FAILED TO COUNT
                                              CORRECTLY, XRA SHOULD
                                              HAVE 2.



                                    TSX, THE INSTRUCTION COUNTER IS
                                    ROUTED THROUGH THE ADDRESS SWITCHES
                                    ON SYSTEMS 3.40, AND TO THE STORAGE
                                    BUSSES, SYSTEMS 2.08.28. THE ADDRESS
                                    IS CYCLED THROUGHT THE ADDERS TO
                                    OBTAIN THE COMPLEMENT


00546  0074 00 1 00550   HERE  TSX *+2,1      77232 TO XRA
00547  0000 00 0 00550         HTR *+1        FAILED TO TRANSFER
                                              ON TSX

00550 -3 77232 1 00552         TXL *+2,1,32K-HERE+1 DEC=77232
00551  0000 00 0 00552         HTR *+1        FAILED TO SET CORRECT
                                              ADDRESS IN XRA ON TSX
                                              XRA SHOULD HAVE 77232

00552  3 77231 1 00554         TXH *+2,1,32K-HERE DEC=77231
00553  0000 00 0 00554         HTR *+1        FAILED TO SET
                                              CORRECT ADDRESS WITH
                                              TSX. XRA SHOUDL
                                              HAVE 77232
```

```
00554  0074 00 1 00556   WE    TSX *+2,1     77224 TO XRA
00555  0000 00 0 00556         HTR *+1       FAILED TO TRANSFER
                                             ON TSX

00556  1 00554 1 00560         TXI *+2,1,WE  XRA SHOULD ADD
                                             TO ZERO
00557  0000 00 0 00560         HTR *+1       FAILED TO TRANSFER
                                             ON TXI

00560 -3 00000 1 00562         TXL *+2,1,0   SHOULD TRANSFER
00561  0000 00 0 00562         HTR *+1       FAILED TO GET
                                             CORRECT ADDRESS ON
                                             TSX, XRA SHOULD
                                             HAVE GONE TO ZERO
                                             AT WE+2.



*          TEST LXA-LOAD INDEX FROM ADDRESS

*          PREVIOUS INSTRUCTIONS AXT, TXH, TXL MUST
*          HAVE BEEN TESTED AND WORKING CORRECTLY.



00562  0774 00 1 00000         AXT 0,1       CLEAR XRA
00563 -3 00000 1 00565         TXL *+2,1,0   SHOULD TRANSFER
00564  0000 00 0 00565         HTR *+1       DID NOT CLEAR XRA
00565  0534 00 1 01410         LXA KK+7,1    07777 TO XRA
00566  3 07776 1 00570         TXH *+2,1,7M+7C+7D+6 SHOUDL TRANSFER
00567  0000 00 0 00570         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 07777
                                             DEC=07776
                                             IF XRA=00000, DID NOT GET
                                             ADDRESS PAST THE ADDERS
                                             2.08.53.1

00570  0774 00 1 07777         AXT 7M+7C+7D+7,107777 TO XRA
00571  0534 00 1 01400         LXA AZE,1     00000 TO XRA
00572 -3 00000 1 00574         TXL *+2,1,0   SHOULD TRANSFER
00573  0000 00 0 00574         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 00000
                                             DEC=00000
                                             IF XRA=07777, DID NOT GET
                                             ADDRESS PAST THE ADDERS
                                             2.08.53.1

00574  0534 00 1 01407         LXA KK+6,1    06666 TO XRA
00575  3 06665 1 00577         TXH *+2,1,6M+6C+6D+5 SHOULD TRANSFER
00576  0000 00 0 00577         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=06666 DEC=06665
00577 -3 06666 1 00601         TXL *+2,1,6M+6C+6D+6,1 SHOUDL TRANSFER
00600  0000 00 0 00601         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=06666
```

```
00601  0534 00 1 01406         LXA KK+5,1    05555 TO XRA
00602  3 05554 1 00604         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
00603  0000 00 0 00604         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=05555 DEC=05554
00604 -3 05555 1 00606         TXL *+2,1,5M+5C+5D+5,1 SHOULD TRANSFER
00605  0000 00 0 00606         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=05555

00606  0534 00 1 01405         LXA KK+4,1    04444 TO XRA
00607  3 04443 1 00611         TXH *+2,1,4M+4C+4D+3 SHOULD TRANSFER
00610  0000 00 0 00611         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=04444 DEC=04443
00611 -3 04444 1 00613         TXL *+2,1,4M+4C+4D+4 SHOULD TRANSFER
00612  0000 00 0 00613         HTR *+1       DID NOTR TRANSFER ON TXL
                                             XRA=DEC=04444

00613  0534 00 1 01404         LXA KK+3,1    03333 TO XRA
00614  3 03332 1 00616         TXH *+2,1,3M+3C+3D+2 SHOULD TRANSFER
00615  0000 00 0 00616         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=03333 DEC=03332
00616 -3 03333 1 00620         TXL *+2,1,3M+3C+3D+3 SHOULD TRANSFER
00617  0000 00 0 00620         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=03333

00620  0534 00 1 01403         LXA KK+2,1    02222 TO XRA
00621  3 02221 1 00623         TXH *+2,1,2M+2C+2D+1 SHOULD TRANSFER
00622  0000 00 0 00623         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=02222 DEC=02221
00623 -3 02222 1 00625         TXL *+2,1,2M+2C+2D+2 SHOULD TRANSFER
00624  0000 00 0 00625         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=02222

00625  0534 00 1 01402         LXA KK+1,1    01111 TO XRA
00626  3 01110 1 00630         TXH *+2,1,M+C+D SHOULD TRANSFER
00627  0000 00 0 00630         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA=01111 DEC=01110
00630 -3 01111 1 00632         TXL *+2,1,M+C+D+1 SHOULD TRANSFER
00631  0000 00 0 00632         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=01111

*          TEST LXA USING A ZERO TAG

00632  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
00633  0534 00 0 01400         LXA AZE,0     00000 WITH A ZERO TAG
00634  3 07776 1 00636         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00635  0000 00 0 00636         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 07777
                                             DEC=07776
                                             IF XRA=00000, THE ADDERS
                                             TO XRA LINE IS UP ON
                                             PAGE 2.12.03

*          TEST LAC-LOAD COMPLEMENT OF ADDRESS IN INDEX
```

```
*          ASSUME DIRECT ROUTING TO INDEX FROM STORAGE IS OK
*          SINCE LXA HAS BEEN TESTED.

00636  0774 00 1 00000         AXT 0,1       CLEAR XRA
00637  0535 00 1 01374         LAC A75,1     2-S COMP. OF 75555 TO
                                             XRA
00640 -3 02223 1 00642         TXL *+2,1,2M+2C+2D+3 SHOULD TRANSFER
00641  0000 00 0 00642         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 02223
                                             DEC=02223
                                             IF XRA=75555,DID NOT CYCLE
                                             THROUGH THE ADDERS FOR THE
                                             2-S COMP. 2.08.49.2 OR
                                             2.08.53.1
00642  3 02222 1 00644         TXH *+2,1,2M+2C+2D+2 SHOULD TRANSFER
00643  0000 00 0 00644         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 02223
                                             DEC=02222
                                             IF XRA=02222,DID NOT GET
                                             A CARRY TO ADDER 17 AT
                                             I3-D7 2.08.05.2

00644  0535 00 1 01411         LAC AL7,1     2-S COMP. 77777 TO XRA
00645  3 00000 1 00647         TXH *+2,1,0   SHOULD TRANSFER
00646  0000 00 0 00647         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD HAVE 00001
                                             DEC=00000
                                             NO CARRY TO ADDER 17
                                             2.08.50.2

00647 -3 00001 1 00651         TXL *+2,1,1   SHOULD TRANSFER
00650  0000 00 0 00651         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 00001
                                             DEC=00001
                                             IF XRA IS ALL 1-S,
                                             DID NOT CYCLE THROUGH
                                             ADDERS FOR 2-S COMPLEMENT
                                             2.08.49.2 OR 2.08.53.1

00651  0535 00 1 01375         LAC A76,1     2-S COMP. OF 76666 TOXRA
00652  3 01111 1 00654         TXH *+2,1,M+C+D+1 SHOULD TRANSFER
00653  0000 00 0 00654         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 01112
                                             DEC=01111
00654 -3 01112 1 00656         TXL *+2,1,M+C+D+2 SHOULD TRANSFER
00655  0000 00 0 00656         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 01112
                                             DEC=01112

00656  0535 00 1 01373         LAC A74,1     2-S COMP. OF 74444
                                             TO XRA
00657  3 03000 1 00661         TXH *+2,1,3M,3C+3D,+3 SHOULD TRANSFER
00660  0000 00 0 00661         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 03334
                                             DEC=03333
```

```
00661 -3 03334 1 00663         TXL *+2,1,3M+3C+3D+4 SHOULD TRANSFER
00662  0000 00 0 00663         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 03334
                                             DEC=03334

00663  0535 00 1 01372         LAC A73,1     2-S COMP. OF 73333
                                             TO XRA
00664  3 04444 1 00666         TXH *+2,1,4M+4C+4D+4 SHOULD TRANSFER
00665  0000 00 0 00666         HTR *+1       DID NOT TRANSDFER ON TXH
                                             XRA SHOULD BE 04445
                                             DEC=04444
00666 -3 04445 1 00670         TXL *+2,1,4M+4C+4D+5 SHOULD TRANSFER
00667  0000 00 0 00670         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 04445
                                             DEC=04445

00670  0535 00 1 01371         LAC A72,1     2-S COMP. OF 72222 TO
                                             XRA
00671  3 05555 1 00673         TXH *+2,1,5M+5C+5D+5 SHOULD TRANSFER
00672  0000 00 0 00673         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 05556
                                             DEC=05555
00673 -3 05556 1 00675         TXL *+2,1,5M+5C+5D+6 SHOULD TRANSFER
00674  0000 00 0 00675         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 05556
                                             DEC=05556

00675  0535 00 1 01370         LAC A71,1     2-S COMP. OF 71111 TO
                                             XRA
00676  3 06666 1 00700         TXH *+2,1,6M+6D+6C+6 SHOULD TRANSFER
00677  0000 00 0 00700         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 06667
                                             DEC=06666
00700 -3 06667 1 00702         TXL *+2,1,6M+6D+6C+7 SHOULD TRANSFER
00701  0000 00 0 00702         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 06667
                                             DEC=06667

00702  0535 00 1 01376         LAC A701,1    2-S COMP. OF 70001 TO XRA
00703  3 07776 1 00705         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00704  0000 00 0 00705         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 07777
                                             DEC=07776
00705 -3 07777 1 00707         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
00706  0000 00 0 00707         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 07777
                                             DEC=07777


*          TRY RIPPLING A 2-S COMPLEMENT CARRY

00707  0535 00 1 01377         LAC A710,1    2-S COMP. OF 71000 TO XRA
00710  3 06777 1 00712         TXH *+2,1,6M+7C+7D+7 SHOULD TRANSFER
00711  0000 00 0 00712         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 07000
                                             DEC=06777
```

```
00712 -3 07000 1 00714         TXL *+2,1,7M SHOULD TRANSFER
00713  0000 00 0 00714         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 07000
                                             DEC=07000

*          CHECK THAT ZERO TAG DOES NOT ALTER XRA CONTENTS

00714  0774 00 1 00000         AXT 0,1       CLEAR XRA
00715  0535 00 0 01411         LAC AL7,0     77777 TO IMAGINARY INDEX
00716 -3 00000 1 00720         TXL *+2,1,0   SHOULD TRANSFER
00717  0000 00 0 00720         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD STILL BE 00000
                                             DEC=00000
                                             IF XRA=00001, SR 20 IS
                                             UP-2.12.02


*          TEST SXA-STORE INDEX IN ADDRESS


00720  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
00721  0634 00 1 01401         SXA KK,1      07777 TO ADDRESS OF
                                             TEMPORARY STORAGE
00722  0774 00 1 00000         AXT 0,1       CLEAR XRA
00723  0534 00 1 01401         LXA KK,1      BRING BACK TEMPORARY STG.
                                             TO SEE IF WAS STORED OK
00724  3 07776 1 00726         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00725  0000 00 0 00726         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
                                             IF XRA=00000, ADDRESS WAS
                                             NEVER STORED IN KK
                                             OR XRA WAS NOT COMPLEMENTED
                                             TO GET THE TRUE INDEX TO
                                             THE ADDRESS IN STG.
                                             PAGE 2.08.53.1
00726 -3 07777 1 00730         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
00727  0000 00 0 00730         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA=DEC=07777

00730  0774 00 1 00000         AXT 0,1       CLEAR XRA
00731  0634 00 1 01401         SXA KK,1      00000 IN TEMP. STG.
00732  0774 00 1 77777         AXT 70M+7M+7C+7D+7,1 ALL 1-S TO XRA
00733  0534 00 1 01401         LXA KK,1      BRING BACK TEMPORARY STG.
                                             TO SEE IF IT WAS STORED OK
00734 -3 00000 1 00736         TXL *+2,1,0   SHOULD TRANSFER
00735  0000 00 0 00736         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 00000
                                             DEC=00000

*          CHECK THAT INDEX REMAINS UNCHANGED AFTER STORING

00736  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
00737  0634 00 1 01401         SXA KK,1      07777 TO TEMP. STG.
00740  3 07776 1 00742         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00741  0000 00 0 00742         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD STILL BE 07777
```

```
                                                DEC=07776
00742 -3 07777 1 00744          TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
00743  0000 00 0 00744          HTR *+1       DID NOT TRANSFER ON TXL
                                               XRA SHOULD STILL BE 07777
                                               DEC=07777

*          TEST SXA WITH A ZERO TAG

00744  0774 00 1 05555          AXT 5M+5C+5D+5,1 05555 TO XRA
00745  0634 00 0 01401          SXA KK,0      IMAGINARY INDEX TO KK
00746  0534 00 1 01401          LXA KK,1      SHOULD BE 00000
00747 -3 00000 1 00751          TXL *+2,1,0   SHOULD TRANSFER
00750  0000 00 0 00751          HTR *+1       DID NOT TRANSFER ON TXL
                                               XRA SHOULD BE 00000
                                               DEC=00000


*          TEST LXD-LOAD INDEX FROM DECREMENT

00751  0774 00 1 00000          AXT 0,1       CLEAR XRA
00752 -0534 00 1 01361          LXD D7,1      07777 TO XRA
00753  3 07776 1 00755          TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00754  0000 00 0 00755          HTR *+1       DID NOT TRANSFER ON TXH
                                               XRA SHOULD BE 07777
                                               DEC=07776
                                               IF XRA=00000, DID NOT GET
                                               PAST THE ADDERS AT E11-D1
                                               PAGE 2.08.53.1
                                               IF XRA=05555, BROUGHT THE
                                               ADR. TO THE INDEX AT E9-D3
                                               PAGE 2.08.05.2
                                               IF XRA=00001, GOT 2-S COMP.
                                               AT I3-D7 OF NEXT I CYCLE
                                               PAGE 2.08.49.2
00755 -3 07777 1 00757          TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
00756  0000 00 0 00757          HTR *+1       DID NOT TRANSFER ON TXL
                                               XRA SHOULD BE 07777
                                               DEC=07777

00757  0774 00 1 07777          AXT 7M+7C+7D+7,1 07777 TO XRA
00760 -0534 00 1 01362          LXD D0,1      00000 TO XRA
00761 -3 00000 1 00763          TXL *+2,1,0   SHOULD TRANSFER
00762  0000 00 0 00763          HTR *+1       DID NOT TRANSFER ON TXL
                                               XRA SHOULD BE 00000
                                               DEC=00000
                                               IF XRA=07777, DID NOT GET PA
                                               THE ADDERS AT E11-D1
                                               PAGE 2.08.53.1
                                               IF XRA=05555, BROUGHT THE
                                               ADR. TO THE INDEX AT E9-D3
                                               PAGE 2.08.05.2


*          CHECK LXD WITH A ZERO TAG

00763  0774 00 1 07777          AXT 7M+7C+7D+7,1 07777 TO XRA
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```
00764 -0534 00 0 01362         LXD D0,0      LOAD IMAGINARY INDEX
00765  3 07776 1 00767         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
00766  0000 00 0 00767         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD STILL BE 07777
                                             DEC=07776
                                             IF XRA=00000, ADDERS TO XRA
                                             IS UP ON PAGE 2.12.03

*CHECK THAT THE ADDRESS OF STORAGE 21-35 DOES NOT CHANGE WITH A LXD INSTR

00767 -0534 00 1 01361         LXD D7,1      LOAD INDEX USING LXD
00770  0534 00 1 01361         LXA D7,1      05555 TO XRA
00771  3 05554 1 00773         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
00772  0000 00 0 00773         HTR *+1       DID NOT TRANSFER ON TXH
                                             POSITIONS 21-35 DID NOT
                                             REMAIN UNCHANGED USING A
                                             LXD INSTRUCTION
                                             XRA SHOULD BE 05555
                                             DEC=05554
00773 -3 05555 1 00775         TXL *+2,1,5M+5C+5D+5 SHOULD TRANSFER
00774  0000 00 0 00775         HTR *+1       WORD ADDRESS CHANGED
                                             XRA SHOULD BE 05555
                                             DEC=05555



*          TEST SXD-STORE INDEX IN DECREMENT

00775  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
00776 -0634 00 1 01401         SXD KK,1      STORE 07777 IN TEMP. STG.
00777 -0534 00 1 01401         LXD KK,1      BRING TEMPORARY STORAGE
                                             BACK TO XRA
01000  3 07776 1 01002         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01001  0000 00 0 01002         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 07777
                                             DEC=07776
                                             IF XRA=00000, DID NOT CYCLE
                                             THROUGH THE ADDERS TO COMP.
                                             XRA AT E4-D1, PP. 2.08.53.1
01002 -3 07777 1 01004         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01003  0000 00 0 01004         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 07777
                                             DEC=07777

01004  0774 00 1 00000         AXT 0,1       00000 TO XRA
01005 -0634 00 1 01401         SXD KK,1      CLEAR DEC OF TEMP. STG.
01006 -0534 00 1 01401         LXD KK,1      BRING DEC BACK TO XRA
01007 -3 00000 1 01011         TXL *+2,1,0   SHOULD TRANSFER
01010  0000 00 0 01011         HTR *+1       DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 00000
                                             DEC=00000

*          CHECK THAT THE ADDRESS OF STORAGE 21-35 DID NOT
*          CHANGE USING AN SXD INSTRUCTION

01011  0774 00 1 05555         AXT 5M+5C+5D+5,1 05555 TO XRA
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```
01012  0634 00 1 01401         SXA KK,1      05555 TO ADR. OF TEMP. STG.
01013  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01014 -0634 00 1 01401         SXD KK,1      STORE 07777 IN DEC OF STG.
01015  0534 00 1 01401         LXA KK,1      BRING IN ADR. TO XRA AND SEE
                                             IF IT IS STILL 05555
01016  3 05554 1 01020         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
01017  0000 00 0 01020         HTR *+1       XRA SHOULD BE 05555
                                             DEC=05554
01020 -3 05555 1 01022         TXL *+2,1,5M+5C+5D+5 SHOULD TRANSFER
01021  0000 00 0 00000         HTR           DID NOT TRANSFER ON TXL
                                             XRA SHOULD BE 05555
                                             DEC=05555
                                             IF XRA=0777, AS TO SB
                                             21-35 IS UP, PP. 2.08.28

*          TEST SXD WITH ZERO TAG

01022  0774 00 1 00000         AXT 0,1       CLEAR XRA
01023 -0634 00 1 01401         SXD KK,1      CLEAR DEC. OF TEMP. STG.
01024  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01025 -0634 00 0 01401         SXD KK,0      IMAGINARY INDEX TO STG.
01026 -0534 00 1 01401         LXD KK,1      SHOULD STILL BE 00000
01027 -3 00000 1 01031         TXL *+2,1,0   SHOULD TRANSFER
01030  0000 00 0 01031         HTR *+1       SXD IN ERROR WITH
                                             A ZERO TAG, PP. 2.12.02

*CHECK TAHT XRA IS RE-COMPLEMENTED AND REMAINS UNCHANGED
*AFTER A SXD INSTRUCTION.

01031  0774 00 1 00000         AXT 0,1       CLEAR XRA
01032 -0634 00 1 01401         SXD KK,1      SHOULD NOT ADDECT CONTENTS
                                              OF XRA
01033 -3 00000 1 01035         TXL *+2,1,0   SHOULD TRANSFER SINCE XRA
                                             SHOULD STILL BE 00000
01034  0000 00 0 01035         HTR *+1       CONTENTS OF XRA CHANGED,
                                             IF XRA IS ALL 1-S
                                             FAILED TO RE-COMPLEMENT
                                             AT E11-D1, PAE 2.08.53.1

01035  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01036 -0634 00 1 01401         SXD KK,1      SHOULD NOT AFFECT CONTENTS
                                             OF XRA
01037  3 07776 1 01041         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01040  0000 00 0 01041         HTR *+1       XRA CHANGED, SHOULD STILL
                                             BE 07777
01041 -3 07777 1 01043         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01042  0000 00 0 01043         HTR *+1       XRA=07777 DEC=07777


*          TEST LDC-LOAD COMPLEMENT OF DECREMENT IN INDEX.
*          AT THIS POINT IT WILL BE ASSUMED THAT LAC HAS
*          BEEM TESTED AND IS WORKING CORRECTLY SINCE LDC
*          IS IDENTICAL EXCEPT THAT INSTEAD OF THE ADDRESS.
*          THE SR DECREMENT GOES TO THE ADDERS.
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01043  0774 00 1 02222         AXT 2M+2C+2D+2,1 02222 TO XRA
01044 -0535 00 1 01364         LDC DA7,1     2-S COMP. OF 77777 TO XRA
01045  3 00000 1 01047         TXH *+2,1,0   SHOULD TRANSFER
01046  0000 00 0 01047         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00000
                                             IF XRA=00000, DIDN'T GET
                                             A CARRY TO ADDER 17
                                             PAGE 2.08.50.2
01047 -3 00001 1 01051         TXL *+2,1,1   SHOULD TRANSFER
01050  0000 00 0 01051         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00001
                                             IF XRA=02222, DID NOT GET
                                             PAST ADDERS AT E11-D1
                                             PAGE 2.08.53.1
                                             IF XRA=77777, DID NOT CYCLE
                                             THROUGH ADDERS FOR 2-S
                                             COMP AT I6-D1 PP. 2.08.53.1
                                             IF XRA=05555, THE LOAD
                                             INDEX FROM ADR. LINE IS UP,
                                             PAGE 2.07.28

01051  0774 00 1 02222         AXT 2M+2C+2D+2,1 02222 TO XRA
01052 -0535 00 1 01363         LDC D0+1,1    2-S COMP. OF 70001 TO XRA
01053  3 07776 1 01055         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01054  0000 00 0 01055         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
01055 -3 07777 1 01057         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01056  0000 00 0 01057         HTR *+1       ERROR, XRA SHOULD BE 07777

*          TEST LDC WITH A ZERO TAG

01057  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01060 -0535 00 0 01361         LDC D7,0      2-S COMP. OF 07777 TO
                                             IMAGINARY INDEX
01061  3 07776 1 01063         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01062  0000 00 0 01063         HTR *+1       XRA SHOULD STILL BE
                                             07777
                                             IF XRA=00001, ADDERS
                                             TO XRA LINE IS UP
                                             PAGE 2.12.02
01063 -3 07777 1 01065         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01064  0000 00 0 01065         HTR *+1       XRA=07777 DEC=07777

*CHECK THAT THE ADDRESS PORTION OF STORAGE 21-35 REMAINS
*UNCHANGED WHEN USING A LDC INSTRUCTION.

01065  0634 00 0 01401         SXA KK,0      CLEAR ADR. 21-35 OF STG.
01066 -0535 00 1 01401         LDC KK,1      ADR. IN STG. SHOULD
                                             NOT CHANGE
01067  0534 00 1 01401         LXA KK,1      BRING ADR. INTO INDEX TO
                                             SEE IF IT REMAINED UNCHANGED
01070 -3 00000 1 01072         TXL *+2,1,0   SHOULD TRANSFER
01071  0000 00 0 01072         HTR *+1       XRA SHOULD BE 00000,
                                             ADR. 21-35 OF STG., CHANGED
                                             USING AN LDC INSTRUCTION
```

```
*CHECK THAT THE DECREMENT OF STORAGE 3-17 REMAINS UNCHANGED
*AFTER AN SXA INSTRUCTION.

01072  0774 00 1 00000         AXT 0,1       CLEAR XRA
01073 -0634 00 1 01401         SXD KK,1      CLEAR DEC, OF TEMP. STG.
01074  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01075  0634 00 1 01401         SXA KK,1      3-17 OF TEMP. STG. SHOULD
                                             REMAIN UNCHANGED.
01076 -0534 00 1 01401         LXD KK,1      SHOULD BE 00000
01077 -3 00000 1 01101         TXL *+2,1,0   SHOULD TRANSFER
01100  0000 00 0 01101         HTR *+1       XRA=DEC=00000


*IN TESTING THE 6 INDEXING INSTRUCTIONS INVOLVING THE ACCUMULATOR
*IT WILL BE ASSUMED THAT THE OTHER INDEXING INSTRUCTIONS HAVE
*BEEN TESTED AND ARE WORKING AND ALSO THAT CLA IS OPERATING
*CORRECTLY.

*          TEST PDX-PLACE DECREMENT IN INDEX

01101  0774 00 1 00000         AXT 0,1       CLEAR XRA
01102  0500 00 0 01361         CLA D7        0077770055555 TO ACC
01103 -0734 00 1 00000         PDX 0,1       077777 TO XRA
01104  3 07776 1 01106         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01105  0000 00 0 01106         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
                                             IF XRA=00000,NEVER GOT
                                             PAST THE ADDERS AT I3-D1
                                             PAGE 2.08.53.1 OR 2.08.06
                                             IF XRA=05555 ROUTED ADR.
                                             TO INDEX,PP, 2.07.29
01106 -3 07777 1 01110         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01107  0000 00 0 01110         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07777

01110  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01111  0500 00 0 01362         CLA D0        000000005555 TO XRA
01112 -0734 00 1 00000         PDX 0,1       00000 TO XRA
01113 -3 00000 1 01115         TXL *+2,1,0   SHOULD TRANSFER
01114  0000 00 0 01115         HTR *+1       XRA SHOULD BE 00000
                                             DEC=00000

*          TEST PDX WITH A ZERO TAG

01115  0774 00 1 00000         AXT 0,1       CLEAR XRA
01116  0500 00 0 01361         CLA D7        0077770055555
01117 -0734 00 0 00000         PDX 0,0       PLACE DECREMENT IN AN
                                             IMAGINARY INDEX
01120 -3 00000 1 01122         TXL *+2,1,0   SHOULD TRANSFER
01121  0000 00 0 01122         HTR *+1       XRA SHOULD NOT HAVE
                                             CHANGED.


*          TEST PDC-PLACE COMPLEMENT OF DECREMENT IN INDEX
```

```
*ASSUME THAT SINCE PDX HAS BEEN TESTED,THE DECREMENT ROUTING
*TO THE ADDERS IS OK,AND ONLY THE COMPLEMENTING DURING THE NEXT
*ICYCLE NEEDS TO BE CHECKED.

01122  0774 00 1 02222         AXT 2M+2C+2D+2,1 02222 TO XRA
01123  0500 00 0 01364         CLA DA7       077777005555 TO ACC
01124 -0737 00 1 00000         PDC 0,1       2-S COMP. OF 77777 TO XRA
01125  3 00000 1 01127         TXH *+2,1,0   SHOULD TRANSFER
01126  0000 00 0 01127         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 00001
                                             DEC=00000
                                             IF XRA=00000,DID NOT GET
                                             CARRY TO ADDER I7 AT I0-D4
                                             PAGE 2.08.50
01127 -3 00001 1 01131         TXL *+2,1,1   SHOULD TRANSFER
01130  0000 00 0 01131         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00001
                                             IF XRA IS ALL 1-S
                                             DID NOT CYCLE THROUGH
                                             THE ADDERS TO COMPLEMENT
                                             AT I3-D1,PP.2.08.53.2
                                             IF XRA=02222,DID NOT ROUTE
                                             DEC. TO INDEX,PP.2.08.53.1

01131  0774 00 1 02222         AXT 2M+2C+2D+2,1 02222 TO XRA
01132  0500 00 0 01363         CLA D0+1      070001005555 TO ACC
01133 -0737 00 1 00000         PDC 0,1       2-S COMP. OF 70001 TO XRA
01134  3 07776 1 01136         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01135  0000 00 0 01136         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
01136 -3 07777 1 01140         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01137  0000 00 0 01140         HTR *+1       XRA=DEC=07777


*CHECK THAT ZERO TAG DOES NOT ALTER XRA

01140  0774 00 1 00000         AXT 0,1       CLEAR XRA
01141  0500 00 0 01363         CLA D0+1
01142 -0737 00 0 00000         PDC 0,0       XRA SHOULD STILL BE 00000
01143 -3 00000 1 01145         TXL *+2,1,0   SHOULD TRANSFER
01144  0000 00 0 01145         HTR *+1       INDEX CHANGED WITH A
                                             ZERO TAG


*          TEST PAX-PLACE ADDRESS IN INDEX

*SINCE THE ADDRESS MUST BE SHIFTED TO THE DECEMENT PORTION
*OF THE ADDERS,THE ACC IS ROUTED VIA THE STORAGE BUSS.

01145  0774 00 1 00000         AXT 0,1       CLEAR XRA
01146  0500 00 0 01361         CLA D7        007777005555 TO ACC
01147  0734 00 1 00000         PAX 0,1       05555 TO XRA
01150  3 05554 1 01152         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
01151  0000 00 0 01152         HTR *+1       DID NOT TRANSFER ON TXH
                                             XRA SHOULD BE 05555
                                             DEC=05554
```

```
                                                IF XRA=00000,DID NOT GET
                                                PAST ADDERS AT I5-D1,
                                                PAGE 2.08.53.2
01152 -3 05555 1 01154          TXL *+2,1,5M+5C+5D+5 SHOULD TRANSFER
01153  0000 00 0 01154          HTR *+1        DID NOT TRANSFER ON TXL
                                                XRA=DEC=05555
                                                IF XRA=07777,ROUTED DEC.
                                                TO INDEX,PP.2.07.29 OR
                                                DID NOT SHIFT SR 18-35 TO
                                                ADD P-17,PP.2.08.48.2


01154  0774 00 1 07777          AXT 7M+7C+7D+7,1 07777 TO XRA
01155  0500 00 0 01365          CLA A0         077777000000 TO ACC
01156  0734 00 1 00000          PAX 0,1        00000 TO XRA
01157 -3 00000 1 01161          TXL *+2,1,0    SHOULD TRANSFER
01160  0000 00 0 01161          HTR *+1        XRA SHOULD BE 00000
                                                DEC=00000

*          TEST PAX WITH A ZERO TAG

01161  0774 00 1 00000          AXT 0,1        CLEAR XRA
01162  0500 00 0 01361          CLA D7         007777005555 TO ACC
01163  0734 00 0 00000          PAX 0,0        05555 TO IMAGINARY INDEX
01164 -3 00000 1 01166          TXL *+2,1,0    SHOULD TRANSFER
01165  0000 00 0 01166          HTR *+1        XRA SHOULD REMAIN 00000
                                                WITH A ZERO TAG


*          TEST PAC-PLACE COMPLEMENT OF ADDRESS IN INDEX

*ASSUME THAT SINCE PAX HAS BEEN TESTED,ACC ADDRESS ROUTING
*TO THE INDEX IS WORKING AND ONLY COMPLEMENTING NEEDS TO BE CHECKED.


01166  0774 00 1 00000          AXT 0,1        CLEAR XRA
01167  0500 00 0 01374          CLA A75        0111111075555 TO ACC
01170  0737 00 1 00000          PAC 0,1        2-S COMP OF 75555 TO XRA
01171  3 02222 1 01173          TXH *+2,1,2M+2C+2D+2 SHOULD TRANSFER
01172  0000 00 0 01173          HTR *+1        FAILED TO TRANSFER ON TXH
                                                XRA SHOULD BE 02223
                                                IF XRA=02222,DID NOT
                                                GET CARRY TO ADDER 17 AT
                                                I0-D4,PP.2.08.50
                                                IF XRA=00000,DID NOT
                                                ROUTE ADR. TO INDEX AT
                                                ER8-D1,PP.2.08.53.2
01173 -3 02223 1 01175          TXL *+2,1,2M+2C+2D+3 SHOULD TRANSFER
01174  0000 00 0 01175          HTR *+1        DID NOT TRANSFER ON TXL
                                                XRA=DEC=02223
                                                IF XRA=75555,DID NOT
                                                CYCLE THROUGH ADDERS FOR
                                                2-S COMP.AT I3-D1,
                                                PAGE 2.08.53.2

01175  0774 00 1 07777          AXT 7M+7C+7D+7,1 07777 TO XRA
```

```
01176  0500 00 0 01366         CLA A01       077777070001 TO ACC
01177  0737 00 1 00000         PAC 0,1       2-S COMP. OF 70001 TO XRA
01200  3 07776 1 01202         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01201  0000 00 0 01202         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
01202 -3 07777 1 01204         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01203  0000 00 0 01204         HTR *+1       XRA=DEC=07777

*          TEST PAC WITH A ZERO TAG

01204  0774 00 1 00000         AXT 0,1       CLEAR XRA
01205  0500 00 0 01366         CLA A01       077777070001 TO ACC
01206  0737 00 0 00000         PAC 0,0       07777 TO IMAGINARY INDEX
01207 -3 00000 1 01211         TXL *+2,1,0   SHOULD TRANSFER
01210  0000 00 0 01211         HTR *+1       XRA SHOULD STILL BE 00000


*CHECK THAT PDX,PDC,PAX,AND PAC LEAVE THE DECREMENT
*AND THE ADDRESS OF THE ACCUMULATOR UNCHANGED.

01211  0500 00 0 01364         CLA DA7       077777005555 TO ACC.
01212 -0734 00 1 00000         PDX 0,1       SHOULD NOT ALTER ACC ADDRESS
01213  0734 00 1 00000         PAX 0,1       05555 TO XRA
01214  3 05554 1 01216         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
01215  0000 00 0 01216         HTR *+1       ACC ADR.WAS CHANGED BY PDX
01216 -3 05555 1 01220         TXL *+2,1,5M+5C+5D+5 SHOULD TRANSFER
01217  0000 00 0 01220         HTR *+1       XRA=DEC=05555

01220  0500 00 0 01364         CLA DA7       077777005555 TO ACC.
01221 -0737 00 1 00000         PDC 0,1       SHOULD NOT ALTER ACC ADDRESS
01222  0734 00 1 00000         PAX 0,1       05555 TO XRA
01223  3 05554 1 01225         TXH *+2,1,5M+5C+5D+4 SHOULD TRANSFER
01224  0000 00 0 01225         HTR *+1       ACC ADR.WAS CHANGED BY PDX
01225 -3 05555 1 01227         TXL *+2,1,5M+5C+5D+5 SHOULD TRANSFER
01226  0000 00 0 01227         HTR *+1       XRA=DEC=05555

01227  0500 00 0 01367         CLA A55       000000005555 TO ACC.
01230  0734 00 1 00000         PAX 0,1       SHOULD NOT ALTER ACC ADDRESS
01231 -0734 00 1 00000         PDX 0,1       00000 TO XRA
01232 -3 00000 1 01234         TXL *+2,1,0   SHOULD TRANSFER
01233  0000 00 0 01234         HTR *+1       ACC DEC.WAS CHANGED BY PAX


01234  0500 00 0 01367         CLA A55       000000005555 TO ACC.
01235  0737 00 1 00000         PAC 0,1       SHOULD NOT ALTER ACC ADDRESS
01236 -0734 00 1 00000         PDX 0,1       00000 TO XRA
01237 -3 00000 1 01241         TXL *+2,1,0   SHOULD TRANSFER
01240  0000 00 0 01241         HTR *+1       ACC DEC.WAS CHANGED BY PAC


*TEST PXD-PLACE INDEX IN DECREMENT AND PXA-PLACE
*INDEX IN ADDRESSS

*ASSUME THAT PREVIOUS INSTRUCTIONS PDX AND PAX HAVE BEEN TESTED
*AND ARE WORKING CORRECTLY.
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```
01241  0500 00 0 01411         CLA AL7       ALL 1-S TO ACC
01242  0774 00 1 00001         AXT 1,1       00001 TO XRA
01243 -0754 00 1 00000         PXD 0,1       00001 TO DEC OF ACC
01244 -0734 00 1 00000         PDX 0,1       BRING IT BACK TO XRA TO
                                             SEE IF PXD ROUTING IS OK
01245  3 00000 1 01247         TXH *+2,1,0   SHOULD TRANSFER
01246  0000 00 0 01247         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00000
                                             IF XRA=00000,DID NOT GET
                                             A CARRY TO ADDER 17 AT
                                             ER4-D2 WHEN COMPLEMENTING
                                             XRA IN ORDER TO GET THE
                                             TRUE OUTPUT.PP.2.08.49.2

01247 -3 00001 1 01251         TXL *+2,1,1   SHOULD TRANSFER
01250  0000 00 0 01251         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00001
                                             IF XRA=77776,DID NOT CYCLE
                                             THROUGH ADDERS IN ORDER TO
                                             GET THE TRUE OUTPUT AT
                                             ER5-D1,PP.2.08.53.2

01251  0500 00 0 01400         CLA AZE       ALL 0-S TO ACC
01252  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01253 -0754 00 1 00000         PXD 0,1       07777 TO DEC.OF ACC
01254 -0734 00 1 00000         PDX 0,1       07777 TO XRA
01255  3 07776 1 01257         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01256  0000 00 0 01257         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07776
01257 -3 07777 1 01261         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01260  0000 00 0 01261         HTR *+1       XRA SHOULD BE 07777
                                             DEC=07777


*CHECK TO SEE IF THE INDEX REGISTER IS RESTORED TO ITS
*ORIGINAL CONTENTS AFTER A PXD INSTRUCTION.

01261  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01262 -0754 00 1 00000         PXD 0,1       XRA SHOULD REMAIN UNCHANGED
01263  3 07776 1 01265         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01264  0000 00 0 01265         HTR *+1       XRA SHOULD STILL BE 07777
                                             DEC=07776
                                             XRA CHANGED WITH A PXD
                                             INSTRUCTION
                                             IF XRA=70000 DID NOT
                                             RE-CYCLE THE INDEX AT ER9-D1
                                             PAGE 2.08.53.2
01265 -3 07777 1 01267         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01266  0000 00 0 01267         HTR *+1       XRA=DEC=07777

01267  0774 00 1 00001         AXT 1,1       00001 TO XRA
01270 -0754 00 1 00000         PXD 0,1       XRA SHOULD REMAIN UNCHANGED
01271  3 00000 1 01273         TXH *+2,1,0   SHOULD TRANSFER
01272  0000 00 0 01273         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00000
```

```
01273 -3 00001 1 01275         TXL *+2,1,1   SHOULD TRANSFER
01274  0000 00 0 01275         HTR *+1       XRA=DEC=00001
                                             IF XRA=77776, DID NOT
                                             RE-CYCLE THE INDEX AT ER9-D1
                                             PAGE 2.08.53.2
*CHECK THAT PXD WITH A ZERO TAG CLEARS THE ACC DECREMENT.

01275  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01276  0500 00 0 01361         CLA D7        07777 IN ACC DECREMENT
01277  0754 00 0 00000         PXA 0,0       SHOULD CLEAR DECREMENT
01300 -0734 00 1 00000         PDX 0,1       BRING DEC.TO XRA AND SEE
                                             IF IT HAS BEEN CLEARED.
01301 -3 00000 1 01303         TXL *+2,1,0   SHOULD TRANSFER
01302  0000 00 0 01303         HTR *+1       ZERO TAG DID NOT CLEAR DEC.

*CHECK THAT THE ACCUMULATOR ADDRESS IS CLEARED USING A PXD INSTRUCTION

01303  0500 00 0 01411         CLA AL7       ALL 1-S TO ACCUMULATOR
01304  0774 00 0 01362         AXT D0        05555 TO XRA
01305 -0754 00 1 00000         PXD 0,1       SHOULD CLEAR ACC ADDRESS
01306  0734 00 1 00000         PAX 0,1       CHECK IF ADR.IS 00000
01307 -3 00000 1 01311         TXL *+2,1,0   SHOULD TRANSFER
01310  0000 00 0 01311         HTR *+1       XRA SHOULD BE 00000
                                             DEC=00000
                                             IF XRA IS ALL 1-S,DID NOT
                                             CLEAR ADDRESS
                                             IF XRA=05555,BROUGH INDEX
                                             TO ADDRESS USING THE PXD
                                             INSTRUCTION.


*          TEST PXA-PLACE INDEX IN ADDRESS

01311  0500 00 0 01411         CLA AL7       ALL 1-S TO ACC.
01312  0774 00 1 00001         AXT 1,1       00001 TO XRA
01313  0754 00 1 00000         PXA 0,1       00001 TO ADR OF ACC
01314  0734 00 0 00000         PAX           BRING IT BACK TO XRA TO
                                             SEE IF PXA ROUTING IS OK
01315  3 00000 1 01317         TXH *+2,1,0   SHOULD TRANSFER
01316  0000 00 0 01317         HTR *+1       XRA SHOULD BE 00001
                                             DEC=00000
                                             IF XRA=00000,MIGHT HAVE
                                             BROUGHT INDEX TO DECREMENT
                                             AND CLEARED ADDRESS
01317 -3 00001 1 01321         TXL *+2,1,1   SHOULD TRANSFER
01320  0000 00 0 01321         HTR *+1       XRA=DEC=00001
                                             IF XRA IS ALL 1-S,NEVER
                                             ROUTED PXA PAST THE ADDER
                                             AT I0-D4,PP.2.08.05.2
                                             IF XRA=7776 NEVER CYCLED
                                             XRA TO GET THE TRUE OUTPUT
                                             AT ER 5-D1,PP.2.08.53.2


01321  0500 00 0 01400         CLA AZE       ALL 0-S TO ACC
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01322  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01323  0754 00 1 00000         PXA 0,1       07777 TO ADR.OF ACC
01324  0734 00 1 00000         PAX 0,1       07777 TO XRA
01325  3 07776 1 01327         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01326  0000 00 0 01327         HTR *+1       XRA=07777 DEC=07776
01327 -3 07777 1 01331         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01330  0000 00 0 01331         HTR *+1       XRA=DEC=07777


*CHECK TO SEE IF THE INDEX REGISTER IS RESTORED TO ITS ORIGINAL
*CONTENTS AFTER A PXA INSTRUCTION.

01331  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01332  0754 00 1 00000         PXA 0,1       XRA SHOULD REMAIN UNCHANGED
01333  3 07776 1 01335         TXH *+2,1,7M+7C+7D+6 SHOULD TRANSFER
01334  0000 00 0 01335         HTR *+1       XRA SHOULD STILL BE 07777
                                             DEC=07776
                                             XRA CHANGED WITHA PXA
                                             INSTRUCTION
                                             IF XRA=00000, DID NOT
                                             RE-CYCLE THE INDEX AT ER9-C
                                             PAGE 2.08.53.2
01335 -3 07777 1 01337         TXL *+2,1,7M+7C+7D+7 SHOULD TRANSFER
01336  0000 00 0 01337         HTR *+1       XRA=DEC=07777

01337  0774 00 1 00001         AXT 1,1       00001 TO XRA
01340  0754 00 1 00000         PXA 0,1       XRA SHOULD REMAIN UNCHANGED
01341  3 00000 1 01343         TXH *+2,1,0   SHOULD TRANSFER
01342  0000 00 0 01343         HTR *+1       XRA SHOULD 00001
                                             DEC=00000
01343 -3 00001 1 01345         TXL *+2,1,1   SHOULD TRANSFER
01344  0000 00 0 01345         HTR *+1       XRA=DEC=00001


*CHECK THAT PXA WITH A ZERO TAG CLEARS THE ACC ADDRESS

01345  0774 00 1 07777         AXT 7M+7C+7D+7,1 07777 TO XRA
01346  0500 00 0 01367         CLA A55       55555 TO ACC ADDRESS
01347  0754 00 0 00000         PXA 0,0       SHOULD CLEAR ADDRESS
01350  0734 00 1 00000         PAX 0,1       BRING ADR.TO XRA AND SEE
                                             IF IT HAS BEEN CLEARED.
01351 -3 00000 1 01353         TXL *+2,1,0   SHOULD TRANSFER
01352  0000 00 0 01353         HTR *+1       ZERO TAG DID NOT CLEAR ADR.


*CHECK THAT THE DECREMENT ADDRESS IS CLEARED USING A PXA INSTRUCION

01353  0500 00 0 01411         CLA AL7       ALL 1-S TO ACCUMULATOR
01354  0774 00 0 01362         AXT D0        05555 TO XRA
01355  0754 00 1 00000         PXA 0,1       SHOULD CLEAR ACC DECREMENT
01356 -0734 00 1 00000         PDX 0,1       CHECK IF DEC.IS 00000
01357 -3 00000 1 01412         TXL *+27,1,0  SHOULD TRANSFER
01360  0000 00 0 01414         HTR *+28      XRA SHOULD BE 00000
                                             DEC=00000
                                             IF XRA IS ALL 1-S,DID NOT
                                             CLEAR ADDRESS
```

IF XRA=05555,BROUGHT
INDEX TO DECREMENT USING
THE PXA INSTRUCTION.

CONSTANTS

```
01361 +007777005555      D7    OCT 007777005555
01362 +000000005555      D0    OCT 000000005555
01363 +070001005555            OCT 070001005555
01364 +077777005555      DA7   OCT 077777005555
01365 +077777000000      A0    OCT 077777000000
01366 +077777070001      A01   OCT 077777070001
01367 +000000055555      A55   OCT 000000055555
01370 +000000071111      A71   OCT 71111
01371 +000000072222      A72   OCT 72222
01372 +000000073333      A73   OCT 73333
01373 +000000074444      A74   OCT 74444
01374 +011111075555      A75   OCT 011111075555
01375 +000000076666      A76   OCT 76666
01376 +000000070001      A701  OCT 70001
01377 +000000071000      A710  OCT 71000
01400 +000000000000      AZE   OCT 0
01401 +000000000000      KK    OCT 0          TEMPORARY STORAGE
01402 +000000001111            OCT 01111
01403 +000000002222            OCT 02222
01404 +000000003333            OCT 03333
01405 +000000004444            OCT 04444
01406 +000000005555            OCT 05555
01407 +000000006666            OCT 06666
01410 +000000007777            OCT 07777
01411 -377777777777      AL7   OCT 7777777777777
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SYMBOLIC VALUES NOT STORED

```
00010   D     EQU 8         10 OCTAL
00020   2D    EQU 2*8       20 OCTAL
00030   3D    EQU 3*8       30 OCTAL
00040   4D    EQU 4*8       40 OCTAL
00050   5D    EQU 5*8       50 OCTAL
00060   6D    EQU 6*8       60 OCTAL
00070   7D    EQU 7*8       70 OCTAL
00100   C     EQU 64        100 OCTAL
00200   2C    EQU 2*64      200 OCTAL
00300   3C    EQU 3*64      300 OCTAL
00400   4C    EQU 4*64      400 OCTAL
00500   5C    EQU 5*64      500 OCTAL
00600   6C    EQU 6*64      600 OCTAL
00700   7C    EQU 7*64      700 OCTAL
01000   M     EQU 512       1000 OCTAL
02000   2M    EQU 2*512     2000 OCTAL
03000   3M    EQU 3*512     3000 OCTAL
04000   4M    EQU 4*512     4000 OCTAL
05000   5M    EQU 5*512     5000 OCTAL
06000   6M    EQU 6*512     6000 OCTAL
07000   7M    EQU 7*512     7000 OCTAL
```

```
                10000   10M   EQU 4096      10,000 OCTAL
                20000   20M   EQU 2*10M     20,000 OCTAL
                30000   30M   EQU 3*10M     30,000 OCTAL
                40000   40M   EQU 4*10M     40,000 OCTAL
                50000   50M   EQU 5*10M     50,000 OCTAL
                60000   60M   EQU 6*10M     60,000 OCTAL
                70000   70M   EQU 7*10M     70,000 OCTAL
                07777   4K    EQU 4095      7777 OCTAL
                77777   32K   EQU 32767     77,777 OCTAL
                22222   A2    EQU 20M+2M+2C+2D+2 22222 OCTAL


*          TEST FOR SIZE OF STORAGE


                01412   Q     HED


01412  0500 00 0 01567   WC    CLA CST+3     ALL 0-S
01413  0601 00 0 77777         STO 32767     STORE IN 32K OR HIGHEST
                                             POSITION OF STORAGE
01414  0400 00 0 06620         ADD L2
01415  0601 00 0 37777         STO 16383     16K OR HIGHEST POS. OF STG.
01416  0400 00 0 06620         ADD L2
01417  0601 00 0 17777         STO 8191      8K OR HIGHEST POS. OF STG.
01420  0400 00 0 06620         ADD L2
01421  0601 00 0 07777         STO 4095      4K OR HIGEST POS. OF STG.


01422  0500 00 0 77777         CLA 32767     BRING BACK WORD FROM
                                             HIGHEST POSITION OF STORAGE
01423  0100 00 0 01433         TZE DW        32K CAPACITY

01424  0402 00 0 06620         SUB L2
01425  0100 00 0 01436         TZE DW+3      16K CAPACITY

01426  0402 00 0 06620         SUB L2
01427  0100 00 0 01441         TZE DW+6      8K CAPACITY

01430  0402 00 0 06620         SUB L2
01431  0100 00 0 01444         TZE DW+9      4K CAPACITY
01432  0000 00 0 01764         HTR L5        ERROR TESTING STG. CAPCITY
                                             TEST FOR 4K STG. ON RESTART


01433  0500 00 0 01564   DW    CLA CST       +00007
01434  0601 00 0 01574         STO KK        STORE CONSTANT FOR 32K
                                             CAPCITY IN TEMPORARY STG.
01435  0020 00 0 01447         TRA RF        DOUBLE CHECK 32K CAPACITY
                                             USING INDEX REG. ROUTING
```

```
01436  0500 00 0 01565         CLA CST+1     +00003
01437  0601 00 0 01574         STO KK        CONSTANT FOR 16K CAPACITY
01440  0020 00 0 01447         TRA RF        CHECK USING XRA ROUTING

01441  0500 00 0 01566         CLA CST+2     +00001
01442  0601 00 0 01574         STO KK        CONSTANT FOR 8K CAPACITY
01443  0020 00 0 01447         TRA RF        CHECK USING XRA ROUTING

01444  0500 00 0 01567         CLA CST+3     +00000
01445  0601 00 0 01574         STO KK        CONSTANT FOR 4K CAPACITY
01446  0020 00 0 01447         TRA RF        CHECK FOR XRA ROUTING



01447  0774 00 1 77777   RF    AXT 32767,1   BRING HIGHEST ADR. TO XRA
01450  0754 00 1 00000         PXA 0,1       XRA TO AC
01451  0340 00 0 01570         CAS CST+4     17777 COMPARE AC WITH 8K
01452  0020 00 0 01461         TRA RF+10     16 OR 32K
01453  0020 00 0 01472         TRA RF+19     8K CAPACITY
01454  0500 00 0 01567         CLA CST+3     +00000 4K CAPACITY

01455  0340 00 0 01574         CAS KK        SEE IF WE GOT 4K FIRST TIME
01456  0020 00 0 01503         TRA ER
01457  0020 00 0 01537         TRA LJB+27    OK PRINT OUT 4K CAPACITY
01460  0020 00 0 01503         TRA ER

01461  0340 00 0 01571         CAS CST+5     37777 COMPARE AC WITH 16K
01462  0020 00 0 01477         TRA RF+24     32K CAPACITY
01463  0020 00 0 01465         TRA RF+14     16K CAPACITY
01464  0020 00 0 01503         TRA ER
01465  0500 00 0 01565         CLA CST+1     +00003
01466  0340 00 0 01574         CAS KK        SEE IF WE GOT 16K FRST TIME
01467  0020 00 0 01503         TRA ER
01470  0020 00 0 01516         TRA LJB+10    OK PRINT OUT 16K CAPACITY
01471  0020 00 0 01503         TRA ER



01472  0500 00 0 01566         CLA CST+2     +00001
01473  0340 00 0 01574         CAS KK        SEE IF WE GOT 8K FIRST TIME
01474  0020 00 0 01503         TRA ER
01475  0020 00 0 01530         TRA LJB+20    OK PRINT OUT 8K CAPACITY
01476  0020 00 0 01503         TRA ER

01477  0500 00 0 01564         CLA CST       +00007
01500  0340 00 0 01574         CAS KK        SEE IF WE GOT 32K FRST TIME
01501  0020 00 0 01503         TRA ER
01502  0020 00 0 01504         TRA LJB       OK PRINT OUT 32K CAPACITY

01503  0000 00 0 01764   ER    HTR L5        ERROR IN ADDRESSING LINES.
                                             CHECK ACCUMULATOR NEONS
                                             POS.21-23 TO DETERMINE
                                             WHICH LINE IS UP OR DOWN
                                             IN ERROR.
                                             TEST FOR 4K ON RESTART
```

```
01504  0500 00 0 01572   LJB   CLA LB        PLACE THE SIZE OF STORAGE
01505  0400 00 0 01611         ADD PRIMG+12  IN THE PRINT IMAGE
01506  0601 00 0 01611         STO PRIMG+12  32K
01507  0500 00 0 01573         CLA LB+1
01510  0400 00 0 01613         ADD PRIMG+14
01511  0601 00 0 01613         STO PRIMG+14
01512  0761 00 0 00000         NOP
01513  0020 00 0 01546         TRA PRINT
01514  0500 00 0 01574         CLA KK        ACC SHOULD BE 00007 FOR 32K
01515  0000 00 0 01625         HTR L3        SET CONSTANT FOR 32K


01516  0500 00 0 01572         CLA LB        16K
01517  0400 00 0 01615         ADD PRIMG+16
01520  0601 00 0 01615         STO PRIMG+16
01521  0500 00 0 01573         CLA LB+1
01522  0400 00 0 01603         ADD PRIMG+6
01523  0601 00 0 01603         STO PRIMG+6
01524  0761 00 0 00000         NOP
01525  0020 00 0 01546         TRA PRINT
01526  0500 00 0 01574         CLA KK        ACC SHOULD BE 00003 FOR 16K
01527  0000 00 0 01644         HTR L10       SET CONSTANTS FOR 16K


01530  0500 00 0 01573         CLA LB+1      8K
01531  0400 00 0 01577         ADD PRIMG+2
01532  0601 00 0 01577         STO PRIMG+2
01533  0761 00 0 00000         NOP
01534  0020 00 0 01546         TRA PRINT
01535  0500 00 0 01574         CLA KK        ACC SHOULD BE 00001 FOR 8K
01536  0000 00 0 01666         HTR L4        SET CONSTANTS FOR 8K


01537  0500 00 0 01573         CLA LB+1      4K
01540  0400 00 0 01607         ADD PRIMG+10
01541  0601 00 0 01607         STO PRIMG+10
01542  0761 00 0 00000         NOP
01543  0020 00 0 01546         TRA PRINT
01544  0500 00 0 01574         CLA KK        ACC SHOULD BE 00000 FOR 4K
01545  0000 00 0 01764         HTR L5        SET CONSTANTS FOR 4K



01546  0766 00 0 01361   PRINT WPRA          FIRST PASS ONLY
01547  0760 00 0 01363         SPRA 3
01550  0540 00 0 01552         RCHA PRIM
01551  0020 00 0 01553         TRA SC

01552  0000 30 0 01575   PRIM  IOCD PRIMG,0,24



01553  0500 00 0 01574   SC    CLA KK        SET CONSTANTS DEPENDING
                                             UPON SIZE OF STORAGE
```

```
01554  0340 00 0 01565         CAS CST+1     +00003
01555  0020 00 0 01625         TRA L3        32K
01556  0020 00 0 01644         TRA L10       16K
01557  0020 00 0 01560         TRA SC+5      8K OR 4K

01560  0340 00 0 01567         CAS CST+3     +00000
01561  0020 00 0 01666         TRA L4        8K
01562  0020 00 0 01764         TRA L5        4K
01563  0000 00 0 00000         HTR           ERROR IN LOOKING UP STORAGE
                                             CAPACITY


*          CONSTANTS
01564 +000000000007      CST   OCT 7         32K
01565 +000000000003            OCT 3         16K
01566 +000000000001            OCT 1         8K
01567 +000000000000            OCT 0         4K
01570 +000000017777            OCT 17777
01571 +000000037777            OCT 37777
01572 +000000000020      LB    OCT 20
01573 +000000000010            OCT 10
01574 +000000000000      KK    OCT 0         TEMPORARY STORAGE



01575 +000020000100      PRIMG OCT 20000100     9L
01576 +020100000000            OCT 20100000000       9R
01577 +000000000000            OCT 0             8L
01600 +004000000000            OCT 4000000000        8R
01601 +000004000000            OCT 4000000       7L
01602 +200020000000            OCT 200020000000      7R
01603 +000000400600            OCT 400600        6L
01604 +000200000000            OCT 200000000         6R
01605 +000210210000            OCT 210210000     5L
01606 +000010000000            OCT 10000000          5R
01607 +000000000000            OCT 0             4L
01610 +000000000000            OCT 0                 4R
01611 +000141044001            OCT 141044001     3L
01612 +050400000000            OCT 50400000000       3R
01613 +000400102004            OCT 400102004     2L
01614 +001000000000            OCT 1000000000        2R
01615 +000000020000            OCT 20000         1L
01616 -100040000000            OCT 500040000000      1R
01617 +000540146000            OCT 540146000     0L
01620 +015400000000            OCT 15400000000       0R
01621 +000010610304            OCT 10610304      11L
01622 +200300000000            OCT 200300000000     11R
01623 +000225020401            OCT 225020401     12L
01624 -160070000000            OCT 560070000000     12R


                                    SET CONSTANTS FOR 32K STORAGE


01625  0500 00 0 06711   L3    CLA L12D      +074000074000
01626  0622 00 0 06673         STD K7D       L 074000 IN DECR.
```

```
01627  0500 00 0 06632         CLA K0+2      ALL ONES
01630  0601 00 0 06635         STO K0+5
01631  0500 00 0 06641         CLA K2        L 35253 00000
01632  0601 00 0 06637         STO K0+7
01633  0500 00 0 06643         CLA K3        L 32526 00000
01634  0601 00 0 06640         STO K0+8
01635  0500 00 0 06701         CLA K17D      L0
01636  0621 00 0 06731         STA Z
01637  0621 00 0 06730         STA Y
01640  0622 00 0 06727         STD X
01641  0622 00 0 06726         STD W
01642  0500 00 0 06611         CLA L1+8      L 77777
01643  0020 00 0 01713         TRA L6

                                   SET CONSTANTS FOR 16K STORAGE

01644  0500 00 0 06710   L10   CLA L11D      L +034000034000
01645  0622 00 0 06673         STD K7D       L 034000 IN DECR.
01646  0500 00 0 06633         CLA K0+3      L -337777737777
01647  0601 00 0 06635         STO K0+5
01650  0500 00 0 06641         CLA K2        L 35253000000
01651  0601 00 0 06637         STO K0+7
01652  0500 00 0 06643         CLA K3        L 32526000000
01653  0601 00 0 06640         STO K0+8
01654  0500 00 0 06705         CLA K22D      L 30000
01655  0400 00 0 06702         ADD K20D      L 10000
01656  0621 00 0 06731         STA Z
01657  0621 00 0 06730         STA Y
01660  0767 00 0 00022         ALS 18
01661  0622 00 0 06727         STD X
01662  0622 00 0 06726         STD W
01663  0500 00 0 06611         CLA L1+8      L 77777
01664  0771 00 0 00001         ARS 1
01665  0020 00 0 01713         TRA L6

                                   SET CONSTANTS FOR 8K STORAGE

01666  0500 00 0 06706   L4    CLA L5D       L +014000014000
01667  0622 00 0 06673         STD K7D       L 14000
01670  0402 00 0 06700         SUB K14D      L 000001000000
01671  0622 00 0 06675         STD K10D      L 13777
01672  0402 00 0 06700         SUB K14D      L 000001000000
01673  0622 00 0 06676         STD K11D      L 13776
01674  0500 00 0 06705         CLA K22D      L 30000
01675  0400 00 0 06705         ADD K22D      L 30000
01676  0621 00 0 06731         STA Z
01677  0621 00 0 06730         STA Y
01700  0767 00 0 00022         ALS 18
01701  0622 00 0 06727         STD X
01702  0622 00 0 06726         STD W

01703  0500 00 0 06634         CLA K0+4      L -317777717777
01704  0601 00 0 06635         STO K0+5
01705  0500 00 0 06642         CLA K2+1      L 15253000000
```

```
01706  0601 00 0 06637         STO K0+7
01707  0500 00 0 06644         CLA K3+1       L 12526000000
01710  0601 00 0 06640         STO K0+8
01711  0500 00 0 06611         CLA L1+8       L 77777
01712  0771 00 0 00002         ARS 2
01713  0601 00 0 06605   L6    STO L1+4
01714  0767 00 0 00022         ALS 18
01715  0601 00 0 06674         STO K8D
01716  0771 00 0 00022         ARS 18
01717  0621 00 0 02640         STA J7
01720  0621 00 0 04015         STA J7B
01721  0621 00 0 05171         STA J7C
01722  0402 00 0 06606         SUB L1+5       L1
01723  0601 00 0 06607         STO L1+6

01724  0400 00 0 06614         ADD L1+11      L 2
01725  0601 00 0 06610         STO L1+7       100000, 40000, 30000, 20000

01726  0402 00 0 06617         SUB L1+14      L G1+1
01727  0767 00 0 00022         ALS 18
01730  0601 00 0 06604         STO L1+3       LOAD IS DEPENDENT ON
                                              SIZE OF STG

01731  0500 00 0 06610         CLA L1+7
01732  0402 00 0 06625         SUB M+4        L M+4
01733  0767 00 0 00022         ALS 18
01734  0601 00 0 06624         STO M+3


                                    ADJUST XRB CONSTANTS

01735  0500 00 0 06610         CLA L1+7
01736  0402 00 0 06647         SUB S2B        L G1B+1
01737  0767 00 0 00022         ALS 18
01740  0601 00 0 06646         STO S1B        LOAD DEPENDS ON SIZE OF STG

01741  0500 00 0 06610         CLA L1+7
01742  0402 00 0 06652         SUB S5B        L HTR M3B
01743  0767 00 0 00022         ALS 18
01744  0601 00 0 06651         STO S4B


                                    ADJUST XRC CONSTANTS

01745  0500 00 0 06610         CLA L1+7
01746  0402 00 0 06657         SUB S2C        L G1C+1
01747  0767 00 0 00022         ALS 18
01750  0601 00 0 06656         STO S1C        LOAD DEPENDS ON SIZE OF STG

01751  0500 00 0 06610         CLA L1+7
01752  0402 00 0 06662         SUB S5C        L M3C
01753  0767 00 0 00022         ALS 18
01754  0601 00 0 06661         STO S4C
```

ADJUST MULTIPLE TAG CONSTANTS

```
01755  0500 00 0 06673         CLA K7D       L DEPENDS ON SIZE OF STG.
01756  0402 00 0 06700         SUB K14D      L 000001000000
01757  0622 00 0 06675         STD K10D      L DEPENDS ON SIZE OF STG.
01760  0402 00 0 06700         SUB K14D      L 000001000000
01761  0622 00 0 06676         STD K11D      L DEPENDS ON SIZE OF STG.
01762  0402 00 0 06732         SUB CAA       L 546000000
01763  0622 00 0 06677         STD K12D
```

COMMENCE TEST

TEST XRA

```
*    TEST THAT NO INDEX TAG LEAVE ADDR UNALTERED

01764  0500 00 0 02010   L5    CLA L9+1      L PXD 0,1
01765  0402 00 0 02051         SUB A1+2      L PXD 0,1
01766  0100 00 0 01771         TZE L7-3
01767  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
01770  0000 00 0 01771         HTR L7-3
01771  0760 00 0 00161         SWT 1
01772  0020 00 0 01774         TRA L7        PROCEED TO NEXT TEST
01773  0020 00 0 01764         TRA L5        REPEAT TEST
```

TEST THAT XR IS RESET TO ZERO IF ADR
ARE BEING MODIFIED

```
01774  0761 00 0 00000   L7    NOP
01775  0534 00 1 06601   L8    LXA L1,1      L 0
01776  0500 00 0 01774         CLA L7        L NOP
01777  0402 00 1 01774         SUB L7,1
02000  0100 00 0 02003         TZE L9-4
02001  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02002  0000 00 0 02003         HTR L9-4
02003  0760 00 0 00161         SWT 1
02004  0020 00 0 02006         TRA L9-1      PROCEED TO NEXT TEST
02005  0020 00 0 01775         TRA L8        REPEAT TEST
```

TEST PLACE XR A IN DECR

```
02006  0534 00 1 06601         LXA L1,1      L 0
02007  0500 00 0 01764   L9    CLA L5        L 050000000307
02010 -0754 00 1 00000         PXD 0,1
02011  0100 00 0 02014         TZE L12-4
02012  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02013  0000 00 0 02014         HTR L12-4
02014  0760 00 0 00161         SWT 1
02015  0020 00 0 02017         TRA L12-1     NEXT SECTION
02016  0020 00 0 02006         TRA L9-1      REPEAT TEST
```

TEST-XRA, PXD AND COMP.

```
02017  0534 00 1 06632         LXA K0+2,1    L 7777
```

```
02020  0500 00 0 06632   L12   CLA K0+2
02021 -0754 00 1 00000         PXD 0,1
02022  0760 00 0 00006         COM
02023 -0763 00 0 00002         LGL 2          TO ELIMINATE P AND Q BITS
02024 -0765 00 0 00002         LGR 2
02025  0140 00 0 02026         TOV *+1        TURN OFF OVERFLOW LIGHT
02026  0600 00 0 06623         STZ M+2        CLEAR TEMP. STORAGE
02027  0622 00 0 06623         STD M+2
02030  0402 00 0 06726         SUB W          L 370000777777
02031  0100 00 0 02034         TZE L11-3      OK-TEST SWITCH 1
02032  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
02033  0000 00 0 02034         HTR L11-3      HALT ON ERROR
02034  0760 00 0 00161         SWT 1
02035  0020 00 0 02037         TRA L11        NEXT SECTION
02036  0020 00 0 02017         TRA L12-1      REPEAT

                                    TEST-STD AFTER PXD COMP.

02037  0500 00 0 06623   L11   CLA M+2        RESULTS STD
02040  0402 00 0 06727         SUB X          TEST STD
02041  0100 00 0 02044         TZE L11+5      OK-TEST SWITCH 1
02042  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
02043  0000 00 0 02044         HTR L11+5      HALT ON ERROR
02044  0760 00 0 00161         SWT 1
02045  0020 00 0 02047         TRA A1         NEXT SECTION
02046  0020 00 0 02017         TRA L12-1      REPEAT SECTION

                                    TEST LXD AND PXD WITH XR A

02047  0500 00 0 01764   A1    CLA L5         L 05000000307
02050 -0534 00 1 06601         LXD L1,1       LOAD XR A
                                              WITH 1
02051 -0754 00 1 00000         PXD 0,1
02052  0402 00 0 06601         SUB L1         L DECR OF 1
02053  0100 00 0 02056         TZE A2-3
02054  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
02055  0000 00 0 02056         HTR A2-3
02056  0760 00 0 00161         SWT 1
02057  0020 00 0 02061         TRA A2         PROCEED TO NEXT TEST
02060  0020 00 0 02047         TRA A1         REPEAT TEST

                                    TEST LXD AND PXD WITH XR A

02061  0500 00 0 01764   A2    CLA L5         L 050000000307
02062 -0534 00 1 06602         LXD L1+1,1     LOAD XRA
                                              WITH 2
02063 -0754 00 1 00000         PXD 0,1
02064  0402 00 0 06602         SUB L1+1       L DECR OF 2
02065  0100 00 0 02070         TZE A3-3
02066  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
02067  0000 00 0 02070         HTR A3-3
02070  0760 00 0 00161         SWT 1
02071  0020 00 0 02073         TRA A3         PROCEED TO NEXT TEST
02072  0020 00 0 02061         TRA A2         REPEAT TEST

                                    TEST ADR MODIFICATION USING XR A
```

```
02073 -0534 00 1 06601   A3    LXD L1,1      L 1
02074  0500 00 1 02074   A4    CLA A4,1      L A3
02075  0402 00 0 02073         SUB A3
02076  0100 00 0 02101         TZE A5-3
02077  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02100  0000 00 0 02101         HTR A5-3
02101  0760 00 0 00161         SWT 1
02102  0020 00 0 02104         TRA A5
02103  0020 00 0 02073         TRA A3        REPEAT TEST

02104 -0754 00 1 00000   A5    PXD 0,1       TEST CONTENT
                                             OF XRA

02105  0402 00 0 06601         SUB L1        L 1 IN DECR
02106  0100 00 0 02111         TZE A6-3
02107  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02110  0000 00 0 02111         HTR A6-3
02111  0760 00 0 00161         SWT 1
02112  0020 00 0 02114         TRA A6        PROCEED TO NEXT TEST
02113  0020 00 0 02073         TRA A3        REPEAT TEST

                                    TEST TXI WITH XR A

02114 -0534 00 1 06601   A6    LXD L1,1      L 1
02115  1 00001 1 02124         TXI A9,1,1
02116  0020 00 0 02117         TRA A8-2
02117  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02120  0000 00 0 02121         HTR A8
02121  0760 00 0 00161   A8    SWT 1
02122  0020 00 0 02124         TRA A9
02123  0020 00 0 02114         TRA A6        REPEAT TEST


02124 -0754 00 1 00000   A9    PXD 0,1
02125  0402 00 0 06602         SUB L1+1      L 2 IN DECR
02126  0100 00 0 02131         TZE B1-3
02127  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02130  0000 00 0 02131         HTR B1-3
02131  0760 00 0 00161         SWT 1
02132  0020 00 0 02134         TRA B1        PROCEED TO NEXT TEST
02133  0020 00 0 02124         TRA A9        REPEAT TEST

                                    TEST SXD WITH XR A

02134 -0534 00 1 02156   B1    LXD B2,1      L DECR 2
02135 -0634 00 1 02155         SXD B3,1
02136  0500 00 0 02155         CLA B3
02137  0402 00 0 02156         SUB B2
02140  0100 00 0 02146         TZE B4
02141  0500 00 0 02154         CLA B5        TEST IF SXD
                                             IS BEING
                                             INDEXED
02142  0402 00 0 02156         SUB B2
02143 -0100 00 0 02144         TNZ B6
02144  0760 00 0 00162   B6    SWT 2         ERROR-TEST SWITCH 2
```

```
02145  0000 00 0 02146         HTR B4        CHECK ACC FOR TYPE OF ERROR

02146  0500 00 0 06603   B4    CLA L1+2      RESET TEMP. STG.
02147  0601 00 0 02154         STO B5
02150  0601 00 0 02155         STO B3
02151  0760 00 0 00161         SWT 1
02152  0020 00 0 02157         TRA B7        PROCEED TO NEXT TEST
02153  0020 00 0 02134         TRA B1        REPEAT TEST

02154  1 00014 1 00002   B5    TXI 2,1,12    CONSTANTS
02155  1 00014 1 00002   B3    TXI 2,1,12
02156  1 00002 1 00002   B2    TXI 2,1,2


                                 TEST PDX WITH XR A

02157 -0534 00 1 06601   B7    LXD L1,1      L1
02160  0760 00 0 00000         CLM
02161 -0734 00 1 00000         PDX 0,1
02162 -0754 00 1 00000         PXD 0,1
02163  0100 00 0 02166         TZE B8-3
02164  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02165  0000 00 0 02166         HTR B8-3
02166  0760 00 0 00161         SWT 1
02167  0020 00 0 02171         TRA B8        PROCEED TO NEXT TEST
02170  0020 00 0 02157         TRA B7        REPEAT TEST

                                 TEST LXA WITH XRA

02171  0760 00 0 00000   B8    CLM
02172 -0734 00 1 00000         PDX 0,1       RESET XR A
02173  0534 00 1 06603         LXA L1+2,1    L2
02174 -0754 00 1 00000         PXD 0,1
02175  0402 00 0 06602         SUB L1+1      L2 IN DECR
02176  0100 00 0 02201         TZE B9-3
02177  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02200  0000 00 0 02201         HTR B9-3
02201  0760 00 0 00161         SWT 1
02202  0020 00 0 02204         TRA B9        PROCEED TO NEXT TEST
02203  0020 00 0 02171         TRA B8        REPEET TEST

                                 TEST PAX WITH XR A

02204  0500 00 0 06603   B9    CLA L1+2      L 2 IN ADDR
02205 -0534 00 1 06601         LXD L1,1      L 1
02206  0734 00 1 00000         PAX 0,1
02207 -0754 00 1 00000         PXD 0,1
02210  0402 00 0 06602         SUB L1+1      L 2 IN DECR
02211  0100 00 0 02214         TZE C1-3
02212  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02213  0000 00 0 02214         HTR C1-3
02214  0760 00 0 00161         SWT 1
02215  0020 00 0 02217         TRA C1        PROCEED TO NEXT TEST
02216  0020 00 0 02204         TRA B9        REPEAT TEST

                                 TEST TXH WHEN XRA IS LOW
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02217 -0534 00 1 06601   C1    LXD L1,1      L 1
02220  3 00002 1 02222         TXH C2-2,1,2
02221  0020 00 0 02227         TRA C3
02222  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02223  0000 00 0 02224         HTR C2
02224  0760 00 0 00161   C2    SWT 1
02225  0020 00 0 02227         TRA C3
02226  0020 00 0 02217         TRA C1        REPEAT TEST

02227 -0754 00 1 00000   C3    PXD 0,1       TEST XR A
02230  0402 00 0 06601         SUB L1
02231  0100 00 0 02234         TZE C4-3
02232  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02233  0000 00 0 02234         HTR C4-3
02234  0760 00 0 00161         SWT 1
02235  0020 00 0 02237         TRA C4        PROCEED TO NEXT TEST
02236  0020 00 0 02227         TRA C3        REPEAT TEST

                                    TEST TXH WHEN XR + DECR EQUAL

02237 -0534 00 1 06601   C4    LXD L1,1      L 1
02240  3 00001 1 02242         TXH C5-2,1,1
02241  0020 00 0 02247         TRA C6
02242  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02243  0000 00 0 02244         HTR C5
02244  0760 00 0 00161   C5    SWT 1
02245  0020 00 0 02247         TRA C6
02246  0020 00 0 02237         TRA C4        REPEAT TEST

02247 -0754 00 1 00000   C6    PXD 0,1       TEST XR
02250  0402 00 0 06601         SUB L1        L 1 IN DECR
02251  0100 00 0 02254         TZE C7-3
02252  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02253  0000 00 0 02254         HTR C7-3
02254  0760 00 0 00161         SWT 1
02255  0020 00 0 02257         TRA C7        PROCEED TO NEXT TEST
02256  0020 00 0 02247         TRA C6        REPEAT TEST

                                    TEST TXH WHEN XR IS HIGH

02257 -0534 00 1 06601   C7    LXD L1,1      L 1
02260  3 00000 1 02266         TXH C8,1
02261  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02262  0000 00 0 02263         HTR C9
02263  0760 00 0 00161   C9    SWT 1
02264  0020 00 0 02266         TRA C8
02265  0020 00 0 02257         TRA C7        REPEAT TEST

02266 -0754 00 1 00000   C8    PXD 0,1       TEST XR
02267  0402 00 0 06601         SUB L1        L 1 IN DECR
02270  0100 00 0 02273         TZE D1-3
02271  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02272  0000 00 0 02273         HTR D1-3
02273  0760 00 0 00161         SWT 1
02274  0020 00 0 02276         TRA D1        PROCEED TO NEXT TEST
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02275  0020 00 0 02266         TRA C8        REPEAT TEST

                                   TEST TXL WHEN XR IS HIGH

02276 -0534 00 1 06601   D1     LXD L1,1      L 1
02277 -3 00000 1 02301          TXL D2-2,1
02300  0020 00 0 02306          TRA D3
02301  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02302  0000 00 0 02303          HTR D2
02303  0760 00 0 00161   D2     SWT 1
02304  0020 00 0 02306          TRA D3
02305  0020 00 0 02276          TRA D1        REPEAT TEST

02306 -0754 00 1 00000   D3     PXD 0,1       TEST XR
02307  0402 00 0 06601          SUB L1        L 1 IN DECR
02310  0100 00 0 02313          TZE D4-3
02311  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02312  0000 00 0 02313          HTR D4-3
02313  0760 00 0 00161          SWT 1
02314  0020 00 0 02316          TRA D4        PROCEED TO NEXT TEST
02315  0020 00 0 02306          TRA D3        REPEAT TEST

                                   TEST TXL WHEN XR EQUALS DECR

02316 -0534 00 1 06601   D4     LXD L1,1      L 1
02317 -3 00001 1 02325          TXL D5,1,1
02320  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02321  0000 00 0 02322          HTR D6

02322  0760 00 0 00161   D6     SWT 1
02323  0020 00 0 02325          TRA D5
02324  0020 00 0 02316          TRA D4        REPEAT TEST
                                              MODIFIED
02325 -0754 00 1 00000   D5     PXD 0,1       TEST XR A
02326  0402 00 0 06601          SUB L1        L 1 IN DECR
02327  0100 00 0 02332          TZE D7-3
02330  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02331  0000 00 0 02332          HTR D7-3
02332  0760 00 0 00161          SWT 1
02333  0020 00 0 02335          TRA D7        PROCEED TO NEXT TEST
02334  0020 00 0 02325          TRA D5        REPEAT TEST

                                   TEST TXL WHEN XR IS LOW

02335 -0534 00 1 06601   D7     LXD L1,1      L 1
02336 -3 00002 1 02344          TXL D8,1,2
02337  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02340  0000 00 0 02341          HTR D9
02341  0760 00 0 00161   D9     SWT 1
02342  0020 00 0 02344          TRA D8
02343  0020 00 0 02335          TRA D7        REPEAT TEST

02344 -0754 00 1 00000   D8     PXD 0,1       TEST XR A
02345  0402 00 0 06601          SUB L1        L 1 IN DECR
02346  0100 00 0 02351          TZE E1-3
02347  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
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02350  0000 00 0 02351         HTR E1-3
02351  0760 00 0 00161         SWT 1
02352  0020 00 0 02354         TRA E1        PROCEED TO NEXT TEST
02353  0020 00 0 02344         TRA D8        REPEAT TEST

                                   TEST TIX XR GREATER THEN DECR

02354 -0534 00 1 06602   E1     LXD L1+1,1    L 2
02355  2 00001 1 02363          TIX E2,1,1
02356  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02357  0000 00 0 02360          HTR E4
02360  0760 00 0 00161   E4     SWT 1
02361  0020 00 0 02363          TRA E2
02362  0020 00 0 02354          TRA E1        REPEAT TEST

02363 -0754 00 1 00000   E2     PXD 0,1       TEST XR A
02364  0402 00 0 06601          SUB L1        L 1 IN DECR
02365  0100 00 0 02370          TZE E5-3
02366  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02367  0000 00 0 02370          HTR E5-3
02370  0760 00 0 00161          SWT 1
02371  0020 00 0 02373          TRA E5        PROCEED TO NEXT TEST
02372  0020 00 0 02363          TRA E2        REPEAT TEST

                                   TEST TIX XR EQUALS DECR

02373 -0534 00 1 06602   E5     LXD L1+1,1    L2
02374  2 00002 1 02376          TIX E6-2,1,2
02375  0020 00 0 02403          TRA E7
02376  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02377  0000 00 0 02400          HTR E6
02400  0760 00 0 00161   E6     SWT 1
02401  0020 00 0 02403          TRA E7
02402  0020 00 0 02373          TRA E5        REPEAT TEST

02403 -0754 00 1 00000   E7     PXD 0,1       TEST XR A
02404  0402 00 0 06602          SUB L1+1      L 2 IN DECR
02405  0100 00 0 02410          TZE E8-3
02406  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02407  0000 00 0 02410          HTR E8-3
02410  0760 00 0 00161          SWT 1
02411  0020 00 0 02413          TRA E8        PROCEED TO NEXT TEST
02412  0020 00 0 02403          TRA E7        REPEAT TEST

                                   TEST TIX XR LESS THEN DECR

02413 -0534 00 1 06601   E8     LXD L1,1      L 1
02414  2 00002 1 02416          TIX E9-2,1,2
02415  0020 00 0 02423          TRA F1
02416  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02417  0000 00 0 02420          HTR E9
02420  0760 00 0 00161   E9     SWT 1
02421  0020 00 0 02423          TRA F1
02422  0020 00 0 02413          TRA E8        REPEAT TEST

02423 -0754 00 1 00000   F1     PXD 0,1       TEST XR A
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02424  0402 00 0 06601         SUB L1        L 1 IN DECR
02425  0100 00 0 02430         TZE F2-3
02426  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02427  0000 00 0 02430         HTR F2-3
02430  0760 00 0 00161         SWT 1
02431  0020 00 0 02433         TRA F2        PROCEED TO NEXT TEST
02432  0020 00 0 02423         TRA F1        REPEAT TEST

                                   TEST TNX XR LESS THAN DECR

02433 -0534 00 1 06601   F2     LXD L1,1      L 1
02434 -2 00002 1 02442          TNX F3,1,2
02435  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02436  0000 00 0 02437          HTR F2+4
02437  0760 00 0 00161          SWT 1
02440  0020 00 0 02442          TRA F3
02441  0020 00 0 02433          TRA F2        REPEAT TEST

02442 -0754 00 1 00000   F3     PXD 0,1
02443  0402 00 0 06601          SUB L1        L 1 IN DECR
02444  0100 00 0 02447          TZE F4-3
02445  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02446  0000 00 0 02447          HTR F4-3
02447  0760 00 0 00161          SWT 1
02450  0020 00 0 02452          TRA F4        PROCEED TO NEXT TEST
02451  0020 00 0 02442          TRA F3        REPEAT TEST

                                   TEST TNX XR EQUALS DECR

02452 -0534 00 1 06601   F4     LXD L1,1      L 1
02453 -2 00001 1 02461          TNX F5,1,1
02454  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02455  0000 00 0 02456          HTR F6
02456  0760 00 0 00161   F6     SWT 1
02457  0020 00 0 02461          TRA F5
02460  0020 00 0 02452          TRA F4        REPEAT TEST

02461 -0754 00 1 00000   F5     PXD 0,1       TEST XR A
02462  0402 00 0 06601          SUB L1         L 1 IN DECR
02463  0100 00 0 02466          TZE F7-3
02464  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02465  0000 00 0 02466          HTR F7-3
02466  0760 00 0 00161          SWT 1
02467  0020 00 0 02471          TRA F7        PROCEED TO NEXT TEST
02470  0020 00 0 02461          TRA F5        REPEAT TEST

                                   TEST TNX XR GREATER THAN DECR

02471 -0534 00 1 06602   F7     LXD L1+1,1    L 2
02472 -2 00001 1 02474          TNX F8-2,1,1
02473  0020 00 0 02501          TRA F9
02474  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
02475  0000 00 0 02476          HTR F8
02476  0760 00 0 00161   F8     SWT 1
02477  0020 00 0 02501          TRA F9
02500  0020 00 0 02471          TRA F7        REPEAT TEST
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02501 -0754 00 1 00000   F9    PXD 0,1       TEST XR A
02502  0402 00 0 06601         SUB L1        L 1 IN DECR
02503  0100 00 0 02506         TZE G1-3
02504  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02505  0000 00 0 02506         HTR G1-3
02506  0760 00 0 00161         SWT 1
02507  0020 00 0 02511         TRA G1        PROCEED TO NEXT TEST
02510  0020 00 0 02501         TRA F9        REPEAT TEST

                                    TEST TSX

02511  0534 00 1 02511   G1    LXA G1,1      L OWN ADDRESS
02512  0074 00 1 02520         TSX G2,1
02513  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02514  0000 00 0 02515         HTR G3
02515  0760 00 0 00161   G3    SWT 1
02516  0020 00 0 02520         TRA G2
02517  0020 00 0 02511         TRA G1        REPEAT TEST

02520 -0754 00 1 00000   G2    PXD 0,1       L COMP TSX
                                             LOCATION IN
                                             DECR
02521  0402 00 0 06604         SUB L1+3      L 007017000000
02522  0100 00 0 02525         TZE G4-3
02523  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02524  0000 00 0 02525         HTR G4-3
02525  0760 00 0 00161         SWT 1
02526  0020 00 0 02530         TRA G4        PROCEED TO NEXT TEST
02527  0020 00 0 02511         TRA G1        REPEAT TEST

                                    TEST TIX FOR COUNTING

02530  0534 00 1 06605   G4    LXA L1+4,1    L 7777
02531  0500 00 0 06605         CLA L1+4      L07777
02532  0760 00 0 00164         SWT 4
02533  0020 00 0 02537         TRA G5
02534  0760 00 0 00163         SWT 3
02535  0020 00 0 02542         TRA G6
02536  0020 00 0 02546         TRA G7

02537  0402 00 0 06606   G5    SUB L1+5      L 00001
02540  2 00001 1 02537         TIX G5,1,1
02541  0020 00 0 02552         TRA G8
02542  0402 00 0 06616   G6    SUB L1+13     L 00100
02543  2 00100 1 02542         TIX G6,1,64
02544  0400 00 0 06616         ADD L1+13     L00100
02545  0020 00 0 02537         TRA G5
02546  0402 00 0 06615   G7    SUB L1+12     L 1000
02547  2 01000 1 02546         TIX G7,1,512
02550  0400 00 0 06615         ADD L1+12     L 1000
02551  0020 00 0 02542         TRA G6
02552  0100 00 0 02555   G8    TZE G9-3      TO NEXT TEST

02553  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02554  0000 00 0 02555         HTR G9-3
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02555  0760 00 0 00161         SWT 1
02556  0020 00 0 02560         TRA G9        PROCEED TO NEXT TEST
02557  0020 00 0 02530         TRA G4        REPEAT TEST

                                   TEST TNX FOR COUNTING

02560  0534 00 1 06605   G9    LXA L1+4,1    L 7777
02561  0500 00 0 06607         CLA L1+6      L 07776
02562  0760 00 0 00164         SWT 4
02563  0020 00 0 02567         TRA H1
02564  0760 00 0 00163         SWT 3
02565  0020 00 0 02572         TRA H2
02566  0020 00 0 02575         TRA H3

02567 -2 00001 1 02600   H1    TNX H5,1,1
02570  0402 00 0 06606         SUB L1+5      L00001
02571  0020 00 0 02567         TRA H1
02572 -2 00100 1 02567   H2    TNX H1,1,64
02573  0402 00 0 06616         SUB L1+13     L00100
02574  0020 00 0 02572         TRA H2
02575 -2 01000 1 02572   H3    TNX H2,1,512
02576  0402 00 0 06615         SUB L1+12     L 1000
02577  0020 00 0 02575   H4    TRA H3
02600  0100 00 0 02603   H5    TZE H6-3      TO NEXT TEST

02601  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02602  0000 00 0 02603         HTR H6-3
02603  0760 00 0 00161         SWT 1
02604  0020 00 0 02606         TRA H6        PROCEED TO NEXT TEST
02605  0020 00 0 02560         TRA G9        REPEAT TEST

                                   TEST TXI FOR COUNTING

02606  0534 00 1 06612   H6    LXA L1+9,1    L 00000
02607  0500 00 0 06610         CLA L1+7      L DEPENDS ON SIZE OF STG.
02610  0760 00 0 00164         SWT 4
02611  0020 00 0 02616         TRA H7
02612  0760 00 0 00163         SWT 3
02613  0020 00 0 02621         TRA H8
02614  0020 00 0 02623         TRA H9

02615  0100 00 0 02626   J2    TZE J1
02616  0402 00 0 06606   H7    SUB L1+5      L 00001
02617  1 00001 1 02615         TXI J2,1,1
02620  3 07600 1 02615   J3    TXH J2,1,3968
02621  0402 00 0 06616   H8    SUB L1+13     L 00100
02622  1 00100 1 02620         TXI J3,1,64
02623  3 06000 1 02621   H9    TXH H8,1,3072
02624  0402 00 0 06615         SUB L1+12     L 1000
02625  1 01000 1 02623         TXI H9,1,512
02626 -0754 00 1 00000   J1    PXD 0,1
02627  0100 00 0 02632         TZE J4-3      TO NEXT TEST

02630  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02631  0000 00 0 02632         HTR J4-3
02632  0760 00 0 00161         SWT 1
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02633  0020 00 0 02635         TRA J4        PROCEED TO NEXT TEST
02634  0020 00 0 02606         TRA H6        REPEAT TEST

                                   TEST ADR MODIFICATION FOR ALL
                                   POSITIONS IN MEMORY

02635  0760 00 0 00000   J4     CLM
02636  0621 00 0 02641         STA J5
02637  0534 00 1 06605         LXA L1+4,1    L 7777
02640  0500 00 1 07777   J7     CLA 4095,1
02641  0402 00 0 00000   J5     SUB 0
02642 -0100 00 0 02650         TNZ J6-2
02643  0500 00 0 02641         CLA J5
02644  0400 00 0 06606         ADD L1+5      L1
02645  0621 00 0 02641         STA J5        MODIFY ADDR.
02646  2 00001 1 02640         TIX J7,1,1
02647  0020 00 0 02652         TRA J6
02650  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02651  0000 00 0 02652         HTR J6
02652  0760 00 0 00161   J6     SWT 1
02653  0020 00 0 02655         TRA M1-2
02654  0020 00 0 02635         TRA J4


02655  0760 00 0 00165         SWT 5
02656  0020 00 0 02713         TRA N1-2      GO TO NEXT TEST
02657  0560 00 0 06621   M1     LDQ M         CLEAR MQ
                                             SSW 5 DOWN TEST HPR
                                             AND TSX INST
02660  0420 00 0 00000         HPR           KEY IN TSX INST. INTO
                                             MQ WITH ADDR OF
                                             M4 TAG A
02661  0020 00 0 02667         TRA M2        O K
02662  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02663  0000 00 0 02664         HTR M2-3
02664  0760 00 0 00161         SWT 1
02665  0020 00 0 02667         TRA M2
02666  0020 00 0 02657         TRA M1        RE-LOOP

02667 -0600 00 0 06623   M2     STQ M+2       CHECK TSX INST
02670  0500 00 0 06623         CLA M+2
02671  0402 00 0 06622         SUB M+1       L TSX
02672  0100 00 0 02675         TZE M3-3      TRANSFER ON ZERO O K
02673  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02674  0000 00 0 02675         HTR M3-3

02675  0760 00 0 00161         SWT 1
02676  0020 00 0 02700         TRA M3
02677  0020 00 0 02657         TRA M1        ERROR ON TSX TEST

02700  0420 00 0 00000   M3     HPR           EXECUTE TSX INST
                                             TO M4 TAG A

02701  0020 00 0 02706         TRA M4+3      DID NOT EXECUTE TSX
02702  0020 00 0 02706         TRA M4+3      ERROR
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02703 -0754 00 1 00000   M4    PXD 0,1
02704  0402 00 0 06624         SUB M+3       L 006631000000
02705  0100 00 0 02710         TZE N1-5      OK
02706  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02707  0000 00 0 02710         HTR M4+5
02710  0760 00 0 00161         SWT 1
02711  0020 00 0 02713         TRA N1-2      PROCEED TO NEXT TEST
02712  0020 00 0 02700         TRA M3        REPEAT TEST

                                   TEST-PLACE INDEX IN ADDRESS

02713  0500 00 0 06632         CLA K0+2      L-377777777777
02714  0534 00 1 06630         LXA K0,1      L +0
02715  0754 00 1 00000   N1    PXA 0,1       CHECK CLEARING ACC
02716  0100 00 0 02721         TZE N2-5
02717  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02720  0000 00 0 02721         HTR N2-5
02721  0760 00 0 00161         SWT 1
02722  0020 00 0 02724         TRA N2-2
02723  0020 00 0 02713         TRA N1-2      REPEAT TEST

02724  0500 00 0 06632         CLA K0+2      L ALL ONES
02725  0534 00 1 06631         LXA K0+1,1    L +1
02726  0754 00 1 00000   N2    PXA 0,1       CHECK CLEAR ALL BUT ADR
02727  0402 00 0 06631         SUB K0+1      L +1
02730  0100 00 0 02733         TZE N3-4
02731  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02732  0000 00 0 02733         HTR N3-4
02733  0760 00 0 00161         SWT 1
02734  0020 00 0 02736         TRA N3-1
02735  0020 00 0 02724         TRA N2-2      REPEAT TEST

02736  0534 00 1 06635         LXA K0+5,1    L DEPENDS ON SIZE OF STG
02737  0754 00 1 00000   N3    PXA 0,1       CHECK ALL POSITIONS
02740  0402 00 0 06605         SUB L1+4      L 07777, 17777, 37777, 77777
02741  0100 00 0 02744         TZE N3+5
02742  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02743  0000 00 0 02744         HTR N3+5
02744  0760 00 0 00161         SWT 1
02745  0020 00 0 02747         TRA AN1-2     NEXT SECTION
02746  0020 00 0 02736         TRA N3-1      REPEAT TEST

                                   TEST-XRA, PXA AND COMP.

02747  0500 00 0 06632         CLA K0+2      L ALL ONES
02750  0534 00 1 06605         LXA L1+4,1    L 7777
02751  0754 00 1 00000   AN1   PXA 0,1
02752  0760 00 0 00006         COM
02753 -0763 00 0 00002         LGL 2         TO ELIMINATE P AND Q BITS
02754 -0765 00 0 00002         LGR 2
02755  0140 00 0 02756         TOV *+1       TURN OFF OVERFLOW LIGHT
02756  0600 00 0 06623         STZ M+2       CLEAR TEMP STG.
02757  0621 00 0 06623         STA M+2
02760  0402 00 0 06730         SUB Y         L 3777777770000
02761  0100 00 0 02764         TZE AN2       OK-TEST SWITCH 1
02762  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
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02763  0000 00 0 02764         HTR AN2       HALT ON ERROR
02764  0760 00 0 00161   AN2   SWT 1
02765  0020 00 0 02767         TRA AN2+3     NEXT SECTION
02766  0020 00 0 02747         TRA AN1-2     REPEAT

                                   TEST-STA AFTER PXA COMP.

02767  0500 00 0 06623         CLA M+2       RESULTS STA
02770  0402 00 0 06731         SUB Z         TEST STA
02771  0100 00 0 02774         TZE AN2+8     OK-TEST SWITCH 1
02772  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
02773  0000 00 0 02774         HTR AN2+8     HALT ON ERROR
02774  0760 00 0 00161         SWT 1
02775  0020 00 0 02777         TRA N4-2      NEXT SECTION
02776  0020 00 0 02747         TRA AN1-2     REPEAT

                                   TEST STORE INDEX IN ADDRESS

02777  0534 00 1 06631         LXA K0+1,1    L +1
03000  0600 00 0 06645         STZ T1        BLANK TEMP STG
03001  0634 00 1 06645   N4    SXA T1,1      PUT 1 IN ADR OF STORAGE
03002  0500 00 0 06645         CLA T1        L 0
03003  0402 00 0 06631         SUB K0+1      L +1
03004 -0100 00 0 03010         TNZ N4+7

03005  0754 00 1 00000         PXA 0,1       CHECK IF INDEX HAS CHANGED
03006  0402 00 0 06631         SUB K0+1      L +1
03007  0100 00 0 03012         TZE N5-9
03010  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03011  0000 00 0 03012         HTR N5-9
03012  0760 00 0 00161         SWT 1
03013  0020 00 0 03015         TRA N5-6
03014  0020 00 0 02777         TRA N4-2      REPEAT TEST

03015 -0500 00 0 06635         CAL K0+5      L -3077777707777
03016  0767 00 0 00022         ALS 18        CLEAR ACC. ADDR. AND TAG
03017  0602 00 0 06645         SLW T1
03020 -0500 00 0 06632         CAL K0+2      TO BRING IN TAG OF 7
03021  0625 00 0 06645         STT T1
03022  0534 00 1 06635         LXA K0+5,1    L DEPENDS ON SIZE OF STG
03023  0634 00 1 06645   N5    SXA T1,1      CHECK ALL POSITIONS
03024  0500 00 0 06645         CLA T1
03025  0402 00 0 06635         SUB K0+5      L DEPENDS ON SIZE OF STG
03026  0100 00 0 03031         TZE N6-5
03027  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03030  0000 00 0 03031         HTR N6-5
03031  0760 00 0 00161         SWT 1
03032  0020 00 0 03034         TRA N6-2      PROCEED TO NEXT TEST
03033  0020 00 0 03015         TRA N5-6

                                   TEST-PLACE 2S COMP OF ADR IN XR

03034  0500 00 0 06636         CLA K0+6      L 345252742525
03035  0534 00 1 06636         LXA K0+6,1    L 42525
03036  0737 00 1 00000   N6    PAC 0,1
03037  0402 00 0 06636         SUB K0+6      CHECK ACC UNCHANGED
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03040 -0100 00 0 03044         TNZ N6+6      NG

03041 -0754 00 1 00000         PXD 0,1       CHECK XR
03042  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
03043  0100 00 0 03046         TZE N7-5
03044  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03045  0000 00 0 03046         HTR N7-5
03046  0760 00 0 00161         SWT 1
03047  0020 00 0 03051         TRA N7-2
03050  0020 00 0 03034         TRA N6-2

                                   TEST-PLACE 2S COMP OF DECR IN XR

03051  0500 00 0 06636         CLA K0+6      L 345252742525
03052 -0534 00 1 06636         LXD K0+6,1    L 45252
03053 -0737 00 1 00000   N7    PDC 0,1
03054  0402 00 0 06636         SUB K0+6      CHECK ACC UNCHANGED
03055 -0100 00 0 03061         TNZ N7+6      NG

03056 -0754 00 1 00000         PXD 0,1       CHECK XR
03057  0402 00 0 06640         SUB K0+8      L DEPENDS ON SIZE OF STG
03060  0100 00 0 03063         TZE N10-4
03061  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03062  0000 00 0 03063         HTR N10-4
03063  0760 00 0 00161         SWT 1
03064  0020 00 0 03066         TRA N10-1     PROCEED TO NEXT TEST
03065  0020 00 0 03051         TRA N7-2      REPEAT TEST

                                   TEST-LOAD ADR 2S COMP IN INDEX

03066  0534 00 1 06635         LXA K0+5,1    L DEPENDS ON SIZE OF STG
03067  0535 00 1 06636   N10   LAC K0+6,1    L 42525
03070 -0754 00 1 00000         PXD 0,1       BRING BACK XR
03071  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
03072  0100 00 0 03075         TZE N11-4
03073  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03074  0000 00 0 03075         HTR N11-4
03075  0760 00 0 00161         SWT 1
03076  0020 00 0 03100         TRA N11-1     PROCEED TO NEXT TEST
03077  0020 00 0 03066         TRA N10-1     REPEAT TEST

                                   TEST-LOAD DECR 2S COMP IN INDEX

03100  0534 00 1 06635         LXA K0+5,1    L DEPENDS ON SIZE OF STG
03101 -0535 00 1 06636   N11   LDC K0+6,1    L 45252
03102 -0754 00 1 00000         PXD 0,1       BRING BACK XR
03103  0402 00 0 06640         SUB K0+8      L DEPENDS ON SIZE OF STG
03104  0100 00 0 03107         TZE N12-5
03105  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03106  0000 00 0 03107         HTR N12-5
03107  0760 00 0 00161         SWT 1
03110  0020 00 0 03112         TRA N12-2     PROCEED TO NEXT TEST
03111  0020 00 0 03100         TRA N11-1     REPEAT TEST

                                   TEST-LOAD OWN ADDRESS IN XR
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03112  0500 00 0 06630         CLA K0         L+0
03113  0534 00 1 06635         LXA K0+5,1     L DEPENDS ON SIZE OF STG
03114  0774 00 1 35253   N12   AXT 15019,1    PUT 35253 IN XR
03115 -0754 00 1 00000         PXD 0,1        BRING BACK XR
03116  0402 00 0 06637         SUB K0+7       L DEPENDS ON SIZE OF STG
03117  0100 00 0 03122         TZE N13-5
03120  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
03121  0000 00 0 03122         HTR N13-5
03122  0760 00 0 00161         SWT 1
03123  0020 00 0 03125         TRA N13-2      PROCEED TO NEXT TEST
03124  0020 00 0 03112         TRA N12-2      REPEAT TEST

                                   TEST-LOAD COMP OF OWN ADDRESS

03125  0500 00 0 06630         CLA K0         L+0
03126  0534 00 1 06635         LXA K0+5,1     L DEPENDS ON SIZE OF STG
03127 -0774 00 1 42525   N13   AXC 17749,1    PUT 35253 IN XRA
03130 -0754 00 1 00000         PXD 0,1        BRING BACK XR
03131  0402 00 0 06637         SUB K0+7       L DEPENDS ON SIZE OF STG
03132  0100 00 0 03135         TZE L5B-3
03133  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
03134  0000 00 0 03135         HTR L5B-3
03135  0760 00 0 00161         SWT 1
03136  0020 00 0 03140         TRA L5B        PROCEED TO NEXT TEST
03137  0020 00 0 03125         TRA N13-2      REPEAT TEST


*   TEST THAT NO INDEX TAG LEAVES ADR UNALTERED

03140  0500 00 0 03164   L5B   CLA L9B+1      L PXD 0,2
03141  0402 00 0 03175         SUB A1B+2      L PXD 0,1
03142  0100 00 0 03145         TZE L7B-3
03143  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
03144  0000 00 0 03145         HTR L7B-3


                                   TEST XRB


03145  0760 00 0 00161         SWT 1
03146  0020 00 0 03150         TRA L7B        PROCEED TO NEXT TEST
03147  0020 00 0 03140         TRA L5B        REPEAT TEST

                                   TEST THAT XR IS RESET TO ZERO IF ADR
                                   ARE BEING MODIFIED

03150  0761 00 0 00000   L7B   NOP
03151  0534 00 2 06601   L8B   LXA L1,2       L 0
03152  0500 00 0 03150         CLA L7B
03153  0402 00 2 03150         SUB L7B,2
03154  0100 00 0 03157         TZE L9B-4
03155  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
03156  0000 00 0 03157         HTR L9B-4
03157  0760 00 0 00161         SWT 1
03160  0020 00 0 03162         TRA L9B-1      PROCEED TO NEXT TEST
03161  0020 00 0 03151         TRA L8B        REPEAT TEST
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                                    TEST PLACE XR B IN DECR

03162  0534 00 2 06601          LXA L1,2      L 0
03163  0500 00 0 03140   L9B    CLA L5B
03164 -0754 00 2 00000          PXD 0,2
03165  0100 00 0 03170          TZE A1B-3
03166  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
03167  0000 00 0 03170          HTR A1B-3
03170  0760 00 0 00161          SWT 1
03171  0020 00 0 03173          TRA A1B       NEXT SECTION
03172  0020 00 0 03162          TRA L9B-1     REPEAT TEST

                                    TEST LXD AND PXD WITH XR B

03173  0500 00 0 03140   A1B    CLA L5B       L CLA
03174 -0534 00 2 06601          LXD L1,2      LOAD XR B
                                              WITH 1
03175 -0754 00 2 00000          PXD 0,2
03176  0402 00 0 06601          SUB L1        L DECR OF 1
03177  0100 00 0 03202          TZE A1B+7
03200  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
03201  0000 00 0 03202          HTR A1B+7
03202  0760 00 0 00161          SWT 1
03203  0020 00 0 03205          TRA L10B-1    PROCEED TO NEXT TEST
03204  0020 00 0 03173          TRA A1B       REPEAT TEST

                                    TEST-XRB, PXD AND COMP.

03205  0534 00 2 06632          LXA K0+2,2    L 7777
03206  0500 00 0 06632   L10B   CLA K0+2
03207 -0754 00 2 00000          PXD 0,2
03210  0760 00 0 00006          COM
03211 -0763 00 0 00002          LGL 2         TO ELIMINATE P AND Q BITS
03212 -0765 00 0 00002          LGR 2
03213  0140 00 0 03214          TOV *+1       TURN OFF OVERFLOW LIGHT
03214  0600 00 0 06623          STZ M+2       CLEAR TEMP. STORAGE
03215  0622 00 0 06623          STD M+2
03216  0402 00 0 06726          SUB W         L 370000777777
03217  0100 00 0 03222          TZE L11B-3    OK-TEST SWITCH 1
03220  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
03221  0000 00 0 03222          HTR L11B-3    HALT ON ERROR
03222  0760 00 0 00161          SWT 1
03223  0020 00 0 03225          TRA L11B      NEXT SECTION
03224  0020 00 0 03205          TRA L10B-1    REPEAT

                                    TEST-STD AFTER PXD COMP.

03225  0500 00 0 06623   L11B   CLA M+2       RESULTS STD
03226  0402 00 0 06727          SUB X         TEST STD
03227  0100 00 0 03232          TZE L11B+5    OK-TEST SWITCH 1
03230  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
03231  0000 00 0 03232          HTR L11B+5    HALT ON ERROR
03232  0760 00 0 00161          SWT 1
03233  0020 00 0 03235          TRA A2B       NEXT SECTION
03234  0020 00 0 03205          TRA L10B-1    REPEAT SECTION
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                                    TEST LXD AND PXD WITH XR B

03235  0500 00 0 03140   A2B   CLA L5B       L CLA
03236 -0534 00 2 06602         LXD L1+1,2    LOAD XRB
                                             WITH 2
03237 -0754 00 2 00000         PXD 0,2
03240  0402 00 0 06602         SUB L1+1      L DECR OF 2
03241  0100 00 0 03244         TZE A3B-3
03242  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03243  0000 00 0 03244         HTR A3B-3
03244  0760 00 0 00161         SWT 1
03245  0020 00 0 03247         TRA A3B       PROCEED TO NEXT TEST
03246  0020 00 0 03235         TRA A2B       REPEAT TEST

                                    TEST ADR MODIFICATION USING XR B

03247 -0534 00 2 06601   A3B   LXD L1,2      L 1
03250  0500 00 2 03250   A4B   CLA A4B,2
03251  0402 00 0 03247         SUB A3B
03252  0100 00 0 03255         TZE A5B-3
03253  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03254  0000 00 0 03255         HTR A5B-3
03255  0760 00 0 00161         SWT 1
03256  0020 00 0 03260         TRA A5B
03257  0020 00 0 03247         TRA A3B       REPEAT TEST

03260 -0754 00 2 00000   A5B   PXD 0,2       TEST CONTENT
                                             OF XRB
03261  0402 00 0 06601         SUB L1        L 1 IN DECR
03262  0100 00 0 03265         TZE A6B-3
03263  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03264  0000 00 0 03265         HTR A6B-3
03265  0760 00 0 00161         SWT 1
03266  0020 00 0 03270         TRA A6B       PROCEED TO NEXT TEST
03267  0020 00 0 03247         TRA A3B       REPEAT TEST

                                    TEST TXI WITH XR B

03270 -0534 00 2 06601   A6B   LXD L1,2      L 1
03271  1 00001 2 03300         TXI A9B,2,1
03272  0020 00 0 03273         TRA A8B-2
03273  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03274  0000 00 0 03275         HTR A8B
03275  0760 00 0 00161   A8B   SWT 1
03276  0020 00 0 03300         TRA A9B
03277  0020 00 0 03270         TRA A6B       REPEAT TEST

03300 -0754 00 2 00000   A9B   PXD 0,2
03301  0402 00 0 06602         SUB L1+1      L 2 IN DECR
03302  0100 00 0 03305         TZE B1B-3
03303  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03304  0000 00 0 03305         HTR B1B-3
03305  0760 00 0 00161         SWT 1
03306  0020 00 0 03310         TRA B1B       PROCEED TO NEXT TEST
03307  0020 00 0 03300         TRA A9B       REPEAT TEST
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                                    TEST SXD WITH XR B

03310 -0534 00 2 03332   B1B   LXD B2B,2     L DECR 2
03311 -0634 00 2 03331         SXD B3B,2
03312  0500 00 0 03331         CLA B3B
03313  0402 00 0 03332         SUB B2B
03314  0100 00 0 03322         TZE B4B

03315  0500 00 0 03330         CLA B5B       TEST IF SXD
                                             IS BEING
                                             INDEXED
03316  0402 00 0 03332         SUB B2B
03317 -0100 00 0 03320         TNZ B6B
03320  0760 00 0 00162   B6B   SWT 2         ERROR-TEST SWITCH 2
03321  0000 00 0 03322         HTR B4B       CHECK ACC FOR TYPE OF ERROR
03322  0500 00 0 06655   B4B   CLA S10B      RESET TEMP. STG.
03323  0601 00 0 03330         STO B5B
03324  0601 00 0 03331         STO B3B
03325  0760 00 0 00161         SWT 1
03326  0020 00 0 03333         TRA B7B       PROCEED TO NEXT TEST
03327  0020 00 0 03310         TRA B1B       REPEAT TEST

03330  1 00014 2 00002   B5B   TXI 2,2,12    CONSTANTS
03331  1 00014 2 00002   B3B   TXI 2,2,12
03332  1 00002 2 00002   B2B   TXI 2,2,2

                                    TEST PDX WITH XR B

03333 -0534 00 2 06601   B7B   LXD L1,2      L1
03334  0760 00 0 00000         CLM
03335 -0734 00 2 00000         PDX 0,2
03336 -0754 00 2 00000         PXD 0,2
03337  0100 00 0 03342         TZE B8B-3
03340  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03341  0000 00 0 03342         HTR B8B-3
03342  0760 00 0 00161         SWT 1
03343  0020 00 0 03345         TRA B8B       PROCEED TO NEXT TEST
03344  0020 00 0 03333         TRA B7B       REPEAT TEST

                                    TEST LXA WITH XRB

03345  0760 00 0 00000   B8B   CLM
03346 -0734 00 2 00000         PDX 0,2       RESET XR B
03347  0534 00 2 06603         LXA L1+2,2    L2
03350 -0754 00 2 00000         PXD 0,2
03351  0402 00 0 06602         SUB L1+1      L2 IN DECR
03352  0100 00 0 03355         TZE B9B-3
03353  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03354  0000 00 0 03355         HTR B9B-3
03355  0760 00 0 00161         SWT 1
03356  0020 00 0 03360         TRA B9B       PROCEED TO NEXT TEST
03357  0020 00 0 03345         TRA B8B       REPEET TEST

                                    TEST PAX WITH XR B
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03360  0500 00 0 06603   B9B   CLA L1+2      L 2 IN ADDR
03361 -0534 00 2 06601         LXD L1,2      L 1
03362  0734 00 2 00000         PAX 0,2
03363 -0754 00 2 00000         PXD 0,2
03364  0402 00 0 06602         SUB L1+1      L 2 IN DECR
03365  0100 00 0 03370         TZE C1B-3
03366  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03367  0000 00 0 03370         HTR C1B-3
03370  0760 00 0 00161         SWT 1
03371  0020 00 0 03373         TRA C1B       PROCEED TO NEXT TEST
03372  0020 00 0 03360         TRA B9B       REPEAT TEST

                                    TEST TXH WHEN XRB IS LOW

03373 -0534 00 2 06601   C1B   LXD L1,2      L 1
03374  3 00002 2 03376         TXH C2B-2,2,2
03375  0020 00 0 03403         TRA C3B
03376  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03377  0000 00 0 03400         HTR C2B
03400  0760 00 0 00161   C2B   SWT 1
03401  0020 00 0 03403         TRA C3B
03402  0020 00 0 03373         TRA C1B       REPEAT TEST

03403 -0754 00 2 00000   C3B   PXD 0,2       TEST XR B
03404  0402 00 0 06601         SUB L1
03405  0100 00 0 03410         TZE C4B-3
03406  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03407  0000 00 0 03410         HTR C4B-3
03410  0760 00 0 00161         SWT 1
03411  0020 00 0 03413         TRA C4B       PROCEED TO NEXT TEST
03412  0020 00 0 03403         TRA C3B       REPEAT TEST

                                    TEST TXH WHEN XR + DECR EQUAL

03413 -0534 00 2 06601   C4B   LXD L1,2      L 1
03414  3 00001 2 03416         TXH C5B-2,2,1
03415  0020 00 0 03423         TRA C6B
03416  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03417  0000 00 0 03420         HTR C5B
03420  0760 00 0 00161   C5B   SWT 1
03421  0020 00 0 03423         TRA C6B
03422  0020 00 0 03413         TRA C4B       REPEAT TEST

03423 -0754 00 2 00000   C6B   PXD 0,2       TEST XR
03424  0402 00 0 06601         SUB L1        L 1 IN DECR
03425  0100 00 0 03430         TZE C7B-3
03426  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03427  0000 00 0 03430         HTR C7B-3
03430  0760 00 0 00161         SWT 1
03431  0020 00 0 03433         TRA C7B       PROCEED TO NEXT TEST
03432  0020 00 0 03423         TRA C6B       REPEAT TEST

                                    TEST TXH WHEN XR IS HIGH

03433 -0534 00 2 06601   C7B   LXD L1,2      L 1
03434  3 00000 2 03442         TXH C8B,2
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03435  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03436  0000 00 0 03437         HTR C9B
03437  0760 00 0 00161   C9B   SWT 1
03440  0020 00 0 03442         TRA C8B
03441  0020 00 0 03433         TRA C7B       REPEAT TEST

03442 -0754 00 2 00000   C8B   PXD 0,2       TEST XR
03443  0402 00 0 06601         SUB L1        L 1 IN DECR
03444  0100 00 0 03447         TZE D1B-3
03445  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03446  0000 00 0 03447         HTR D1B-3
03447  0760 00 0 00161         SWT 1
03450  0020 00 0 03452         TRA D1B       PROCEED TO NEXT TEST
03451  0020 00 0 03442         TRA C8B       REPEAT TEST

                                   TEST TXL WHEN XR IS HIGH

03452 -0534 00 2 06601   D1B   LXD L1,2      L 1
03453 -3 00000 2 03456         TXL D2B-2,2
03454  0020 00 0 03463         TRA D3B
03455  0020 00 0 03456         TRA D2B-2     ERROR TRANS
03456  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03457  0000 00 0 03460         HTR D2B
03460  0760 00 0 00161   D2B   SWT 1
03461  0020 00 0 03463         TRA D3B
03462  0020 00 0 03452         TRA D1B       REPEAT TEST

03463 -0754 00 2 00000   D3B   PXD 0,2       TEST XR
03464  0402 00 0 06601         SUB L1        L 1 IN DECR
03465  0100 00 0 03470         TZE D4B-3
03466  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03467  0000 00 0 03470         HTR D4B-3
03470  0760 00 0 00161         SWT 1
03471  0020 00 0 03473         TRA D4B       PROCEED TO NEXT TEST
03472  0020 00 0 03463         TRA D3B       REPEAT TEST

                                   TEST TXL WHEN XR EQUALS DECR

03473 -0534 00 2 06601   D4B   LXD L1,2      L 1
03474 -3 00001 2 03502         TXL D5B,2,1
03475  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03476  0000 00 0 03477         HTR D6B
03477  0760 00 0 00161   D6B   SWT 1
03500  0020 00 0 03502         TRA D5B
03501  0020 00 0 03473         TRA D4B       REPEAT TEST
                                             MODIFIED
03502 -0754 00 2 00000   D5B   PXD 0,2       TEST XR B
03503  0402 00 0 06601         SUB L1        L 1 IN DECR
03504  0100 00 0 03507         TZE D7B-3
03505  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03506  0000 00 0 03507         HTR D7B-3
03507  0760 00 0 00161         SWT 1
03510  0020 00 0 03512         TRA D7B       PROCEED TO NEXT TEST
03511  0020 00 0 03502         TRA D5B       REPEAT TEST

                                   TEST TXL WHEN XR IS LOW
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03512 -0534 00 2 06601   D7B   LXD L1,2      L 1
03513 -3 00002 2 03521         TXL D8B,2,2
03514  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03515  0000 00 0 03516         HTR D9B
03516  0760 00 0 00161   D9B   SWT 1
03517  0020 00 0 03521         TRA D8B
03520  0020 00 0 03512         TRA D7B       REPEAT TEST

03521 -0754 00 2 00000   D8B   PXD 0,2       TEST XR B
03522  0402 00 0 06601         SUB L1        L 1 IN DECR
03523  0100 00 0 03526         TZE E1B-3
03524  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03525  0000 00 0 03526         HTR E1B-3
03526  0760 00 0 00161         SWT 1
03527  0020 00 0 03531         TRA E1B       PROCEED TO NEXT TEST
03530  0020 00 0 03521         TRA D8B       REPEAT TEST

                                    TEST TIX XR GREATER THEN DECR

03531 -0534 00 2 06602   E1B   LXD L1+1,2    L 2
03532  2 00001 2 03540         TIX E2B,2,1
03533  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03534  0000 00 0 03535         HTR E4B
03535  0760 00 0 00161   E4B   SWT 1
03536  0020 00 0 03540         TRA E2B
03537  0020 00 0 03531         TRA E1B       REPEAT TEST

03540 -0754 00 2 00000   E2B   PXD 0,2       TEST XR B
03541  0402 00 0 06601         SUB L1        L 1 IN DECR
03542  0100 00 0 03545         TZE E5B-3
03543  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03544  0000 00 0 03545         HTR E5B-3
03545  0760 00 0 00161         SWT 1
03546  0020 00 0 03550         TRA E5B       PROCEED TO NEXT TEST
03547  0020 00 0 03540         TRA E2B       REPEAT TEST

                                    TEST TIX XR EQUALS DECR

03550 -0534 00 2 06602   E5B   LXD L1+1,2    L2
03551  2 00002 2 03553         TIX E6B-2,2,2
03552  0020 00 0 03560         TRA E7B
03553  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03554  0000 00 0 03555         HTR E6B
03555  0760 00 0 00161   E6B   SWT 1
03556  0020 00 0 03560         TRA E7B
03557  0020 00 0 03550         TRA E5B       REPEAT TEST

03560 -0754 00 2 00000   E7B   PXD 0,2       TEST XR B
03561  0402 00 0 06602         SUB L1+1      L 2 IN DECR
03562  0100 00 0 03565         TZE E8B-3
03563  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03564  0000 00 0 03565         HTR E8B-3
03565  0760 00 0 00161         SWT 1
03566  0020 00 0 03570         TRA E8B       PROCEED TO NEXT TEST
03567  0020 00 0 03560         TRA E7B       REPEAT TEST
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                                    TEST TIX XR LESS THEN DECR

03570 -0534 00 2 06601   E8B   LXD L1,2      L 1
03571  2 00002 2 03573         TIX E9B-2,2,2
03572  0020 00 0 03600         TRA F1B
03573  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03574  0000 00 0 03575         HTR E9B
03575  0760 00 0 00161   E9B   SWT 1
03576  0020 00 0 03600         TRA F1B
03577  0020 00 0 03570         TRA E8B       REPEAT TEST

03600 -0754 00 2 00000   F1B   PXD 0,2       TEST XR B
03601  0402 00 0 06601         SUB L1        L 1 IN DECR
03602  0100 00 0 03605         TZE F2B-3
03603  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03604  0000 00 0 03605         HTR F2B-3
03605  0760 00 0 00161         SWT 1
03606  0020 00 0 03610         TRA F2B       PROCEED TO NEXT TEST
03607  0020 00 0 03600         TRA F1B       REPEAT TEST

                                    TEST TNX XR LESS THAN DECR

03610 -0534 00 2 06601   F2B   LXD L1,2      L 1
03611 -2 00002 2 03617         TNX F3B,2,2
03612  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03613  0000 00 0 03614         HTR F2B+4
03614  0760 00 0 00161         SWT 1
03615  0020 00 0 03617         TRA F3B
03616  0020 00 0 03610         TRA F2B       REPEAT TEST

03617 -0754 00 2 00000   F3B   PXD 0,2
03620  0402 00 0 06601         SUB L1        L 1 IN DECR
03621  0100 00 0 03624         TZE F4B-3
03622  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03623  0000 00 0 03624         HTR F4B-3
03624  0760 00 0 00161         SWT 1
03625  0020 00 0 03627         TRA F4B       PROCEED TO NEXT TEST
03626  0020 00 0 03617         TRA F3B       REPEAT TEST

                                    TEST TNX XR EQUALS DECR

03627 -0534 00 2 06601   F4B   LXD L1,2      L 1
03630 -2 00001 2 03636         TNX F5B,2,1
03631  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03632  0000 00 0 03633         HTR F6B
03633  0760 00 0 00161   F6B   SWT 1
03634  0020 00 0 03636         TRA F5B
03635  0020 00 0 03627         TRA F4B       REPEAT TEST

03636 -0754 00 2 00000   F5B   PXD 0,2       TEST XR B
03637  0402 00 0 06601         SUB L1         L 1 IN DECR
03640  0100 00 0 03643         TZE F7B-3
03641  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03642  0000 00 0 03643         HTR F7B-3
03643  0760 00 0 00161         SWT 1
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03644  0020 00 0 03646         TRA F7B       PROCEED TO NEXT TEST
03645  0020 00 0 03636         TRA F5B       REPEAT TEST

                                   TEST TNX XR GREATER THAN DECR

03646 -0534 00 2 06602   F7B   LXD L1+1,2    L 2
03647 -2 00001 2 03651         TNX F8B-2,2,1
03650  0020 00 0 03656         TRA F9B
03651  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03652  0000 00 0 03653         HTR F8B
03653  0760 00 0 00161   F8B   SWT 1
03654  0020 00 0 03656         TRA F9B
03655  0020 00 0 03646         TRA F7B       REPEAT TEST

03656 -0754 00 2 00000   F9B   PXD 0,2       TEST XR A
03657  0402 00 0 06601         SUB L1        L 1 IN DECR
03660  0100 00 0 03663         TZE G1B-3
03661  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03662  0000 00 0 03663         HTR G1B-3
03663  0760 00 0 00161         SWT 1
03664  0020 00 0 03666         TRA G1B       PROCEED TO NEXT TEST
03665  0020 00 0 03656         TRA F9B       REPEAT TEST

                                   TEST TSX

03666  0534 00 2 03666   G1B   LXA G1B,2     L OWN ADDRESS
03667  0074 00 2 03675         TSX G2B,2
03670  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03671  0000 00 0 03672         HTR G3B
03672  0760 00 0 00161   G3B   SWT 1
03673  0020 00 0 03675         TRA G2B
03674  0020 00 0 03666         TRA G1B       REPEAT TEST

03675 -0754 00 2 00000   G2B   PXD 0,2       L COMP TSX
                                             LOCATION IN
                                             DECR
03676  0402 00 0 06646         SUB S1B       L 007017000000
03677  0100 00 0 03702         TZE G4B-3
03700  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03701  0000 00 0 03702         HTR G4B-3
03702  0760 00 0 00161         SWT 1
03703  0020 00 0 03705         TRA G4B       PROCEED TO NEXT TEST
03704  0020 00 0 03666         TRA G1B       REPEAT TEST

                                   TEST TIX FOR COUNTING

03705  0534 00 2 06605   G4B   LXA L1+4,2    L 7777
03706  0500 00 0 06605         CLA L1+4      L07777
03707  0760 00 0 00164         SWT 4
03710  0020 00 0 03714         TRA G5B
03711  0760 00 0 00163         SWT 3
03712  0020 00 0 03717         TRA G6B
03713  0020 00 0 03723         TRA G7B

03714  0402 00 0 06606   G5B   SUB L1+5      L 00001
03715  2 00001 2 03714         TIX G5B,2,1
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03716  0020 00 0 03727         TRA G8B
03717  0402 00 0 06616   G6B   SUB L1+13     L 00100
03720  2 00100 2 03717         TIX G6B,2,64
03721  0400 00 0 06616         ADD L1+13     L00100
03722  0020 00 0 03714         TRA G5B
03723  0402 00 0 06615   G7B   SUB L1+12     L 1000
03724  2 01000 2 03723         TIX G7B,2,512
03725  0400 00 0 06615         ADD L1+12     L 1000
03726  0020 00 0 03717         TRA G6B
03727  0100 00 0 03732   G8B   TZE G9B-3     TO NEXT TEST

03730  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03731  0000 00 0 03732         HTR G9B-3
03732  0760 00 0 00161         SWT 1
03733  0020 00 0 03735         TRA G9B       PROCEED TO NEXT TEST
03734  0020 00 0 03705         TRA G4B       REPEAT TEST

                                   TEST TNX FOR COUNTING

03735  0534 00 2 06605   G9B   LXA L1+4,2    L 7777
03736  0500 00 0 06607         CLA L1+6      L 07776
03737  0760 00 0 00164         SWT 4
03740  0020 00 0 03744         TRA H1B
03741  0760 00 0 00163         SWT 3
03742  0020 00 0 03747         TRA H2B
03743  0020 00 0 03752         TRA H3B

03744 -2 00001 2 03755   H1B   TNX H5B,2,1
03745  0402 00 0 06606         SUB L1+5      L00001
03746  0020 00 0 03744         TRA H1B
03747 -2 00100 2 03744   H2B   TNX H1B,2,64
03750  0402 00 0 06616         SUB L1+13     L00100
03751  0020 00 0 03747         TRA H2B
03752 -2 01000 2 03747   H3B   TNX H2B,2,512
03753  0402 00 0 06615         SUB L1+12     L 1000
03754  0020 00 0 03752   H4B   TRA H3B
03755  0100 00 0 03760   H5B   TZE H6B-3     TO NEXT TEST

03756  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
03757  0000 00 0 03760         HTR H6B-3
03760  0760 00 0 00161         SWT 1
03761  0020 00 0 03763         TRA H6B       PROCEED TO NEXT TEST
03762  0020 00 0 03735         TRA G9B       REPEAT TEST

                                   TEST TXI FOR COUNTING

03763  0534 00 2 06612   H6B   LXA L1+9,2    L 00000
03764  0500 00 0 06610         CLA L1+7      L DEPENDS ON SIZE OF STG.
03765  0760 00 0 00164         SWT 4
03766  0020 00 0 03773         TRA H7B
03767  0760 00 0 00163         SWT 3
03770  0020 00 0 03776         TRA H8B
03771  0020 00 0 04000         TRA H9B

03772  0100 00 0 04003   J2B   TZE J1B
03773  0402 00 0 06606   H7B   SUB L1+5      L 1
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03774  1 00001 2 03772         TXI J2B,2,1
03775  3 07600 2 03772   J3B   TXH J2B,2,3968
03776  0402 00 0 06616   H8B   SUB L1+13     L 00100
03777  1 00100 2 03775         TXI J3B,2,64
04000  3 06000 2 03776   H9B   TXH H8B,2,3072
04001  0402 00 0 06615         SUB L1+12     L 1000
04002  1 01000 2 04000         TXI H9B,2,512

04003 -0754 00 2 00000   J1B   PXD 0,2
04004  0100 00 0 04007         TZE J4B-3     TO NEXT TEST

04005  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04006  0000 00 0 04007         HTR J4B-3
04007  0760 00 0 00161         SWT 1
04010  0020 00 0 04012         TRA J4B       PROCEED TO NEXT TEST
04011  0020 00 0 03763         TRA H6B       REPEAT TEST

                                   TEST ADR MODIFICATION FOR ALL
                                   POSITIONS IN MEMORY

04012  0760 00 0 00000   J4B   CLM
04013  0621 00 0 04016         STA J5B
04014  0534 00 2 06605         LXA L1+4,2    L 7777
04015  0500 00 2 07777   J7B   CLA 4095,2
04016  0402 00 0 00000   J5B   SUB 0
04017 -0100 00 0 04025         TNZ J6B-2
04020  0500 00 0 04016         CLA J5B
04021  0400 00 0 06606         ADD L1+5      L1
04022  0621 00 0 04016         STA J5B       MODIFY ADDR.
04023  2 00001 2 04015         TIX J7B,2,1
04024  0020 00 0 04027         TRA J6B
04025  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04026  0000 00 0 04027         HTR J6B
04027  0760 00 0 00161   J6B   SWT 1
04030  0020 00 0 04032         TRA M1B-2
04031  0020 00 0 04012         TRA J4B


04032  0760 00 0 00165         SWT 5
04033  0020 00 0 04070         TRA N1B-2     GO TO NEXT TEST
04034  0560 00 0 06621   M1B   LDQ M         CLEAR MQ
                                             SSW 5 DOWN TEST HPR
                                             AND TSX INST
04035  0420 00 0 00000         HPR           KEY IN TSX INST. INTO
                                             MQ WITH ADDR OF
                                             M4 TAG A
04036  0020 00 0 04044         TRA M2B       O K
04037  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04040  0000 00 0 04041         HTR M2B-3
04041  0760 00 0 00161         SWT 1
04042  0020 00 0 04044         TRA M2B
04043  0020 00 0 04034         TRA M1B       RE-LOOP

04044 -0600 00 0 06654   M2B   STQ S7B       CHECK TSX INST
04045  0500 00 0 06654         CLA S7B
04046  0402 00 0 06650         SUB S3B
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04047  0100 00 0 04052         TZE M3B-3     TRANSFER ON ZERO O K
04050  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04051  0000 00 0 04052         HTR M3B-3

04052  0760 00 0 00161         SWT 1
04053  0020 00 0 04055         TRA M3B
04054  0020 00 0 04034         TRA M1B       ERROR ON TSX TEST

04055  0420 00 0 00000   M3B   HPR           EXECUTE TSX INST
                                             TO M4B TAG B

04056  0020 00 0 04063         TRA M4B+3     DID NOT EXECUTE TSX
04057  0020 00 0 04063         TRA M4B+3     ERROR

04060 -0754 00 2 00000   M4B   PXD 0,2
04061  0402 00 0 06651         SUB S4B
04062  0100 00 0 04065         TZE N1B-5     OK
04063  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04064  0000 00 0 04065         HTR M4B+5
04065  0760 00 0 00161         SWT 1
04066  0020 00 0 04070         TRA N1B-2     PROCEED TO NEXT TEST
04067  0020 00 0 04055         TRA M3B       REPEAT TEST

                                   TEST-PLACE INDEX IN ADDRESS

04070  0500 00 0 06632         CLA K0+2      L-377777777777
04071  0534 00 2 06630         LXA K0,2      L +0
04072  0754 00 2 00000   N1B   PXA 0,2       CHECK CLEARING ACC
04073  0100 00 0 04076         TZE N2B-5
04074  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04075  0000 00 0 04076         HTR N2B-5
04076  0760 00 0 00161         SWT 1
04077  0020 00 0 04101         TRA N2B-2
04100  0020 00 0 04070         TRA N1B-2     REPEAT TEST

04101  0500 00 0 06632         CLA K0+2      L ALL ONES
04102  0534 00 2 06631         LXA K0+1,2    L +1
04103  0754 00 2 00000   N2B   PXA 0,2       CHECK CLEAR ALL BUT ADR
04104  0402 00 0 06631         SUB K0+1      L +1
04105  0100 00 0 04110         TZE N3B-4
04106  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04107  0000 00 0 04110         HTR N3B-4
04110  0760 00 0 00161         SWT 1
04111  0020 00 0 04113         TRA N3B-1
04112  0020 00 0 04101         TRA N2B-2     REPEAT TEST

04113  0534 00 2 06635         LXA K0+5,2    L DEPENDS ON SIZE OF STG
04114  0754 00 2 00000   N3B   PXA 0,2       CHECK ALL POSITIONS
04115  0402 00 0 06605         SUB L1+4      L 07777, 17777, 37777, 77777
04116  0100 00 0 04121         TZE N3B+5
04117  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04120  0000 00 0 04121         HTR N3B+5
04121  0760 00 0 00161         SWT 1
04122  0020 00 0 04124         TRA M10B-2    NEXT SECTION
04123  0020 00 0 04113         TRA N3B-1     REPEAT TEST
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                                    TEST-XRB, PXA AND COMP.

04124  0500 00 0 06632         CLA K0+2       L ALL ONES
04125  0534 00 2 06605         LXA L1+4,2     L 7777
04126  0754 00 2 00000   M10B  PXA 0,2
04127  0760 00 0 00006         COM
04130 -0763 00 0 00002         LGL 2          TO ELIMINATE P AND Q BITS
04131 -0765 00 0 00002         LGR 2
04132  0140 00 0 04133         TOV *+1        TURN OFF OVERFLOW LIGHT
04133  0600 00 0 06623         STZ M+2        CLEAR TEMP STG.
04134  0621 00 0 06623         STA M+2
04135  0402 00 0 06730         SUB Y          L 3777777770000
04136  0100 00 0 04141         TZE M11B       OK-TEST SWITCH 1
04137  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04140  0000 00 0 04141         HTR M11B       HALT ON ERROR
04141  0760 00 0 00161   M11B  SWT 1
04142  0020 00 0 04144         TRA M12B       NEXT SECTION
04143  0020 00 0 04124         TRA M10B-2     REPEAT

                                    TEST-STA AFTER PXA COMP.

04144  0500 00 0 06623   M12B  CLA M+2        RESULTS STA
04145  0402 00 0 06731         SUB Z          TEST STA
04146  0100 00 0 04151         TZE M12B+5     OK-TEST SWITCH 1
04147  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04150  0000 00 0 04151         HTR M12B+5     HALT ON ERROR
04151  0760 00 0 00161         SWT 1
04152  0020 00 0 04154         TRA N4B-2      NEXT SECTION
04153  0020 00 0 04124         TRA M10B-2     REPEAT

                                    TEST STORE INDEX IN ADDRESS

04154  0534 00 2 06631         LXA K0+1,2     L +1
04155  0600 00 0 06645         STZ T1         BLANK TEMP STG
04156  0634 00 2 06645   N4B   SXA T1,2       PUT 1 IN ADR OF STORAGE
04157  0500 00 0 06645         CLA T1         L 0
04160  0402 00 0 06631         SUB K0+1       L +1
04161 -0100 00 0 04165         TNZ N4B+7

04162  0754 00 2 00000         PXA 0,2        CHECK IF INDEX HAS CHANGED
04163  0402 00 0 06631         SUB K0+1       L +1
04164  0100 00 0 04167         TZE N5B-9
04165  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04166  0000 00 0 04167         HTR N5B-9
04167  0760 00 0 00161         SWT 1
04170  0020 00 0 04172         TRA N5B-6
04171  0020 00 0 04154         TRA N4B-2      REPEAT TEST

04172 -0500 00 0 06635         CAL K0+5       L -3077777707777
04173  0767 00 0 00022         ALS 18         CLEAR ACC. ADDR. AND TAG
04174  0602 00 0 06645         SLW T1
04175 -0500 00 0 06632         CAL K0+2       TO BRING IN TAG OF 7
04176  0625 00 0 06645         STT T1
04177  0534 00 2 06635         LXA K0+5,2     L DEPENDS ON SIZE OF STG
04200  0634 00 2 06645   N5B   SXA T1,2       CHECK ALL POSITIONS
04201  0500 00 0 06645         CLA T1
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04202  0402 00 0 06635         SUB K0+5      L DEPENDS ON SIZE OF STG
04203  0100 00 0 04206         TZE N6B-5
04204  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04205  0000 00 0 04206         HTR N6B-5
04206  0760 00 0 00161         SWT 1
04207  0020 00 0 04211         TRA N6B-2     PROCEED TO NEXT TEST
04210  0020 00 0 04172         TRA N5B-6

                                   TEST-PLACE 2S COMP OF ADR IN XR

04211  0500 00 0 06636         CLA K0+6      L 345252742525
04212  0534 00 2 06636         LXA K0+6,2    L 42525
04213  0737 00 2 00000   N6B   PAC 0,2
04214  0402 00 0 06636         SUB K0+6      CHECK ACC UNCHANGED
04215 -0100 00 0 04221         TNZ N6B+6     NG

04216 -0754 00 2 00000         PXD 0,2       CHECK XR
04217  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
04220  0100 00 0 04223         TZE N7B-5
04221  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04222  0000 00 0 04223         HTR N7B-5
04223  0760 00 0 00161         SWT 1
04224  0020 00 0 04226         TRA N7B-2
04225  0020 00 0 04211         TRA N6B-2

                                   TEST-PLACE 2S COMP OF DECR IN XR

04226  0500 00 0 06636         CLA K0+6      L 345252742525
04227 -0534 00 2 06636         LXD K0+6,2    L 45252
04230 -0737 00 2 00000   N7B   PDC 0,2
04231  0402 00 0 06636         SUB K0+6      CHECK ACC UNCHANGED
04232 -0100 00 0 04236         TNZ N7B+6     NG

04233 -0754 00 2 00000         PXD 0,2       CHECK XR
04234  0402 00 0 06640         SUB K0+8      L DEPENDS ON SIZE OF STG
04235  0100 00 0 04240         TZE N10B-4
04236  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04237  0000 00 0 04240         HTR N10B-4
04240  0760 00 0 00161         SWT 1
04241  0020 00 0 04243         TRA N10B-1    PROCEED TO NEXT TEST
04242  0020 00 0 04226         TRA N7B-2     REPEAT TEST

                                   TEST-LOAD ADR 2S COMP IN INDEX

04243  0534 00 2 06635         LXA K0+5,2    L DEPENDS ON SIZE OF STG
04244  0535 00 2 06636   N10B  LAC K0+6,2    L 42525
04245 -0754 00 2 00000         PXD 0,2       BRING BACK XR
04246  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
04247  0100 00 0 04252         TZE N11B-4
04250  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04251  0000 00 0 04252         HTR N11B-4
04252  0760 00 0 00161         SWT 1
04253  0020 00 0 04255         TRA N11B-1    PROCEED TO NEXT TEST
04254  0020 00 0 04243         TRA N10B-1    REPEAT TEST

                                   TEST-LOAD DECR 2S COMP IN INDEX
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04255  0534 00 2 06635         LXA K0+5,2    L DEPENDS ON SIZE OF STG
04256 -0535 00 2 06636   N11B  LDC K0+6,2    L 45252
04257 -0754 00 2 00000         PXD 0,2       BRING BACK XR
04260  0402 00 0 06640         SUB K0+8      L DEPENDS ON SIZE OF STG
04261  0100 00 0 04264         TZE N12B-5
04262  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04263  0000 00 0 04264         HTR N12B-5
04264  0760 00 0 00161         SWT 1
04265  0020 00 0 04267         TRA N12B-2    PROCEED TO NEXT TEST
04266  0020 00 0 04255         TRA N11B-1    REPEAT TEST

                                   TEST-LOAD OWN ADDRESS IN XR

04267  0500 00 0 06630         CLA K0        L+0
04270  0534 00 2 06635         LXA K0+5,2    L DEPENDS ON SIZE OF STG
04271  0774 00 2 35253   N12B  AXT 15019,2   PUT 35253 IN XR
04272 -0754 00 2 00000         PXD 0,2       BRING BACK XR
04273  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
04274  0100 00 0 04277         TZE N13B-5
04275  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04276  0000 00 0 04277         HTR N13B-5
04277  0760 00 0 00161         SWT 1
04300  0020 00 0 04302         TRA N13B-2    PROCEED TO NEXT TEST
04301  0020 00 0 04267         TRA N12B-2    REPEAT TEST

                                   TEST-LOAD COMP OF OWN ADDRESS

04302  0500 00 0 06630         CLA K0        L+0
04303  0534 00 2 06635         LXA K0+5,2    L DEPENDS ON SIZE OF STG
04304 -0774 00 2 42525   N13B  AXC 17749,2   PUT 35253 IN XRA
04305 -0754 00 2 00000         PXD 0,2       BRING BACK XR
04306  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
04307  0100 00 0 04312         TZE L5C-3
04310  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04311  0000 00 0 04312         HTR L5C-3
04312  0760 00 0 00161         SWT 1
04313  0020 00 0 04315         TRA L5C       PROCEED TO NEXT TEST
04314  0020 00 0 04302         TRA N13B-2    REPEAT TEST



                                   TEST XRC

                                   COMMENCE TEST

                                   TEST THAT NO INDEX TAG LEAVES ADR
                                   UNALTERED

04315  0500 00 0 04341   L5C   CLA L9C+1     L PXD 0,4
04316  0402 00 0 04352         SUB A1C+2     L PXD 0,4
04317  0100 00 0 04322         TZE L7C-3
04320  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04321  0000 00 0 04322         HTR L7C-3
04322  0760 00 0 00161         SWT 1
04323  0020 00 0 04325         TRA L7C       PROCEED TO NEXT TEST
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04324  0020 00 0 04315         TRA L5C       REPEAT TEST

                                   TEST THAT XR IS RESET TO ZERO IF ADR
                                   ARE BEING MODIFIED

04325  0761 00 0 00000   L7C   NOP
04326  0534 00 4 06601   L8C   LXA L1,4      L 0
04327  0500 00 0 04325         CLA L7C
04330  0402 00 4 04325         SUB L7C,4
04331  0100 00 0 04334         TZE L9C-4
04332  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04333  0000 00 0 04334         HTR L9C-4
04334  0760 00 0 00161         SWT 1
04335  0020 00 0 04337         TRA L9C-1     PROCEED TO NEXT TEST
04336  0020 00 0 04326         TRA L8C       REPEAT TEST

                                   TEST PLACE XR C IN DECR

04337  0534 00 4 06601         LXA L1,4      L 0
04340  0500 00 0 04315   L9C   CLA L5C
04341 -0754 00 4 00000         PXD 0,4
04342  0100 00 0 04345         TZE A1C-3
04343  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04344  0000 00 0 04345         HTR A1C-3
04345  0760 00 0 00161         SWT 1
04346  0020 00 0 04350         TRA A1C       NEXT SECTION
04347  0020 00 0 04337         TRA L9C-1     REPEAT TEST

                                   TEST LXD AND PXD WITH XR B

04350  0500 00 0 04315   A1C   CLA L5C
04351 -0534 00 4 06601         LXD L1,4      LOAD XRC
                                             WITH 1
04352 -0754 00 4 00000         PXD 0,4
04353  0402 00 0 06601         SUB L1        L DECR OF 1
04354  0100 00 0 04357         TZE A1C+7
04355  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04356  0000 00 0 04357         HTR A1C+7
04357  0760 00 0 00161         SWT 1
04360  0020 00 0 04362         TRA A10C-1    PROCEED TO NEXT TEST
04361  0020 00 0 04350         TRA A1C       REPEAT TEST

                                   TEST-XRC, PXD AND COMP.

04362  0534 00 4 06632         LXA K0+2,4    L 7777
04363  0500 00 0 06632   A10C  CLA K0+2
04364 -0754 00 4 00000         PXD 0,4
04365  0760 00 0 00006         COM
04366 -0763 00 0 00002         LGL 2         TO ELIMINATE P AND Q BITS
04367 -0765 00 0 00002         LGR 2
04370  0140 00 0 04371         TOV *+1       TURN OFF OVERFLOW LIGHT
04371  0600 00 0 06623         STZ M+2       CLEAR TEMP. STORAGE
04372  0622 00 0 06623         STD M+2
04373  0402 00 0 06726         SUB W         L 370000777777
04374  0100 00 0 04377         TZE A11C-3    OK-TEST SWITCH 1
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04375  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04376  0000 00 0 04377         HTR A11C-3     HALT ON ERROR
04377  0760 00 0 00161         SWT 1
04400  0020 00 0 04402         TRA A11C       NEXT SECTION
04401  0020 00 0 04362         TRA A10C-1     REPEAT

                                   TEST-STD AFTER PXD COMP.

04402  0500 00 0 06623   A11C  CLA M+2        RESULTS STD
04403  0402 00 0 06727         SUB X          TEST STD
04404  0100 00 0 04407         TZE A11C+5     OK-TEST SWITCH 1
04405  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04406  0000 00 0 04407         HTR A11C+5     HALT ON ERROR
04407  0760 00 0 00161         SWT 1
04410  0020 00 0 04412         TRA A2C        NEXT SECTION
04411  0020 00 0 04362         TRA A10C-1     REPEAT SECTION

                                   TEST LXD AND PXD WITH XR C

04412  0500 00 0 04315   A2C   CLA L5C
04413 -0534 00 4 06602         LXD L1+1,4     LOAD XRC
                                              WITH 2
04414 -0754 00 4 00000         PXD 0,4
04415  0402 00 0 06602         SUB L1+1       L DECR OF 2
04416  0100 00 0 04421         TZE A3C-3
04417  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04420  0000 00 0 04421         HTR A3C-3
04421  0760 00 0 00161         SWT 1
04422  0020 00 0 04424         TRA A3C        PROCEED TO NEXT TEST
04423  0020 00 0 04412         TRA A2C        REPEAT TEST

                                   TEST ADR MODIFICATION USING XR C

04424 -0534 00 4 06601   A3C   LXD L1,4       L 1
04425  0500 00 4 04425   A4C   CLA A4C,4
04426  0402 00 0 04424         SUB A3C
04427  0100 00 0 04432         TZE A5C-3
04430  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04431  0000 00 0 04432         HTR A5C-3
04432  0760 00 0 00161         SWT 1
04433  0020 00 0 04435         TRA A5C
04434  0020 00 0 04424         TRA A3C        REPEAT TEST

04435 -0754 00 4 00000   A5C   PXD 0,4        TEST CONTENT
                                              OF XRB
04436  0402 00 0 06601         SUB L1         L 1 IN DECR
04437  0100 00 0 04442         TZE A6C-3
04440  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04441  0000 00 0 04442         HTR A6C-3
04442  0760 00 0 00161         SWT 1
04443  0020 00 0 04445         TRA A6C        PROCEED TO NEXT TEST
04444  0020 00 0 04424         TRA A3C        REPEAT TEST

                                   TEST TXI WITH XR C

04445 -0534 00 4 06601   A6C   LXD L1,4       L 1
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04446  1 00001 4 04455         TXI A9C,4,1
04447  0020 00 0 04450         TRA A8C-2
04450  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04451  0000 00 0 04452         HTR A8C
04452  0760 00 0 00161   A8C   SWT 1
04453  0020 00 0 04455         TRA A9C
04454  0020 00 0 04445         TRA A6C        REPEAT TEST

04455 -0754 00 4 00000   A9C   PXD 0,4
04456  0402 00 0 06602         SUB L1+1       L 2 IN DECR
04457  0100 00 0 04462         TZE B1C-3
04460  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04461  0000 00 0 04462         HTR B1C-3
04462  0760 00 0 00161         SWT 1
04463  0020 00 0 04465         TRA B1C        PROCEED TO NEXT TEST
04464  0020 00 0 04455         TRA A9C        REPEAT TEST

                                    TEST SXD WITH XR C

04465 -0534 00 4 04507   B1C   LXD B2C,4      L DECR 2
04466 -0634 00 4 04506         SXD B3C,4
04467  0500 00 0 04506         CLA B3C
04470  0402 00 0 04507         SUB B2C
04471  0100 00 0 04477         TZE B4C
04472  0500 00 0 04505         CLA B5C        TEST IF SXD
                                              IS BEING
                                              INDEXED
04473  0402 00 0 04507         SUB B2C
04474 -0100 00 0 04475         TNZ B6C
04475  0760 00 0 00162   B6C   SWT 2          ERROR-TEST SWITCH 2
04476  0000 00 0 04477         HTR B4C        CHECK ACC FOR TYPE OF ERROR
04477  0500 00 0 06665   B4C   CLA S10C       RESET TEMP. STG.
04500  0601 00 0 04505         STO B5C
04501  0601 00 0 04506         STO B3C
04502  0760 00 0 00161         SWT 1
04503  0020 00 0 04510         TRA B7C        PROCEED TO NEXT TEST
04504  0020 00 0 04465         TRA B1C        REPEAT TEST

04505  1 00014 4 00002   B5C   TXI 2,4,12     CONSTANTS
04506  1 00014 4 00002   B3C   TXI 2,4,12
04507  1 00002 4 00002   B2C   TXI 2,4,2

                                    TEST PDX WITH XR C

04510 -0534 00 4 06601   B7C   LXD L1,4       L1
04511  0760 00 0 00000         CLM
04512 -0734 00 4 00000         PDX 0,4
04513 -0754 00 4 00000         PXD 0,4
04514  0100 00 0 04517         TZE B8C-3
04515  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
04516  0000 00 0 04517         HTR B8C-3
04517  0760 00 0 00161         SWT 1
04520  0020 00 0 04522         TRA B8C        PROCEED TO NEXT TEST
04521  0020 00 0 04510         TRA B7C        REPEAT TEST

                                    TEST LXA WITH XRC
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04522  0760 00 0 00000   B8C   CLM
04523 -0734 00 4 00000         PDX 0,4       RESET XRC
04524  0534 00 4 06603         LXA L1+2,4    L2
04525 -0754 00 4 00000         PXD 0,4
04526  0402 00 0 06602         SUB L1+1      L2 IN DECR
04527  0100 00 0 04532         TZE B9C-3
04530  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04531  0000 00 0 04532         HTR B9C-3
04532  0760 00 0 00161         SWT 1
04533  0020 00 0 04535         TRA B9C       PROCEED TO NEXT TEST
04534  0020 00 0 04522         TRA B8C       REPEET TEST

                                   TEST PAX WITH XR C

04535  0500 00 0 06603   B9C   CLA L1+2      L 2 IN ADDR
04536 -0534 00 4 06601         LXD L1,4      L 1
04537  0734 00 4 00000         PAX 0,4
04540 -0754 00 4 00000         PXD 0,4
04541  0402 00 0 06602         SUB L1+1      L 2 IN DECR
04542  0100 00 0 04545         TZE C1C-3
04543  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04544  0000 00 0 04545         HTR C1C-3
04545  0760 00 0 00161         SWT 1
04546  0020 00 0 04550         TRA C1C       PROCEED TO NEXT TEST
04547  0020 00 0 04535         TRA B9C       REPEAT TEST

                                   TEST TXH WHEN XRC IS LOW

04550 -0534 00 4 06601   C1C   LXD L1,4      L 1
04551  3 00002 4 04553         TXH C2C-2,4,2
04552  0020 00 0 04560         TRA C3C
04553  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04554  0000 00 0 04555         HTR C2C
04555  0760 00 0 00161   C2C   SWT 1
04556  0020 00 0 04560         TRA C3C
04557  0020 00 0 04550         TRA C1C       REPEAT TEST

04560 -0754 00 4 00000   C3C   PXD 0,4       TEST XRC
04561  0402 00 0 06601         SUB L1
04562  0100 00 0 04565         TZE C4C-3
04563  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04564  0000 00 0 04565         HTR C4C-3
04565  0760 00 0 00161         SWT 1
04566  0020 00 0 04570         TRA C4C       PROCEED TO NEXT TEST
04567  0020 00 0 04560         TRA C3C       REPEAT TEST

                                   TEST TXH WHEN XR + DECR EQUAL

04570 -0534 00 4 06601   C4C   LXD L1,4      L 1
04571  3 00001 4 04573         TXH C5C-2,4,1
04572  0020 00 0 04600         TRA C6C
04573  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04574  0000 00 0 04575         HTR C5C
04575  0760 00 0 00161   C5C   SWT 1
04576  0020 00 0 04600         TRA C6C
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04577  0020 00 0 04570         TRA C4C       REPEAT TEST

04600 -0754 00 4 00000   C6C   PXD 0,4       TEST XR
04601  0402 00 0 06601         SUB L1        L 1 IN DECR
04602  0100 00 0 04605         TZE C7C-3
04603  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04604  0000 00 0 04605         HTR C7C-3
04605  0760 00 0 00161         SWT 1
04606  0020 00 0 04610         TRA C7C       PROCEED TO NEXT TEST
04607  0020 00 0 04600         TRA C6C       REPEAT TEST

                                    TEST TXH WHEN XR IS HIGH

04610 -0534 00 4 06601   C7C   LXD L1,4      L 1
04611  3 00000 4 04617         TXH C8C,4
04612  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04613  0000 00 0 04614         HTR C9C
04614  0760 00 0 00161   C9C   SWT 1
04615  0020 00 0 04617         TRA C8C
04616  0020 00 0 04610         TRA C7C       REPEAT TEST

04617 -0754 00 4 00000   C8C   PXD 0,4       TEST XR
04620  0402 00 0 06601         SUB L1        L 1 IN DECR
04621  0100 00 0 04624         TZE D1C-3
04622  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04623  0000 00 0 04624         HTR D1C-3
04624  0760 00 0 00161         SWT 1
04625  0020 00 0 04627         TRA D1C       PROCEED TO NEXT TEST
04626  0020 00 0 04617         TRA C8C       REPEAT TEST

                                    TEST TXL WHEN XR IS HIGH

04627 -0534 00 4 06601   D1C   LXD L1,4      L 1
04630 -3 00000 4 04632         TXL D2C-2,4
04631  0020 00 0 04637         TRA D3C
04632  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04633  0000 00 0 04634         HTR D2C
04634  0760 00 0 00161   D2C   SWT 1
04635  0020 00 0 04637         TRA D3C
04636  0020 00 0 04627         TRA D1C       REPEAT TEST

04637 -0754 00 4 00000   D3C   PXD 0,4       TEST XR
04640  0402 00 0 06601         SUB L1        L 1 IN DECR
04641  0100 00 0 04644         TZE D4C-3
04642  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04643  0000 00 0 04644         HTR D4C-3
04644  0760 00 0 00161         SWT 1
04645  0020 00 0 04647         TRA D4C       PROCEED TO NEXT TEST
04646  0020 00 0 04637         TRA D3C       REPEAT TEST

                                    TEST TXL WHEN XR EQUALS DECR

04647 -0534 00 4 06601   D4C   LXD L1,4      L 1
04650 -3 00001 4 04656         TXL D5C,4,1
04651  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04652  0000 00 0 04653         HTR D6C
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04653  0760 00 0 00161   D6C   SWT 1
04654  0020 00 0 04656         TRA D5C
04655  0020 00 0 04647         TRA D4C       REPEAT TEST
                                             MODIFIED
04656 -0754 00 4 00000   D5C   PXD 0,4       TEST XRC
04657  0402 00 0 06601         SUB L1        L 1 IN DECR
04660  0100 00 0 04663         TZE D7C-3
04661  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04662  0000 00 0 04663         HTR D7C-3
04663  0760 00 0 00161         SWT 1
04664  0020 00 0 04666         TRA D7C       PROCEED TO NEXT TEST
04665  0020 00 0 04656         TRA D5C       REPEAT TEST

                                     TEST TXL WHEN XR IS LOW

04666 -0534 00 4 06601   D7C   LXD L1,4      L 1
04667 -3 00002 4 04675         TXL D8C,4,2
04670  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04671  0000 00 0 04672         HTR D9C
04672  0760 00 0 00161   D9C   SWT 1
04673  0020 00 0 04675         TRA D8C
04674  0020 00 0 04666         TRA D7C       REPEAT TEST

04675 -0754 00 4 00000   D8C   PXD 0,4       TEST XR B
04676  0402 00 0 06601         SUB L1        L 1 IN DECR
04677  0100 00 0 04702         TZE E1C-3
04700  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04701  0000 00 0 04702         HTR E1C-3
04702  0760 00 0 00161         SWT 1
04703  0020 00 0 04705         TRA E1C       PROCEED TO NEXT TEST
04704  0020 00 0 04675         TRA D8C       REPEAT TEST

                                     TEST TIX XR GREATER THEN DECR

04705 -0534 00 4 06602   E1C   LXD L1+1,4    L 2
04706  2 00001 4 04714         TIX E2C,4,1
04707  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04710  0000 00 0 04711         HTR E4C
04711  0760 00 0 00161   E4C   SWT 1
04712  0020 00 0 04714         TRA E2C
04713  0020 00 0 04705         TRA E1C       REPEAT TEST

04714 -0754 00 4 00000   E2C   PXD 0,4       TEST XRC
04715  0402 00 0 06601         SUB L1        L 1 IN DECR
04716  0100 00 0 04721         TZE E5C-3
04717  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04720  0000 00 0 04721         HTR E5C-3
04721  0760 00 0 00161         SWT 1
04722  0020 00 0 04724         TRA E5C       PROCEED TO NEXT TEST
04723  0020 00 0 04714         TRA E2C       REPEAT TEST

                                     TEST TIX XR EQUALS DECR

04724 -0534 00 4 06602   E5C   LXD L1+1,4    L2
04725  2 00002 4 04727         TIX E6C-2,4,2
04726  0020 00 0 04734         TRA E7C
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04727  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04730  0000 00 0 04731         HTR E6C
04731  0760 00 0 00161   E6C   SWT 1
04732  0020 00 0 04734         TRA E7C
04733  0020 00 0 04724         TRA E5C       REPEAT TEST

04734 -0754 00 4 00000   E7C   PXD 0,4       TEST XRC
04735  0402 00 0 06602         SUB L1+1      L 2 IN DECR
04736  0100 00 0 04741         TZE E8C-3
04737  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04740  0000 00 0 04741         HTR E8C-3
04741  0760 00 0 00161         SWT 1
04742  0020 00 0 04744         TRA E8C       PROCEED TO NEXT TEST
04743  0020 00 0 04734         TRA E7C       REPEAT TEST

                                    TEST TIX XR LESS THEN DECR

04744 -0534 00 4 06601   E8C   LXD L1,4      L 1
04745  2 00002 4 04747         TIX E9C-2,4,2
04746  0020 00 0 04754         TRA F1C
04747  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04750  0000 00 0 04751         HTR E9C
04751  0760 00 0 00161   E9C   SWT 1
04752  0020 00 0 04754         TRA F1C
04753  0020 00 0 04744         TRA E8C       REPEAT TEST

04754 -0754 00 4 00000   F1C   PXD 0,4       TEST XRC
04755  0402 00 0 06601         SUB L1        L 1 IN DECR
04756  0100 00 0 04761         TZE F2C-3
04757  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04760  0000 00 0 04761         HTR F2C-3
04761  0760 00 0 00161         SWT 1
04762  0020 00 0 04764         TRA F2C       PROCEED TO NEXT TEST
04763  0020 00 0 04754         TRA F1C       REPEAT TEST

                                    TEST TNX XR LESS THAN DECR

04764 -0534 00 4 06601   F2C   LXD L1,4      L 1
04765 -2 00002 4 04773         TNX F3C,4,2
04766  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04767  0000 00 0 04770         HTR F2C+4
04770  0760 00 0 00161         SWT 1
04771  0020 00 0 04773         TRA F3C
04772  0020 00 0 04764         TRA F2C       REPEAT TEST

04773 -0754 00 4 00000   F3C   PXD 0,4
04774  0402 00 0 06601         SUB L1        L 1 IN DECR
04775  0100 00 0 05000         TZE F4C-3
04776  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
04777  0000 00 0 05000         HTR F4C-3
05000  0760 00 0 00161         SWT 1
05001  0020 00 0 05003         TRA F4C       PROCEED TO NEXT TEST
05002  0020 00 0 04773         TRA F3C       REPEAT TEST

                                    TEST TNX XR EQUALS DECR
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05003 -0534 00 4 06601   F4C   LXD L1,4      L 1
05004 -2 00001 4 05012         TNX F5C,4,1
05005  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05006  0000 00 0 05007         HTR F6C
05007  0760 00 0 00161   F6C   SWT 1
05010  0020 00 0 05012         TRA F5C
05011  0020 00 0 05003         TRA F4C       REPEAT TEST

05012 -0754 00 4 00000   F5C   PXD 0,4       TEST XRC
05013  0402 00 0 06601         SUB L1         L 1 IN DECR
05014  0100 00 0 05017         TZE F7C-3
05015  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05016  0000 00 0 05017         HTR F7C-3
05017  0760 00 0 00161         SWT 1
05020  0020 00 0 05022         TRA F7C       PROCEED TO NEXT TEST
05021  0020 00 0 05012         TRA F5C       REPEAT TEST

                                   TEST TNX XR GREATER THAN DECR

05022 -0534 00 4 06602   F7C   LXD L1+1,4    L 2
05023 -2 00001 4 05025         TNX F8C-2,4,1
05024  0020 00 0 05032         TRA F9C
05025  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05026  0000 00 0 05027         HTR F8C
05027  0760 00 0 00161   F8C   SWT 1
05030  0020 00 0 05032         TRA F9C
05031  0020 00 0 05022         TRA F7C       REPEAT TEST

05032 -0754 00 4 00000   F9C   PXD 0,4       TEST XRC
05033  0402 00 0 06601         SUB L1        L 1 IN DECR
05034  0100 00 0 05037         TZE G1C-3
05035  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05036  0000 00 0 05037         HTR G1C-3
05037  0760 00 0 00161         SWT 1
05040  0020 00 0 05042         TRA G1C       PROCEED TO NEXT TEST
05041  0020 00 0 05032         TRA F9C       REPEAT TEST

                                   TEST TSX

05042  0534 00 4 05042   G1C   LXA G1C,4     L OWN ADDRESS
05043  0074 00 4 05051         TSX G2C,4
05044  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05045  0000 00 0 05046         HTR G3C
05046  0760 00 0 00161   G3C   SWT 1
05047  0020 00 0 05051         TRA G2C
05050  0020 00 0 05042         TRA G1C       REPEAT TEST

05051 -0754 00 4 00000   G2C   PXD 0,4       L COMP TSX
                                             LOCATION IN
                                             DECR
05052  0402 00 0 06656         SUB S1C       L 007017000000
05053  0100 00 0 05056         TZE G4C-3
05054  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05055  0000 00 0 05056         HTR G4C-3
05056  0760 00 0 00161         SWT 1
05057  0020 00 0 05061         TRA G4C       PROCEED TO NEXT TEST
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05060  0020 00 0 05042         TRA G1C       REPEAT TEST

                                   TEST TIX FOR COUNTING

05061  0534 00 4 06605   G4C   LXA L1+4,4    L 7777
05062  0500 00 0 06605         CLA L1+4      L07777
05063  0760 00 0 00164         SWT 4
05064  0020 00 0 05070         TRA G5C
05065  0760 00 0 00163         SWT 3
05066  0020 00 0 05073         TRA G6C
05067  0020 00 0 05077         TRA G7C

05070  0402 00 0 06606   G5C   SUB L1+5      L 00001
05071  2 00001 4 05070         TIX G5C,4,1
05072  0020 00 0 05103         TRA G8C
05073  0402 00 0 06616   G6C   SUB L1+13     L 00100
05074  2 00100 4 05073         TIX G6C,4,64
05075  0400 00 0 06616         ADD L1+13     L00100
05076  0020 00 0 05070         TRA G5C
05077  0402 00 0 06615   G7C   SUB L1+12     L 1000
05100  2 01000 4 05077         TIX G7C,4,512
05101  0400 00 0 06615         ADD L1+12     L 1000
05102  0020 00 0 05073         TRA G6C
05103  0100 00 0 05106   G8C   TZE G9C-3     TO NEXT TEST

05104  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05105  0000 00 0 05106         HTR G9C-3
05106  0760 00 0 00161         SWT 1
05107  0020 00 0 05111         TRA G9C       PROCEED TO NEXT TEST
05110  0020 00 0 05061         TRA G4C       REPEAT TEST

                                   TEST TNX FOR COUNTING

05111  0534 00 4 06605   G9C   LXA L1+4,4    L 7777
05112  0500 00 0 06607         CLA L1+6      L 07776
05113  0760 00 0 00164         SWT 4
05114  0020 00 0 05120         TRA H1C
05115  0760 00 0 00163         SWT 3
05116  0020 00 0 05123         TRA H2C
05117  0020 00 0 05126         TRA H3C

05120 -2 00001 4 05131   H1C   TNX H5C,4,1
05121  0402 00 0 06606         SUB L1+5      L00001
05122  0020 00 0 05120         TRA H1C
05123 -2 00100 4 05120   H2C   TNX H1C,4,64
05124  0402 00 0 06616         SUB L1+13     L00100
05125  0020 00 0 05123         TRA H2C
05126 -2 01000 4 05123   H3C   TNX H2C,4,512
05127  0402 00 0 06615         SUB L1+12     L 1000
05130  0020 00 0 05126   H4C   TRA H3C
05131  0100 00 0 05134   H5C   TZE H6C-3     TO NEXT TEST

05132  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05133  0000 00 0 05134         HTR H6C-3
05134  0760 00 0 00161         SWT 1
05135  0020 00 0 05137         TRA H6C       PROCEED TO NEXT TEST
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05136  0020 00 0 05111         TRA G9C       REPEAT TEST

                                   TEST TXI FOR COUNTING

05137  0534 00 4 06612   H6C   LXA L1+9,4    L 00000
05140  0500 00 0 06610         CLA L1+7      L DEPENDS ON SIZE OF STG.
05141  0760 00 0 00164         SWT 4
05142  0020 00 0 05147         TRA H7C
05143  0760 00 0 00163         SWT 3
05144  0020 00 0 05152         TRA H8C
05145  0020 00 0 05154         TRA H9C

05146  0100 00 0 05157   J2C   TZE J1C
05147  0402 00 0 06606   H7C   SUB L1+5      L 1
05150  1 00001 4 05146         TXI J2C,4,1
05151  3 07600 4 05146   J3C   TXH J2C,4,3968
05152  0402 00 0 06616   H8C   SUB L1+13     L 100
05153  1 00100 4 05151         TXI J3C,4,64
05154  3 06000 4 05152   H9C   TXH H8C,4,3072
05155  0402 00 0 06615         SUB L1+12     L 1000
05156  1 01000 4 05154         TXI H9C,4,512
05157 -0754 00 4 00000   J1C   PXD 0,4
05160  0100 00 0 05163         TZE J4C-3     TO NEXT TEST

05161  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05162  0000 00 0 05163         HTR J4C-3
05163  0760 00 0 00161         SWT 1
05164  0020 00 0 05166         TRA J4C       PROCEED TO NEXT TEST
05165  0020 00 0 05137         TRA H6C       REPEAT TEST

                                   TEST ADR MODIFICATION FOR ALL
                                   POSITIONS IN MEMORY

05166  0760 00 0 00000   J4C   CLM
05167  0621 00 0 05172         STA J5C
05170  0534 00 4 06605         LXA L1+4,4    L 7777
05171  0500 00 4 07777   J7C   CLA 4095,4
05172  0402 00 0 00000   J5C   SUB 0
05173 -0100 00 0 05201         TNZ J6C-2
05174  0500 00 0 05172         CLA J5C
05175  0400 00 0 06606         ADD L1+5      L1
05176  0621 00 0 05172         STA J5C       MODIFY ADDR.
05177  2 00001 4 05171         TIX J7C,4,1
05200  0020 00 0 05203         TRA J6C
05201  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05202  0000 00 0 05203         HTR J6C
05203  0760 00 0 00161   J6C   SWT 1
05204  0020 00 0 05206         TRA M1C-2
05205  0020 00 0 05166         TRA J4C


05206  0760 00 0 00165         SWT 5
05207  0020 00 0 05244         TRA N1C-2     GO TO NEXT TEST
05210  0560 00 0 06621   M1C   LDQ M         CLEAR MQ
                                             SSW 5 DOWN TEST HPR
                                             AND TSX INST
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05211  0420 00 0 00000         HPR           KEY IN TSX INST. INTO
                                             MQ WITH ADDR OF
                                             M4 TAG A
05212  0020 00 0 05220         TRA M2C       O K
05213  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05214  0000 00 0 05215         HTR M2C-3
05215  0760 00 0 00161         SWT 1
05216  0020 00 0 05220         TRA M2C
05217  0020 00 0 05210         TRA M1C       RE-LOOP

05220 -0600 00 0 06664   M2C   STQ S7C       CHECK TSX INST
05221  0500 00 0 06664         CLA S7C
05222  0402 00 0 06660         SUB S3C
05223  0100 00 0 05226         TZE M3C-3     TRANSFER ON ZERO O K
05224  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05225  0000 00 0 05226         HTR M3C-3

05226  0760 00 0 00161         SWT 1
05227  0020 00 0 05231         TRA M3C
05230  0020 00 0 05210         TRA M1C       ERROR ON TSX TEST

05231  0420 00 0 00000   M3C   HPR           EXECUTE TSX INST
                                             TO M4B TAG C


05232  0020 00 0 05237         TRA M4C+3     DID NOT EXECUTE TSX
05233  0020 00 0 05237         TRA M4C+3     ERROR

05234 -0754 00 4 00000   M4C   PXD 0,4
05235  0402 00 0 06661         SUB S4C
05236  0100 00 0 05241         TZE N1C-5     OK
05237  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05240  0000 00 0 05241         HTR M4C+5
05241  0760 00 0 00161         SWT 1
05242  0020 00 0 05244         TRA N1C-2     PROCEED TO NEXT TEST
05243  0020 00 0 05231         TRA M3C       REPEAT TEST

                                    TEST-PLACE INDEX IN ADDRESS

05244  0500 00 0 06632         CLA K0+2      L-377777777777
05245  0534 00 4 06630         LXA K0,4      L +0
05246  0754 00 4 00000   N1C   PXA 0,4       CHECK CLEARING ACC
05247  0100 00 0 05252         TZE N2C-5
05250  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05251  0000 00 0 05252         HTR N2C-5
05252  0760 00 0 00161         SWT 1
05253  0020 00 0 05255         TRA N2C-2
05254  0020 00 0 05244         TRA N1C-2     REPEAT TEST

05255  0500 00 0 06632         CLA K0+2      L ALL ONES
05256  0534 00 4 06631         LXA K0+1,4    L +1
05257  0754 00 4 00000   N2C   PXA 0,4       CHECK CLEAR ALL BUT ADR
05260  0402 00 0 06631         SUB K0+1      L +1
05261  0100 00 0 05264         TZE N3C-4
05262  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05263  0000 00 0 05264         HTR N3C-4
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05264  0760 00 0 00161         SWT 1
05265  0020 00 0 05267         TRA N3C-1
05266  0020 00 0 05255         TRA N2C-2     REPEAT TEST

05267  0534 00 4 06635         LXA K0+5,4    L DEPENDS ON SIZE OF STG
05270  0754 00 4 00000   N3C   PXA 0,4       CHECK ALL POSITIONS
05271  0402 00 0 06605         SUB L1+4      L 07777, 17777, 37777, 77777
05272  0100 00 0 05275         TZE N3C+5
05273  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05274  0000 00 0 05275         HTR N3C+5
05275  0760 00 0 00161         SWT 1
05276  0020 00 0 05300         TRA N14C-2    NEXT SECTION
05277  0020 00 0 05267         TRA N3C-1     REPEAT TEST

                                   TEST-XRC, PXA AND COMP.

05300  0500 00 0 06632         CLA K0+2      L ALL ONES
05301  0534 00 4 06605         LXA L1+4,4    L 7777
05302  0754 00 4 00000   N14C  PXA 0,4
05303  0760 00 0 00006         COM
05304 -0763 00 0 00002         LGL 2         TO ELIMINATE P AND Q BITS
05305 -0765 00 0 00002         LGR 2
05306  0140 00 0 05307         TOV *+1       TURN OFF OVERFLOW LIGHT
05307  0600 00 0 06623         STZ M+2       CLEAR TEMP STG.
05310  0621 00 0 06623         STA M+2
05311  0402 00 0 06730         SUB Y         L 3777777770000
05312  0100 00 0 05315         TZE N15C      OK-TEST SWITCH 1
05313  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05314  0000 00 0 05315         HTR N15C      HALT ON ERROR
05315  0760 00 0 00161   N15C  SWT 1
05316  0020 00 0 05320         TRA N15C+3    NEXT SECTION
05317  0020 00 0 05300         TRA N14C-2    REPEAT

                                   TEST-STA AFTER PXA COMP.

05320  0500 00 0 06623         CLA M+2       RESULTS STA
05321  0402 00 0 06731         SUB Z         TEST STA
05322  0100 00 0 05325         TZE N15C+8    OK-TEST SWITCH 1
05323  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05324  0000 00 0 05325         HTR N15C+8    HALT ON ERROR
05325  0760 00 0 00161         SWT 1
05326  0020 00 0 05330         TRA N4C-2     NEXT SECTION
05327  0020 00 0 05300         TRA N14C-2    REPEAT

                                   TEST STORE INDEX IN ADDRESS

05330  0534 00 4 06631         LXA K0+1,4    L +1
05331  0600 00 0 06645         STZ T1        BLANK TEMP STG
05332  0634 00 4 06645   N4C   SXA T1,4      PUT 1 IN ADR OF STORAGE
05333  0500 00 0 06645         CLA T1        L 0
05334  0402 00 0 06631         SUB K0+1      L +1

05335 -0100 00 0 05341         TNZ N4C+7
05336  0754 00 4 00000         PXA 0,4       CHECK IF INDEX HAS CHANGED
05337  0402 00 0 06631         SUB K0+1      L +1
05340  0100 00 0 05343         TZE N5C-9
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05341  0760 00 0 00162          SWT 2          ERROR-TEST SWITCH 2
05342  0000 00 0 05343          HTR N5C-9
05343  0760 00 0 00161          SWT 1
05344  0020 00 0 05346          TRA N5C-6
05345  0020 00 0 05330          TRA N4C-2      REPEAT TEST

05346 -0500 00 0 06635          CAL K0+5       L -3077777707777
05347  0767 00 0 00022          ALS 18         CLEAR ACC. ADDR. AND TAG
05350  0602 00 0 06645          SLW T1
05351 -0500 00 0 06632          CAL K0+2       TO BRING IN TAG OF 7
05352  0625 00 0 06645          STT T1
05353  0534 00 4 06635          LXA K0+5,4     L DEPENDS ON SIZE OF STG
05354  0634 00 4 06645    N5C   SXA T1,4       CHECK ALL POSITIONS
05355  0500 00 0 06645          CLA T1
05356  0402 00 0 06635          SUB K0+5       L DEPENDS ON SIZE OF STG
05357  0100 00 0 05362          TZE N6C-5
05360  0760 00 0 00162          SWT 2          ERROR-TEST SWITCH 2
05361  0000 00 0 05362          HTR N6C-5
05362  0760 00 0 00161          SWT 1
05363  0020 00 0 05365          TRA N6C-2      PROCEED TO NEXT TEST
05364  0020 00 0 05346          TRA N5C-6

                                    TEST-PLACE 2S COMP OF ADR IN XR

05365  0500 00 0 06636          CLA K0+6       L 345252742525
05366  0534 00 4 06636          LXA K0+6,4     L 42525
05367  0737 00 4 00000    N6C   PAC 0,4
05370  0402 00 0 06636          SUB K0+6       CHECK ACC UNCHANGED
05371 -0100 00 0 05375          TNZ N6C+6      NG
05372 -0754 00 4 00000          PXD 0,4        CHECK XR
05373  0402 00 0 06637          SUB K0+7       L DEPENDS ON SIZE OF STG
05374  0100 00 0 05377          TZE N7C-5
05375  0760 00 0 00162          SWT 2          ERROR-TEST SWITCH 2
05376  0000 00 0 05377          HTR N7C-5
05377  0760 00 0 00161          SWT 1
05400  0020 00 0 05402          TRA N7C-2
05401  0020 00 0 05365          TRA N6C-2

                                    TEST-PLACE 2S COMP OF DECR IN XR

05402  0500 00 0 06636          CLA K0+6       L 345252742525
05403 -0534 00 4 06636          LXD K0+6,4     L 45252
05404 -0737 00 4 00000    N7C   PDC 0,4
05405  0402 00 0 06636          SUB K0+6       CHECK ACC UNCHANGED
05406 -0100 00 0 05412          TNZ N7C+6      NG
05407 -0754 00 4 00000          PXD 0,4        CHECK XR
05410  0402 00 0 06640          SUB K0+8       L DEPENDS ON SIZE OF STG
05411  0100 00 0 05414          TZE N10C-4
05412  0760 00 0 00162          SWT 2          ERROR-TEST SWITCH 2
05413  0000 00 0 05414          HTR N10C-4
05414  0760 00 0 00161          SWT 1
05415  0020 00 0 05417          TRA N10C-1     PROCEED TO NEXT TEST
05416  0020 00 0 05402          TRA N7C-2      REPEAT TEST

                                    TEST-LOAD ADR 2S COMP IN INDEX
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```
05417  0534 00 4 06635         LXA K0+5,4    L DEPENDS ON SIZE OF STG
05420  0535 00 4 06636   N10C  LAC K0+6,4    L 42525
05421 -0754 00 4 00000         PXD 0,4       BRING BACK XR
05422  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
05423  0100 00 0 05426         TZE N11C-4
05424  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05425  0000 00 0 05426         HTR N11C-4
05426  0760 00 0 00161         SWT 1
05427  0020 00 0 05431         TRA N11C-1    PROCEED TO NEXT TEST
05430  0020 00 0 05417         TRA N10C-1    REPEAT TEST

                                   TEST-LOAD DECR 2S COMP IN INDEX

05431  0534 00 4 06635         LXA K0+5,4    L DEPENDS ON SIZE OF STG
05432 -0535 00 4 06636   N11C  LDC K0+6,4    L 45252
05433 -0754 00 4 00000         PXD 0,4       BRING BACK XR
05434  0402 00 0 06640         SUB K0+8      L DEPENDS ON SIZE OF STG
05435  0100 00 0 05440         TZE N12C-5
05436  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05437  0000 00 0 05440         HTR N12C-5
05440  0760 00 0 00161         SWT 1
05441  0020 00 0 05443         TRA N12C-2    PROCEED TO NEXT TEST
05442  0020 00 0 05431         TRA N11C-1    REPEAT TEST

                                   TEST-LOAD OWN ADDRESS IN XR

05443  0500 00 0 06630         CLA K0        L+0
05444  0534 00 4 06635         LXA K0+5,4    L DEPENDS ON SIZE OF STG
05445  0774 00 4 35253   N12C  AXT 15019,4   PUT 35253 IN XR
05446 -0754 00 4 00000         PXD 0,4       BRING BACK XR
05447  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
05450  0100 00 0 05453         TZE N13C-5
05451  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05452  0000 00 0 05453         HTR N13C-5
05453  0760 00 0 00161         SWT 1
05454  0020 00 0 05456         TRA N13C-2    PROCEED TO NEXT TEST
05455  0020 00 0 05443         TRA N12C-2    REPEAT TEST

                                   TEST-LOAD COMP OF OWN ADDRESS

05456  0500 00 0 06630         CLA K0        L+0
05457  0534 00 4 06635         LXA K0+5,4    L DEPENDS ON SIZE OF STG
05460 -0774 00 4 42525   N13C  AXC 17749,4   PUT 35253 IN XRA
05461 -0754 00 4 00000         PXD 0,4       BRING BACK XR
05462  0402 00 0 06637         SUB K0+7      L DEPENDS ON SIZE OF STG
05463  0100 00 0 05466         TZE C1AD-3
05464  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05465  0000 00 0 05466         HTR C1AD-3
05466  0760 00 0 00161         SWT 1
05467  0020 00 0 05471         TRA C1AD      PROCEED TO NEXT TEST
05470  0020 00 0 05456         TRA N13C-2    REPEAT TEST
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05471  0534 00 1 06723   C1AD  LXA K1111,1   L +1111
05472  0534 00 2 06724         LXA K2222,2   L +2222
05473  0534 00 4 06725         LXA K4444,4   L +4444

05474  0560 00 1 10033   C2D   LDQ K06D+585,1 L DEPENDS ON SIZE OF STG.
05475  0500 00 1 10033         CLA K06D+585,1 L DEPENDS ON SIZE OF STG.
05476  0340 00 0 06722         CAS K06D      L +1111111111
05477  0020 00 0 05501         TRA C2D+5     ERROR
05500  0020 00 0 05503         TRA C2D+7     OK
05501  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05502  0000 00 0 05503         HTR C2D+7     ERROR ON COMPARISON
05503  0760 00 0 00161         SWT 1
05504  0020 00 0 05506         TRA C3D       CONTINUE TEST
05505  0020 00 0 05474         TRA C2D       REPEAT TEST


05506 -0600 00 0 06713   C3D   STQ J1D       TEMPORARY STORAGE
05507  0500 00 0 06713         CLA J1D
05510  0340 00 0 06722         CAS K06D      L +11111111111
05511  0020 00 0 05513         TRA C3D+5     ERROR
05512  0020 00 0 05515         TRA C3D+7     OK
05513  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05514  0000 00 0 05515         HTR C3D+7     ERROR ON COMPARISON
05515  0760 00 0 00161         SWT 1
05516  0020 00 0 05520         TRA CA2D      PROCEED TO NEXT TEST
05517  0020 00 0 05474         TRA C2D       REPEAT TEST

                                    TESTING TAG 2

05520  0560 00 2 11143   CA2D  LDQ K05D+1170,2 L DEPENDS ON SIZE OF STG.
05521  0500 00 2 11143         CLA K05D+1170,2 L DEPENDS ON SIZE OF STG.
05522  0340 00 0 06721         CAS K05D      L +222222222222
05523  0020 00 0 05525         TRA CA2D+5    ERROR
05524  0020 00 0 05527         TRA CA2D+7    OK
05525  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05526  0000 00 0 05527         HTR CA2D+7    ERROR ON COMPARISON
05527  0760 00 0 00161         SWT 1
05530  0020 00 0 05532         TRA CA3D      CONTINUE TEST
05531  0020 00 0 05520         TRA CA2D      REPEAT TEST


05532 -0600 00 0 06713   CA3D  STQ J1D       TEMPORARY STORAGE
05533  0500 00 0 06713         CLA J1D
05534  0340 00 0 06721         CAS K05D      L +22222222222
05535  0020 00 0 05537         TRA CA3D+5    ERROR
05536  0020 00 0 05541         TRA CA3D+7    OK
05537  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05540  0000 00 0 05541         HTR CA3D+7    ERROR ON COMPARISION
05541  0020 00 0 05543         TRA CB2D      PROCEED TO NEXT TEST
05542  0020 00 0 05520         TRA CA2D      REPEAT TEST

                                    TESTING TAG 3
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```
05543  0560 00 3 12253   CB2D  LDQ K04D+1755,3 L DEPENDS ON SIZE OF STG.
05544  0500 00 3 12253         CLA K04D+1755,3 L DEPENDS ON SIZE OF STG.
05545  0340 00 0 06720         CAS K04D      L +33333333333
05546  0020 00 0 05550         TRA CB2D+5    ERROR
05547  0020 00 0 05552         TRA CB2D+7    OK
05550  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05551  0000 00 0 05552         HTR CB2D+7    ERROR ON COMPARISON
05552  0760 00 0 00161         SWT 1
05553  0020 00 0 05555         TRA CB3D      CONTINUE TEST
05554  0020 00 0 05543         TRA CB2D      REPEAT TEST


05555 -0600 00 0 06713   CB3D  STQ J1D       TEMPORARY STORAGE
05556  0500 00 0 06713         CLA J1D
05557  0340 00 0 06720         CAS K04D      L +3333333333333
05560  0020 00 0 05562         TRA CB3D+5    ERROR
05561  0020 00 0 05564         TRA CB3D+7    OK
05562  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05563  0000 00 0 05564         HTR CB3D+7    ERROR ON COMPARISON
05564  0760 00 0 00161         SWT 1
05565  0020 00 0 05567         TRA CC2D      PROCEED TO NEXT TEST
05566  0020 00 0 05543         TRA CB2D      REPEAT TEST


                                    TESTING TAG 4

05567  0560 00 4 13363   CC2D  LDQ K03D+2340,4 L DEPENDS ON SIZE OF STG.
05570  0500 00 4 13363         CLA K03D+2340,4 L DEPENDS ON SIZE OF STG.
05571  0340 00 0 06717         CAS K03D      L +44444444444
05572  0020 00 0 05574         TRA CC2D+5    ERROR
05573  0020 00 0 05576         TRA CC2D+7    OK
05574  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05575  0000 00 0 05576         HTR CC2D+7    ERROR ON COMPARISON
05576  0760 00 0 00161         SWT 1
05577  0020 00 0 05601         TRA CC3D      CONTINUE TEST
05600  0020 00 0 05567         TRA CC2D      REPEAT TEST


05601 -0600 00 0 06713   CC3D  STQ J1D       TEMPORARY STORAGE
05602  0500 00 0 06713         CLA J1D
05603  0340 00 0 06717         CAS K03D      L +4444444444444
05604  0020 00 0 05606         TRA CC3D+5    ERROR
05605  0020 00 0 05610         TRA CC3D+7    OK
05606  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05607  0000 00 0 05610         HTR CC3D+7    ERROR ON COMPARISON
05610  0760 00 0 00161         SWT 1
05611  0020 00 0 05613         TRA CD2D      PROCEED TO NEXT TEST
05612  0020 00 0 05567         TRA CC2D      REPEAT TEST


                                    TESTING TAG 5

05613  0560 00 5 14473   CD2D  LDQ K02D+2925,5 L DEPENDS ON SIZE OF STG.
05614  0500 00 5 14473         CLA K02D+2925,5 L DEPENDS ON SIZE OF STG.
05615  0340 00 0 06716         CAS K02D      L +55555555555
05616  0020 00 0 05620         TRA CD2D+5    ERROR
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05617  0020 00 0 05622         TRA CD2D+7    OK
05620  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05621  0000 00 0 05622         HTR CD2D+7    ERROR ON COMPARISON
05622  0760 00 0 00161         SWT 1
05623  0020 00 0 05625         TRA CD3D      CONTINUE TEST
05624  0020 00 0 05613         TRA CD2D      REPEAT TEST


05625 -0600 00 0 06713   CD3D  STQ J1D       TEMPORARY STORAGE
05626  0500 00 0 06713         CLA J1D
05627  0340 00 0 06716         CAS K02D      L +555555555555
05630  0020 00 0 05632         TRA CD3D+5    ERROR
05631  0020 00 0 05634         TRA CD3D+7    OK
05632  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05633  0000 00 0 05634         HTR CD3D+7    ERROR ON COMPARISON
05634  0760 00 0 00161         SWT 1
05635  0020 00 0 05637         TRA CE2D      PROCEED TO NEXT TEST
05636  0020 00 0 05613         TRA CD2D      REPEAT TEST


                                    TESTING TAG 6

05637  0560 00 6 15603   CE2D  LDQ K01D+3510,6 L DEPENDS ON SIZE OF STG.
05640  0500 00 6 15603         CLA K01D+3510,6 L DEPENDS ON SIZE OF STG.
05641  0340 00 0 06715         CAS K01D      L +6666666666666
05642  0020 00 0 05644         TRA CE2D+5    ERROR
05643  0020 00 0 05646         TRA CE2D+7    OK
05644  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05645  0000 00 0 05646         HTR CE2D+7    ERROR ON COMPARISON
05646  0760 00 0 00161         SWT 1
05647  0020 00 0 05651         TRA CE3D      CONTINUE TEST
05650  0020 00 0 05637         TRA CE2D      REPEAT TEST


05651 -0600 00 0 06713   CE3D  STQ J1D       TEMPORARY STORAGE
05652  0500 00 0 06713         CLA J1D
05653  0340 00 0 06715         CAS K01D      L +6666666666666
05654  0020 00 0 05656         TRA CE3D+5    ERROR
05655  0020 00 0 05660         TRA CE3D+7    OK
05656  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05657  0000 00 0 05660         HTR CE3D+7    ERROR ON COMPARISON
05660  0760 00 0 00161         SWT 1
05661  0020 00 0 05663         TRA CF2D      PROCEED TO NEXT TEST
05662  0020 00 0 05637         TRA CE2D      REPEAT TEST


                                    TESTING TAG 7

05663  0560 00 7 16713   CF2D  LDQ K00D+4095,7 L DEPENDS ON SIZE OF STG.
05664  0500 00 7 16713         CLA K00D+4095,7 L DEPENDS ON SIZE OF STG.
05665  0340 00 0 06714         CAS K00D      L +7777777777777
05666  0020 00 0 05670         TRA CF2D+5    ERROR
05667  0020 00 0 05672         TRA CF2D+7    OK
05670  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05671  0000 00 0 05672         HTR CF2D+7    ERROR ON COMPARISON
05672  0760 00 0 00161         SWT 1
```

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05673  0020 00 0 05675         TRA CF3D      CONTINUE TEST
05674  0020 00 0 05663         TRA CF2D      REPEAT TEST


05675 -0600 00 0 06713   CF3D  STQ J1D       TEMPORARY STORAGE
05676  0500 00 0 06713         CLA J1D
05677  0340 00 0 06714         CAS K00D      L +7777777777777
05700  0020 00 0 05702         TRA CF3D+5    ERROR
05701  0020 00 0 05704         TRA CF3D+7    OK
05702  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05703  0000 00 0 05704         HTR CF3D+7    ERROR ON COMPARISON
05704  0760 00 0 00161         SWT 1
05705  0020 00 0 05707         TRA C8D       PROCEED TO NEXT TEST
05706  0020 00 0 05663         TRA CF2D      REPEAT TEST


                                    TEST-XR READ IN WITH MULTIPLE TAG

05707  0534 00 7 06635   C8D   LXA K0+5,7    L 7777
05710  0500 00 0 06701         CLA K17D      L ZEROS
05711 -0754 00 1 00000         PXD 0,1       L 7777
05712  0560 00 0 06674         LDQ K8D       L DECR OF 7777
05713  0340 00 0 06674         CAS K8D       DECR OF 7777 TEST TAG 1
05714  0020 00 0 05716         TRA C8D+7     ERROR
05715  0020 00 0 05720         TRA C8D+9     OK
05716  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05717  0000 00 0 05720         HTR C8D+9     ERROR
05720  0760 00 0 00161         SWT 1
05721  0020 00 0 05723         TRA C9D       PROCEED TO NEXT TEST
05722  0020 00 0 05707         TRA C8D       REPEAT TEST


05723  0500 00 0 06701   C9D   CLA K17D      L ZEROS
05724 -0754 00 2 00000         PXD 0,2       L 7777
05725  0560 00 0 06674         LDQ K8D       L DEPENDS ON SIZE OF STO.
05726  0340 00 0 06674         CAS K8D       DECR OF 7777 TEST TAG B
05727  0020 00 0 05731         TRA C9D+6     ERROR
05730  0020 00 0 05733         TRA C9D+8     OK
05731  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05732  0000 00 0 05733         HTR C9D+8     ERROR
05733  0760 00 0 00161         SWT 1
05734  0020 00 0 05736         TRA C10D      PROCEED TO NEXT TEST
05735  0020 00 0 05723         TRA C9D       REPEAT TEST


05736  0500 00 0 06701   C10D  CLA K17D      L ZEROS
05737 -0754 00 4 00000         PXD 0,4       L 7777
05740  0560 00 0 06674         LDQ K8D       L DEPENDS ON SIZE OF STO.
05741  0340 00 0 06674         CAS K8D       DECR OF 7777 TEST TAG B
05742  0020 00 0 05744         TRA C10D+6    ERROR
05743  0020 00 0 05746         TRA C10D+8    OK
05744  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
05745  0000 00 0 05746         HTR C10D+8    ERROR
05746  0760 00 0 00161         SWT 1
05747  0020 00 0 05751         TRA C11D      PROCEED TO NEXT TEST
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05750  0020 00 0 05736         TRA C10D      REPEAT TEST


                                   TEST TAG 0

05751 -0534 00 7 06635   C11D   LXD K0+5,7    L DEPENDS ON SIZE OF STG.
05752  3 06777 1 05760          TXH C12D,1,3583 TEST TXH FOR TRA
05753  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
05754  0000 00 0 05755          HTR C11D+4    ERROR TXH FAILED TO TRA
05755  0760 00 0 00161          SWT 1
05756  0020 00 0 05760          TRA C12D      PROCEED TO NEXT TEST
05757  0020 00 0 05751          TRA C11D      REPEAT TEST

05760  3 06777 0 05762   C12D   TXH C12D+2,0,3583 TEST TXH WITH TAG 0
05761  0020 00 0 05767          TRA C13D      OK
05762  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
05763  0000 00 0 05764          HTR C12D+4    TXH TRANSFERED IN ERROR
05764  0760 00 0 00161          SWT 1
05765  0020 00 0 05767          TRA C13D      CONTINUE TEST
05766  0020 00 0 05760          TRA C12D      REPEAT TEST

05767 -0754 00 1 00000   C13D   PXD 0,1       L 7777
05770  0560 00 0 06674          LDQ K8D       CORRECNT NUMBER
05771  0340 00 0 06674          CAS K8D       CHECK XRA 7777
05772  0020 00 0 05774          TRA C13D+5    ERROR
05773  0020 00 0 05776          TRA C13D+7    OK
05774  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
05775  0000 00 0 05776          HTR C13D+7    ERROR
05776  0760 00 0 00161          SWT 1
05777  0020 00 0 06001          TRA C14D      PROCEED TO NEXT TEST
06000  0020 00 0 05760          TRA C12D      REPEAT TEST


06001 -0754 00 2 00000   C14D   PXD 0,2       CHECK XRB 7777
06002  0560 00 0 06674          LDQ K8D       CORRECNT NUMBER
06003  0340 00 0 06674          CAS K8D
06004  0020 00 0 06006          TRA C14D+5
06005  0020 00 0 06010          TRA C14D+7    OK
06006  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
06007  0000 00 0 06010          HTR C14D+7    ERROR
06010  0760 00 0 00161          SWT 1
06011  0020 00 0 06013          TRA C15D      PROCEED TO NEXT TEST
06012  0020 00 0 06001          TRA C14D      REPEAT TEST


06013 -0754 00 4 00000   C15D   PXD 0,4       L 7777
06014  0560 00 0 06674          LDQ K8D       CORRECNT NUMBER
06015  0340 00 0 06674          CAS K8D       CHECK XRC 7777
06016  0020 00 0 06020          TRA C15D+5
06017  0020 00 0 06022          TRA C15D+7    OK
06020  0760 00 0 00162          SWT 2         ERROR-TEST SWITCH 2
06021  0000 00 0 06022          HTR C15D+7    ERROR
06022  0760 00 0 00161          SWT 1
06023  0020 00 0 06025          TRA C16D      PROCEED TO NEXT TEST
06024  0020 00 0 06013          TRA C15D      REPEAT TEST
```

TEST TIX

```
06025  2 03777 1 06033   C16D  TIX C17D,1,2047 WITH TAG 1
06026  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06027  0000 00 0 06030         HTR C16D+3     TIX FAILED TO TRA
06030  0760 00 0 00161         SWT 1
06031  0020 00 0 06033         TRA C17D       PROCEED TO NEXT TEST
06032  0020 00 0 06025         TRA C16D       REPEAT TEST


06033  2 00001 0 06035   C17D  TIX C17D+2,0,1 WITH TAG 0
06034  0020 00 0 06042         TRA C18D       OK
06035  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06036  0000 00 0 06037         HTR C17D+4     TIX TRANSFERED IN ERROR
06037  0760 00 0 00161         SWT 1
06040  0020 00 0 06042         TRA C18D       PROCEED TO NEXT TEST
06041  0020 00 0 06033         TRA C17D       REPEAT TEST


06042 -0754 00 1 00000   C18D  PXD 0,1        L 4000
06043  0560 00 0 06673         LDQ K7D        CORRECT NUMBER
06044  0340 00 0 06673         CAS K7D        CHECK XRA 4000
06045  0020 00 0 06047         TRA C18D+5
06046  0020 00 0 06051         TRA C18D+7     OK
06047  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06050  0000 00 0 06051         HTR C18D+7
06051  0760 00 0 00161         SWT 1
06052  0020 00 0 06054         TRA C21D       PROCEED TO NEXT TEST
06053  0020 00 0 06033         TRA C17D       REPEAT TEST

06054 -0754 00 2 00000   C21D  PXD 0,2        L 4000
06055  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06056  0340 00 0 06674         CAS K8D        CHECK XRB 4000
06057  0020 00 0 06061         TRA C21D+5     ERROR
06060  0020 00 0 06063         TRA C21D+7     OK
06061  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06062  0000 00 0 06063         HTR C21D+7     ERROR
06063  0760 00 0 00161         SWT 1
06064  0020 00 0 06066         TRA C22D       PROCEED TO NEXT TEST
06065  0020 00 0 06054         TRA C21D       REPEAT TEST

06066 -0754 00 4 00000   C22D  PXD 0,4        L 4000
06067  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06070  0340 00 0 06674         CAS K8D        CHECK XRC 4000
06071  0020 00 0 06073         TRA C22D+5     ERROR
06072  0020 00 0 06075         TRA C22D+7     OK
06073  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06074  0020 00 0 06066         TRA C22D       PROCEED TO NEXT TEST
06075  0020 00 0 06100         TRA C23D       REPEAT TEST
06076  0760 00 0 00161         SWT 1
06077  0000 00 0 06075         HTR C22D+7     ERROR
```

```
06100 -3 03777 1 06102   C23D  TXL C24D,1,2047 SHOULD NOT TRANSFER
06101  0020 00 0 06107         TRA C25D       OK
06102  0760 00 0 00162   C24D  SWT 2          ERROR-TEST SWITCH 2
06103  0000 00 0 06104         HTR C24D+2     TXL TRANSFERED IN ERROR
06104  0760 00 0 00161         SWT 1
06105  0020 00 0 06107         TRA C25D       PROCEED TO NEXT TEST
06106  0020 00 0 06100         TRA C23D       REPEAT TEST

06107 -3 07777 0 06115   C25D  TXL DD,0,4095 TEST TXL TAG 0
06110  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06111  0000 00 0 06112         HTR C25D+3     TXL TRANSFERED IN ERROR
06112  0760 00 0 00161         SWT 1
06113  0020 00 0 06115         TRA DD         PROCEED TO NEXT TEST
06114  0020 00 0 06107         TRA C25D       REPEAT TEST


06115 -0754 00 1 00000   DD    PXD 0,1        L 4000
06116  0560 00 0 06673         LDQ K7D        CORRECT NUMBER
06117  0340 00 0 06673         CAS K7D        CHECK XRA 4000
06120  0020 00 0 06122         TRA DD+5       ERROR
06121  0020 00 0 06124         TRA DD+7       OK
06122  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06123  0000 00 0 06124         HTR DD+7       ERROR
06124  0760 00 0 00161         SWT 1
06125  0020 00 0 06127         TRA D1D        PROCEED TO NEXT TEST
06126  0020 00 0 06115         TRA DD         REPEAT TEST


06127 -0754 00 2 00000   D1D   PXD 0,2        L 4000
06130  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06131  0340 00 0 06674         CAS K8D        CHECK XRB 4000
06132  0020 00 0 06134         TRA D1D+5      ERROR
06133  0020 00 0 06136         TRA D1D+7      OK
06134  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06135  0000 00 0 06136         HTR D1D+7      ERROR
06136  0760 00 0 00161         SWT 1
06137  0020 00 0 06141         TRA D2D        PROCEED TO NEXT TEST
06140  0020 00 0 06127         TRA D1D        REPEAT TEST


06141 -0754 00 4 00000   D2D   PXD 0,4        L 4000
06142  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06143  0340 00 0 06674         CAS K8D        CHECK XRC 4000
06144  0020 00 0 06146         TRA D2D+5      ERROR
06145  0020 00 0 06150         TRA D2D+7      OK
06146  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06147  0000 00 0 06150         HTR D2D+7      ERROR
06150  0760 00 0 00161         SWT 1
06151  0020 00 0 06153         TRA D3D        PROCEED TO NEXT TEST
06152  0020 00 0 06141         TRA D2D        REPEAT TEST


                                TEST TNX

06153 -2 00001 1 06155   D3D   TNX D4D,1,1    SHOULD NOT TRANSFER
06154  0020 00 0 06162         TRA D5D        OK
```

```
06155  0760 00 0 00162   D4D   SWT 2          ERROR-TEST SWITCH 2
06156  0000 00 0 06157         HTR D4D+2      TNX TRANSFERED IN ERROR
06157  0760 00 0 00161         SWT 1
06160  0020 00 0 06162         TRA D5D            PROCEED TO NEXT TEST
06161  0020 00 0 06153         TRA D3D        REPEAT TEST


06162 -2 00000 0 06170   D5D   TNX D6D,0,0    TEST TNX TAG 0
06163  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06164  0000 00 0 06165         HTR D5D+3      TNX TRANSFERED IN ERROR
06165  0760 00 0 00161         SWT 1
06166  0020 00 0 06170         TRA D6D        PROCEED TO NEXT TEST
06167  0020 00 0 06162         TRA D5D        REPEAT TEST

06170 -0754 00 1 00000   D6D   PXD 0,1        L 3777
06171  0560 00 0 06675         LDQ K10D       CORRECT NUMBER
06172  0340 00 0 06675         CAS K10D       CHECK XRA 3777
06173  0020 00 0 06175         TRA D6D+5      ERROR
06174  0020 00 0 06177         TRA D6D+7      OK
06175  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06176  0000 00 0 06177         HTR D6D+7      ERROR
06177  0760 00 0 00161         SWT 1
06200  0020 00 0 06202         TRA D7D        PROCEED TO NEXT TEST
06201  0020 00 0 06170         TRA D6D        REPEAT TEST

06202 -0754 00 2 00000   D7D   PXD 0,2        L 3777
06203  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06204  0340 00 0 06674         CAS K8D        CHECK XRB 3777
06205  0020 00 0 06207         TRA D7D+5      ERROR
06206  0020 00 0 06211         TRA D7D+7      OK
06207  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06210  0000 00 0 06211         HTR D7D+7      ERROR
06211  0760 00 0 00161         SWT 1
06212  0020 00 0 06214         TRA D8D        PROCEED TO NEXT TEST
06213  0020 00 0 06202         TRA D7D        REPEAT TEST


06214 -0754 00 4 00000   D8D   PXD 0,4        L 3777
06215  0560 00 0 06674         LDQ K8D        CORRECT NUMBER
06216  0340 00 0 06674         CAS K8D        CHECK XRC 3777
06217  0020 00 0 06221         TRA D8D+5      ERROR
06220  0020 00 0 06223         TRA D8D+7      OK
06221  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06222  0000 00 0 06223         HTR D8D+7      ERROR
06223  0760 00 0 00161         SWT 1
06224  0020 00 0 06226         TRA D9D        PROCEED TO NEXT TEST
06225  0020 00 0 06214         TRA D8D        REPEAT TEST


                                    TEST TXI

06226  1 03777 1 06234   D9D   TXI D10D,1,2047 SHOULD TRANSFER
06227  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06230  0000 00 0 06231         HTR D9D+3      TIX FAILED TO TRANSFER
06231  0760 00 0 00161         SWT 1
06232  0020 00 0 06234         TRA D10D       PROCEED TO NEXT TEST
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06233  0020 00 0 06226         TRA D9D       REPEAT TEST


06234  1 07777 0 06242   D10D  TXI D11D,0,4095 TEST TXI TAG 0
06235  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06236  0000 00 0 06237         HTR D10D+3    DID NOT TRANSFER
06237  0760 00 0 00161         SWT 1
06240  0020 00 0 06242         TRA D11D      PROCEED TO NEXT TEST
06241  0020 00 0 06234         TRA D10D      REPEAT TEST

06242  0754 00 1 00000   D11D  PXA 0,1       L 7776
06243  0560 00 0 06607         LDQ L1+6      CORRECT NUMBER
06244  0340 00 0 06607         CAS L1+6      CHECK XRA 7776
06245  0020 00 0 06247         TRA D11D+5    ERROR
06246  0020 00 0 06251         TRA D11D+7    OK
06247  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06250  0000 00 0 06251         HTR D11D+7    ERROR
06251  0760 00 0 00161         SWT 1
06252  0020 00 0 06254         TRA D13D      PROCEED TO NEXT TEST
06253  0020 00 0 06234         TRA D10D      REPEAT TEST


06254 -0754 00 2 00000   D13D  PXD 0,2       L 7777
06255  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06256  0340 00 0 06674         CAS K8D       CHECK XRB 7777
06257  0020 00 0 06261         TRA D13D+5    ERROR
06260  0020 00 0 06263         TRA D13D+7    OK
06261  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06262  0000 00 0 06263         HTR D13D+7    ERROR
06263  0760 00 0 00161         SWT 1
06264  0020 00 0 06266         TRA D14D      PROCEED TO NEXT TEST
06265  0020 00 0 06254         TRA D13D      REPEAT TEST

06266 -0754 00 4 00000   D14D  PXD 0,4       L 7777
06267  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06270  0340 00 0 06674         CAS K8D       CHECK XRC 7777
06271  0020 00 0 06273         TRA D14D+5    ERROR
06272  0020 00 0 06275         TRA D14D+7    OK
06273  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06274  0000 00 0 06275         HTR D14D+7    ERROR
06275  0760 00 0 00161         SWT 1
06276  0020 00 0 06300         TRA D15D      PROCEED TO NEXT TEST
06277  0020 00 0 06266         TRA D14D      REPEAT TEST


                                   TEST TSX TAG 1

06300  0074 00 1 06306   D15D  TSX D16D,1    SHOULD TRANSFER
06301  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06302  0000 00 0 06303         HTR D15D+3    TSX FAILED TO TRANSFER
06303  0760 00 0 00161         SWT 1
06304  0020 00 0 06306         TRA D16D      PROCEED TO NEXT TEST
06305  0020 00 0 06300         TRA D15D      REPEAT TEST
```

```
06306 -0754 00 1 00000   D16D  PXD 0,1
06307 -0737 00 1 00000         PDC 0,1       RE-COMPLEMENT TO GET THE
                                             ADR. OF TSX INSTRUCTION
06310  3 06277 1 06312         TXH *+2,1,D15D-1 SHOULD TRANSFER
06311  0000 00 0 06312         HTR *+1       ERROR XRA=D15D DEC.=D15D-1
06312 -3 06300 1 06314         TXL *+2,1,D15D SHOULD TRANSFER
06313  0000 00 0 06314         HTR *+1       ERROR XRA=DEC=D15D
06314  0760 00 0 00161         SWT 1
06315  0020 00 0 06317         TRA D17D      PROCEED TO NEXT TEST
06316  0020 00 0 06306         TRA D16D      REPEAT TEST


06317 -0754 00 2 00000   D17D  PXD 0,2       L 7777
06320  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06321  0340 00 0 06674         CAS K8D       CHECK XRB 7777
06322  0020 00 0 06324         TRA D17D+5    ERROR
06323  0020 00 0 06326         TRA D17D+7    OK
06324  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06325  0000 00 0 06326         HTR D17D+7    ERROR
06326  0760 00 0 00161         SWT 1
06327  0020 00 0 06331         TRA D19D      PROCEED TO NEXT TEST
06330  0020 00 0 06317         TRA D17D      REPEAT TEST


06331 -0754 00 4 00000   D19D  PXD 0,4       L 7777
06332  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06333  0340 00 0 06674         CAS K8D       CHECK XRC 7777
06334  0020 00 0 06336         TRA D19D+5    ERROR
06335  0020 00 0 06340         TRA D19D+7    OK
06336  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06337  0000 00 0 06340         HTR D19D+7    ERROR
06340  0760 00 0 00161         SWT 1
06341  0020 00 0 06343         TRA D20D      PROCEED TO NEXT TEST
06342  0020 00 0 06331         TRA D19D      REPEAT TEST


                                     TEST TSX TAG 0

06343  0074 00 0 06351   D20D  TSX D21D,0    SHOULD TRANSFER
                                             BUT XRA SHOULD STILL = D15D
06344  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06345  0000 00 0 06346         HTR D20D+3    TSX FAILED TO TRANSFER
06346  0760 00 0 00161         SWT 1
06347  0020 00 0 06351         TRA D21D      PROCEED TO NEXT TEST
06350  0020 00 0 06343         TRA D20D      REPEAT TEST


06351  3 06277 1 06353   D21D  TXH *+2,1,D15D-1 SHOULD TRANSFER
06352  0000 00 0 06353         HTR *+1       ERROR XRA=D15D DEC.=D15D-1
06353 -3 06300 1 06355         TXL *+2,1,D15D SHOULD TRANSFER
06354  0000 00 0 06355         HTR *+1       ERROR XRA=DEC=D15D
06355  0760 00 0 00161         SWT 1
06356  0020 00 0 06360         TRA D22D      PROCEED TO NEXT TEST
06357  0020 00 0 06351         TRA D21D      REPEAT TEST
```

```
06360 -0754 00 2 00000   D22D  PXD 0,2       L 7777
06361  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06362  0340 00 0 06674         CAS K8D       CHECK XRB 7777
06363  0020 00 0 06365         TRA D22D+5    ERROR
06364  0020 00 0 06367         TRA D22D+7    OK
06365  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06366  0000 00 0 06367         HTR D22D+7    ERROR
06367  0760 00 0 00161         SWT 1
06370  0020 00 0 06372         TRA D23D      PROCEED TO NEXT TEST
06371  0020 00 0 06360         TRA D22D      REPEAT TEST


06372 -0754 00 4 00000   D23D  PXD 0,4       L 7777
06373  0560 00 0 06674         LDQ K8D       CORRECT NUMBER
06374  0340 00 0 06674         CAS K8D       CHECK XRC 7777
06375  0020 00 0 06377         TRA D23D+5    ERROR
06376  0020 00 0 06401         TRA D23D+7    OK
06377  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06400  0000 00 0 06401         HTR D23D+7    ERROR
06401  0760 00 0 00161         SWT 1
06402  0020 00 0 06404         TRA D24D      PROCEED TO NEXT TEST
06403  0020 00 0 06372         TRA D23D      REPEAT TEST


                                   TEST LXA WITH TAG OF ZERO

06404  0534 00 7 06701   D24D  LXA K17D,7    L ZEROS
06405  0534 00 0 06635         LXA K0+5,0    L 7777
06406 -0754 00 1 00000         PXD 0,1       L ZEROS CHECK XRA
06407  0100 00 0 06412         TZE D24D+6    OK
06410  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06411  0000 00 0 06412         HTR D24D+6    ERROR
                                             DECR OF ACC INDICATES
                                             ERROR WHICH WAS LOADED
                                             INTO XRA
06412  0760 00 0 00161         SWT 1
06413  0020 00 0 06415         TRA D25D      PROCEED TO NEXT TEST
06414  0020 00 0 06404         TRA D24D      REPEAT TEST



06415 -0754 00 2 00000   D25D  PXD 0,2       CHECK XRB
06416  0100 00 0 06421         TZE D25D+4    OK
06417  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06420  0000 00 0 06421         HTR D25D+4    ERROR IN XRB
06421  0760 00 0 00161         SWT 1
06422  0020 00 0 06424         TRA ED        PROCEED TO NEXT TEST
06423  0020 00 0 06415         TRA D25D      REPEAT TEST


06424 -0754 00 4 00000   ED    PXD 0,4       CHECK XRB
06425  0100 00 0 06430         TZE ED+4      OK
06426  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06427  0000 00 0 06430         HTR ED+4      ERROR IN XRC
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06430  0760 00 0 00161         SWT 1
06431  0020 00 0 06433         TRA E1D       PROCEED TO NEXT TEST
06432  0020 00 0 06424         TRA ED        REPEAT TEST


                                   TEST LXD WITH TAG OF ZERO

06433  0534 00 7 06701   E1D   LXA K17D,7    L ZEROS
06434 -0534 00 0 06635         LXD K0+5,0    L 7777
06435 -0754 00 1 00000         PXD 0,1       L ZEROS CHECK XRA
06436  0100 00 0 06441         TZE E1D+6     OK
06437  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06440  0000 00 0 06441         HTR E1D+6     ERROR XRA
06441  0760 00 0 00161         SWT 1
06442  0020 00 0 06444         TRA E2D       PROCEED TO NEXT TEST
06443  0020 00 0 06433         TRA E1D       REPEAT TEST


06444 -0754 00 2 00000   E2D   PXD 0,2       CHECK XRB
06445  0100 00 0 06450         TZE E2D+4     OK
06446  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06447  0000 00 0 06450         HTR E2D+4     ERROR IN XRB
06450  0760 00 0 00161         SWT 1
06451  0020 00 0 06453         TRA E3D       PROCEED TO NEXT TEST
06452  0020 00 0 06444         TRA E2D       REPEAT TEST


06453 -0754 00 4 00000   E3D   PXD 0,4       CHECK XRB
06454  0100 00 0 06457         TZE E3D+4     OK
06455  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06456  0000 00 0 06457         HTR E3D+4     ERROR IN XRC
06457  0760 00 0 00161         SWT 1
06460  0020 00 0 06462         TRA E4D       PROCEED TO NEXT TEST
06461  0020 00 0 06453         TRA E3D       REPEAT TEST


                                   TEST PAX WITH TAG OF ZERO

06462  0500 00 0 06635   E4D   CLA K0+5      L-3077777707777 FOR 4K
06463  0534 00 7 06701         LXA K17D,7    L ZEROS
06464  0734 00 0 06635         PAX K0+5,0    L 7777
06465 -0754 00 1 00000         PXD 0,1       CHECK XRA
06466  0100 00 0 06471         TZE E4D+7     OK
06467  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06470  0000 00 0 06471         HTR E4D+7     ERROR XRA
06471  0760 00 0 00161         SWT 1
06472  0020 00 0 06474         TRA E5D       PROCEED TO NEXT TEST
06473  0020 00 0 06462         TRA E4D       REPEAT TEST


06474 -0754 00 2 00000   E5D   PXD 0,2       CHECK XRB
06475  0100 00 0 06500         TZE E5D+4     OK
06476  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06477  0000 00 0 06500         HTR E5D+4     ERROR IN XRB
06500  0760 00 0 00161         SWT 1
06501  0020 00 0 06503         TRA E6D       PROCEED TO NEXT TEST
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06502  0020 00 0 06474         TRA E5D       REPEAT TEST


06503 -0754 00 4 00000   E6D   PXD 0,4       CHECK XRB
06504  0100 00 0 06507         TZE E6D+4     OK
06505  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06506  0000 00 0 06507         HTR E6D+4     ERROR IN XRC
06507  0760 00 0 00161         SWT 1
06510  0020 00 0 06512         TRA E7D       PROCEED TO NEXT TEST
06511  0020 00 0 06503         TRA E6D       REPEAT TEST


                                    TEST PDX WITH TAG OF ZERO

06512  0500 00 0 06635   E7D   CLA K0+5      L-3077777707777 FOR 4K
06513  0534 00 7 06701         LXA K17D,7    L ZEROS
06514 -0734 00 0 06635         PDX K0+5,0    L 7777
06515 -0754 00 1 00000         PXD 0,1       CHECK XRA
06516  0100 00 0 06521         TZE E7D+7     OK
06517  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06520  0000 00 0 06521         HTR E7D+7     ERROR XRA
06521  0760 00 0 00161         SWT 1
06522  0020 00 0 06524         TRA E8D       PROCEED TO NEXT TEST
06523  0020 00 0 06512         TRA E7D       REPEAT TEST


06524 -0754 00 2 00000   E8D   PXD 0,2       CHECK XRB
06525  0100 00 0 06530         TZE E8D+4     OK
06526  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06527  0000 00 0 06530         HTR E8D+4     ERROR IN XRB
06530  0760 00 0 00161         SWT 1
06531  0020 00 0 06533         TRA E9D       PROCEED TO NEXT TEST
06532  0020 00 0 06524         TRA E8D       REPEAT TEST


06533 -0754 00 4 00000   E9D   PXD 0,4       CHECK XRB
06534  0100 00 0 06537         TZE E9D+4     OK
06535  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06536  0000 00 0 06537         HTR E9D+4     ERROR IN XRC
06537  0760 00 0 00161         SWT 1
06540  0020 00 0 06542         TRA E10D      PROCEED TO NEXT TEST
06541  0020 00 0 06533         TRA E9D       REPEAT TEST


                                    TEST SXD WITH TAG OF ZERO

06542  0534 00 7 06635   E10D  LXA K0+5,7    L ZEROS
06543  0500 00 0 06632         CLA K0+2      L ALL ONES
06544  0601 00 0 06713         STO J1D       TEMPORARY STG
06545 -0634 00 0 06713         SXD J1D,0
06546  0500 00 0 06713         CLA J1D
06547  0402 00 0 06704         SUB K21AD     L -300000777777
06550  0100 00 0 06553         TZE E10D+9    OK
06551  0760 00 0 00162         SWT 2         ERROR-TEST SWITCH 2
06552  0000 00 0 06553         HTR E10D+9    ERROR XRA
06553  0760 00 0 00161         SWT 1
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06554  0020 00 0 06556         TRA E11D      PROCEED TO NEXT TEST
06555  0020 00 0 06542         TRA E10D      REPEAT TEST


                                   TEST PXD WITH TAG OF ZERO

06556  0500 00 0 06635   E11D  CLA K0+5       L-3077777707777 FOR 4K
06557  0534 00 7 06635         LXA K0+5,7     L 7777
06560 -0754 00 0 00000         PXD 0,0
06561  0100 00 0 06564         TZE E11D+6     OK
06562  0760 00 0 00162         SWT 2          ERROR-TEST SWITCH 2
06563  0000 00 0 06564         HTR E11D+6     ERROR XRA
06564  0760 00 0 00161         SWT 1
06565  0020 00 0 06567         TRA N17C-2     PROCEED TO NEXT TEST
06566  0020 00 0 06556         TRA E11D       REPEAT TEST


*ERASE PRINT INSTRUCTION SO THAT THE SIZE OF STORAGE
*WILL ONLY BE PRINTED OUT ONCE.


06567  0500 00 0 06733         CLA CAA+1      L TRA SC
06570  0601 00 0 01546         STO PRINT



06571  0760 00 0 00166   N17C  SWT 6
06572  0020 00 0 06574         TRA *+2
06573  0020 00 0 06771         TRA HJW        PRINT OUT PASS COMPLETE



                                   RDS
06574  0762 00 0 01321   N16C  RCDA           READ IN NEXT PROGRAM
06575  0540 00 0 06600         RCHA CNTW
06576  0544 00 0 00000         LCHA 0
06577  0020 00 0 00001         TRA 1
06600 -1 00003 0 00000   CNTW  MON 0,0,3


                                   CONSTANTS

06601 +000001000000      L1    OCT 000001000000     CONSTANTS
06602 +000002000000            OCT +000002000000
06603 +100014100002            OCT +100014100002
06604  0052 66 0 00000         HTR 0,0,4096-G1-1 THESE VARY DEPENDING
                                                    UPON SIZE OF STG
06605 +000000007777            OCT 7777       77777, 37777, 27777, 17777,
                                              OR 7777 IN ADDRESS
06606 +000000000001            OCT +000000000001
06607 +000000007776            OCT 7776       77776, 37776, 27776, 17776,
                                              OR 7776 IN ADDRESS
06610 +000000010000            OCT 10000      100000, 40000, 30000, 20000,
                                              OR 10000 IN ADDRESS
06611 +000000077777            OCT +000000077777
06612 +000000000000            OCT +000000000000
```

```
06613 +000020000030            OCT +0020000030
06614 +000000000002            OCT +000000000002
06615 +000000001000            OCT +00000001000
06616 +000000000100            OCT +00000000100
06617  0000 00 0 02512          HTR G1+1
06620 +000000000001      L2    OCT 1
06621 +000000000000      M     OCT +00000000000
06622  0074 00 1 02703          TSX M4,1
06623 +000000000000            OCT +00000000000  TEMP STORAGE
06624  0051 00 0 00000          HTR 0,0,4096-M3
06625  0000 00 0 02700          HTR M3
06626  0534 00 1 06601          LXA L1,1
06627 -327777727777      K00   OCT -327777727777
06630 +000000000000      K0    OCT 0
06631 +000000000001            OCT 1
06632 -377777777777            OCT -377777777777
06633 -337777737777            OCT -337777737777
06634 -317777717777            OCT -317777717777
06635 -307777707777            OCT -307777707777 FOR 4K
                                    -317777717777 FOR 8K
                                    -327777727777 FOR 12K
                                    -337777737777 FOR 16K
                                    -377777777777 FOR ALL OTHERS
06636 +345252742525            OCT 345252742525
06637 +005253000000            OCT 005253000000  FOR 4K
                                    015253000000  FOR 8K
                                    035253000000  FOR ALL OTHERS
06640 +002526000000            OCT 002526000000  FOR 4K
                                    012526000000  FOR 8K
                                    032526000000  FOR ALL OTHERS
06641 +035253000000      K2    OCT 035253000000
06642 +015253000000            OCT 015253000000
06643 +032526000000      K3    OCT 032526000000
06644 +012526000000            OCT 012526000000
06645 +000000000000      T1    OCT 0         TEMP. STORAGE

                                             CONSTANTS
06646  0041 11 0 00000   S1B   HTR 0,0,4096-G1B-1 THESE VARY DEPENDING
                                             UPON SIZE OF STG
06647  0000 00 0 03667   S2B   HTR G1B+1
06650  0074 00 2 04060   S3B   TSX M4B,2
06651  0037 23 0 00000   S4B   HTR 0,0,4096-M3B   THESE VARY DEPENDING
                                             UPON SIZE OF STG.
06652  0000 00 0 04055   S5B   HTR M3B
06653  0534 00 2 06601   S6B   LXA L1,2
06654 +000000000000      S7B   OCT 0         TEMPORARY STORAGE
06655 +100014200002      S10B  OCT +100014200002

                                             CONSTANTS

06656  0027 35 0 00000   S1C   HTR 0,0,4096-G1C-1  THESE VARY DEPENDING
                                             UPON SIZE OF STG.
06657  0000 00 0 05043   S2C   HTR G1C+1
06660  0074 00 4 05234   S3C   TSX M4C,4
06661  0025 47 0 00000   S4C   HTR 0,0,4096-M3C  THESE VARY DEPENDING
                                             UPON SIZE OF STG.
```

```
06662  0000 00 0 05231   S5C   HTR M3C
06663  0534 00 4 06601   S6C   LXA L1,4
06664 +000000000000      S7C   OCT 0         TEMPORARY STORAGE
06665 +100014400002      S10C  OCT +100014400002


06666 +100000000000      K2D   OCT 100000000000
06667 +000000100000      K3D   OCT 000000100000
06670 +040000000000      K4D   OCT 040000000000
06671 +025252525252      K5D   OCT 025252525252
06672 +052525252525      K6D   OCT 052525252525
06673 +004000000000      K7D   OCT 004000000000
06674 +007777000000      K8D   OCT 007777000000
06675 +003777000000      K10D  OCT 003777000000
06676 +003776000000      K11D  OCT 003776000000
06677  0015 00 0 00000   K12D  HTR 0,0,4096-D15D
06700 +000001000000      K14D  OCT 000001000000
06701 +000000000000      K17D  OCT 0
06702 +000000010000      K20D  OCT 10000
06703 +000000020000      K21D  OCT 20000
06704 -300000777777      K21AD OCT 700000777777
06705 +000000030000      K22D  OCT 30000

06706 +014000014000      L5D   OCT 014000014000
06707 +024000024000      L7D   OCT 024000024000
06710 +034000034000      L11D  OCT 034000034000
06711 +074000074000      L12D  OCT 074000074000
06712 +002753000000      L13D  OCT 002753000000

06713 +000000000000      J1D   OCT 0         TEST WORD STORAGE
06714 -377777777777      K00D  OCT 777777777777
06715 -266666666666      K01D  OCT 666666666666
06716 -155555555555      K02D  OCT 555555555555
06717 -044444444444      K03D  OCT 444444444444
06720 +333333333333      K04D  OCT 333333333333
06721 +222222222222      K05D  OCT 222222222222
06722 +111111111111      K06D  OCT 111111111111
06723 +000000001111      K1111 OCT 1111
06724 +000000002222      K2222 OCT 2222
06725 +000000004444      K4444 OCT 4444

06726 +370000777777      W     OCT 370000777777
06727 +070000000000      X     OCT 070000000000
06730 +377777770000      Y     OCT 377777770000
06731 +000000070000      Z     OCT 000000070000
06732 +000546000000      CAA   OCT 546000000
06733  0020 00 0 01553         TRA SC



06734  0766 00 0 01361         WPRA
06735  0760 00 0 01363         SPRA 3
06736  0540 00 0 06740         RCHA PRT      PRINT PROGRAM NAME
06737  0020 00 0 00000         TRA 0         START
06740  0000 30 0 06741   PRT   IOCD PRG,0,24
```

```
*PRINT IMAGE FOR NOW RUNNING 9M03A- INDEXING TEST

06741 +000000421004      PRG   OCT 421004       9L
06742 +100000000000            OCT 100000000000 9R
06743 +000000000000            OCT 0            8L
06744 +000000000000            OCT 0            8R
06745 +000000004000            OCT 4000         7L
06746 +220000000000            OCT 220000000000 7R
06747 +000006000000            OCT 6000000      6L
06750 +000000000000            OCT 0            6R
06751 +000010150002            OCT 10150002     5L
06752 -042000000000            OCT 442000000000 5R
06753 +000000200401            OCT 200401       4L
06754 +000000000000            OCT 0            4R
06755 +000000000100            OCT 100          3L
06756 +004400000000            OCT 4400000000   3R
06757 +000000000000            OCT 0            2L
06760 +001000000000            OCT 1000000000   2R
06761 +000000000040            OCT 40           1L
06762 +000000000000            OCT 0            1R
06763 +000002200200            OCT 2200200      0L
06764 +205400000000            OCT 205400000000 0R
06765 +000014550412            OCT 14550412     11L
06766 +040000000000            OCT 40000000000  11R
06767 +000000024045            OCT 24045        12L
06770 -122000000000            OCT 522000000000 12R




06771  0766 00 0 01361   HJW   WPRA
06772  0760 00 0 01363         SPRA 3
06773  0540 00 0 06775         RCHA PR       PRINT PASS COMPLETE
06774  0020 00 0 00001         TRA 1         REPEAT TEST
06775  0000 30 0 06776   PR    IOCD PG,0,24


*PRINT IMAGE FOR PASS COMPLETE - 9M03A
06776 +000000000000      PG    OCT 0            9L
06777 +001000000000            OCT 1000000000   9R
07000 +000000000000            OCT 0            8L
07001 +000000000000            OCT 0            8R
07002 +000000000200            OCT 200          7L
07003 -000000000000            OCT 400000000000 7R
07004 +000000000002            OCT 2            6L
07005 +000000000000            OCT 0            6R
07006 +000000000000            OCT 0            5L
07007 +120000000000            OCT 120000000000 5R
07010 +000000000001            OCT 1            4L
07011 +000400000000            OCT 400000000    4R
07012 +000000000004            OCT 4            3L
07013 +240100000000            OCT 240100000000 3R
07014 +000000000060            OCT 60           2L
07015 +000000000000            OCT 0            2R
```

```
07016 +000000000100           OCT 100          1L
07017 +000040000000           OCT 40000000     1R
07020 +000000000060           OCT 60           0L
07021 +040200000000           OCT 40200000000  0R
07022 +000000000203           OCT 203          11L
07023 -204400000000           OCT 604400000000 11R
07024 +000000000104           OCT 104          12L
07025 +120040000000           OCT 120040000000 12R


                    00000         END
```

EOF*